

**MODEM**

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# **1. MODEM document summary**

## **1.1 Introduction**

This document is an extraction from the MODEM model and should be used as a dictionary of MODEM. Descriptive reports can be found in:

- MODAF\_M3\_and\_IDEAS\_integration\_version\_2.00.pdf  
This report deals with the mapping between MODEM and the MODAF M3 meta-model.
- MODAF\_M3\_and\_IDEAS\_integration\_examplification\_version\_2.00.pdf  
This report contains modelling examples both of the IDEAS foundation directly as well as models created by the use of MODEM directly, i.e. not filtered through a tool implementation. This is required for verification purposes in order to ensure that the MODEM meta-model can be used directly to create enterprise architecture models. It should be emphasised that this it is not intended that the MODEM model should be used in this manner by modellers. In order for tool manufacturers to implement MODEM properly, the examples shown here are a requirement.

### **1.1.1 MODEM benefits**

- MODEM provides a truly EA tool agnostic representation of MODAF.
- This allows both general EA tools as well as UML based tools to work with a common basis, something that in time will increase the number of different tools that can interwork.
- The semantic created by MODEM underpinning improves the MODAF concepts in a number of areas.
  - Common patterns have also been identified as a result of the MODEM work, something that leads, in a number of areas, to a clearer understanding of the model as well as similarity between different aspects of the model since the patterns are reused throughout the model.
- MODEM is grounded in real-world semantics and provides proper handling of individuals, something that MODAF never did. This also implies that the meta-model has a formalism required to ensure that data can be maintained in a semantically consistent and coherent manner. MODEM can therefore be used to deal with the grave semantic issues that plague the proprietary meta-model that the generic EA tools use (1) as well as the ones identified for the UML based tools (2).
- MODAF M3 was based on UML and this was, at the time, a good decision. UML is a common standard and has had an enormous amount of work invested in it. MODEM has been created by harvesting all of the good points of MODAF and UML and winnowing out all the less good parts by means of the BORO methodology that underpins the work effort to create MODEM.
- The origins of UML are primarily technical and devoted to the design of software systems and this is one of the reasons that UML use brings with it a lot of baggage.
- The UML baggage which in many cases distorts the MODAF meta-model is therefore removed in MODEM and a more enterprise architecture approach has been achieved.
- MODEM development has had the primary objective of covering MODAF, i.e. it is by and large backward compatible to MODAF architectures developed based on the M3 meta-model.

- MODEM, it is felt, answers the need of NATO to have a NAF model without UML dependencies.
- MODEM provides a vehicle for discussions and development of a common enterprise architecture framework for defence (and even outside defence) since it will be based on the same concepts as DoDAF 2.

### **1.1.2 Document structure**

This document is structured in the following manner:

- For each viewpoint (AV, StV, OV, SOV, SV, TV and AcV) the M3 meta-model view MODEM counterparts are contained. In some viewpoints there are some additional view representations that were not contained in MODAF M3 but this is rare.
- The above viewpoint descriptions are followed by a list of all of the elements owned by a particular viewpoint. It should be noted that there will often be more elements in this list than the ones that are shown in the above viewpoint views.
- The elements list is followed by a set of figures that show relevant features of the MODEM model in greater detail.
- At the end of the document, the same structure is repeated for the IDEAS foundation, additions made to the Foundation to accommodate MODEM and also the patterns defined in order to bridge the gap between the IDEAD foundation and MODAF.

## 2. MODEM

### 2.1 Modelling Notation

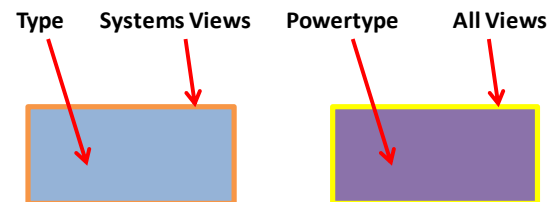
The UML model for MODEM uses a slightly enhance colour scheme from the usual IDEAS approach. The fill colours of each element remain the same:

- Sky-blue = Type
- Orange = IndividualType
- Lilac = Powertype
- Light-green = TupleType
- Dark-grey = Individual
- Yellow = NamingScheme

For MODEM, in addition to, the border colour is used to indicate the MODAF viewpoint, using the standard MODAF colours:

- Yellow = All Views
- Green = Strategic Views
- Purple = Service-Oriented Views
- Blue = Operational Views
- Orange = Systems Views
- Pink = Acquisition Views
- Grey = Technology & Standards Views

Examples are:



In addition, placeable types (Tuples, TupleTypes, TupleTypeTypes, etc.) are displayed with thin borders whilst all other elements have thick borders.

As noted later in this document, some additions to the IDEAS Foundation were necessary. Where these additions are used, they are shown with a red border.

## 2.2

## All Views

### 2.2.1

## AV-1: Overview and summary information

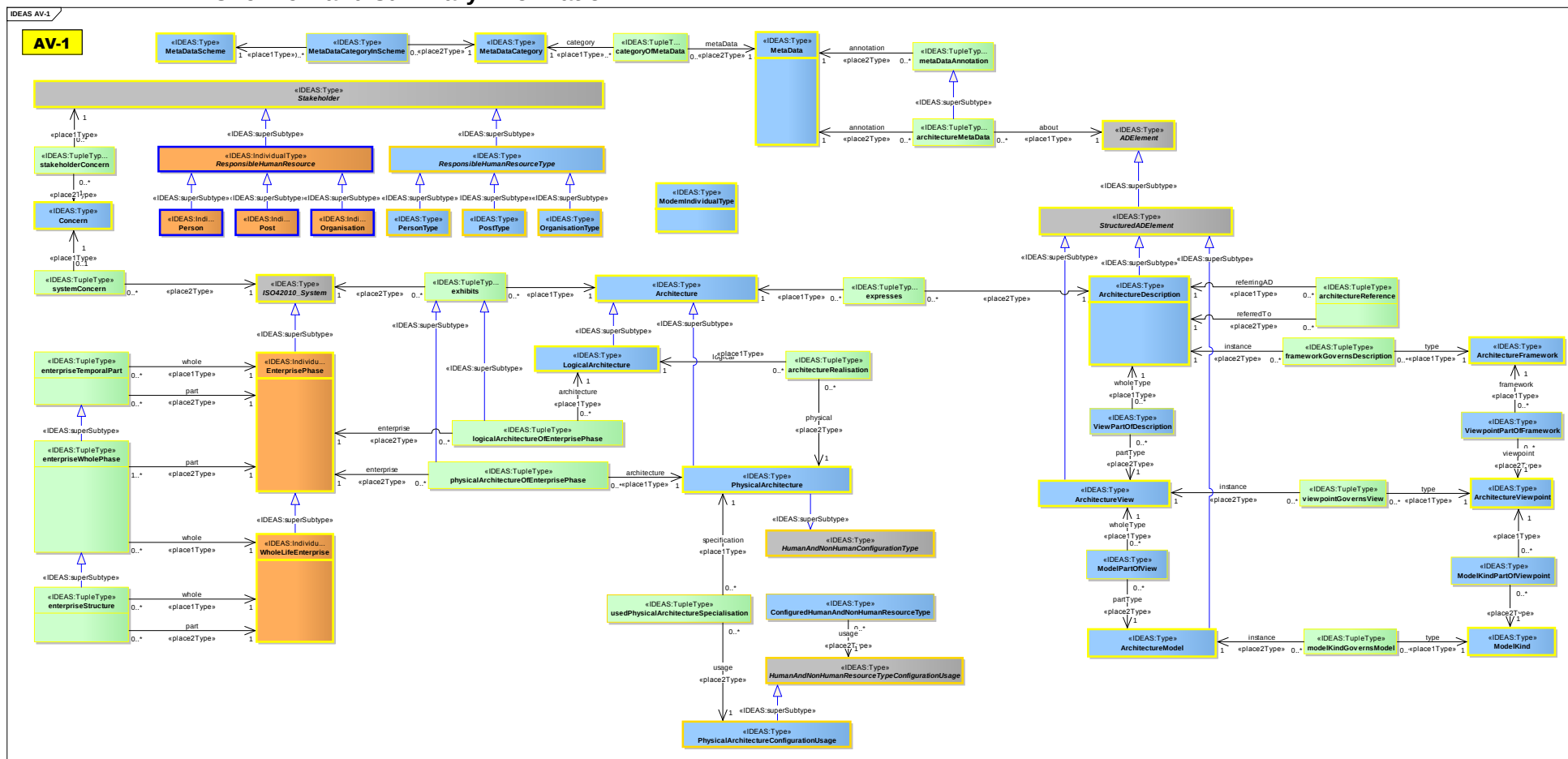


Figure 1 : AV-1

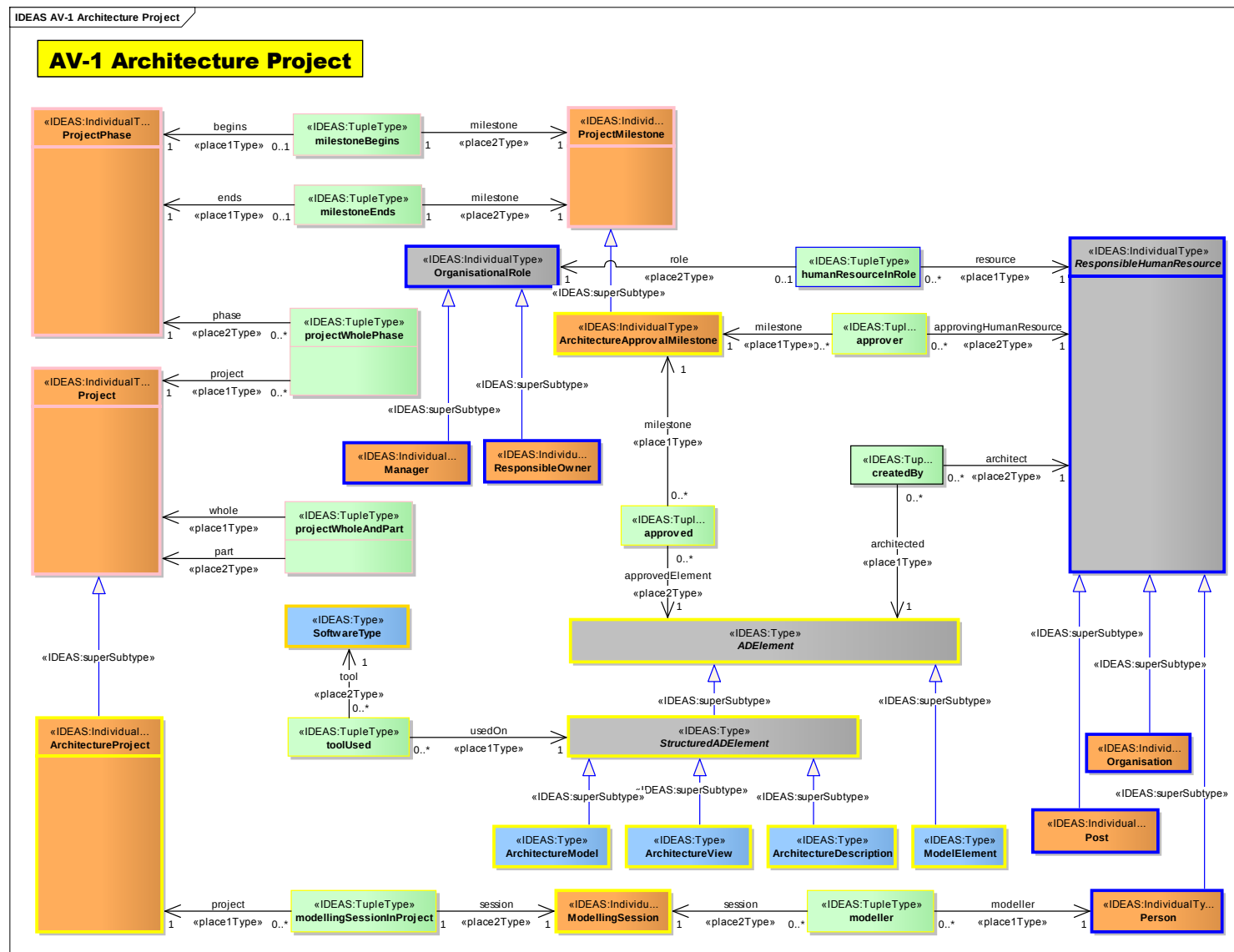


Figure 2 : AV-1 Architecture Project

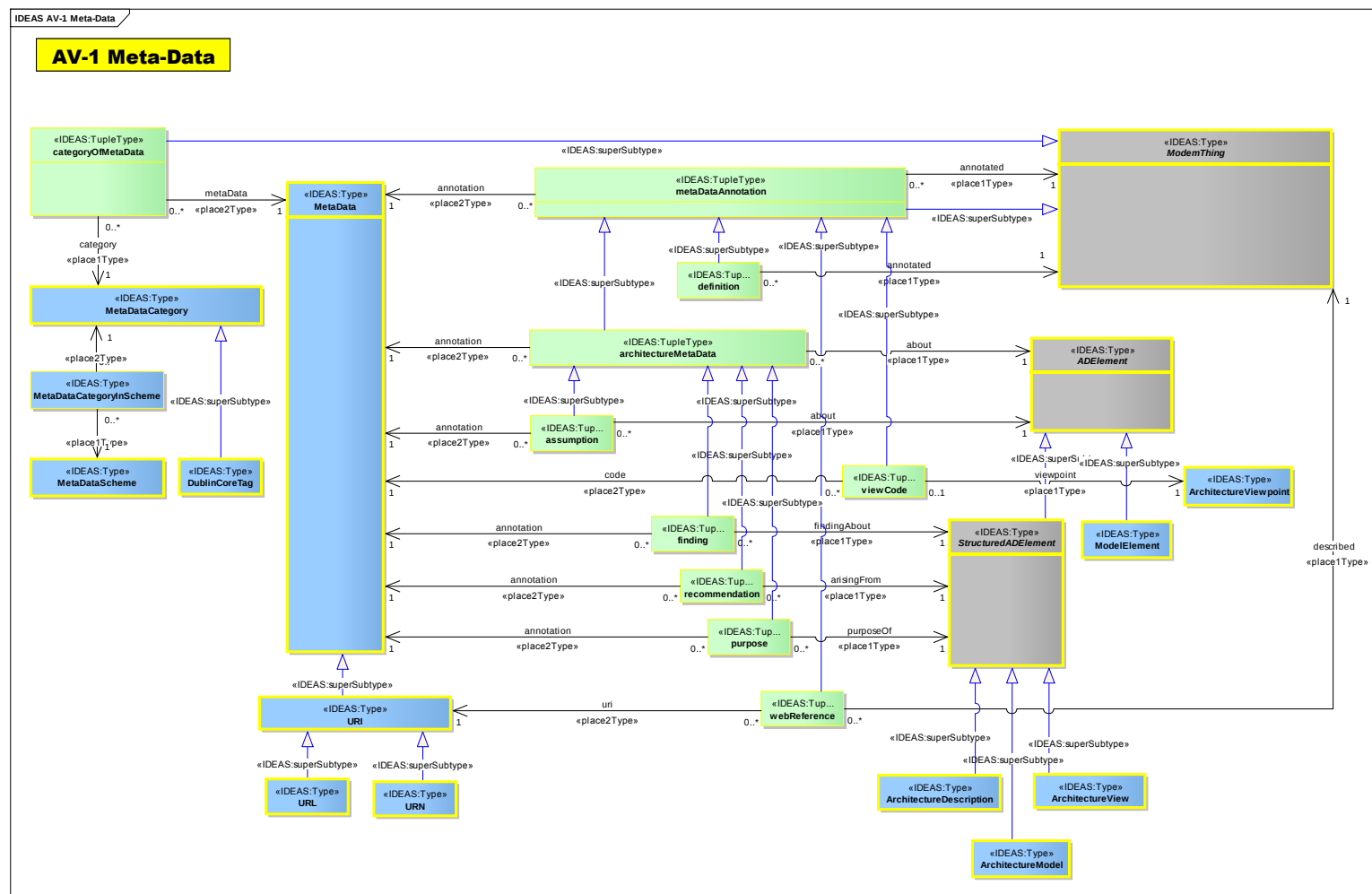


Figure 3 : AV-1 Meta-Data



### 2.2.2 AV-2: Integrated dictionary

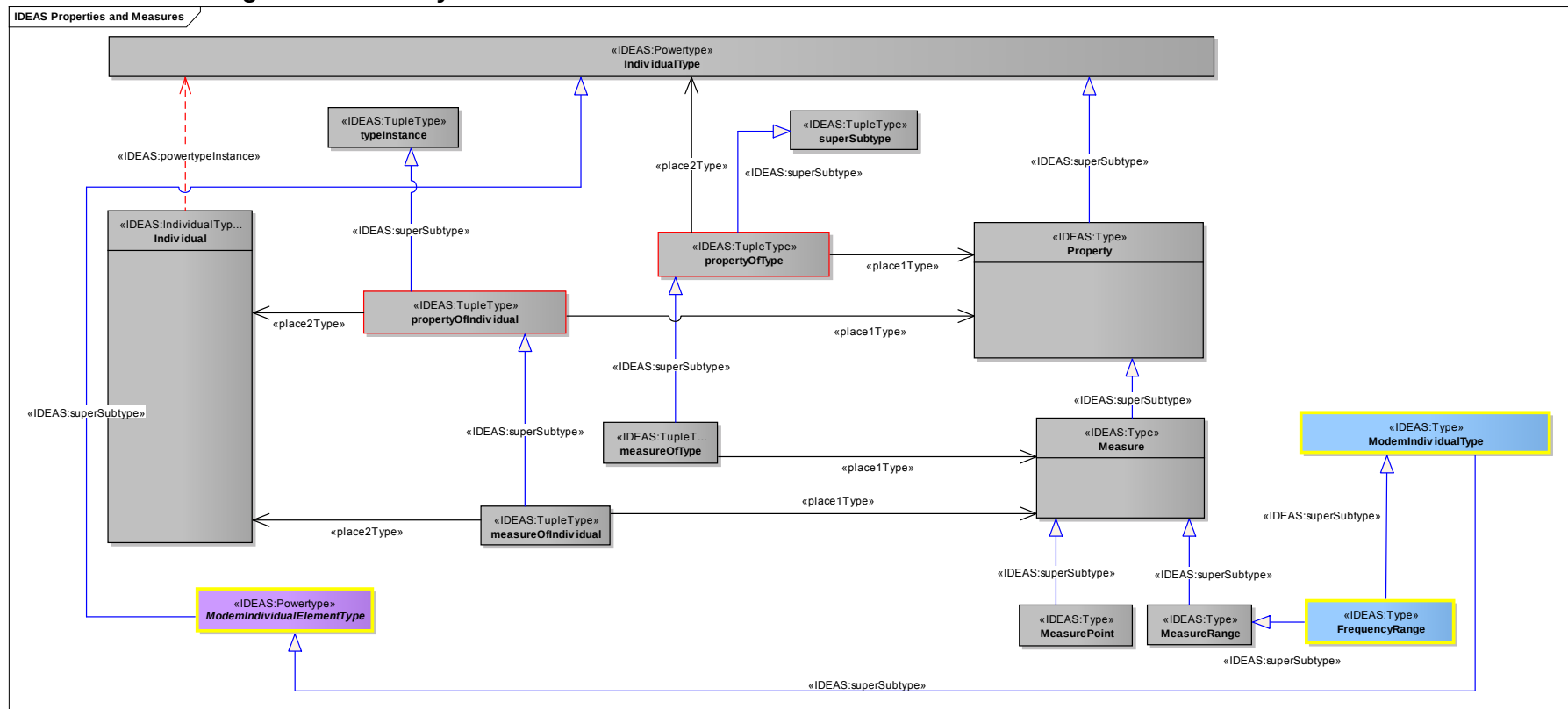


Figure 5 : Properties and Measures

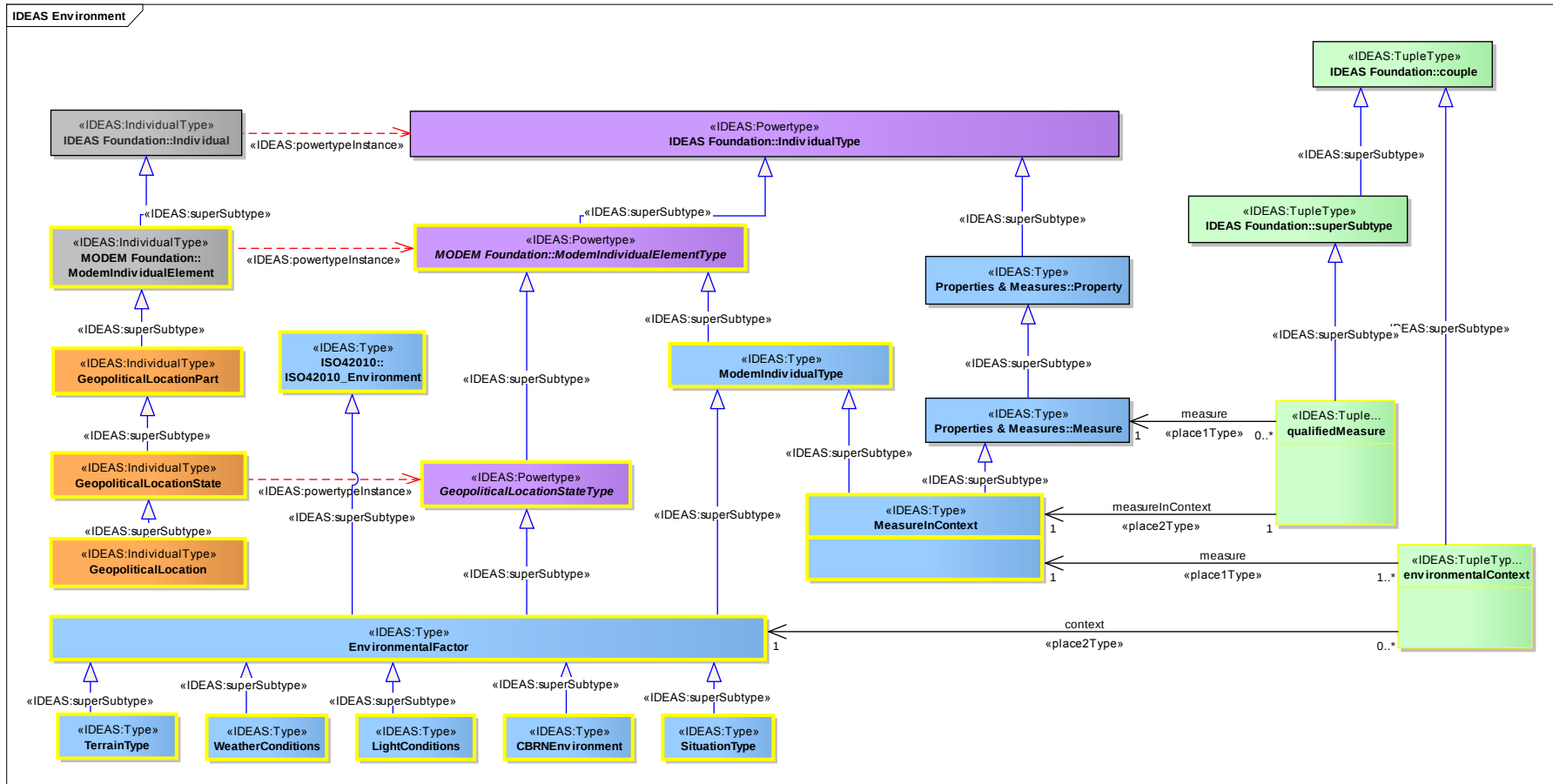


Figure 6 : Environment

### 2.2.3 All Views elements list

| MODEM All Views                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>After</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>After - BeforeAfterType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>After - StartsAfter</p> <p>Association (source - target): «place2Type»</p> <p>After - TriggerItem</p> <p>Association (source - target): «place1Type»</p> <p>After - TriggerItem</p> <p><u>Attributes:</u></p> <p>-</p> <p>A BeforeAfterType where one TriggerItem starts after another has ended.</p> <p>Note: the TriggerItem that happens after may happen at any point in time after the one that comes before it (i.e. there may be an interval of time between them).</p> |
| <p><b>AgentCapableOfResponsibilityOrAgentCapableOfResponsibilityType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentCapableOfResponsibilityOrAgentCapableOfResponsibilityType - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>The union of AgentCapableOfResponsibility and AgentCapableOfResponsibilityType.</p>                                                                                                                                                                                                                                                                                                                          |
| <p><b>ArchitectureApprovalMilestone</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ArchitectureApprovalMilestone - ProjectMilestone</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProjectMilestone where an ADElement is approved by a ResponsibleHumanResource. Note: this replaces the dateCompleted tag on ArchitecturalDescription in M3.</p>                                                                                                                                                                                                                                                                                        |
| <p><b>ArchitectureProject</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ArchitectureProject - Project</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Project that delivers an ArchitectureDescription.</p>                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>ArtefactPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ArtefactPowertype - NonHumanResourcePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of Artefact.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                               |

|                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>CBRNEEnvironment</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>CBRNEEnvironment - EnvironmentalFactor</p> <p><u>Attributes:</u></p> <p>-</p> <p>An EnvironmentalFactor that defines the type of chemical, biological, radiological and nuclear environment in which an Enterprise may operate.</p> |
| <p><b>Constraint</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Constraint - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType that is the collection of all the objects subject to a particular constraint.</p>                                                        |
| <p><b>Delay</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Delay – TriggerItem</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TriggerItem that is a pause between Processes, Events, etc.</p>                                                                                                                |
| <p><b>DublinCoreTag</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>DublinCoreTag - MetadataCategory</p> <p><u>Attributes:</u></p> <p>-</p> <p>A MetadataCategory that is a DublinCore tag.</p>                                                                                                            |
| <p><b>EnduringTaskPart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EnduringTaskPart - UndertakingPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>An UndertakingPart where the whole is an EnduringTask.</p>                                                                                   |
| <p><b>EnterprisePart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EnterprisePart - AgentPart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EnterprisePart - UndertakingPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A part of a WholeLifeEnterprise</p>    |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <p><b>EnterprisePhase</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>EnterprisePhase - EnterprisePhaseType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>EnterprisePhase - UndertakingState</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>EnterprisePhase - EnterprisePart</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>EnterprisePhase - AgentState</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>EnterprisePhase - ISO42010_System</p> <p><u>Attributes:</u></p> <p>-</p> <p>An UndertakingState that is a current or future state of a WholeLifeEnterprise or another EnterprisePhase.</p> |
| <p><b>EnterprisePhaseType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>EnterprisePhaseType - UndertakingStateType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>EnterprisePhaseType - AgentStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of EnterprisePhase</p>                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>EnvironmentalFactor</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>EnvironmentalFactor - GeopoliticalLocationStateType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>EnvironmentalFactor - ISO42010_Environment</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>EnvironmentalFactor - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A GeopoliticalLocationStateType that defines some aspect of the environment in which an Enterprise may operate.</p>                                                                                                                                                                                                              |
| <p><b>Event</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>Event - TemporalBorderType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>Event - TriggerItem</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TemporalBorderType whose instances are instants the mark the temporal beginning or end of an Individual.</p>                                                                                                                                                                                                                                                                                                                                                                                                                 |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>FrequencyRange</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FrequencyRange - ModemIndividualType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FrequencyRange - MeasureRange</p> <p><u>Attributes:</u></p> <p>-</p> <p>A MeasureRange that specifies maximum and minimum frequencies, measured in Hertz as real numbers.</p>                                                                                                                                                                                                                                        |
| <p><b>GeoName</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>GeoName - StringName</p> <p><u>Attributes:</u></p> <p>-</p> <p>A MeasureRange that specifies maximum and minimum frequencies, measured in Hertz as real numbers.</p>                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>GeopoliticalLocation</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>GeopoliticalLocation - Location</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>GeopoliticalLocation - IntentionallyConstructedIndividual</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>GeopoliticalLocation - GeopoliticalLocationType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>GeopoliticalLocation - GeopoliticalLocationState</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Location and a GeoPoliticalArea.</p> |
| <p><b>GeopoliticalLocationPart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>GeopoliticalLocationPart - ModemIndividualElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualElement that is a part of a GeopoliticalLocation.</p>                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>GeopoliticalLocationState</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>GeopoliticalLocationState - GeopoliticalLocationStateType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>GeopoliticalLocationState - GeopoliticalLocationPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A GeopoliticalLocationPart that is a temporal state of a GeopoliticalLocation - i.e. all of the location for a period of time.</p>                                                                                                                                          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>GeopoliticalLocationStateType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>GeopoliticalLocationStateType - ModemIndividualElementType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of GeopoliticalLocationState.</p>                                                                                                                                                                                                                                                                                                                                    |
| <p><b>GeopoliticalLocationType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>GeopoliticalLocationType - GeopoliticalLocationStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of GeopoliticalLocation.</p>                                                                                                                                                                                                                                                                                                                                                |
| <p><b>ISO6709Representation</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ISO6709Representation - GeoName</p> <p><u>Attributes:</u></p> <p>-</p> <p>A GeoName expressed using the ISO6709:2008 standard notaton</p> <p>Examples: "-90+000+2800CRSWGS_84/" "+48.8577+002.295/"</p>                                                                                                                                                                                                                                                                                              |
| <p><b>ImmediatelyAfter</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ImmediatelyAfter - ImmediateBeforeAfterType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ImmediatelyAfter - After</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>ImmediatelyAfter - TriggerItem</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>ImmediatelyAfter - TriggerItem</p> <p><u>Attributes:</u></p> <p>-</p> <p>An After where the subsequent TriggerItem starts immediately as the preceeding TriggerItem ends.</p> |
| <p><b>InformationInstance</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>InformationInstance - Sign</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>InformationInstance - InformationInstanceType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>InformationInstance - ModemIndividualElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Sign that is an individual item of information (e.g. an utterance, an individual instance of a paper or electronic document).</p>              |

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| <p><b>InformationInstanceType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InformationInstanceType - SignType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InformationInstanceType - ModemIndividualElementType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of InformationInstance.</p>                                                                                                                                                   |
| <p><b>ItemInScenario</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ItemInScenario – TypicalWholePart</p> <p>Association (source - target): «place1Type»</p> <p>ItemInScenario - Scenario</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart where the whole is a Scenario.</p>                                                                                                                                                                                                      |
| <p><b>LightConditions</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LightConditions - EnvironmentalFactor</p> <p><u>Attributes:</u></p> <p>-</p> <p>An EnvironmentmentalFactor that defines the types of light (e.g. broad daylight, dusk, moonlit, etc.) in which an Enterprise may operate.</p>                                                                                                                                                                                             |
| <p><b>Location</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Location - ModemIndividualElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A location anywhere on the earth. The means of describing the location is a string (locationDescription). The information contained in that string is governed by the taxonomy reference - e.g. if the Location is a “GPS reference”, the string will contain the GPS coordinates.</p> <p>Note: was called "ActualLocation" in M3 v1.2</p> |
| <p><b>LogicalArchitecture</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalArchitecture - Architecture</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalArchitecture - NodeParent</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalArchitecture - EnteprisePhaseType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NodeParent whose parts are either Nodes, KnownResources or LogicalDomains.</p>                 |

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| <p><b>MeasureInContext</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>MeasureInContext - ModemIndividualType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>MeasureInContext - Measure</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType that brings together EnvironmentalFactors with a Measure in order to qualify the measure. Examples: 40mph in desert, 1km range in cloudy conditions.</p>                                                               |
| <p><b>MetaData</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>MetaData - MetaDataType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>MetaData - StringRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StringRepresentation that can be applied to any element in the architecture. Note: wherever possible, standard Meta-Data types should be used - e.g. conforming to Dublin Core. Note for MOD Users: The MOD Meta Data Standard categories shall be used.</p> |
| <p><b>MetaDataCategory</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>MetaDataCategory - MetaDataType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A MetaDataType that defines the category of a MetaData element</p> <p>example: <a href="http://purl.org/dc/terms/abstract">http://purl.org/dc/terms/abstract</a></p>                                                                                                                                                                                          |
| <p><b>MetaDataCategoryInScheme</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>MetaDataCategoryInScheme - WholePartTypeType</p> <p>Association (source - target): «place2Type»</p> <p>MetaDataCategoryInScheme - MetaDataCategory</p> <p>Association (source - target): «place1Type»</p> <p>MetaDataCategoryInScheme - MetaDataScheme</p> <p><u>Attributes:</u></p> <p>-</p> <p>A WholePartTypeType that asserts a MetaDataCategory belongs to a MetaDataScheme.</p>                                           |
| <p><b>MetaDataScheme</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>MetaDataScheme - RepresentationScheme</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RepresentationScheme that defines a set of MetaData</p>                                                                                                                                                                                                                                                                                                 |

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| <p><b>MetaDataType</b> «IDEAS:Powertype»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> MetaDataType - RepresentationType<br/> <u>Attributes:</u><br/> -<br/> The powertype of MetaData.</p>                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>ModellingSession</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> ModellingSession - AgentPart<br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> ModellingSession - ProjectPart<br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> ModellingSession - ParticipationExtent<br/> <u>Attributes:</u><br/> -<br/> A ProjectPart where ArchitectureDescriptions are worked on.</p>                                                                                                                                    |
| <p><b>ModemIndividualType</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> ModemIndividualType - ModemIndividualElementOrModemIndividualType<br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> ModemIndividualType - ModafIndividualElementType<br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> ModemIndividualType - ModemThing<br/> <u>Attributes:</u><br/> -<br/> The parent (supertype) of all MODEM elements that are types of Individuals<br/> e.g. tank, computer, etc.</p>                                            |
| <p><b>ModemTemporalWholePartType</b> «IDEAS:Powertype»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> ModemTemporalWholePartType - ModemWholePartType<br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> ModemTemporalWholePartType - TemporalWholePartType<br/> Association (source - target): «place2Type»<br/> ModemTemporalWholePartType - ModemIndividualElementType<br/> Association (source - target): «place1Type»<br/> ModemTemporalWholePartType - ModemIndividualElementType<br/> <u>Attributes:</u><br/> -<br/> The powertype of modemTemporalWholePart.</p> |

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| <p><b>ModemWholePartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ModemWholePartType - WholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ModemWholePartType - ModemThing</p> <p>Association (source - target): «place2Type»</p> <p>ModemWholePartType - ModafIndividualElementType</p> <p>Association (source - target): «place1Type»</p> <p>ModemWholePartType - ModafIndividualElementType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of modemWholePart.</p>             |
| <p><b>PhysicalArchitecture</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PhysicalArchitecture - HumanAndNonHumanConfigurationType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PhysicalArchitecture - PhysicalArchitecturePowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PhysicalArchitecture - Architecture</p> <p><u>Attributes:</u></p> <p>-</p> <p>A HumanAndNonHumanConfigurationType that specifies the structure and behaviour of an EnterprisePhase.</p> |
| <p><b>PointLocation</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PointLocation - GeopoliticalLocationPart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PointLocation - Location</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Location expressed as a point on a ReferenceEllipsoidOrGeoid.</p>                                                                                                                                                                                                   |
| <p><b>ProjectPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectPartType - UndertakingPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ProjectPart.</p>                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>ProjectPhaseType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectPhaseType - ProjectPartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectPhaseType - UndertakingStateType</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                                                                                                                   |

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| <p>The powertype of ProjectPhase</p> <p><b>ProjectPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectPowertype - ProjectPhaseType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectPowertype - UndertakingType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of Project</p>                                                                                                                                                                                                                                                                                                                    |
| <p><b>ProjectThreadPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectThreadPowertype - ProjectPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ProjectThread.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>ResourcePackageType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourcePackageType - IndividualResourcePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ResourcePackage.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>Scenario</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Scenario - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType whose typical parts are other ModemIndividualTypes that are organised into a typical temporal sequence.</p>                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b>ServiceDelivery</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceDelivery - ServiceDeliveryState</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ServiceDelivery - ServiceDeliveryType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Undertaking that is a realization of a ServiceSpecification - i.e. the delivery of Service according to that specification. Note a ServiceDelivery is an Individual whose extent is the fusion of all the processes, people, systems that go into delivering a service. Example: the ongoing building management service provided to MOD by Amey for Main Building.</p> |
| <p><b>ServiceDeliveryPart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceDeliveryPart - ModemIndividualElement</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ServiceDeliveryPart - ServiceDeliveryPartType</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                                                                                                                                                                                      |

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| <p>-</p> <p>A ModemIndividualType that is part of a ServiceDelivery.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>ServiceDeliveryPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceDeliveryPartType - ModemIndividualElementType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ServiceDeliveryPart.</p>                                                                                                                                                                                                             |
| <p><b>ServiceDeliveryState</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceDeliveryState - ServiceDeliveryPart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ServiceDeliveryState - ServiceDeliveryStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ServiceDeliveryPart that is a temporal part of a ServiceDelivery - i.e. all of the ServiceDelivery for a period of time.</p> |
| <p><b>ServiceDeliveryStateType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceDeliveryStateType - ServiceDeliveryPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ServiceDeliveryState.</p>                                                                                                                                                                                                             |
| <p><b>ServiceDeliveryType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceDeliveryType - ServiceDeliveryStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ServiceDelivery.</p>                                                                                                                                                                                                                           |
| <p><b>ServiceDeliveryWholeAndPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceDeliveryWholeAndPartType - ServiceDeliveryWholeStateType</p> <p>Association (source - target): «place2Type»</p> <p>ServiceDeliveryWholeAndPartType - ServiceDeliveryType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The Powertype of serviceDeliveryWholeAndPart.</p>                                                                  |

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| <p><b>ServiceDeliveryWholeFacadeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceDeliveryWholeFacadeType - ServiceDeliveryWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>ServiceDeliveryWholeFacadeType - ServiceFacadeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of serviceDeliveryWholeFacade.</p>                                                                                                                                              |
| <p><b>ServiceDeliveryWholePartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceDeliveryWholePartType - ModemWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>ServiceDeliveryWholePartType - ServiceDeliveryPartType</p> <p>Association (source - target): «place1Type»</p> <p>ServiceDeliveryWholePartType - ServiceDeliveryType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of serviceDeliveryWholePart.</p>                                             |
| <p><b>ServiceDeliveryWholeStateType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceDeliveryWholeStateType - ModemTemporalWholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceDeliveryWholeStateType - ServiceDeliveryWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>ServiceDeliveryWholeStateType - ServiceDeliveryStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of serviceDeliveryWholeState.</p> |
| <p><b>ServiceFacade</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceFacade - ServiceDeliveryPart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ServiceFacade - ServiceFacadeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ServiceDeliveryPart that is the extent of all the parts of a ServiceDelivery that are concerned with communication with consumers. A ServiceFacade may be specified by a ServiceInterface.</p>                                |
| <p><b>ServiceFacadeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceFacadeType - ServiceDeliveryPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ServiceFacade.</p>                                                                                                                                                                                                                                                                                                       |

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| <p><b>SituationType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>SituationType - EnvironmentalFactor</p> <p><u>Attributes:</u></p> <p>-</p> <p>An EnvironmentalFactor used to describe the types and levels of threat under which an Enterprise may operate. Examples: Corrosive, Fire, Smoke, Peaceful, Under Fire, Under Heavy Fire, etc.</p>                                                                                                                                                                                                                       |
| <p><b>StartsAfter</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StartsAfter - WeakTemporalOrderingType</p> <p>Association (source - target):«place2Type»</p> <p>StartsAfter - TriggerItem</p> <p>Association (source - target):«place1Type»</p> <p>StartsAfter - TriggerItem</p> <p><u>Attributes:</u></p> <p>-</p> <p>A WeakTemporalOrderingType that asserts one TriggerItem starts before another. Note: there is constraint on when either TriggerItem ends - hence if A starts before B, it is possible that B ends before A and indeed that A ends before B.</p> |
| <p><b>StartsImmediatelyAfter</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StartsImmediatelyAfter - StartsAfter</p> <p>Association (source - target):«place2Type»</p> <p>StartsImmediatelyAfter - TriggerItem</p> <p>Association (source - target):«place1Type»</p> <p>StartsImmediatelyAfter - TriggerItem</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StartsAfter where the subsequent TriggerItem starts immediately after the preceeding TriggerItem.</p>                                                                                                          |
| <p><b>StateMachine</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StateMachine - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StateMachine - StateMachineViews</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StateMachineViews used to model typical states and transitions for ModemIndividualElementTypes.</p>                                                                                                                                                                                                              |
| <p><b>StateMachineRegion</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StateMachineRegion - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StateMachineRegion - StateMachineRegions</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StateMachineRegions which is part of a StateMachine.</p>                                                                                                                                                                                                                                     |

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| <p><b>StateSpecification</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StateSpecification - TriggerItem</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StateSpecification - OwnedStateSets</p> <p><u>Attributes:</u></p> <p>-</p> <p>An OwnedStateSets used in a MODEM state machine.</p>                                                                                                                         |
| <p><b>StateTransition</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StateTransition - StateSetTransitions</p> <p>Association (source - target):«place2Type»</p> <p>StateTransition - StateSpecification</p> <p>Association (source - target):«place1Type»</p> <p>StateTransition - StateSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StateSuccessionType indicating there is a possible transition between StateSpecifications.</p> |
| <p><b>StatusOfThreadType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StatusOfThreadType - ModemTemporalWholePartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of statusOfThread.</p>                                                                                                                                                                                                                                       |
| <p><b>TerrainType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>TerrainType - EnvironmentalFactor</p> <p><u>Attributes:</u></p> <p>-</p> <p>An EnvironmentalFactor that defines the type of ground conditions that an Enterprise may operate in.</p> <p>Note: TerrainType is a subtype of GeopoliticalLocationStateType as the terrain may change over time (e.g. muddy, frozen ground, deep snow, etc.)</p>                                     |
| <p><b>ThreadStatusType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ThreadStatusType - ProjectPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ThreadStatus.</p>                                                                                                                                                                                                                                                        |
| <p><b>TriggerItem</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>TriggerItem - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                                                                                                                                                         |

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| <p>A ModafIndividualType that can be the cause or effect of a Trigger.</p> <p><b>TypicalTemporalWholePart</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>TypicalTemporalWholePart - ModemTemporalWholePartType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>TypicalTemporalWholePart - TypicalWholePart</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>TypicalTemporalWholePart - ModemIndividualType</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>TypicalTemporalWholePart - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart where the instances of the partType are temporal parts of instances of the wholeType.</p> |
| <p><b>TypicalWholePart</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>TypicalWholePart - ModemWholePartType</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>TypicalWholePart - ModemIndividualType</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>TypicalWholePart - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModafWholePartType where types of whole and part are ModafIndividalTypeElements</p> <p>Note : this is used in AV-2 to model typical whole-part relationships between ModafIndividualTypeElements</p>                                                                                                                                                            |
| <p><b>URI</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>URI - MetaData</p> <p><u>Attributes:</u></p> <p>-</p> <p>A MetaData that is a uniform resource identifier.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>URL</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>URL - URI</p> <p><u>Attributes:</u></p> <p>-</p> <p>A URI that is a uniform resource location.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>URN</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>URN - URI</p> <p><u>Attributes:</u></p> <p>-</p> <p>A URI that is a uniform resource name.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <p><b>Undertaking</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Undertaking - Process</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Undertaking - UndertakingState</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Undertaking - UndertakingType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Process that is intended to deliver something.</p>                                           |
| <p><b>UndertakingPart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UndertakingPart - ModemIndividualElement</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UndertakingPart - ProcessPart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>UndertakingPart - UndertakingPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualElement that is part of an Undertaking.</p>     |
| <p><b>UndertakingPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UndertakingPartType - ProcessPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of UndertakingPart.</p>                                                                                                                                                                                                                                                                  |
| <p><b>UndertakingState</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UndertakingState - UndertakingPart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UndertakingState - ProcessState</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>UndertakingState - UndertakingStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An UndertakingPart that is a temporal part of an Undertaking.</p> |
| <p><b>UndertakingStateType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UndertakingStateType - UndertakingPartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UndertakingStateType - ProcessStateType</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                              |

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| <p>The powertype of UndertakingState.</p> <p><b>UndertakingType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UndertakingType - ProcessType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UndertakingType - UndertakingStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of Undertaking.</p>                                                                                                                             |
| <p><b>UndertakingWholeAndPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UndertakingWholeAndPartType - UndertakingWholeStateType</p> <p>Association (source - target): «place2Type»</p> <p>UndertakingWholeAndPartType - UndertakingType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of undertakingWholeAndPart.</p>                                                                                                                                   |
| <p><b>UndertakingWholePartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UndertakingWholePartType - ModemWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>UndertakingWholePartType - UndertakingPartType</p> <p>Association (source - target): «place1Type»</p> <p>UndertakingWholePartType - UndertakingType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of undertakingWholePart.</p>                                             |
| <p><b>UndertakingWholeStateType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UndertakingWholeStateType - UndertakingWholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UndertakingWholeStateType - ModemTemporalWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>UndertakingWholeStateType - UndertakingStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of undertakingWholeState.</p> |
| <p><b>WeatherConditions</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>WeatherConditions - EnvironmentalFactor</p> <p><u>Attributes:</u></p> <p>-</p> <p>An EnvironmentalFactor that defines the type of weather in which an Enterprise may operate.</p>                                                                                                                                                                                                                        |

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| <p><b>WholeLifeEnterprise</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> WholeLifeEnterprise - EnterprisePhase<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> WholeLifeEnterprise - Undertaking<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> WholeLifeEnterprise - Agent<br/> <u>Attributes:</u><br/> -<br/> An EnterprisePhase that represents the whole existence of an enterprise.</p>                                                                                                                                |
| <p><b>appliedStateMachine</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> appliedStateMachine - ModemThing<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> appliedStateMachine - stateMachineViewStateTypeOwners<br/> <i>Association (source - target):</i> «place1Type»<br/> appliedStateMachine - ModemIndividualElementType<br/> <i>Association (source - target):</i> «place2Type»<br/> appliedStateMachine - StateMachine<br/> <u>Attributes:</u><br/> -<br/> A stateMachineViewStateTypeOwners that relates a ModemIndividualElement to its state machine.</p> |
| <p><b>approved</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> approved - ModemThing<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> approved - couple<br/> <i>Association (source - target):</i> «place2Type»<br/> approved - ADElement<br/> <i>Association (source - target):</i> «place1Type»<br/> approved - ArchitectureApprovalMilestone<br/> <u>Attributes:</u><br/> -<br/> A couple that relates an ArchitectureApprovalMilestone to the ADElement that is approved.</p>                                                                                     |
| <p><b>approver</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> approver - couple<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> approver - ModemThing<br/> <i>Association (source - target):</i> «place2Type»<br/> approver - ResponsibleHumanResource<br/> <i>Association (source - target):</i> «place1Type»<br/> approver - ArchitectureApprovalMilestone<br/> <u>Attributes:</u><br/> =</p>                                                                                                                                                                     |

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| <p>A couple that relates an ArchitectureApprovalMilestone to the ResponsibleHumanResource that approved it.</p> <p><b>architectureMetaData</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>architectureMetaData - metaDataAnnotation</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>architectureMetaData - ADElement</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>architectureMetaData - MetaData</p> <p><u>Attributes:</u></p> <p>-</p> <p>A metaDataAnnotation that relates a MetaData element to the ArchitectureDescription it annotates.</p>                                                                                                                                                           |
| <p><b>architectureRealisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>architectureRealisation - modemIndividualTypeSpecialisation</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>architectureRealisation - LogicalArchitecture</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>architectureRealisation - PhysicalArchitecture</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that asserts that a PhysicalArchitecture is a realisation of a LogicalArchitecture</p>                                                                                                                                                                                                   |
| <p><b>architectureReference</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>architectureReference - ModemThing</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>architectureReference - couple</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>architectureReference - correspondence</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>architectureReference - ArchitectureDescription</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>architectureReference - ArchitectureDescription</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that relates an ArchitectureDescription to another ArchitectureDescription it refers to.</p> |
| <p><b>assumption</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>assumption - architectureMetaData</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>assumption - ADElement</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>assumption - MetaData</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                                                                                                                                                                                                                                                                          |

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| <p>A describedBy that states an assumption about an ADElement. Note: Any given ADElement may have zero to many assumptions.</p> <p><b>categoryOfMetaData</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place2Type»</p> <p>categoryOfMetaData - MetaData</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>categoryOfMetaData - typeInstance</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>categoryOfMetaData - ModemThing</p> <p>Association (source - target):«place1Type»</p> <p>categoryOfMetaData - MetaDataCategory</p> <p><u>Attributes:</u></p> <p>-</p> <p>A typeInstance that relates a MetaData element to its category.</p> |
| <p><b>constraintOnIndividual</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place2Type»</p> <p>constraintOnIndividual - ModemIndividualElement</p> <p>Association (source - target):«place1Type»</p> <p>constraintOnIndividual - Constraint</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>constraintOnIndividual - modemIndividualTypeInstance</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts a constraint placed upon a ModemThing related to a ModemThing.</p>                                                                                                                                                                                   |
| <p><b>constraintOnType</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>constraintOnType - modemIndividualTypeSpecialisation</p> <p>Association (source - target):«place2Type»</p> <p>constraintOnType - ModemIndividualType</p> <p>Association (source - target):«place1Type»</p> <p>constraintOnType - Constraint</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubtype that asserts all the instances of the subType object are subject to the constraint.</p>                                                                                                                                                                                          |
| <p><b>createdBy</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>createdBy - couple</p> <p>Association (source - target):«place2Type»</p> <p>createdBy - ResponsibleHumanResource</p> <p>Association (source - target):«place1Type»</p> <p>createdBy - ADElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts a ResponsibleHumanResource is the creator of an ADElement. Note: this covers the creatingOrganisation and architect tags that were applied to ArchitectureDescription in M3.</p>                                                                                                                                             |

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| <p><b>definition</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>definition - metaDataAnnotation</p> <p>Association (source - target): «place1Type»</p> <p>definition - ModemThing</p> <p><u>Attributes:</u></p> <p>-</p> <p>A metaDataAnnotation that provides the definition for a ModemThing.</p>                                                                                                                                                                                                                                                                                   |
| <p><b>delayRange</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»</p> <p>delayRange - Delay</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>delayRange - measureOfType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>delayRange - ModemThing</p> <p>Association (source - target): «place1Type»</p> <p>delayRange - TimeRange</p> <p><u>Attributes:</u></p> <p>-</p> <p>A measureOfType that relates a LogicalDelay to the TimeRange in which it falls.</p>                                                                                         |
| <p><b>delayTime</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>delayTime - ModemThing</p> <p>Association (source - target): «place2Type»</p> <p>delayRange - Delay</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>delayRange - measureOfType</p> <p>Association (source - target): «place1Type»</p> <p>delayRange - Time</p> <p><u>Attributes:</u></p> <p>-</p> <p>A measureOfType that relates a LogicalDelay to its Time.</p>                                                                                                                       |
| <p><b>designReleasedAtMilestone</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>designReleasedAtMilestone - couple</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>designReleasedAtMilestone - ModemThing</p> <p>Association (source - target): «place1Type»</p> <p>designReleasedAtMilestone - ResourceType</p> <p>Association (source - target): «place2Type»</p> <p>designReleasedAtMilestone - ProjectMilestone</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that indicates a ResourceType is released as a design at a ProjectMilestone.</p> |

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| <p><b>designWithdrawnAtMilestone</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>designWithdrawnAtMilestone - couple</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>designWithdrawnAtMilestone - ModemThing</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>designWithdrawnAtMilestone - ResourceType</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>designWithdrawnAtMilestone - ProjectMilestone</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that indicates a ResourceType was withdrawn as a design at a ProjectMilestone.</p>                                                                                                                         |
| <p><b>enduringTaskWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>enduringTaskWholePart - undertakingWholePart</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>enduringTaskWholePart - EnduringTaskPart</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>enduringTaskWholePart - EnduringTask</p> <p><u>Attributes:</u></p> <p>-</p> <p>An undertakingWholePart where the whole is an EnduringTask.</p>                                                                                                                                                                                                                                                                                         |
| <p><b>enterpriseStructure</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>enterpriseStructure - agentWholeAndPart</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>enterpriseStructure - undertakingWholeAndPart</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>enterpriseStructure - enterpriseWholePhase</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>enterpriseStructure - WholeLifeEnterprise</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>enterpriseStructure - WholeLifeEnterprise</p> <p><u>Attributes:</u></p> <p>-</p> <p>A wholePart that asserts that one EnterprisePhase is a spatial part of another.</p> |
| <p><b>enterpriseTemporalPart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>enterpriseTemporalPart - undertakingWholeState</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>enterpriseTemporalPart - agentWholeState</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>enterpriseTemporalPart - enterpriseWholePart</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>enterpriseTemporalPart - EnterprisePhase</p>                                                                                                                                                                                                                                |

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| <p><i>Association (source - target):</i> «place1Type»<br/>enterpriseTemporalPart - EnterprisePhase</p> <p><u>Attributes:</u></p> <p>-</p> <p>An enterpriseStructure and a temporalWholePart that asserts that one EnterprisePhase is a temporal part of another (i.e. it is a phase of the other).</p>                                                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>enterpriseWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>enterpriseWholePart - agentWholePart</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>enterpriseWholePart - undertakingWholePart</p> <p><i>Association (source - target):</i> «place2Type»<br/>enterpriseWholePart - EnterprisePart</p> <p><i>Association (source - target):</i> «place1Type»<br/>enterpriseWholePart - WholeLifeEnterprise</p> <p><u>Attributes:</u></p> <p>-</p> <p>An agentWholePart where the whole is a WholeLifeEnterprise and the part is an EnterprisePart.</p> |
| <p><b>enterpriseWholePhase</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>enterpriseWholePhase - enterpriseTemporalPart</p> <p><i>Association (source - target):</i> «place2Type»<br/>enterpriseWholePhase - EnterprisePhase</p> <p><i>Association (source - target):</i> «place1Type»<br/>enterpriseWholePhase - WholeLifeEnterprise</p> <p><u>Attributes:</u></p> <p>-</p> <p>An enterpriseTemporalPart where whole is a WholeLifeEnterprise.</p>                                                                                                                                                |
| <p><b>environmentalContext</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>environmentalContext - couple</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>environmentalContext - ModemThing</p> <p><i>Association (source - target):</i> «place2Type»<br/>environmentalContext - EnvironmentalFactor</p> <p><i>Association (source - target):</i> «place1Type»<br/>environmentalContext - MeasureInContext</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that relates a MeasureInContext to an EnvironmentalFactor in order to qualify the measure.</p>      |
| <p><b>finding</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>finding - architectureMetaData</p> <p><i>Association (source - target):</i> «place2Type»<br/>finding - MetaData</p>                                                                                                                                                                                                                                                                                                                                                                                                                   |

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| <p><i>Association (source - target):</i>«place1Type»<br/> finding - StructuredADElement</p> <p><u>Attributes:</u><br/> -</p> <p>A describedBy that describes a finding about an ArchitectureDescription. Note: Any given ADElement may have zero to many findings.</p>                                                                                                                                                                                                                                                                        |
| <p><b>individualFacade</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u><br/> <i>Dependancy (element - is instance of):</i>«IDEAS:powertypeInstance»<br/> individualFacade - IndividualFacadeType<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> individualFacade - modemWholePart</p> <p><u>Attributes:</u><br/> -</p> <p>A modemWholePart where the part is an outer part of another ModemIndividualElement.</p>                                                                                            |
| <p><b>locatedAt</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> locatedAt - modemWholePart<br/> <i>Association (source - target):</i> «place1Type»<br/> locatedAt - ModemIndividualElement<br/> <i>Association (source - target):</i> «place2Type»<br/> locatedAt - PointLocation</p> <p><u>Attributes:</u><br/> -</p> <p>A modafWholePart relating an MODAIndividualElement to a PointLocation that is within the extent of the MODAIndividualElement.</p> |
| <p><b>locatedIn</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> locatedIn - modemWholePart<br/> <i>Association (source - target):</i> «place2Type»<br/> locatedIn - ModemIndividualElement<br/> <i>Association (source - target):</i> «place1Type»<br/> locatedIn - GeopoliticalLocation</p> <p><u>Attributes:</u><br/> -</p> <p>A modafWholePart that relates a ModafIndividualElement to the GeopoliticalLocation it is in.</p>                           |
| <p><b>locationNamedBy</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> locationNamedBy - namedBy<br/> <i>Association (source - target):</i>«place1Type»<br/> locationNamedBy - Location<br/> <i>Association (source - target):</i>«place2Type»<br/> locationNamedBy - GeoName</p> <p><u>Attributes:</u><br/> -</p> <p>A namedBy that identifies a Location.</p>                                                                                               |

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| <p><b>logicalArchitectureOfEnterprisePhase</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>logicalArchitectureOfEnterprisePhase - exhibits</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>logicalArchitectureOfEnterprisePhase - modemIndividualTypeInstance</p> <p>Association (source - target): «place1Type»</p> <p>logicalArchitectureOfEnterprisePhase - LogicalArchitecture</p> <p>Association (source - target): «place2Type»</p> <p>logicalArchitectureOfEnterprisePhase - EnterprisePhase</p> <p><u>Attributes:</u></p> <p>-</p> <p>Relates an EnterprisePhase to a LogicalArchitecture that specifies its (logical) structure and behaviour.</p> |
| <p><b>metaDataAnnotation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>metaDataAnnotation - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>metaDataAnnotation - representedBy</p> <p>Association (source - target): «place1Type»</p> <p>metaDataAnnotation - ModemThing</p> <p>Association (source - target): «place2Type»</p> <p>metaDataAnnotation - MetaData</p> <p><u>Attributes:</u></p> <p>-</p> <p>A representedBy that relates a MetaData element to the ModafThing it describes.</p>                                                                                                                                                 |
| <p><b>modeller</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>modeller - modemWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>modeller - agentParticipation</p> <p>Association (source - target): «place1Type»</p> <p>modeller - Person</p> <p>Association (source - target): «place2Type»</p> <p>modeller - ModellingSession</p> <p><u>Attributes:</u></p> <p>-</p> <p>An agentParticipation where a Person conducts a ModellingSession.</p>                                                                                                                                                                                                    |
| <p><b>modellingSessionInProject</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>modellingSessionInProject - processWholeRoleExtentPart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>modellingSessionInProject - projectWholePart</p> <p>Association (source - target): «place1Type»</p> <p>modellingSessionInProject - ArchitectureProject</p> <p>Association (source - target): «place2Type»</p> <p>modellingSessionInProject - ModellingSession</p>                                                                                                                                                                                                    |

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| <p><u>Attributes:</u></p> <p>-</p> <p>A projectWholePart relating a ModellingSession to the ArchitectureProject it is part of.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>modemIndividualTypeInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> modemIndividualTypeInstance - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> modemIndividualTypeInstance - typeInstance</p> <p>Association (source - target): «place2Type»<br/> modemIndividualTypeInstance - ModemIndividualElement</p> <p>Association (source - target): «place1Type»<br/> modemIndividualTypeInstance - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A typeInstance used to assert that a ModemIndividualElement is an instance of a ModemIndividualType.</p>                                                                                                                                            |
| <p><b>modemIndividualTypeSpecialisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> modemIndividualTypeSpecialisation - superSubtype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> modemIndividualTypeSpecialisation - ModemThing</p> <p>Association (source - target): «place2Type»<br/> modemIndividualTypeSpecialisation - ModemIndividualType</p> <p>Association (source - target): «place1Type»<br/> modemIndividualTypeSpecialisation - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubtype that expresses a specialisation relationship between ModemIndividualTypeElements.<br/> Note: This relationship is used to build specialisation hierarchies of ModemIndividualTypeElements in an AV-2.</p> |
| <p><b>modemTemporalWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> modemTemporalWholePart - modemWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> modemTemporalWholePart - temporalWholePart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»<br/> modemTemporalWholePart - ModemTemporalWholePartType</p> <p>Association (source - target): «place2Type»<br/> modemTemporalWholePart - ModemIndividualElement</p> <p>Association (source - target): «place1Type»<br/> modemTemporalWholePart - ModemIndividualElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A temporalWholePart relationship between two ModemIndividualElements.</p>                                                       |

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| <p><b>modemWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> modemWholePart - wholePart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»<br/> modemWholePart - ModemWholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> modemWholePart - ModemThing</p> <p>Association (source - target): «place2Type»<br/> modemWholePart - ModemIndividualElement</p> <p>Association (source - target): «place1Type»<br/> modemWholePart - ModemIndividualElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A wholePart relationship between ModemIndividualElements.</p>                                         |
| <p><b>organisationWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> organisationWholePart - undertakingWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> organisationWholePart - responsibleHumanResourceWholePart</p> <p>Association (source - target): «place2Type»<br/> organisationWholePart - OrganisationPart</p> <p>Association (source - target): «place1Type»<br/> organisationWholePart - Organisation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modafWholePart where the whole is an Organisation and the part is an OrganisationPart (i.e. a Post or Organisation).</p>                                        |
| <p><b>physicalArchitectureOfEnterprisePhase</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> physicalArchitectureOfEnterprisePhase - modemIndividualTypeInstance</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> physicalArchitectureOfEnterprisePhase - exhibits</p> <p>Association (source - target): «place1Type»<br/> physicalArchitectureOfEnterprisePhase - PhysicalArchitecture</p> <p>Association (source - target): «place2Type»<br/> physicalArchitectureOfEnterprisePhase - EnterprisePhase</p> <p><u>Attributes:</u></p> <p>-</p> <p>Relates an EnterprisePhase to a ResourceType that specifies its structure and behaviour.</p> |
| <p><b>projectTypeSpecialisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> projectTypeSpecialisation - modemIndividualTypeSpecialisation</p> <p>Association (source - target): «place2Type»<br/> projectTypeSpecialisation - ProjectType</p> <p>Association (source - target): «place1Type»<br/> projectTypeSpecialisation - ProjectType</p>                                                                                                                                                                                                                                                                                                                         |

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| <p><u>Attributes:</u></p> <p>-</p> <p>A modafIndividualTypeSpecialisation that asserts one ProjectType (subtype) is a special type of another (supertype).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>purpose</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>purpose - architectureMetaData</p> <p>Association (source - target):«place2Type»</p> <p>purpose - MetaData</p> <p>Association (source - target):«place1Type»</p> <p>purpose - StructuredADElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>An architectureMetaData that describes the purpose of a StructuredADElement.</p>                                                                                                                                    |
| <p><b>qualifiedMeasure</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>qualifiedMeasure - superSubtype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>qualifiedMeasure - ModemThing</p> <p>Association (source - target):«place1Type»</p> <p>qualifiedMeasure - Measure</p> <p>Association (source - target):«place2Type»</p> <p>qualifiedMeasure - MeasureInContext</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubtype that relates a MeasureInContext to the measure it qualifies.</p> |
| <p><b>recommendation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>recommendation - architectureMetaData</p> <p>Association (source - target):«place2Type»</p> <p>recommendation - MetaData</p> <p>Association (source - target):«place1Type»</p> <p>recommendation - StructuredADElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>An architectureMetaData that expresses a recommendation arising from a StructuredADElement.</p>                                                                                         |
| <p><b>regionOfStateMachine</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>regionOfStateMachine - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>regionOfStateMachine - stateMachineViewTypesRegionInstances</p> <p>Association (source - target):«place2Type»</p> <p>regionOfStateMachine - StateMachineRegion</p> <p>Association (source - target):«place1Type»</p> <p>regionOfStateMachine - StateMachine</p>                                                                    |

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| <p><u>Attributes:</u></p> <p>-</p> <p>A stateMachineViewTypesRegionInstances which relates a StateMachineRegion to a StateMachine.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>serviceDeliveryWholeAndPart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>serviceDeliveryWholeAndPart - serviceDeliveryWholeState</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>serviceDeliveryWholeAndPart - ServiceDeliveryWholeAndPart</p> <p>Association (source - target): «place2Type»</p> <p>serviceDeliveryWholeAndPart - ServiceDelivery</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ServiceDeleiveryWholeState where both the whole and part are ServiceDeliveries.</p>                                                                                               |
| <p><b>serviceDeliveryWholeFacade</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>serviceDeliveryWholeFacade - serviceDeliveryWholePart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>serviceDeliveryWholeFacade - ServiceDeliveryWholeFacadeType</p> <p>Association (source - target): «place2Type»</p> <p>serviceDeliveryWholeFacade - ServiceFacade</p> <p><u>Attributes:</u></p> <p>-</p> <p>A serviceDeliveryWholePart where the part is a ServiceFacade.</p>                                                                                                                       |
| <p><b>serviceDeliveryWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>serviceDeliveryWholePart - modemWholePart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>serviceDeliveryWholePart - ServiceDeliveryWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>serviceDeliveryWholePart - ServiceDeliveryPart</p> <p>Association (source - target): «place1Type»</p> <p>serviceDeliveryWholePart - ServiceDelivery</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemWholePart where the whole is a ServiceDelivery and the part is a ServiceDeliveryPart.</p> |
| <p><b>serviceDeliveryWholeState</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>serviceDeliveryWholeState - modemTemporalWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>serviceDeliveryWholeState - serviceDeliveryWholePart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>serviceDeliveryWholeState - ServiceDeliveryWholeStateType</p> <p>Association (source - target): «place2Type»</p> <p>serviceDeliveryWholeState - ServiceDeliveryState</p>                                                                                           |

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| <p><u>Attributes:</u></p> <p>-</p> <p>A serviceDeliveryWholePart where the part is a temporal part and is a ServiceDeliveryState.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>stateInRegion</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateInRegion - regionTypeInstances</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateInRegion - ModemThing</p> <p>Association (source - target): «place1Type»</p> <p>stateInRegion - StateMachineRegion</p> <p>Association (source - target): «place2Type»</p> <p>stateInRegion - StateSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A regionTypeInstance that asserts a StateSpecification features in a StateMachineRegion.</p>                                             |
| <p><b>stateTransitionInRegion</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateTransitionInRegion - regionTypeInstances</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateTransitionInRegion - ModemThing</p> <p>Association (source - target): «place1Type»</p> <p>stateTransitionInRegion - StateMachineRegion</p> <p>Association (source - target): «place2Type»</p> <p>stateTransitionInRegion - StateTransition</p> <p><u>Attributes:</u></p> <p>-</p> <p>A regionTypeInstance that asserts a StateTransition features in a StateMachineRegion.</p> |
| <p><b>toolUsed</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>toolUsed - couple</p> <p>Association (source - target): «place2Type»</p> <p>toolUsed - SoftwareType</p> <p>Association (source - target): «place1Type»</p> <p>toolUsed - StructuredADElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts a SoftwareType was used in the production of a StructuredADElement.</p>                                                                                                                                                                                            |
| <p><b>undertakingWholeAndPart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>undertakingWholeAndPart - undertakingWholeState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>undertakingWholeAndPart - processWholeAndPart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>undertakingWholeAndPart - UndertakingWholeAndPartType</p>                                                                                                                                                                                            |

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| <p><i>Association (source - target):</i> «place2Type»<br/>undertakingWholeAndPart - Undertaking</p> <p><u>Attributes:</u></p> <p>-</p> <p>An UndertakingWholeState where both the whole and part are Undertakings.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>undertakingWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>undertakingWholePart - modemWholePart</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>undertakingWholePart - processWholePart</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/>undertakingWholePart - UndertakingWholePartType</p> <p><i>Association (source - target):</i> «place2Type»<br/>undertakingWholePart - UndertakingPart</p> <p><i>Association (source - target):</i> «place1Type»<br/>undertakingWholePart - Undertaking</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemWholePart where an UndertakingPart is part of an Undertaking.</p>                                                        |
| <p><b>undertakingWholeState</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>undertakingWholeState - undertakingWholePart</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>undertakingWholeState - modemTemporalWholePart</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>undertakingWholeState - processWholeState</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/>undertakingWholeState - UndertakingWholeStateType</p> <p><i>Association (source - target):</i> «place2Type»<br/>undertakingWholeState - UndertakingState</p> <p><u>Attributes:</u></p> <p>-</p> <p>An undertakingWholePart where the part is a temporal part of an Undertaking.</p> |
| <p><b>viewCode</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>viewCode - metaDataAnnotation</p> <p><i>Association (source - target):</i> «place2Type»<br/>viewCode - MetaData</p> <p><i>Association (source - target):</i> «place1Type»<br/>viewCode - ArchitectureViewpoint</p> <p><u>Attributes:</u></p> <p>-</p> <p>A metaDataAnnotation that uses MetaData to represent the short code that identifies an ArchitectureViewpoint. Note that viewCode and viewDescription from M3 are handled using the core IDEAS description and naming patterns.</p>                                                                                                                                                                                                     |

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| <p><b>webReference</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>webReference - metaDataAnnotation</p> <p>Association (source - target): «place1Type»</p> <p>webReference - ModemThing</p> <p>Association (source - target): «place2Type»</p> <p>webReference - URI</p> <p><u>Attributes:</u></p> <p>-</p> <p>A metaDataAnnotation that asserts URI contains information about a ModemThing.</p> |
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| All Views Foundation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <p><b>ModemIndividualElement</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ModemIndividualElement - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ModemIndividualElement - ModemIndividualElementOrModemIndividualType</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ModemIndividualElement - ModafIndividualElementType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ModemIndividualElement - Individual</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Individual that can feature in a MODEM architecture.</p> |
| <p><b>ModafIndividualElementType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ModafIndividualElementType - IndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ModafIndividualElement. Note - this is simply used to specify the set-theretic logic at the top of MODA. It should never be used in an architecture.</p>                                                                                                                                                                                                                                                                                      |
| <p><b>ModemThing</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ModemThing - Thing</p> <p><u>Attributes:</u></p> <p>-</p> <p>Any Thing that can feature in a MODEM Architecture. Note: things that appear in the MODEM metamodel will not necessarily be instances, unless they appear in an architecture.</p>                                                                                                                                                                                                                                                                                                                            |

## All Views ISO42010

**ADElement** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

ADElement - Representation

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

ADElement - ISO42010\_Thing

Attributes:

-

From ISO42010:

An AD element is any construct in an architecture description. AD elements are the most primitive constructs discussed in this International Standard. Every stakeholder, concern, architecture viewpoint, architecture view, model kind, architecture model, architecture decision and rationale (see 4.2.7) is considered an AD element. When viewpoints and model kinds are defined and their models are populated, additional AD elements are introduced.

**Architecture** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

Architecture - ISO42010\_Thing

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

Architecture - IndividualType

Attributes:

-

Fundamental concepts or properties of a system in its environment embodied in its elements, relationships, and in the principles of its design and evolution.

**ArchitectureDescription** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

ArchitectureDescription - StructuredADElement

*Dependency (element - is instance of):* «IDEAS:powertypeInstance»

ArchitectureDescription - ArchitectureDescriptionType

Attributes:

-

A work product used to express an architecture.

**ArchitectureDescriptionType** «IDEAS:Powertype»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

ArchitectureDescriptionType - ISO42010\_Thing

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

ArchitectureDescriptionType - RepresentationType

Attributes:

-

The powertype of ArchitectureDescription.

**ArchitectureFramework** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

ArchitectureFramework - ArchitectureDescriptionType

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

ArchitectureFramework - RepresentationScheme

Attributes:

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| <p>From ISO42010:</p> <p>Uses of architecture frameworks include, but are not limited to: creating architecture descriptions; developing architecture modelling tools and architecting methods; and establishing processes to facilitate communication, commitments and interoperation across multiple projects and/or organizations.</p> <p>NOTE 1 Architecture frameworks frequently encompass both provisions for architecture description and additional architecting practices.</p> <p>EXAMPLES The following are architecture frameworks in the terms of this International Standard: Zachman's information systems architecture framework [44], UK Ministry of Defence Architecture framework [27], The Open Group's Architecture Framework (TOGAF) [41], Kruchten's "4+1" view model [23], Siemens' 4 views method [10], Reference Model for Open Distributed Processing (RM-ODP), [ISO/IEC 10746] and Generalized Enterprise Reference Architecture (GERA) [ISO 15704].</p> |
| <p><b>ArchitectureModel</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>ArchitectureModel - ArchitectureModelType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ArchitectureModel - StructuredRepresentation</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ArchitectureModel - StructuredADElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>There is no no specific definition provided in ISO42010.</p>                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>ArchitectureModelType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ArchitectureModelType - ISO42010_Thing</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ArchitectureModelType - RepresentationType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ArchitectureModel.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>ArchitectureView</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>ArchitectureView - ArchitectureViewType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ArchitectureView - StructuredADElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>work product expressing the architecture of a system from the perspective of specific system concerns</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>ArchitectureViewType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ArchitectureModelType - RepresentationType</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ArchitectureViewType - ISO42010_Thing</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ArchitectureView.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <p><b>ArchitectureViewpoint</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ArchitectureViewpoint - ArchitectureViewType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ArchitectureViewpoint - ISO42010_Thing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ArchitectureViewpoint - RepresentationScheme</p> <p><u>Attributes:</u></p> <p>-</p> <p>Work product establishing the conventions for the construction, interpretation and use of architecture views to frame specific system concerns</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>Concern</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Concern - ISO42010_Thing</p> <p><u>Attributes:</u></p> <p>-</p> <p>From ISO42010:</p> <p>A concern could be held by one or more stakeholders. Concerns arise throughout the life cycle from system needs and requirements, from design choices and from implementation and operating considerations. A concern could be manifest in many forms, such as in relation to one or more stakeholder needs, goals, expectations, responsibilities, requirements, design constraints, assumptions, dependencies, quality attributes, architecture decisions, risks or other issues pertaining to the system.</p> <p>EXAMPLES The following are concerns in the terms of this International Standard: functionality, feasibility, usage, system purposes, system features, system properties, known limitations, structure, behavior, performance, resource utilization, reliability, security, information assurance, complexity, evolvability, openness, concurrency, autonomy, cost, schedule, quality of service, flexibility, agility, modifiability, modularity, control, inter-process communication, deadlock, state change, subsystem integration, data accessibility, privacy, compliance to regulation, assurance, business goals and strategies, customer experience, maintainability, affordability and disposability. The distribution transparencies described in the Reference Model of Open Distributed Processing [ISO/IEC 10746-1] are concerns in the terms of this International Standard. Software properties as described in SQUARE [ISO/IEC 25010:2011, 4.2] name concerns in the terms of this International Standard.</p> |
| <p><b>CorrespondenceRule</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>CorrespondenceRule - ISO42010_Thing</p> <p>Dependency (element - is instance of): «IDEAS:typeInstance»</p> <p>CorrespondenceRule - PlaceableType</p> <p><u>Attributes:</u></p> <p>-</p> <p>From ISO42010:</p> <p>Correspondence rules are used to enforce relations within an architecture description (or between architecture descriptions).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>ISO42010_Environment</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ISO42010_Environment - ISO42010_Thing</p> <p><u>Attributes:</u></p> <p>--</p> <p>Context determining the setting and circumstances of all influences upon a system</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>ISO42010_System</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ISO42010_System - ISO42010_Thing</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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| <p>-</p> <p>The term system is used in this International Standard to refer to entities whose architectures are of interest. The term is intended to encompass, but is not limited to, entities within the following domains:</p> <ul style="list-style-type: none"> <li>- systems as described in [ISO/IEC 15288]: “systems that are man-made and may be configured with one or more of the following: hardware, software, data, humans, processes (e.g., processes for providing service to users), procedures (e.g. operator instructions), facilities, materials and naturally occurring entities”;</li> <li>- software products and services as described in [ISO/IEC 12207];</li> <li>- software-intensive systems as described in [IEEE Std 1471TM:2000]: “any system where software contributes essential influences to the design, construction, deployment, and evolution of the system as a whole” to encompass “individual applications, systems in the traditional sense, subsystems, systems of systems, product lines, product families, whole enterprises, and other aggregations of interest”.</li> </ul> <p>This International Standard takes no position on what constitutes a system within those domains—or elsewhere. The nature of systems is not defined by this International Standard.</p> |
| <p><b>ISO42010_Thing</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ISO42010_Thing - Thing</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Thing that is described by the standard ISO 421010.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p><b>ModelKind</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ModelKind - ArchitectureModelType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ModelKind - RepresentationScheme</p> <p><u>Attributes:</u></p> <p>-</p> <p>Conventions for a type of modelling.</p> <p>NOTE Examples of model kinds include: data flow diagrams, class diagrams, Petri nets, balance sheets, organization charts and state transition models.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>ModelKindPartOfViewpoint</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ModelKindPartOfViewpoint - ModelPartOfViewType</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>ModelKindPartOfViewpoint - ArchitectureViewpoint</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>ModelKindPartOfViewpoint - ModelKind</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModelPartOfViewType where a ModelKind is a typical part of an ArchitectureViewpoint.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>ModelPartOfView</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ModelPartOfView - ISO42010_Thing</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>ModelPartOfView - ModelPartOfViewType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ModelPartOfView - WholePartType</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>ModelPartOfView - ArchitectureModel</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>ModelPartOfView - ArchitectureView</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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| <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>A WholePartType where an ArchitectureModel is part of an ArchitectureView.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>ModelPartOfViewType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ModelPartOfViewType - WholePartTypeType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ModelPartOfViewType - ISO42010_Thing</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>The powertype of ModelPartOfView</p>                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>Stakeholder</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Stakeholder - AgentCapableOfResponsibilityOrAgentCapableOfResponsibilityType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Stakeholder - ISO42010_Thing</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>An individual, team, organization, or classes thereof, having an interest in a system.</p>                                                                                                                                                                                                                                                                                                                      |
| <p><b>StructuredADElement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StructuredADElement - ADElement</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>An ADElement that has other ADElements as part of it. Note: this is not in ISO42010, but is required if the model is to be useful.</p>                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>ViewPartOfDescription</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ViewPartOfDescription - ISO42010_Thing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ViewPartOfDescription - WholePartType</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ViewPartOfDescription - ViewPartOfDescriptionType</p> <p>Association (source - target): «place2Type»</p> <p>ViewPartOfDescription - ArchitectureView</p> <p>Association (source - target): «place1Type»</p> <p>ViewPartOfDescription - ArchitectureDescription</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>A WholePartType where an ArchitectureView is part of an ArchitectureDescription.</p> |
| <p><b>ViewPartOfDescriptionType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ViewPartOfDescriptionType - ISO42010_Thing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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| ViewPartOfDescriptionType - WholePartTypeType<br><u>Attributes:</u><br>-<br>The powertype of ViewPartOfDescription.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>ViewpointPartOfFramework</b> «IDEAS:Type»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>ViewpointPartOfFramework - ViewPartOfDescriptionType<br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>ViewpointPartOfFramework - WholePartTypeType<br>Association (source - target): «place1Type»<br>ViewpointPartOfFramework - ArchitectureFramework<br>Association (source - target): «place2Type»<br>ViewpointPartOfFramework - ArchitectureViewpoint<br><u>Attributes:</u><br>-<br>A WholePartTypeType that asserts an ArchitectureViewpoint is part of an ArchitectureFramework.                                                                                                                                                                                                                        |
| <b>correspondence</b> «IDEAS:Type»<br><u>Connectors:</u><br>Association (source - target): «place1Type»<br>correspondence - ADElement<br>Dependency (element - is instance of): «IDEAS:typeInstance»<br>correspondence - PlaceableType<br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>correspondence - ISO42010_Thing<br>Association (source - target): «place2Type»<br>correspondence - ADElement<br><u>Attributes:</u><br>-<br>From ISO42010:<br>A correspondence defines a relation between AD elements. Correspondences are used to express architecture relations of interest within an architecture description (or between architecture descriptions). Correspondences can be governed by correspondence rules. Correspondence rules are used to enforce relations within an architecture description (or between architecture descriptions). |
| <b>exhibits</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>exhibits - ISO42010_Thing<br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>exhibits - couple<br>Association (source - target): «place2Type»<br>exhibits - ISO42010_System<br>Association (source - target): «place1Type»<br>exhibits - Architecture<br><u>Attributes:</u><br>-<br>A couple that asserts an ISO42010_System has an Architecture.                                                                                                                                                                                                                                                                                                                                                                         |

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| <p><b>expresses</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>expresses - Architecture</p> <p>Association (source - target): «place2Type»</p> <p>expresses - ArchitectureDescription</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>expresses - ISO42010_Thing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>expresses - representedBy</p> <p><u>Attributes:</u></p> <p>-</p> <p>A representedBy that asserts and an ArchitectureDescription represents an Architecture.</p>                                                                                                           |
| <p><b>frameworkGovernsDescription</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>frameworkGovernsDescription - ISO42010_Thing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>frameworkGovernsDescription - typeInstance</p> <p>Association (source - target): «place2Type»</p> <p>frameworkGovernsDescription - ArchitectureDescription</p> <p>Association (source - target): «place1Type»</p> <p>frameworkGovernsDescription - ArchitectureFramework</p> <p><u>Attributes:</u></p> <p>-</p> <p>A typeInstance relating an ArchitectureDescription to the ArchitectureFramework it conforms to.</p> |
| <p><b>modelKindGovernsModel</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>modelKindGovernsModel - ISO42010_Thing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>modelKindGovernsModel - typeInstance</p> <p>Association (source - target): «place2Type»</p> <p>modelKindGovernsModel - ArchitectureModel</p> <p>Association (source - target): «place1Type»</p> <p>modelKindGovernsModel - ModelKind</p> <p><u>Attributes:</u></p> <p>-</p> <p>A typeInstance where an ArchitecturalModel conforms to a ModelKind.</p>                                                                             |
| <p><b>ruleGovernsCorrespondence</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ruleGovernsCorrespondence - ISO42010_Thing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ruleGovernsCorrespondence - typeInstance</p> <p>Association (source - target): «place2Type»</p> <p>ruleGovernsCorrespondence - correspondence</p> <p>Association (source - target): «place1Type»</p> <p>ruleGovernsCorrespondence - CorrespondenceRule</p>                                                                                                                                                                 |

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| <p><u>Attributes:</u></p> <p>-</p> <p>A typeInstance relating a correspondence to the CorrespondenceRule that governs it.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>situatedIn</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>situatedIn - ISO42010_Thing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>situatedIn - couple</p> <p>Association (source - target): «place1Type»</p> <p>situatedIn - ISO42010_Environment</p> <p>Association (source - target): «place2Type»</p> <p>situatedIn - ISO42010_System</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that relates an ISO42010_Environment to a ISO42010_system. Note: This is probably a subtype of the union of wholePart and WholePartType.</p>                                                                                                                                                                          |
| <p><b>stakeholderConcern</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stakeholderConcern - couple</p> <p>Association (source - target): «place2Type»</p> <p>stakeholderConcern - Concern</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stakeholderConcern - ISO42010_Thing</p> <p>Association (source - target): «place1Type»</p> <p>stakeholderConcern - Stakeholder</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that relates a Concern to a stakeholder that have the Concern. Note: a concern may be held by more than one Stakeholder, hence there maybe multiple stakeholderConcerns.</p>                                                                                                                   |
| <p><b>systemConcern</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>systemConcern - Concern</p> <p>Association (source - target): «place2Type»</p> <p>systemConcern - ISO42010_System</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>systemConcern - ISO42010_Thing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>systemConcern - couple</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that relates an ISO42010_System to a Concern that is held against the system. NOTE A concern pertains to any influence on a system in its environment including: developmental, technological, business, operational, organizational, political, economic, legal, regulatory, ecological and social influences.</p> |

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| <p><b>viewpointGovernsView</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>viewpointGovernsView - ISO42010_Thing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>viewpointGovernsView - typeInstance</p> <p>Association (source - target): «place2Type»</p> <p>viewpointGovernsView - ArchitectureView</p> <p>Association (source - target): «place1Type»</p> <p>viewpointGovernsView - ArchitectureViewpoint</p> <p><u>Attributes:</u></p> <p>-</p> <p>A typeInstance where an ArchitectureView conforms to an ArchitectureViewpoint.</p> |
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| All Views Representation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <p><b>ElementInModel</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>ElementInModel - ArchitectureModel</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ElementInModel - RepresentationInStructure</p> <p>Association (source - target): «place2Type»</p> <p>ElementInModel - ModelElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A WholePartType relating a RepresentationElement to the ArchitecturalModel it is shown in.</p> |
| <p><b>ModelElement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ModelElement - ADElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A graphical element in an ArchitectureModel.</p>                                                                                                                                                                                                                                                        |
| <p><b>ModemIndividualElementOrModemIndividualType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ModemIndividualElementOrModemIndividualType - ModemThing</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemThing that collects all ModemIndividualElements and all ModemIndividualType elements.</p>                                                                                                                                         |
| <p><b>SvgCanvas</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SvgCanvas - ArchitectureModel</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SvgCanvas - SvgRepresentation</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                                             |

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| <p>An ArchitectureModel which uses the Scalable Vector Graphics (1.1) standard to encode the model canvas. The exemplar attribute is used to store the XML SVG code that defines the canvas - e.g.</p> <pre>&lt;svg:svg width="4cm" height="8cm" version="1.1"&gt;   &lt;/svg:svg&gt;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>SvgElement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SvgElement - SvgRepresentation</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SvgElement - ModelElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModelElement that is encoded using the Scaleable Vector Graphics (1.1) standard. An SvgElement can be any graphical element that is allowed by SVG v1.1 - e.g.</p> <p>The 'rect' element</p> <p>The 'circle' element</p> <p>The 'ellipse' element</p> <p>The 'line' element</p> <p>The 'polyline' element</p> <p>The 'polygon' element</p> <p>If the element is a group of other elements, then the SvgElementGroup should be used.</p> |
| <p><b>SvgElementGroup</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SvgElementGroup - SvgElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>An SvgElement that groups together other SvgElements. This corresponds to the &lt;g&gt; element in the Scaleable Vector Graphics Standard (v1.1).</p>                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>SvgElementInGroup</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SvgElementInGroup - RepresentationInStructure</p> <p>Association (source - target): «place2Type»</p> <p>SvgElementInGroup - SvgElement</p> <p>Association (source - target): «place1Type»</p> <p>SvgElementInGroup - SvgElementGroup</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RepresentationStructure.</p>                                                                                                                                                                                                                                                                                                        |
| <p><b>SvgElementOnCanvas</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>SvgElementOnCanvas - SvgCanvas</p> <p>Association (source - target): «place2Type»</p> <p>SvgElementOnCanvas - SvgElement</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SvgElementOnCanvas - ElementInModel</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ElementInModel relating an SvgElement to the SvgCanvas on which it is displayed.</p>                                                                                                                                                                                                                                                            |

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| <p><b>SvgRepresentation</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SvgRepresentation - Representation</p> <p><u>Attributes:</u></p> <p>exemplar</p> <p>A Representation where the exemplar text for the representation is and encoding in SVG XML that represents a graphical symbol.</p>                                                                                                                                                                                                                       |
| <p><b>representedModemThing</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>representedModemThing - ModemIndividualElementOrModemIndividualType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>representedModemThing - representedBy</p> <p>Association (source - target): «place2Type»</p> <p>representedModemThing - ModelElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A representedBy relating a ModemIndividualElementOrModemIndividualType to the ModelRepresentation that depicts it.</p> |

## 2.2.4 All Views additional diagrams

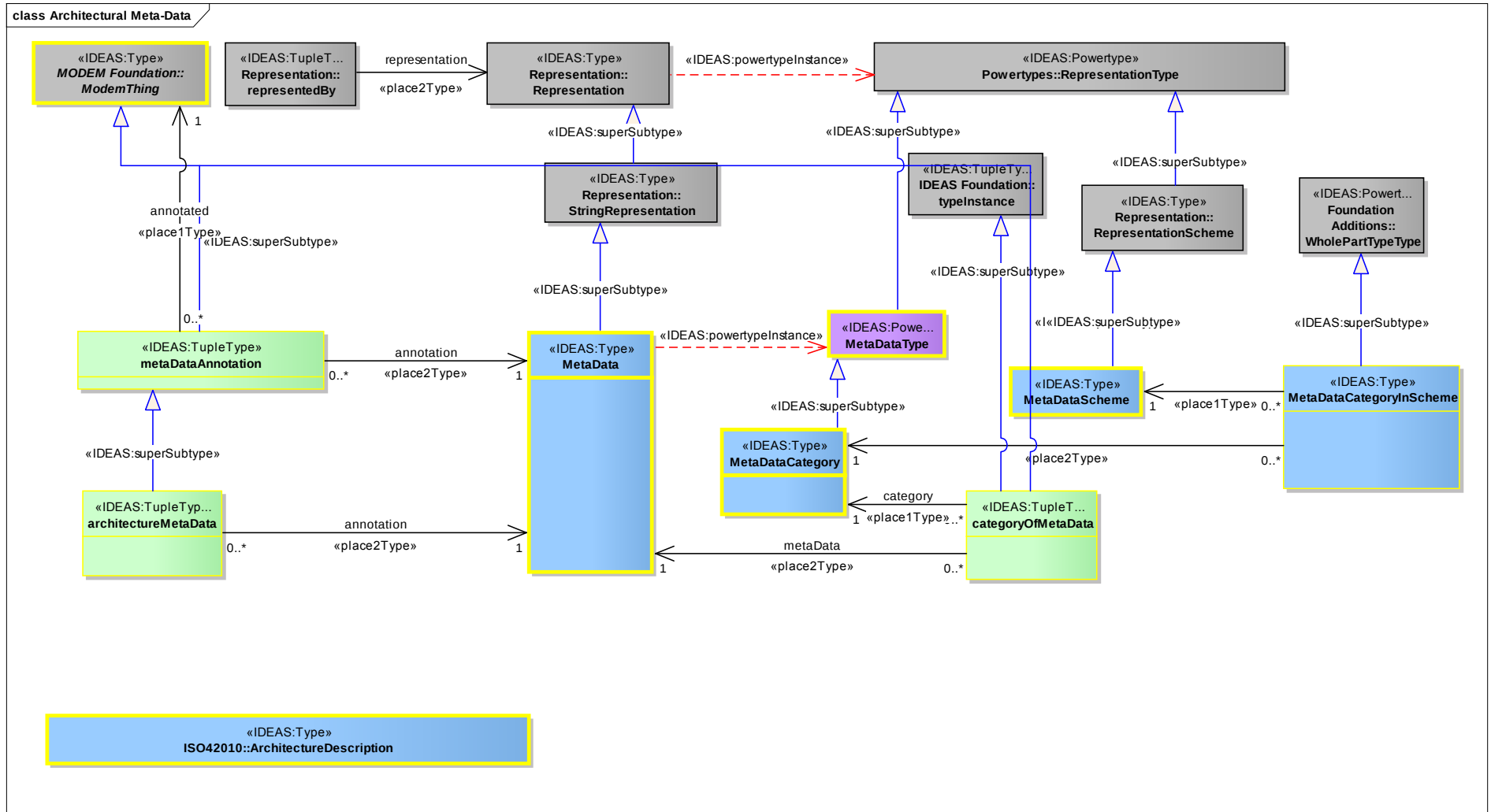


Figure 7 : Architectural Meta-Data

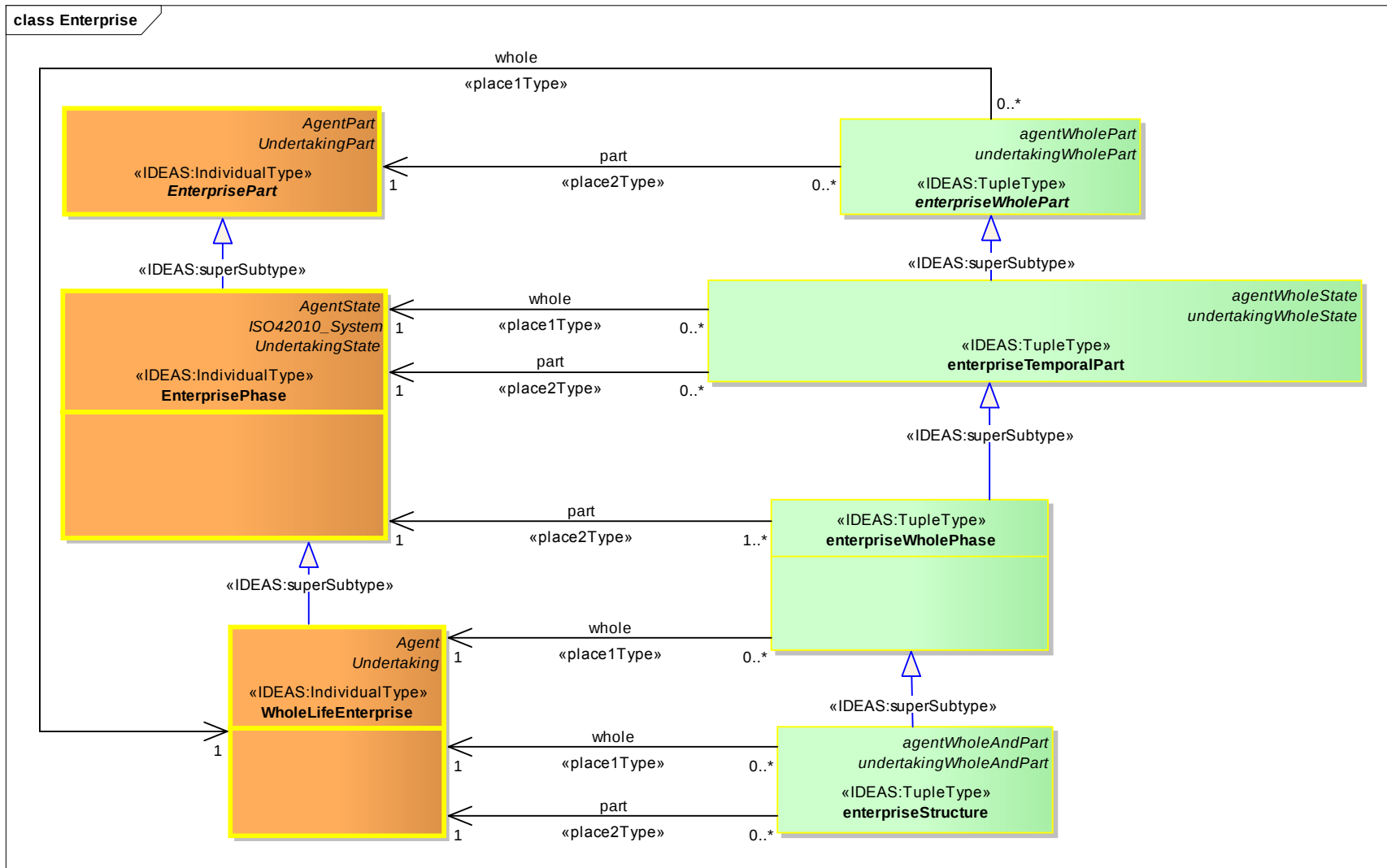


Figure 8 : Enterprise

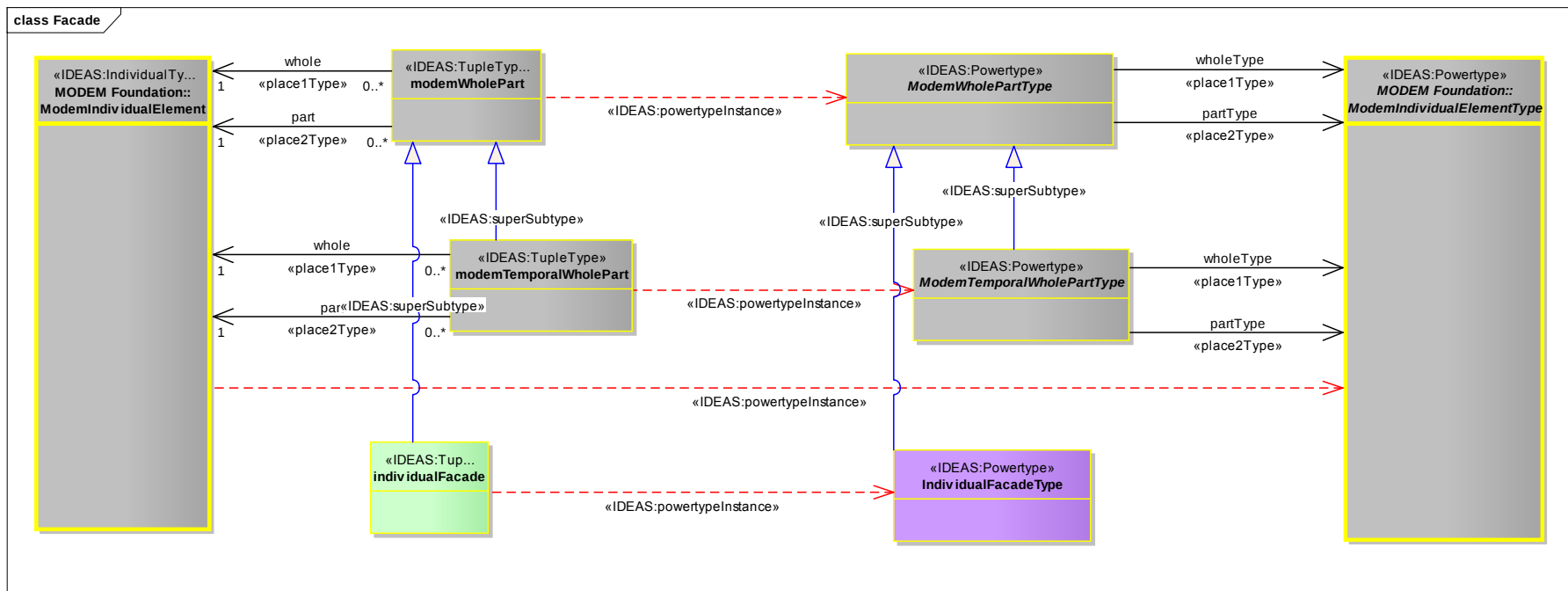


Figure 9 : Facade

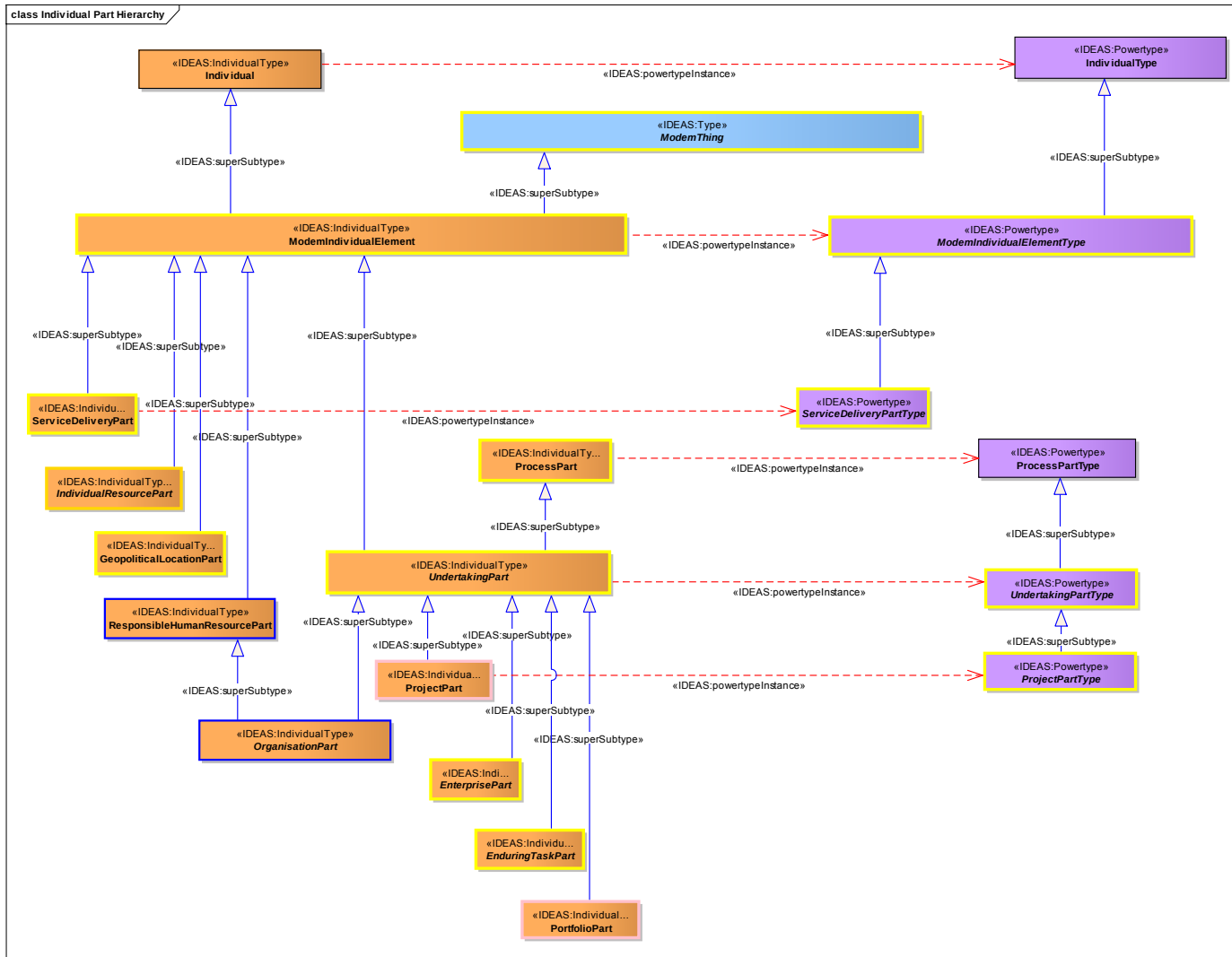


Figure 10 : Individual Part Hierarchy



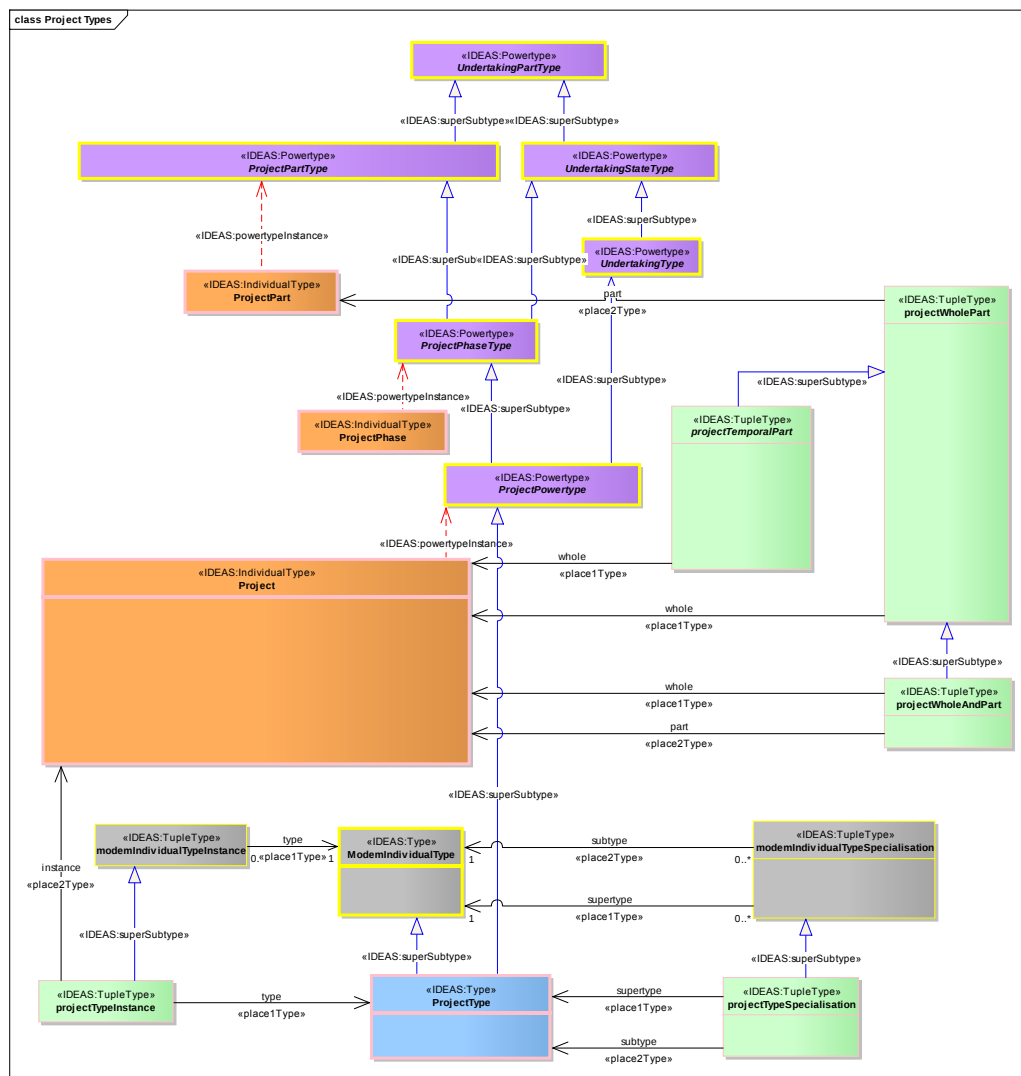


Figure 12 : Project Types

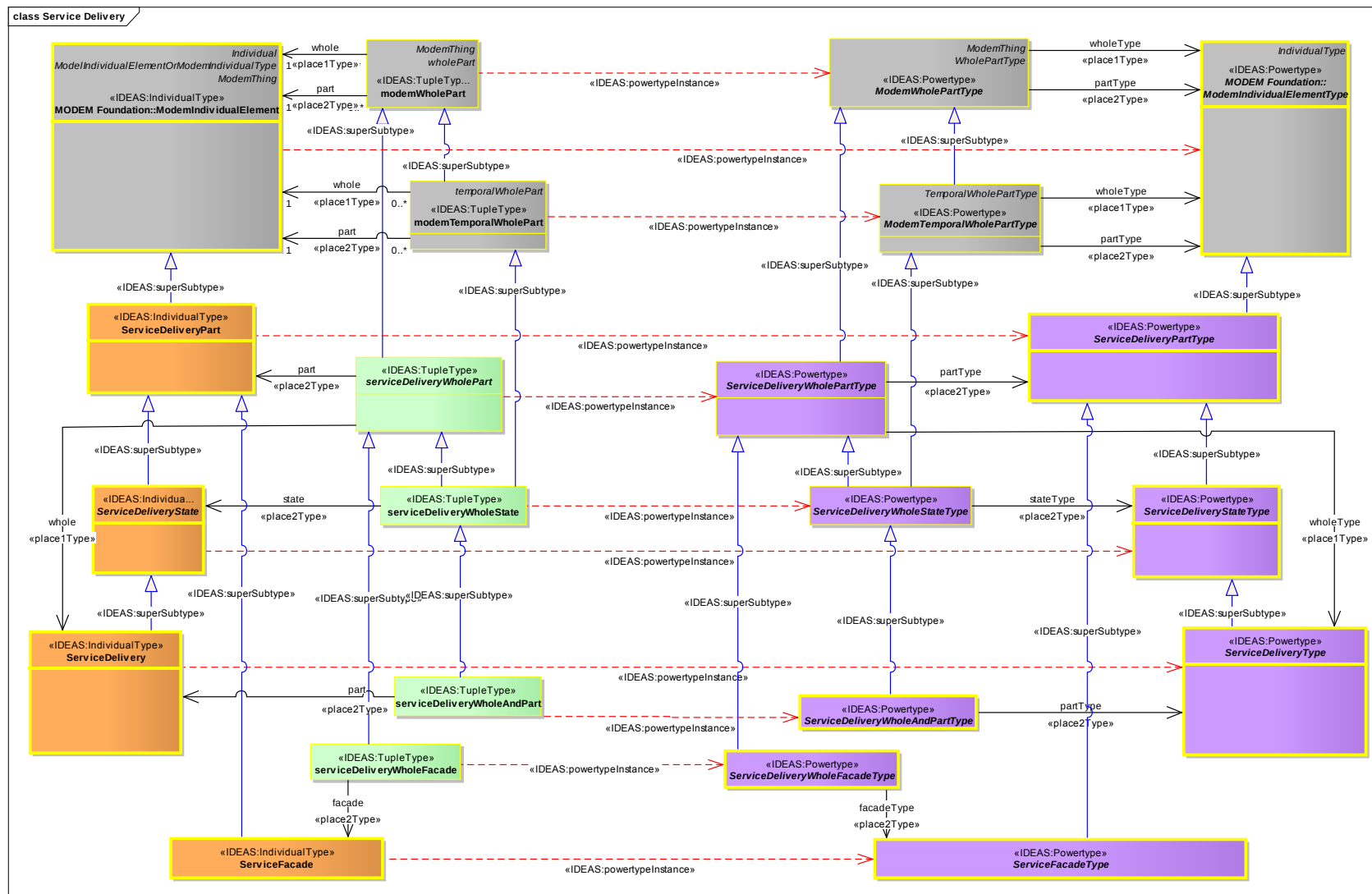


Figure 13 : Service Delivery

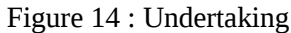


Figure 14 : Undertaking

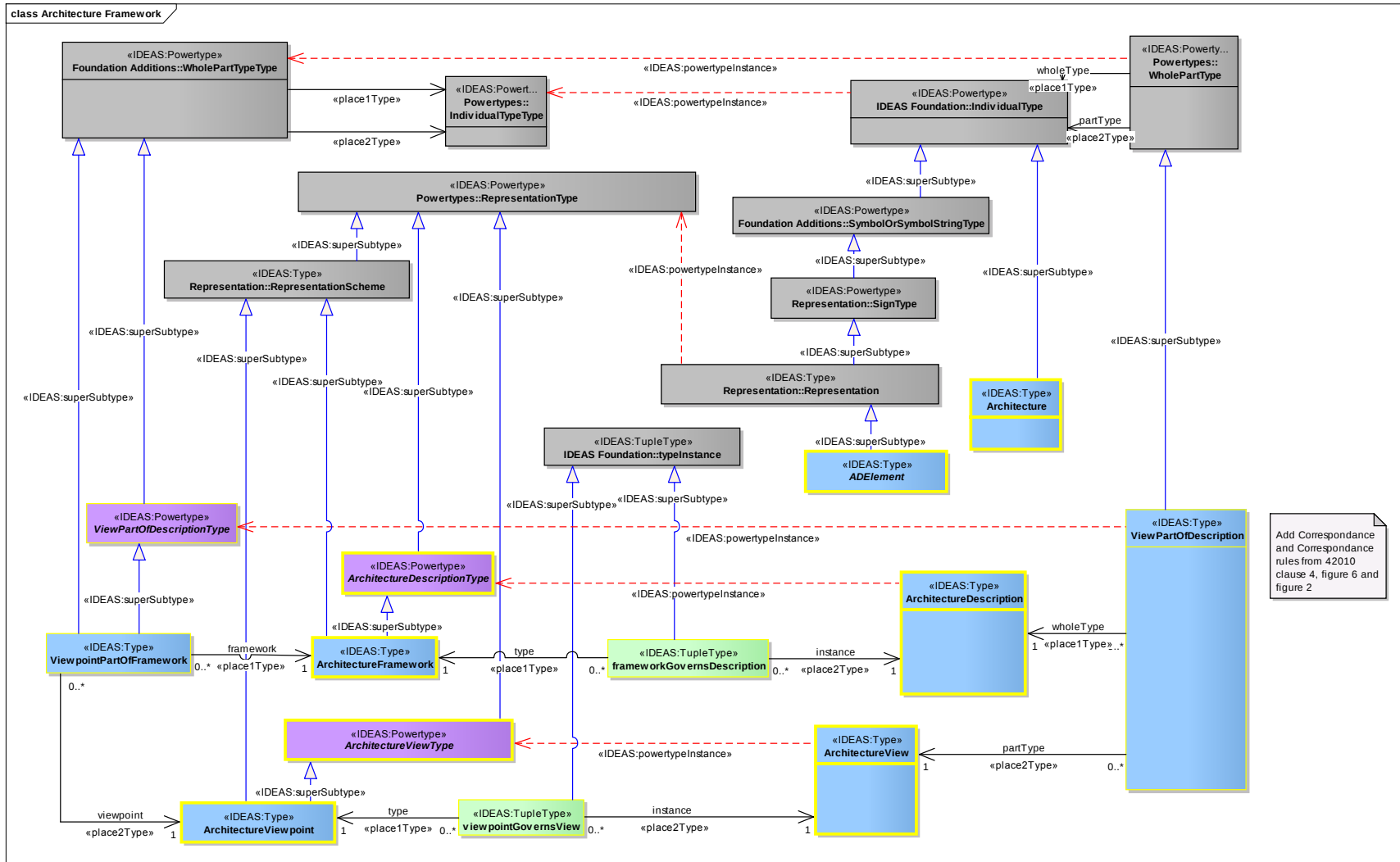


Figure 15 : Architecture Framework

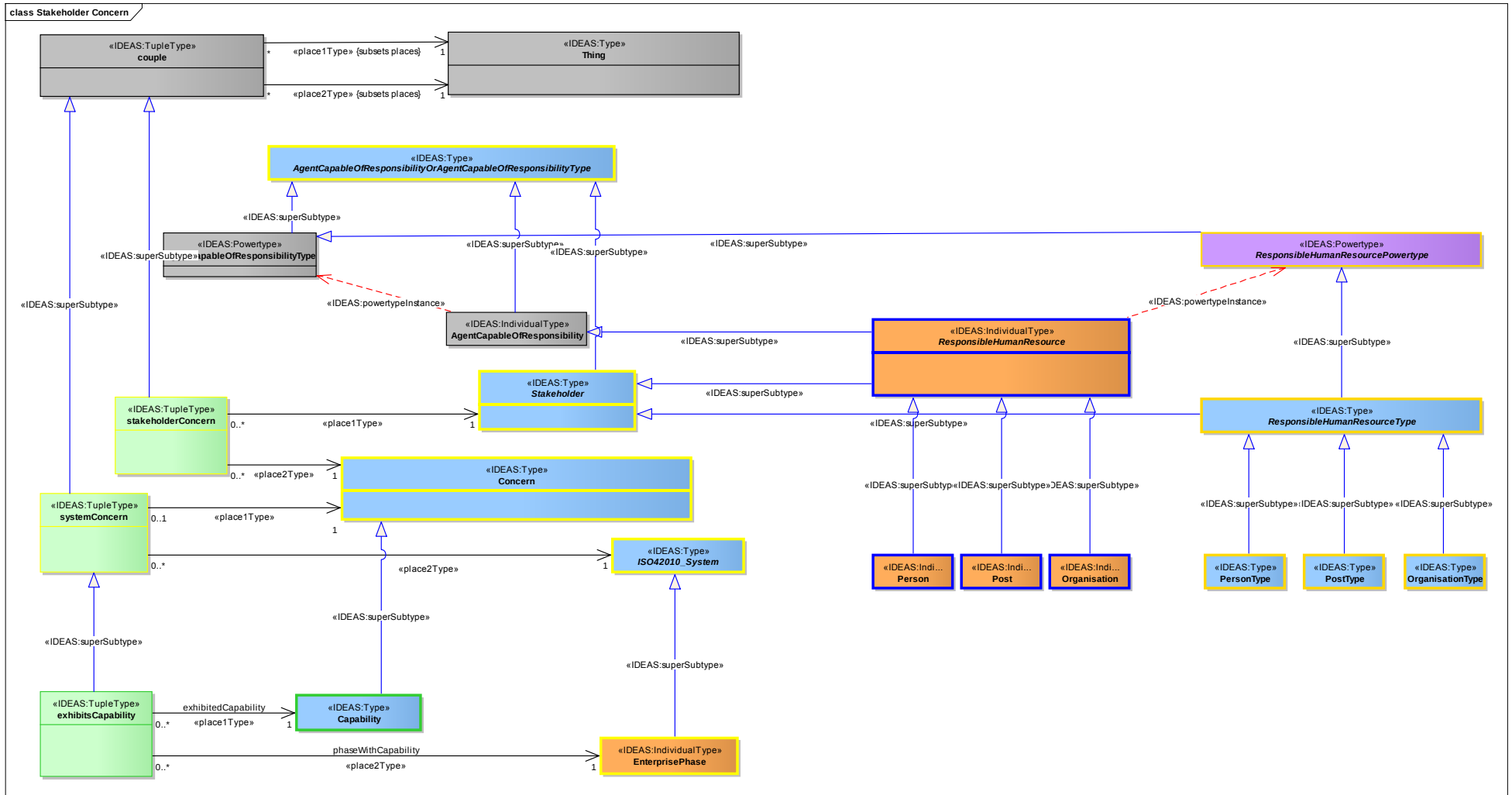


Figure 16 : Stakeholder Concern

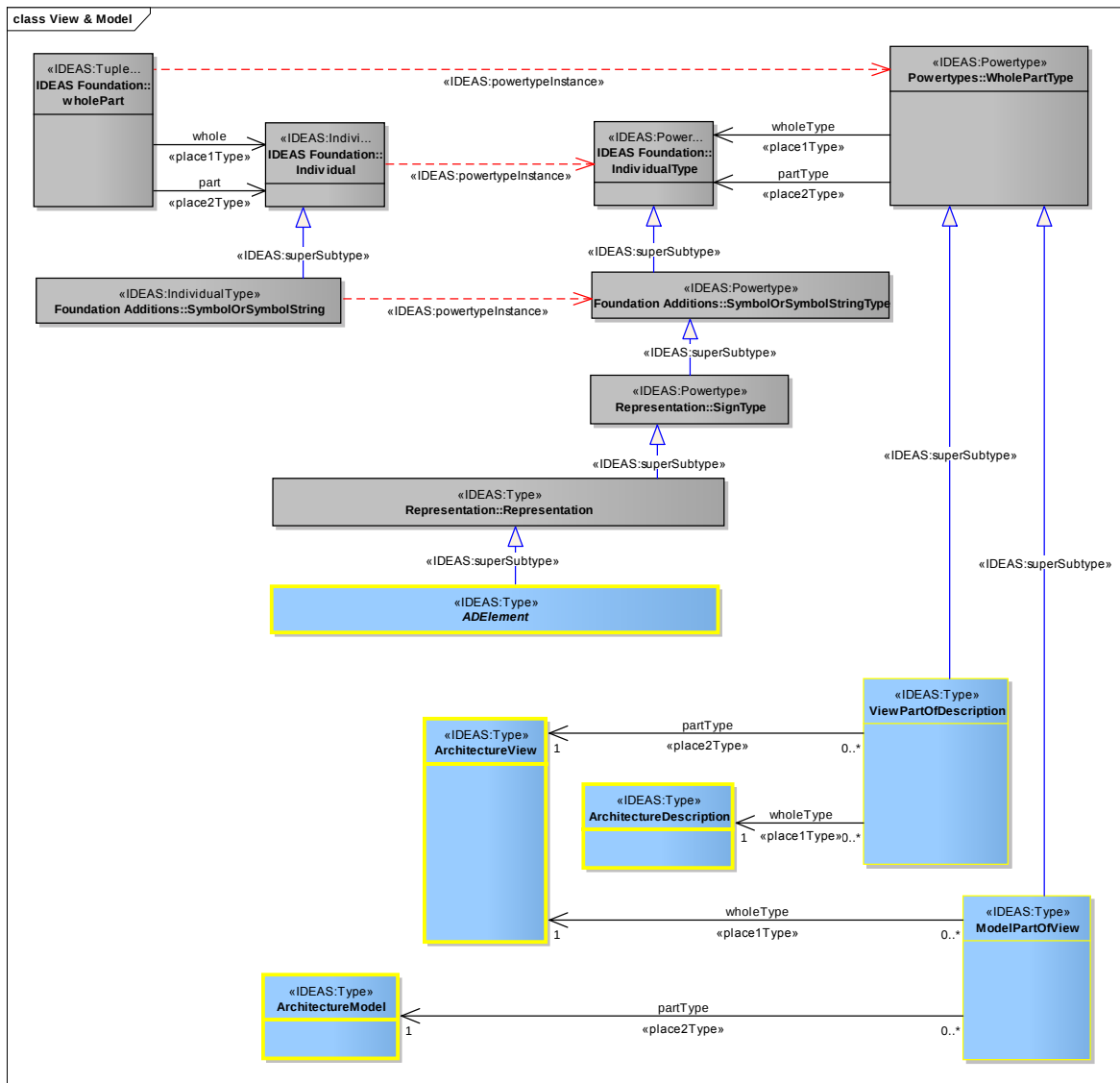


Figure 17 : View and model

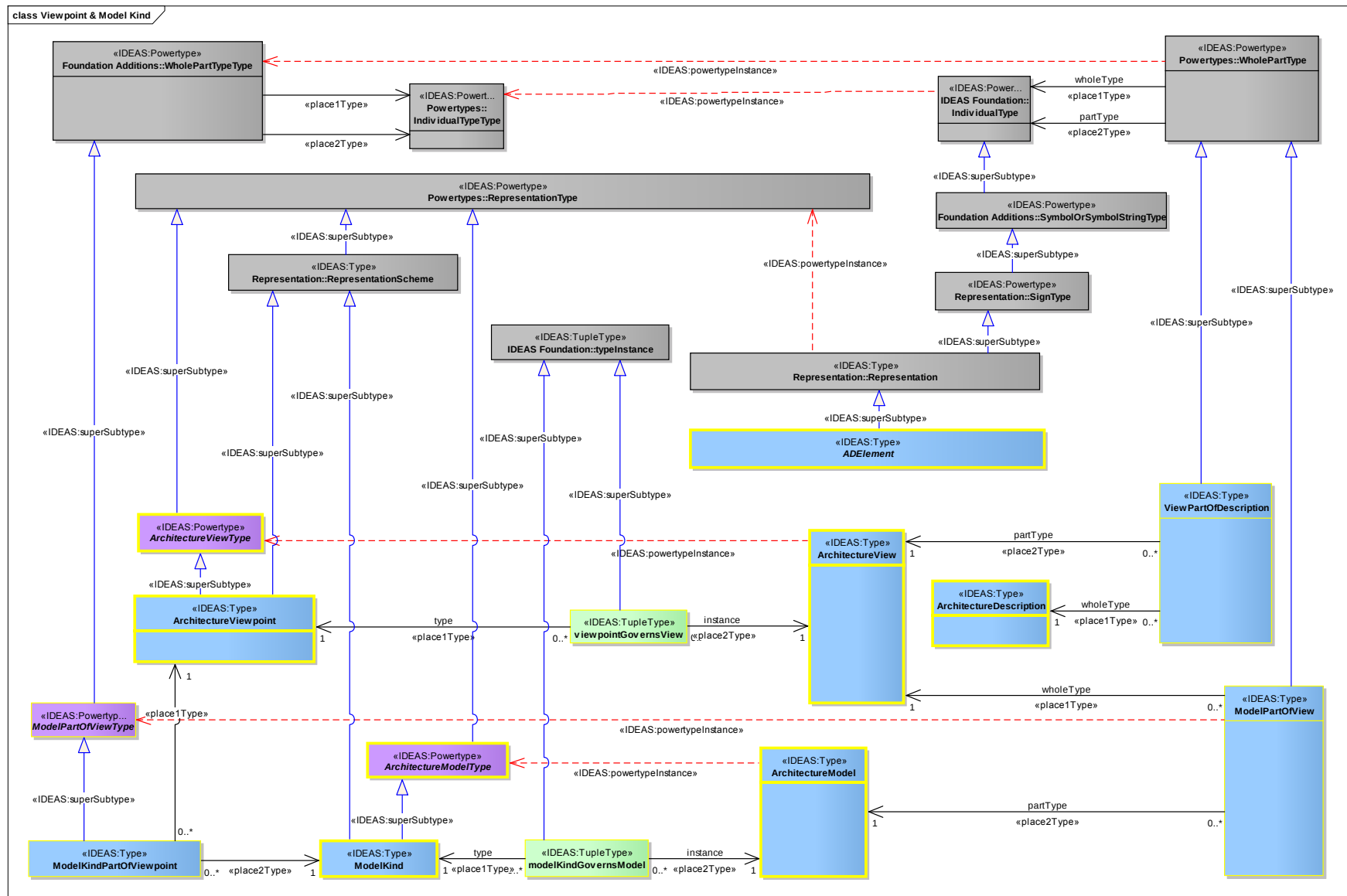


Figure 18 : Viewpoint & Model kind

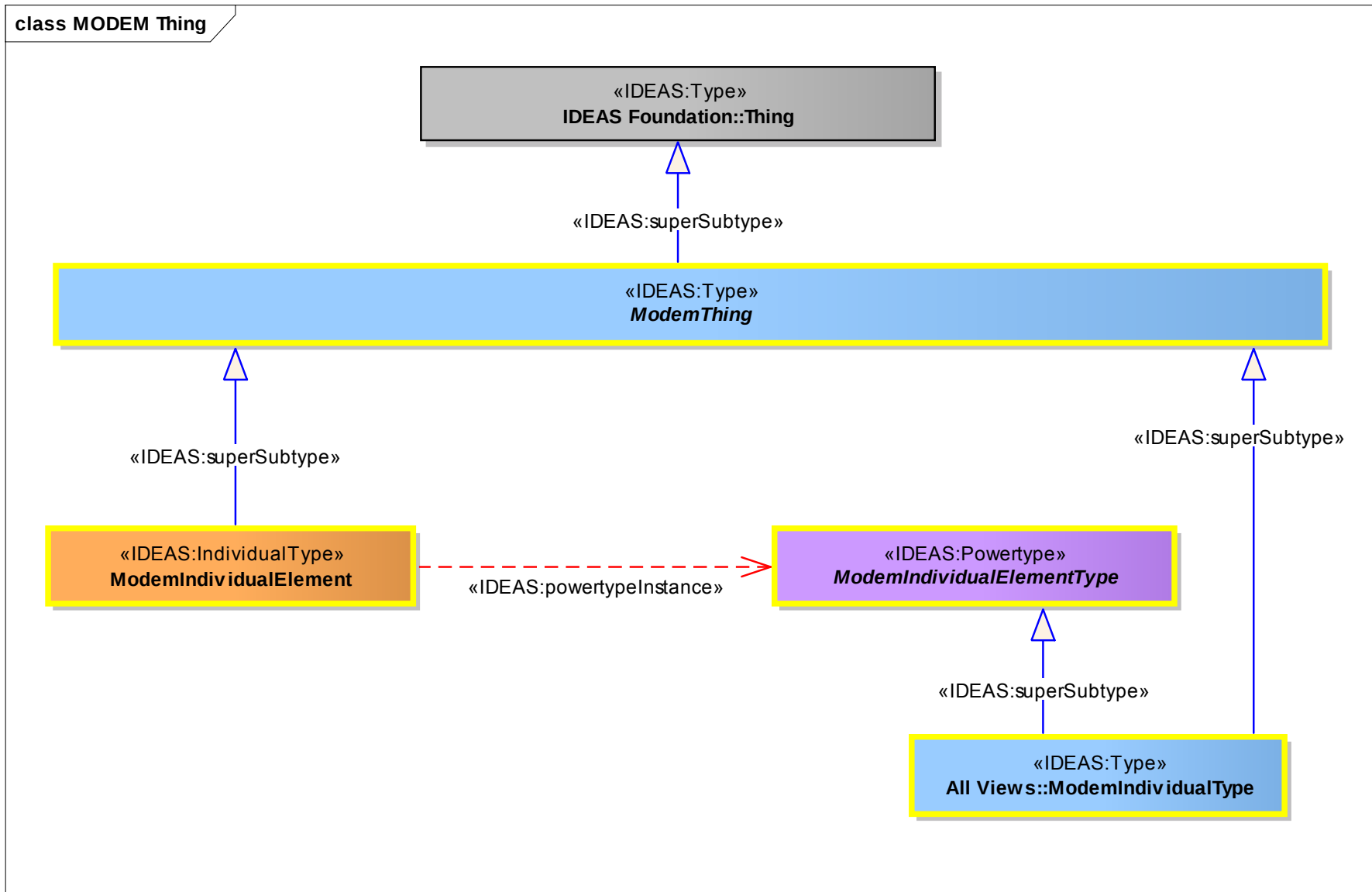


Figure 19 : Modem Thing

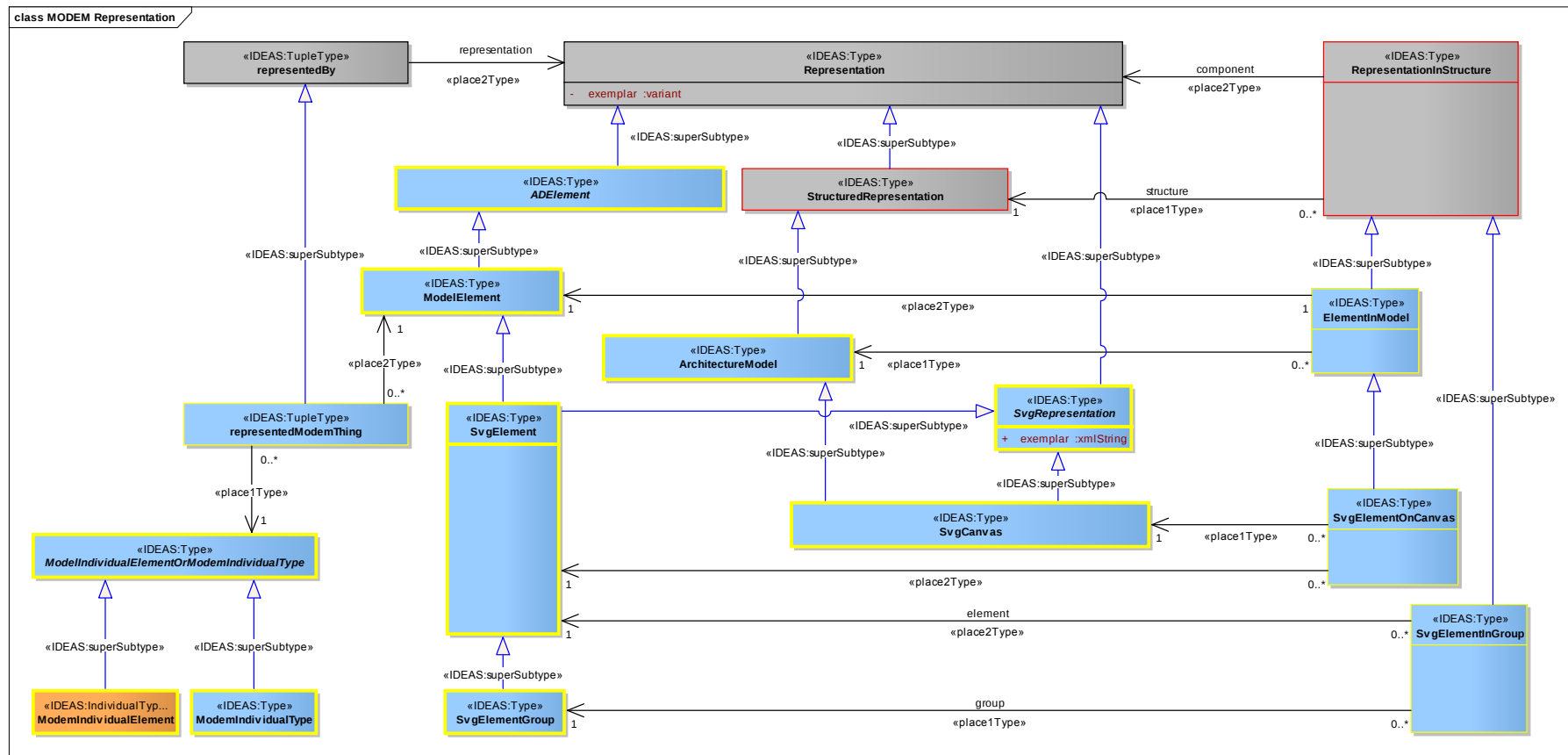


Figure 20 : Modem representation

## 2.3

## Strategic views

### 2.3.1

## StV-1: Enterprise vision

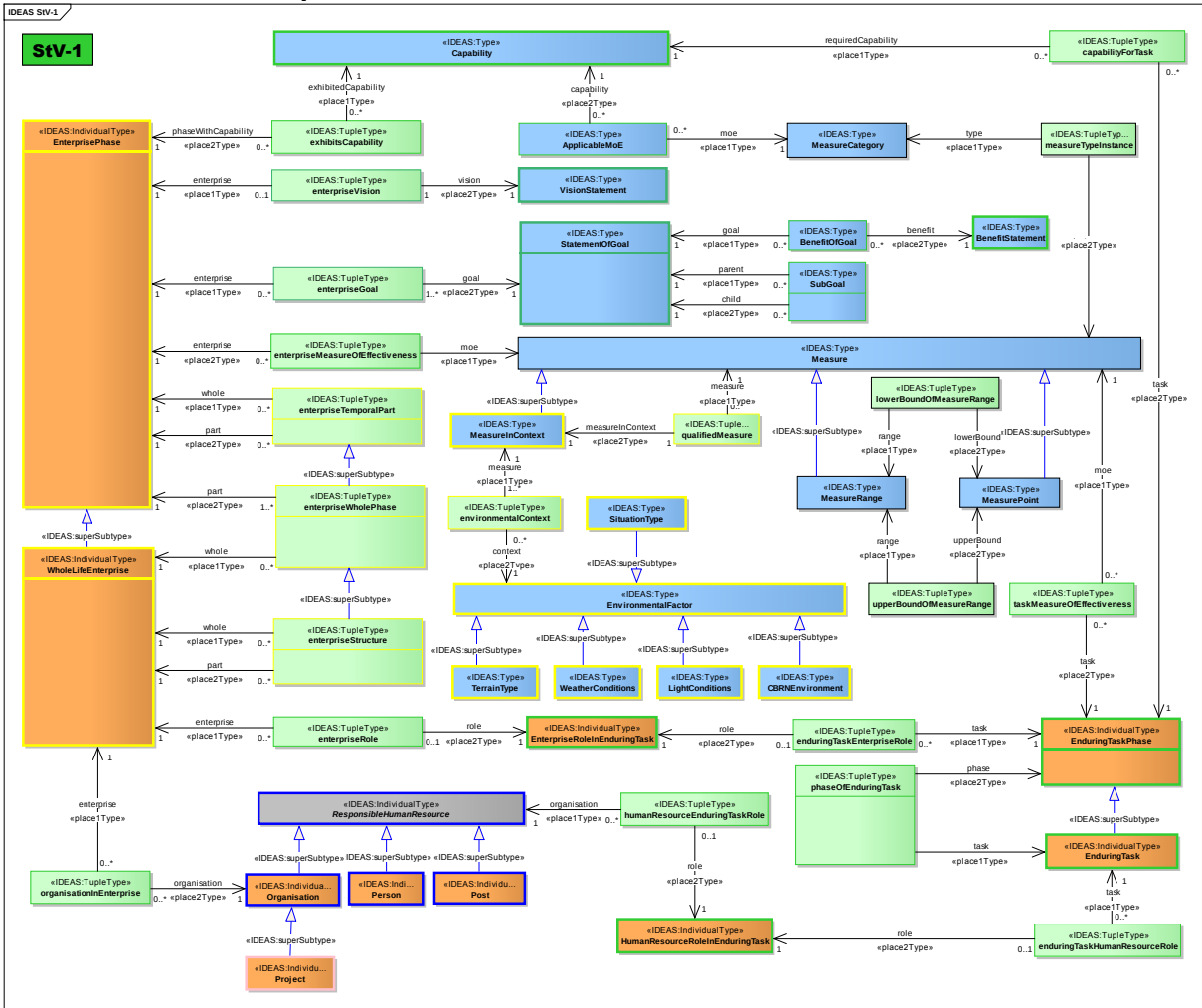


Figure 21 : StV-1

### 2.3.2 StV-2: Capability taxonomy

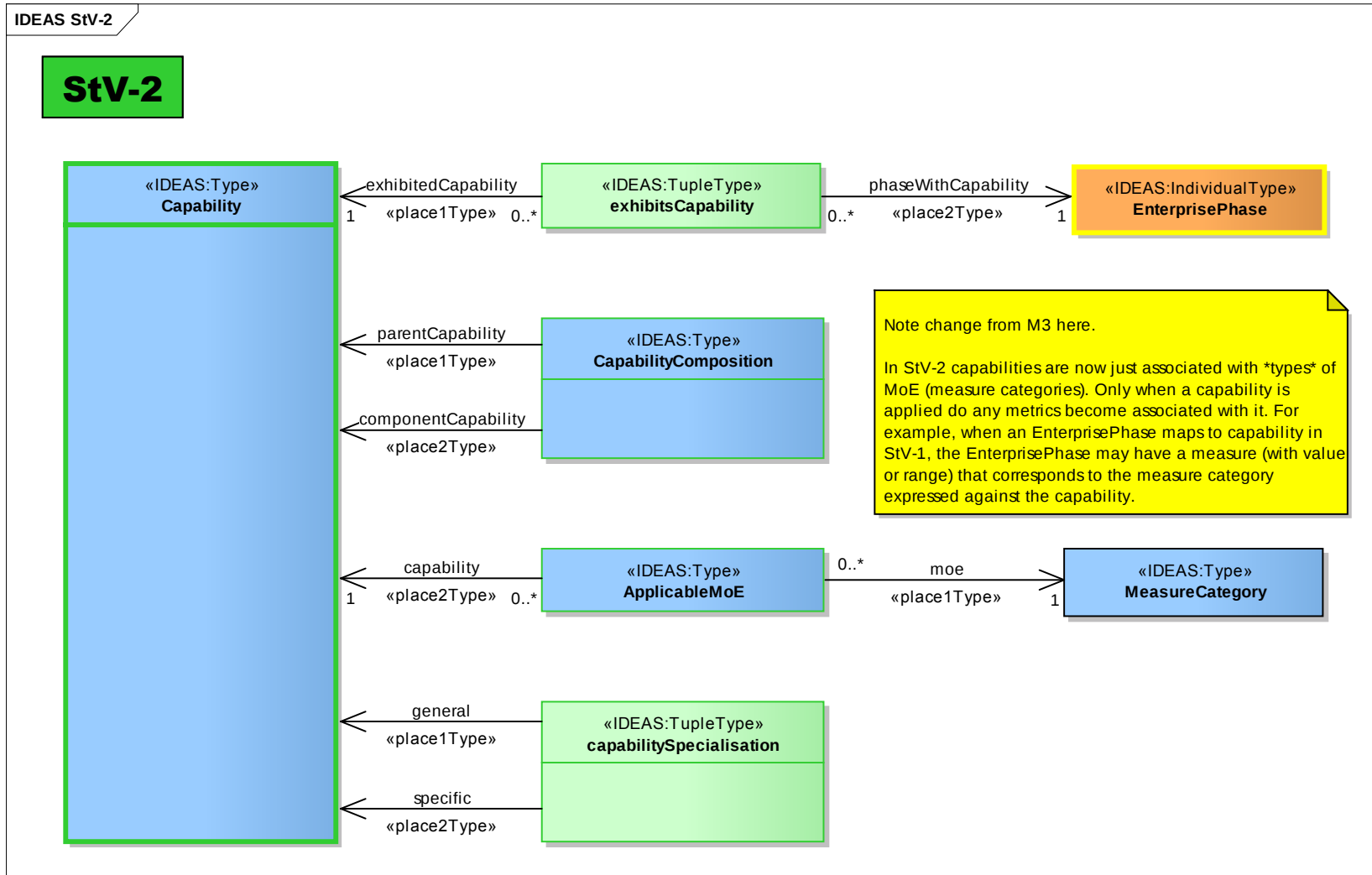


Figure 22 : StV-2

### 2.3.3 StV-3: Capability phasing

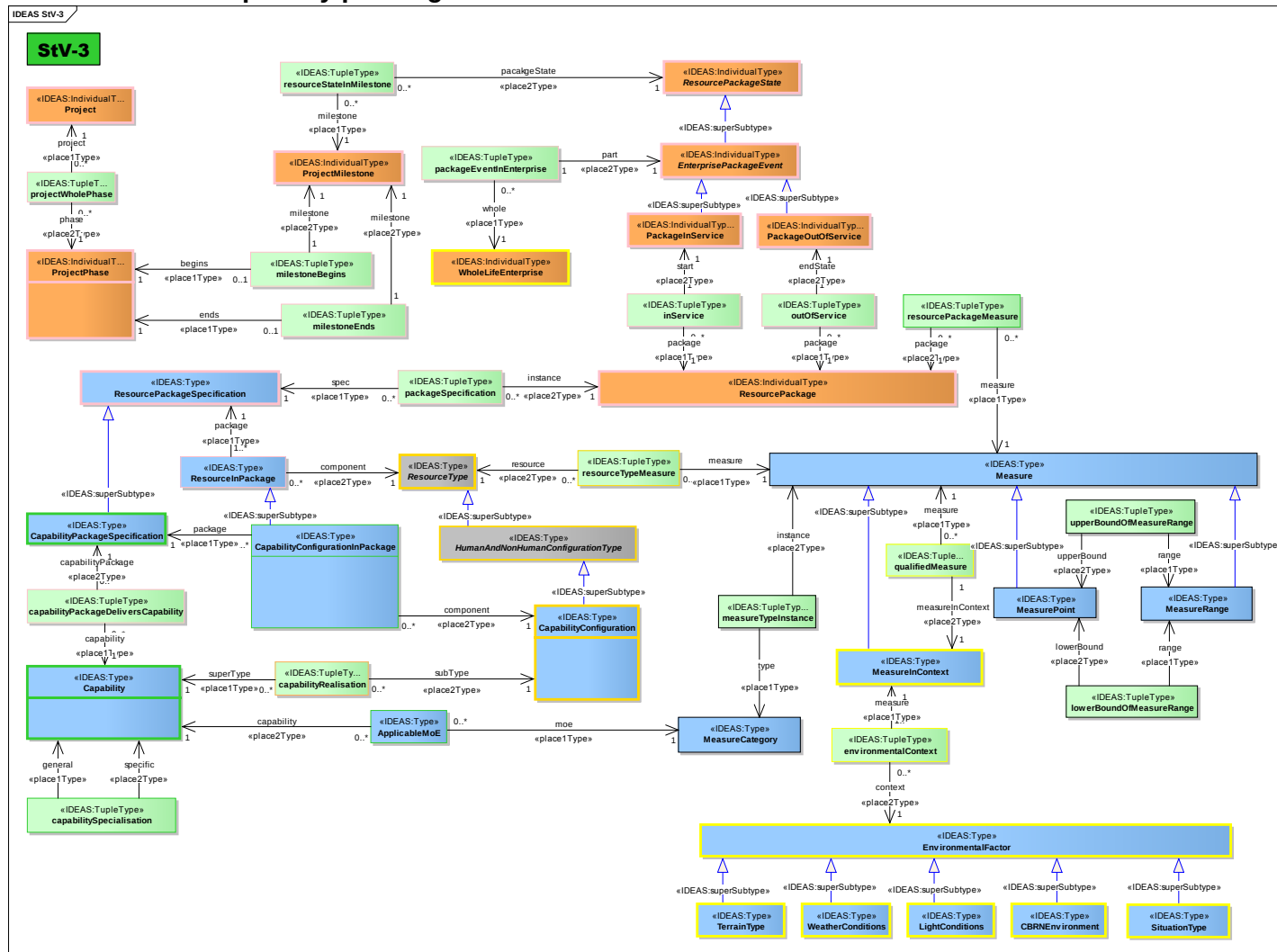


Figure 23 : StV-3

### 2.3.4 StV-4: Capability dependencies

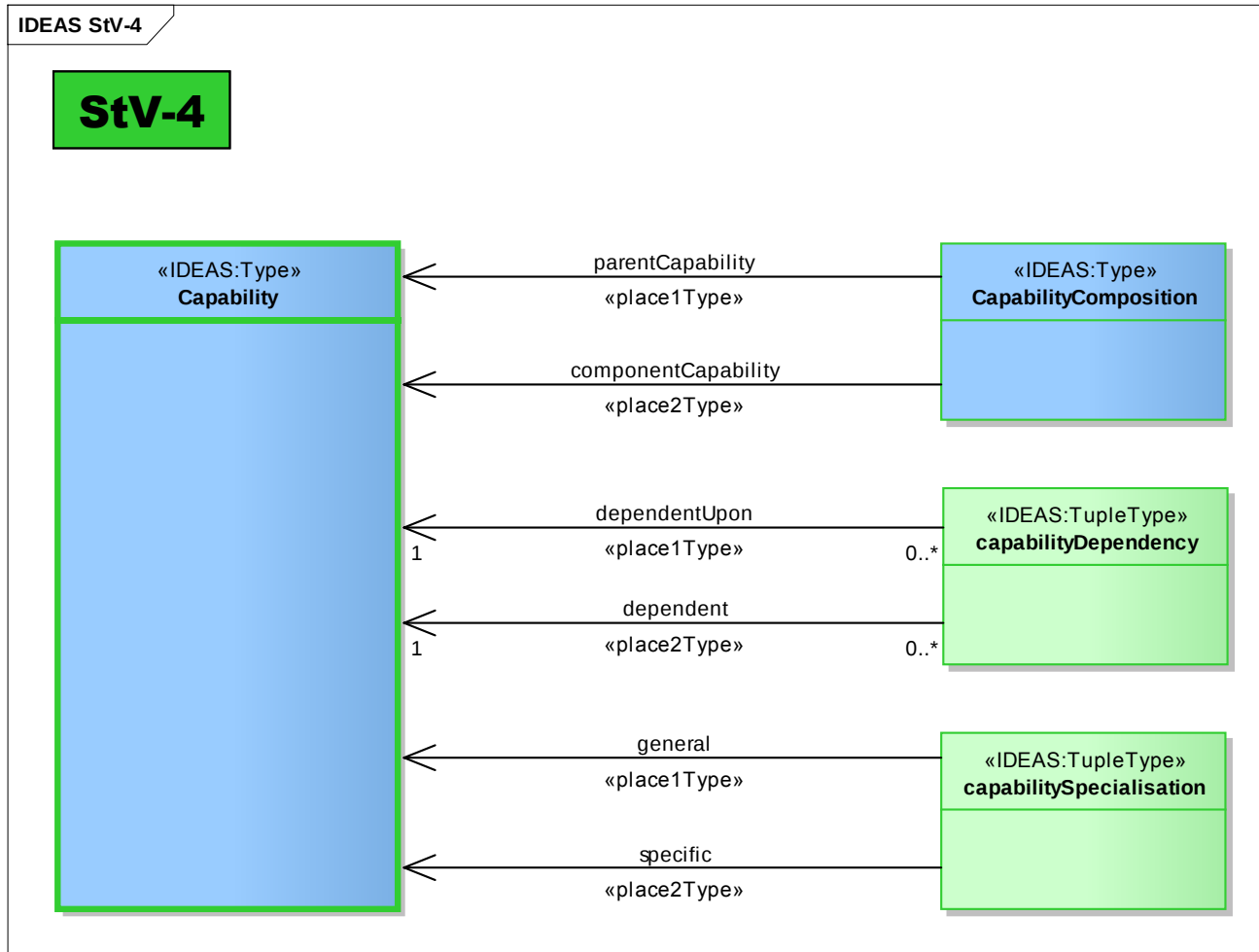


Figure 24 : StV-4

### 2.3.5 StV-5: Capability to organisational deployment mapping

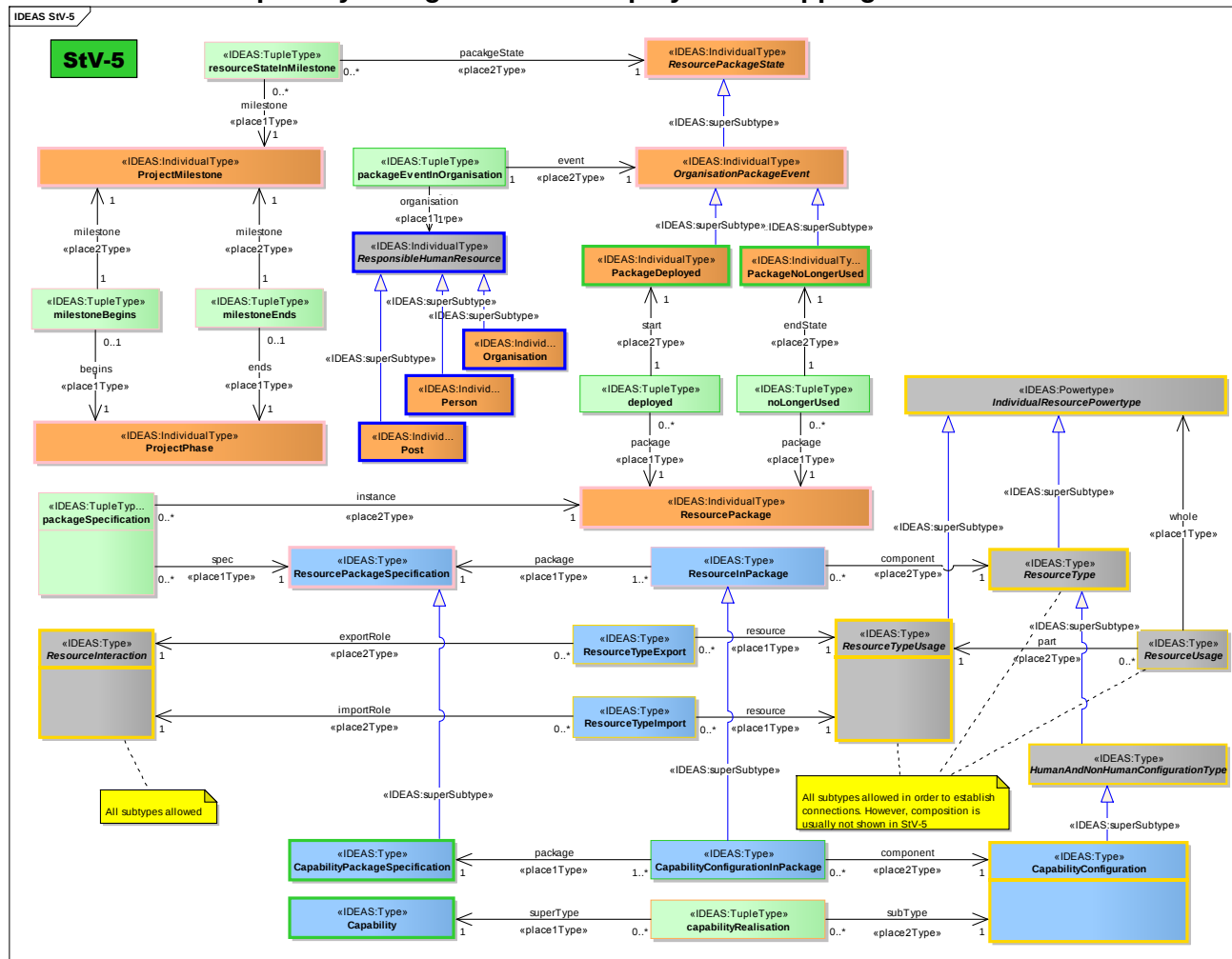


Figure 25 : StV-5

### 2.3.6 StV-6: Operational activity to capability mapping

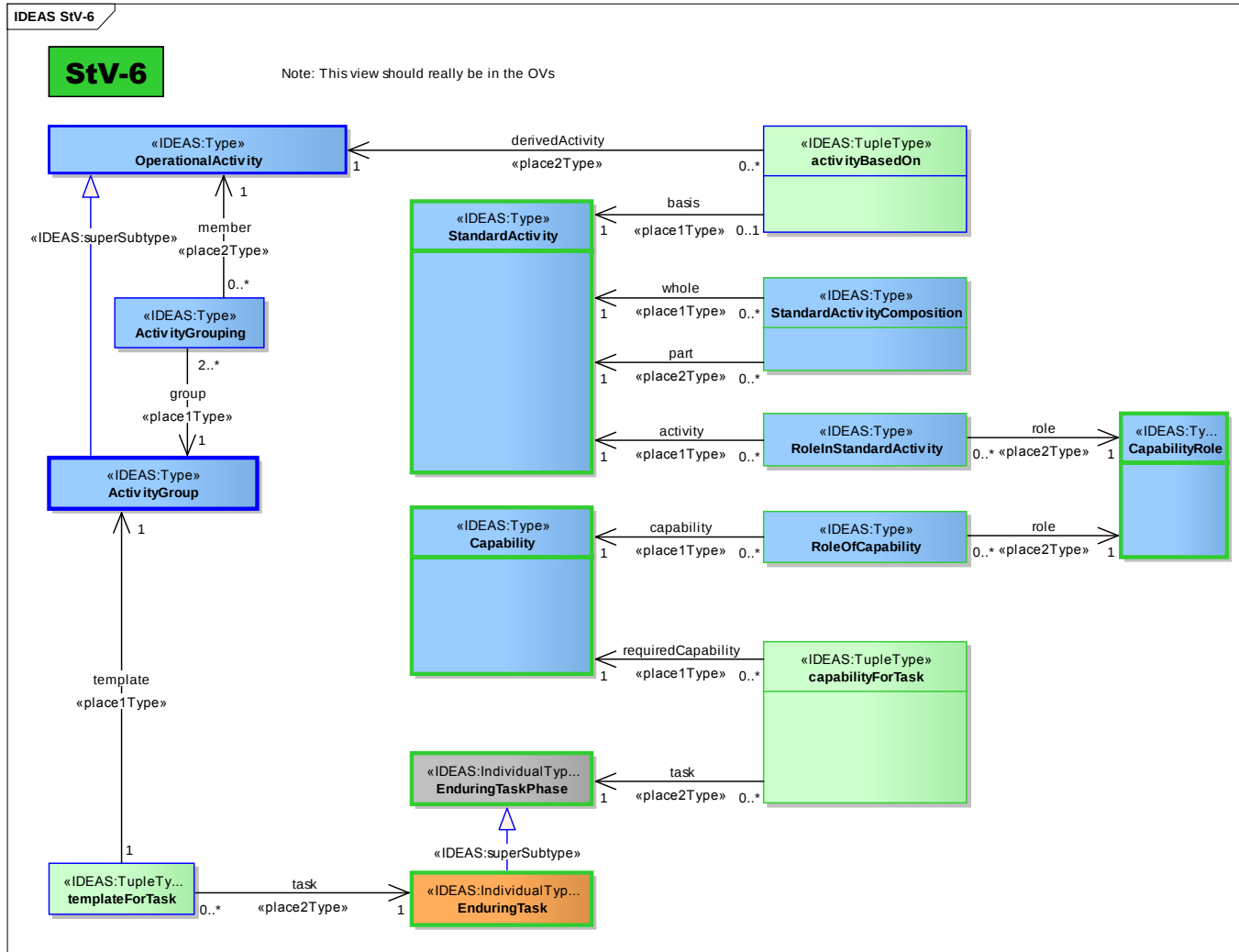


Figure 26 : StV-6

### 2.3.7 Strategic Views elements list

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <p><b>ApplicableMoE</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ApplicableMoE - ApplicableMeasureCategory</p> <p>Association (source - target): «place2Type»</p> <p>ApplicableMoE - Capability</p> <p>Association (source - target): «place1Type»</p> <p>ApplicableMoE - MeasureCategory</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ApplicableMeasureCategory where the categories are MeasureOfEffectivenessCategories and the things being measured are Capabilities.</p>                                                                                                         |
| <p><b>BenefitOfGoal</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>BenefitOfGoal - RepresentationInStructure</p> <p>Association (source - target): «place2Type»</p> <p>BenefitOfGoal - BenefitStatement</p> <p>Association (source - target): «place1Type»</p> <p>BenefitOfGoal - StatementOfGoal</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RepresentationInStructure where a BenefitStatement is part of a StatementOfGoal.</p>                                                                                                                                                       |
| <p><b>BenefitStatement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>BenefitStatement - ModernIndividualType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>BenefitStatement - StringDescription</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>BenefitStatement - StructuredRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StringDescription that is part of a StatementOfGoal which describes a benefit realised by achieving the goal.</p>                                                               |
| <p><b>Capability</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Capability - Concern</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Capability - DispositionalProperty</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Capability - StrategicIndividualType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Capability - AgentType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A DispositionalProperty that is the set of all things that are capable of achieving a particular outcome.</p> |
| <p><b>CapabilityComposition</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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| <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>CapabilityComposition - TypicalWholePart</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>CapabilityComposition - Capability</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>CapabilityComposition - Capability</p> <p><u>Attributes:</u></p> <p>-</p> <p>A WholePartType that asserts one Capability is part of another.</p>                                                                                                                                                                                                                  |
| <p><b>CapabilityConfigurationInPackage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>CapabilityConfigurationInPackage - ResourceInPackage</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>CapabilityConfigurationInPackage - CapabilityConfiguration</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>CapabilityConfigurationInPackage - CapabilityPackageSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceInPackage where the ResourceType is a CapabilityConfiguration and the package is a ResourcePackageSpecification.</p> |
| <p><b>CapabilityPackageSpecification</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>CapabilityPackageSpecification - ResourcePackageSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourcePackageSpecification that contains at least one CapabilityConfiguration.</p>                                                                                                                                                                                                                                                                                               |
| <p><b>CapabilityRole</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>CapabilityRole - ParticipationExtentType</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>CapabilityRole - StrategicIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ParticipationExtentType which is the extent of a Capability's participation in a StandardActivity.</p>                                                                                                                                                                                   |
| <p><b>EnduringTask</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>EnduringTask - Undertaking</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>EnduringTask - EnduringTaskPhase</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Undertaking recognised by an enterprise as being essential to achieving its goals - i.e. a strategic specification of what the enterprise does.</p>                                                                                                                                                  |

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| <p><b>EnduringTaskPhase</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EnduringTaskPhase - UndertakingState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EnduringTaskPhase - EnduringTaskPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A UndertakingState that is a temporal part of an EnduringTask.</p>                                                                                                                                                                                                                               |
| <p><b>EnterpriseRoleInEnduringTask</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EnterpriseRoleInEnduringTask - ParticipationExtent</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EnterpriseRoleInEnduringTask - EnterprisePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EnterpriseRoleInEnduringTask - EnduringTaskPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ParticipationExtent whose extent is the participation of an EnterprisePhase (or WholeLifeEnterprise) in an EnduringTask.</p>  |
| <p><b>HumanResourceRoleInEnduringTask</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanResourceRoleInEnduringTask - ParticipationExtent</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanResourceRoleInEnduringTask - OrganisationPart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanResourceRoleInEnduringTask - EnduringTaskPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ParticipationExtent where the participant is a ResponsibleHumanResource and the Process is an EnduringTask.</p> |
| <p><b>PackageDeployed</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PackageDeployed - OrganisationPackageEvent</p> <p><u>Attributes:</u></p> <p>-</p> <p>An OrganisationPackageEvent which marks the delivery of a particular ResourcePackage to an Organisation.</p>                                                                                                                                                                                                                                                                                                     |
| <p><b>PackageNoLongerUsed</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PackageNoLongerUsed - OrganisationPackageEvent</p> <p><u>Attributes:</u></p> <p>-</p> <p>A OrganisationPackageEvent marking the point when a ResourcePacakge is no longer used by an Organisation.</p>                                                                                                                                                                                                                                                                                            |

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| <p><b>RoleInStandardActivity</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleInStandardActivity - ModemWholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleInStandardActivity - ProcessWholeRoleExtentPartType</p> <p>Association (source - target): «place1Type»</p> <p>RoleInStandardActivity - StandardActivity</p> <p>Association (source - target): «place2Type»</p> <p>RoleInStandardActivity - CapabilityRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProcessWholeRoleExtentPartType that relates a StandardActivity to a CapabilityRole.</p>      |
| <p><b>RoleOfCapability</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleOfCapability - ModemWholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleOfCapability - AgentParticipationType</p> <p>Association (source - target): «place1Type»</p> <p>RoleOfCapability - Capability</p> <p>Association (source - target): «place2Type»</p> <p>RoleOfCapability - CapabilityRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>An AgentParticipationType that relates a Capability to its role in a StandardOperationalActivity.</p>                                      |
| <p><b>StandardActivity</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StandardActivity - ProcessType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StandardActivity - StrategicIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ProcessType that is a standard procedure (e.g. doctrinal tasks). Note: This is equivalent to what some defence organisations call JETLs. Note: was called "StandardOperationalActivity" in M3.</p>                                                                                                                                |
| <p><b>StandardActivityComposition</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StandardActivityComposition - TypicalWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StandardActivityComposition - ProcessWholeAndPartType</p> <p>Association (source - target): «place2Type»</p> <p>StandardActivityComposition - StandardActivity</p> <p>Association (source - target): «place1Type»</p> <p>StandardActivityComposition - StandardActivity</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart that asserts one StandardActivity is part of another.</p> |

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| <p><b>StatementOfGoal</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StatementOfGoal - StructuredRepresentation</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StatementOfGoal - StringDescription</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StatementOfGoal - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StringDescription that is a specific, required objective for an EnterprisePhase.</p> |
| <p><b>StrategicIndividualType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StrategicIndividualType - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType which is used in Strategic modelling - i.e. a type of individual that may have relevance across more than one architecture.</p>                                                                                                                                                             |
| <p><b>SubGoal</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>SubGoal - RepresentationInStructure</p> <p>Association (source - target):«place2Type»</p> <p>SubGoal - StatementOfGoal</p> <p>Association (source - target):«place1Type»</p> <p>SubGoal - StatementOfGoal</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RepresentationInStructure where one StatementOfGoal is part of another.</p>                                                                                         |
| <p><b>VisionStatement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>VisionStatement - ModemIndividualType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>VisionStatement - StringDescription</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StringDescription that is a short paragraph outlining the vision for a given phase of an enterprise.</p>                                                                                                      |
| <p><b>capabilityDependency</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>capabilityDependency - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>capabilityDependency - couple</p> <p>Association (source - target):«place2Type»</p> <p>capabilityDependency - Capability</p> <p>Association (source - target):«place1Type»</p> <p>capabilityDependency - Capability</p>                                                                 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><u>Attributes:</u></p> <p>-</p> <p>A couple that relates a (dependent) Capability to a Capability it is dependent upon.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>capabilityForTask</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>capabilityForTask - propertyOfIndividual</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>capabilityForTask - modermIndividualTypeInstance</p> <p>Association (source - target): «place1Type»</p> <p>capabilityForTask - Capability</p> <p>Association (source - target): «place2Type»</p> <p>capabilityForTask - EnduringTaskPhase</p> <p><u>Attributes:</u></p> <p>-</p> <p>A propertyOfIndividual that asserts a Capability is required in order for an Enterprise to conduct a phase of an EnduringTask.</p>                                                   |
| <p><b>capabilitySpecialisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>capabilitySpecialisation - modermIndividualTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>capabilitySpecialisation - Capability</p> <p>Association (source - target): «place2Type»</p> <p>capabilitySpecialisation - Capability</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubtype that relates one Capability (supertype) to a more specialised Capability (subtype).</p>                                                                                                                                                                            |
| <p><b>deployed</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>deployed - modermTemporalWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>deployed - individualResourceState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>deployed - startBorder</p> <p>Association (source - target): «place1Type»</p> <p>deployed - ResourcePackage</p> <p>Association (source - target): «place1Type»</p> <p>deployed - PackageDeployed</p> <p><u>Attributes:</u></p> <p>-</p> <p>A startBorder that indicates that an PackageDeployed marks the introduction into an Organisation of a ResourcePackage.</p> |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>enduringTaskEnterpriseRole</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>enduringTaskEnterpriseRole - processWholeRoleExtentPart</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>enduringTaskEnterpriseRole - enduringTaskWholePart</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>enduringTaskEnterpriseRole - EnterpriseRoleInEnduringTask</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>enduringTaskEnterpriseRole - EnduringTaskPhase</p> <p><u>Attributes:</u></p> <p>-</p> <p>A processWholeRoleExtentPart which relates an EnduringTaskPhase to an EnterpriseRoleInEnduringTask.</p>                                      |
| <p><b>enduringTaskHumanResourceRole</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>enduringTaskHumanResourceRole - enduringTaskWholePart</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>enduringTaskHumanResourceRole - processWholeRoleExtentPart</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>enduringTaskHumanResourceRole -HumanResourceRoleInEnduringTask</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>enduringTaskHumanResourceRole - EnduringTask</p> <p><u>Attributes:</u></p> <p>-</p> <p>A processWholeRoleExtentPart where the Process is an EnduringTask and the involved Individual is a ResponsibleHumanResource.</p> |
| <p><b>enterpriseGoal</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>enterpriseGoal - ModemThing</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>enterpriseGoal - describedBy</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>enterpriseGoal - EnterprisePhase</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>enterpriseGoal - StatementOfGoal</p> <p><u>Attributes:</u></p> <p>-</p> <p>A describedBy that relates a StatementOfGoal to the EnterprisePhase it describes.</p>                                                                                                                                                                 |
| <p><b>enterpriseMeasureOfEffectiveness</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>enterpriseMeasureOfEffectiveness - measureOfIndividual</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>enterpriseMeasureOfEffectiveness - modemIndividualTypeInstance</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>enterpriseMeasureOfEffectiveness - EnterprisePhase</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>enterpriseMeasureOfEffectiveness - Measure</p>                                                                                                                                                                                  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <p><u>Attributes:</u></p> <p>-</p> <p>A measureOfIndividual where the Individual is an EnterprisePhase and the measure is a MeasureOfEffectiveness.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p><b>enterpriseRole</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> enterpriseRole - agentParticipation</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> enterpriseRole - enterpriseWholePart</p> <p>Association (source - target): «place1Type»<br/> enterpriseRole - WholeLifeEnterprise</p> <p>Association (source - target): «place2Type»<br/> enterpriseRole - EnterpriseRoleInEnduringTask</p> <p><u>Attributes:</u></p> <p>-</p> <p>An agentParticipation where the agent is a WholeLifeEnterprise and the participation is an EnterpriseRoleInEnduringTask. An enterpriseRole relates a WholeLifeEnterprise to a role it performs in an EnduringTask.</p>                                                  |
| <p><b>enterpriseVision</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> enterpriseVision - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> enterpriseVision - describedBy</p> <p>Association (source - target): «place1Type»<br/> enterpriseVision - EnterprisePhase</p> <p>Association (source - target): «place2Type»<br/> enterpriseVision - VisionStatement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A describedBy that relates a VisionStatement to the EnterprisePhase it describes.</p>                                                                                                                                                                                                          |
| <p><b>exhibitsCapability</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> exhibitsCapability - propertyOfIndividual</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> exhibitsCapability - modemIndividualTypeInstance</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> exhibitsCapability - systemConcern</p> <p>Association (source - target): «place1Type»<br/> exhibitsCapability - Capability</p> <p>Association (source - target): «place2Type»<br/> exhibitsCapability - EnterprisePhase</p> <p><u>Attributes:</u></p> <p>-</p> <p>A propertyOfIndividual that relates an EnterprisePhase to a Capability that it exhibits.<br/> Note: replaces "exhibits" tagged value in M3.</p> |

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| <p><b>humanResourceEnduringTaskRole</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/>humanResourceEnduringTaskRole - agentParticipation</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/>humanResourceEnduringTaskRole - organisationWholePart</p> <p>Association (source - target):«place1Type»<br/>humanResourceEnduringTaskRole - ResponsibleHumanResource</p> <p>Association (source - target):«place2Type»<br/>humanResourceEnduringTaskRole - HumanResourceRoleInEnduringTask</p> <p><u>Attributes:</u></p> <p>-</p> <p>An agentParticipation where the Agent is a ResponsibleHumanResource and the Process is an EnduringTask.</p>                  |
| <p><b>noLongerUsed</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/>noLongerUsed - endBorder</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/>noLongerUsed - individualResourceState</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/>noLongerUsed - modermTemporalWholePart</p> <p>Association (source - target):«place2Type»<br/>noLongerUsed - PackageNoLongerUsed</p> <p>Association (source - target):«place1Type»<br/>noLongerUsed - ResourcePackage</p> <p><u>Attributes:</u></p> <p>-</p> <p>An endBorder that indicates that an PackageNoLongerUsed marks the retirement from an Organisation of a ResourcePackage.</p> |
| <p><b>organisationInEnterprise</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/>organisationInEnterprise - enterpriseWholePart</p> <p>Association (source - target):«place1Type»<br/>organisationInEnterprise - WholeLifeEnterprise</p> <p>Association (source - target):«place2Type»<br/>organisationInEnterprise - Organisation</p> <p><u>Attributes:</u></p> <p>-</p> <p>An enterpriseWholePart that asserts an Organisation is part of a WholeLifeEnterprise. Note: this includes the limit case where the Organisation *is* the Enterprise, and cases where the Organisation is a Project.</p>                                                                                  |
| <p><b>packageEventInOrganisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/>packageEventInOrganisation - organisationWholePart</p> <p>Association (source - target):«place2Type»<br/>packageEventInOrganisation - OrganisationPackageEvent</p> <p>Association (source - target):«place1Type»<br/>packageEventInOrganisation - ResponsibleHumanResource</p>                                                                                                                                                                                                                                                                                                                     |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>An organisationWholePart where an OrganisationPackageEvent is part of an Organisation - e.g. the package is rolled-out into the organisation.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>phaseOfEnduringTask</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>phaseOfEnduringTask - undertakingWholeState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>phaseOfEnduringTask - enduringTaskWholePart</p> <p>Association (source - target): «place2Type»</p> <p>phaseOfEnduringTask - EnduringTaskPhase</p> <p>Association (source - target): «place1Type»</p> <p>phaseOfEnduringTask - EnduringTask</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>An undertakingWholeState where the state (part) is an EnduringTaskPhase and the whole is an EnduringTask.</p>           |
| <p><b>resourcePackageMeasure</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>resourcePackageMeasure - modermIndividualTypeInstance</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>resourcePackageMeasure - measureOfIndividual</p> <p>Association (source - target): «place1Type»</p> <p>resourcePackageMeasure - Measure</p> <p>Association (source - target): «place2Type»</p> <p>resourcePackageMeasure - ResourcePackage</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>A measureOfIndividual where the measure Individual is a ResourcePackage.</p>                               |
| <p><b>taskMeasureOfEffectiveness</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>taskMeasureOfEffectiveness - measureOfIndividual</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>taskMeasureOfEffectiveness - modermIndividualTypeInstance</p> <p>Association (source - target): «place1Type»</p> <p>taskMeasureOfEffectiveness - Measure</p> <p>Association (source - target): «place2Type»</p> <p>taskMeasureOfEffectiveness - EnduringTaskPhase</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>A measureOfIndividual that asserts a Measure is an MoE for an EnduringTaskPhase.</p> |

### 2.3.8 Strategic Views additional diagrams.

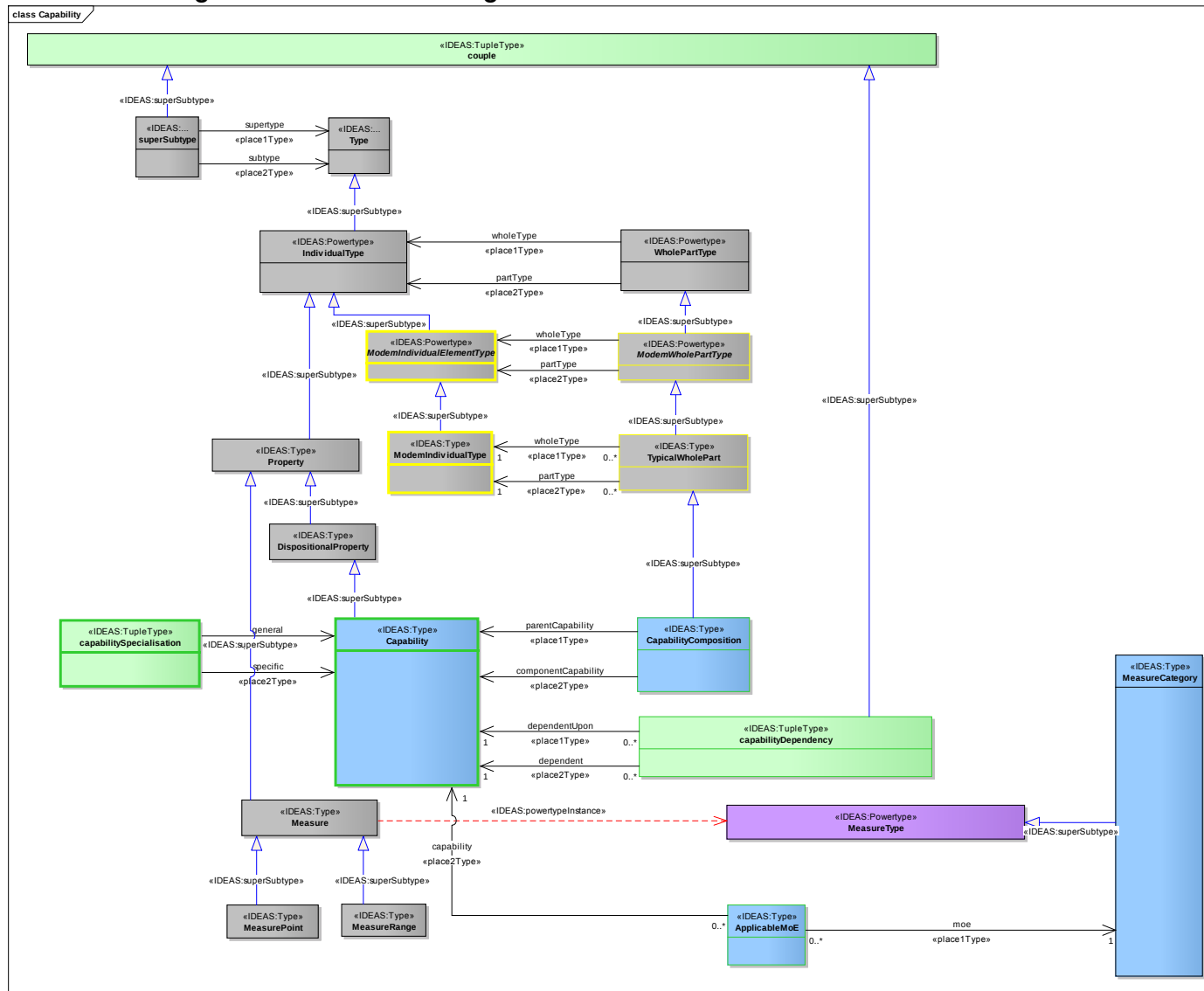


Figure 27 : Capability



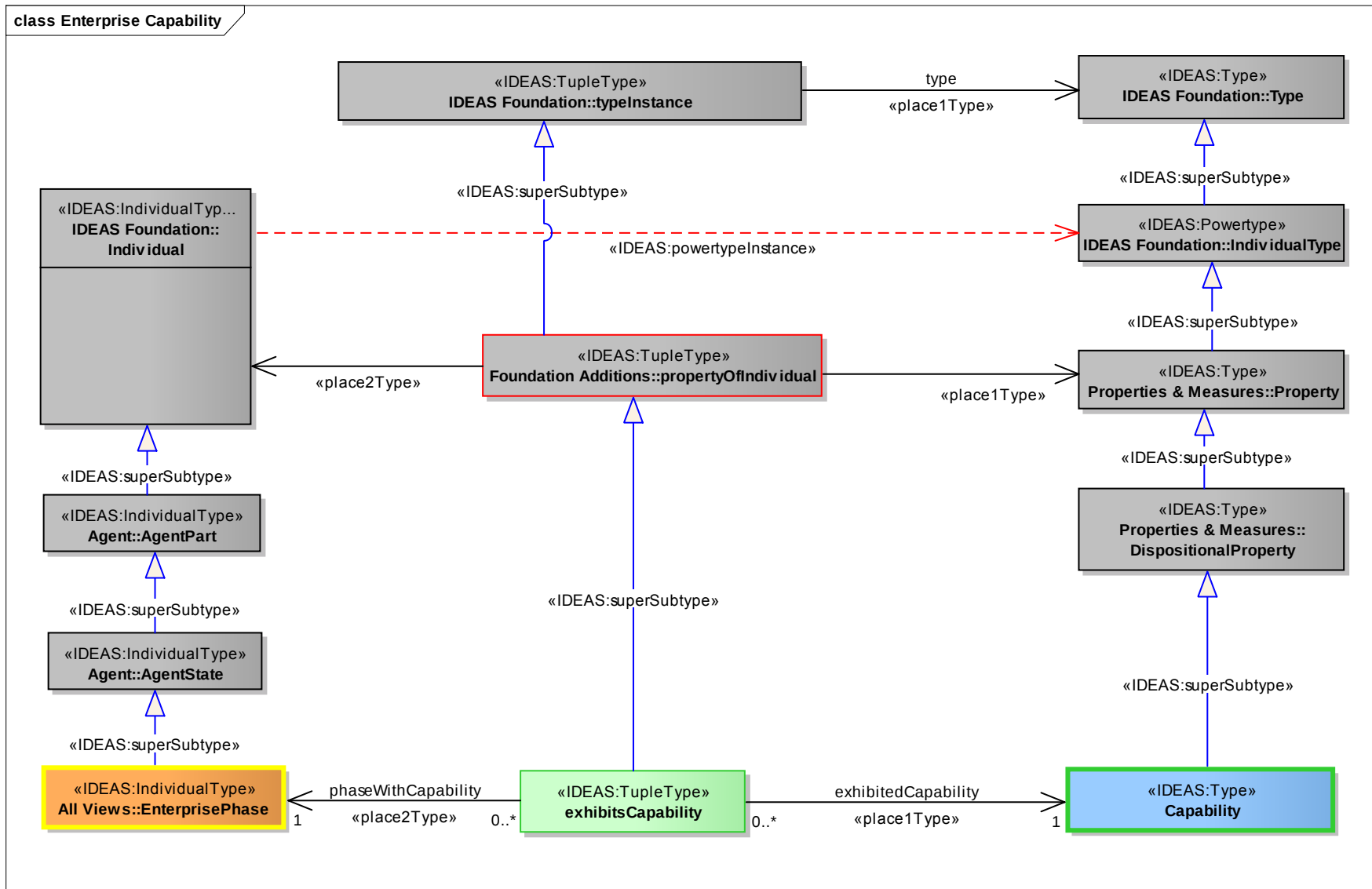


Figure 29 : Enterprise Capability

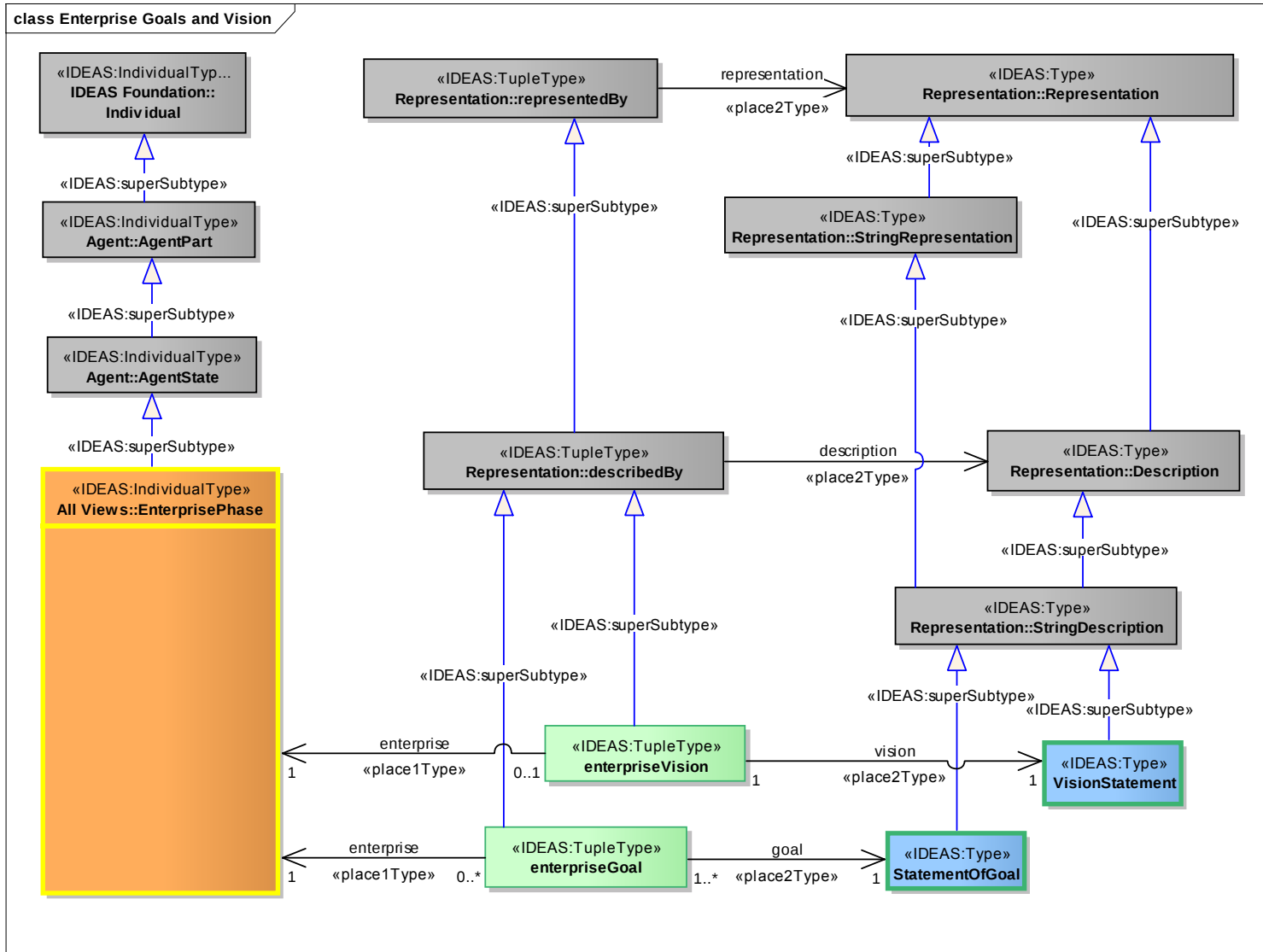


Figure 30 : Enterprise Goals and Vision

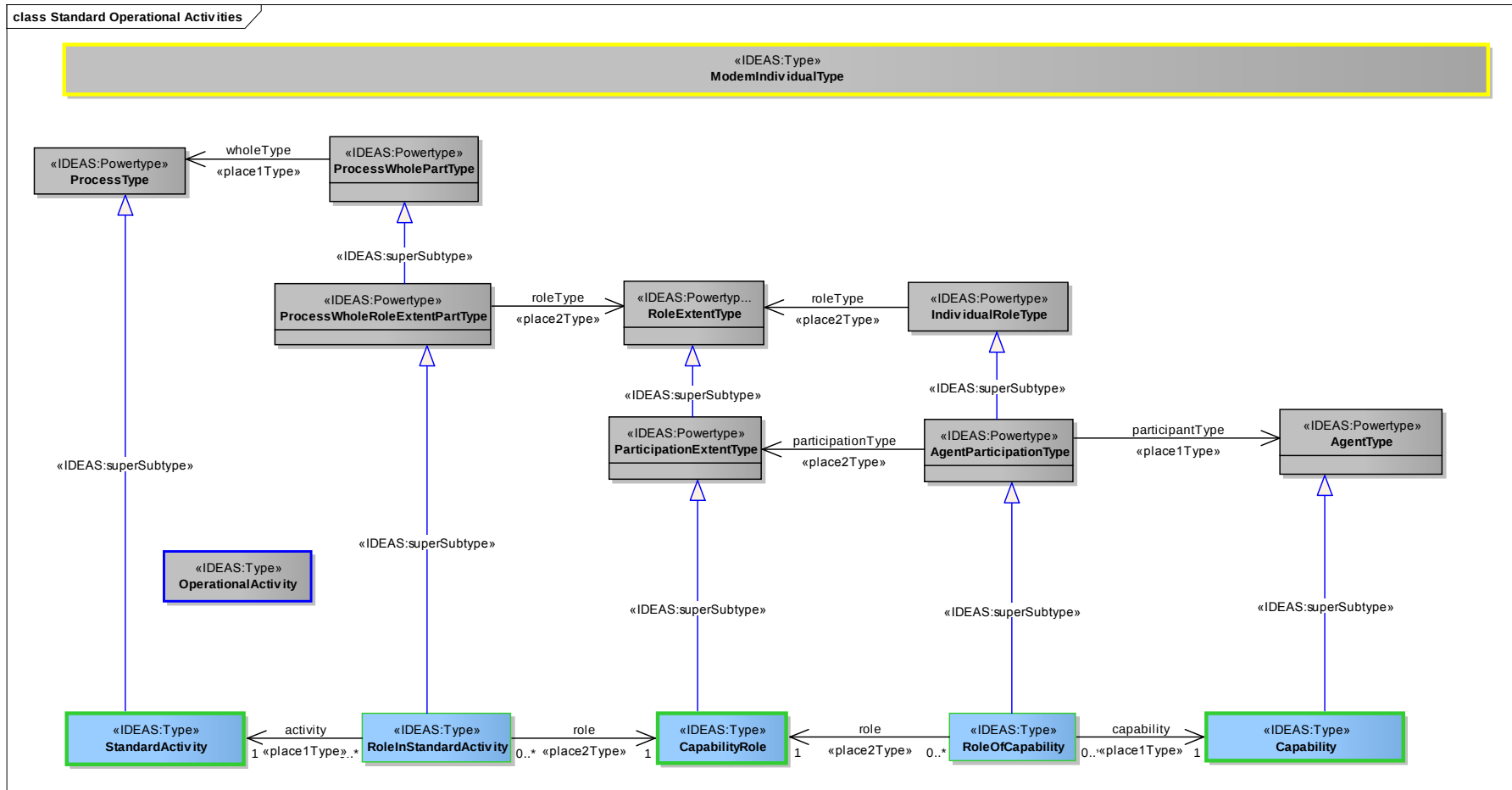


Figure 31 : Standard Operational Activities

## Operational views

**OV-1: High level operational concept graphic (a, b, c)**

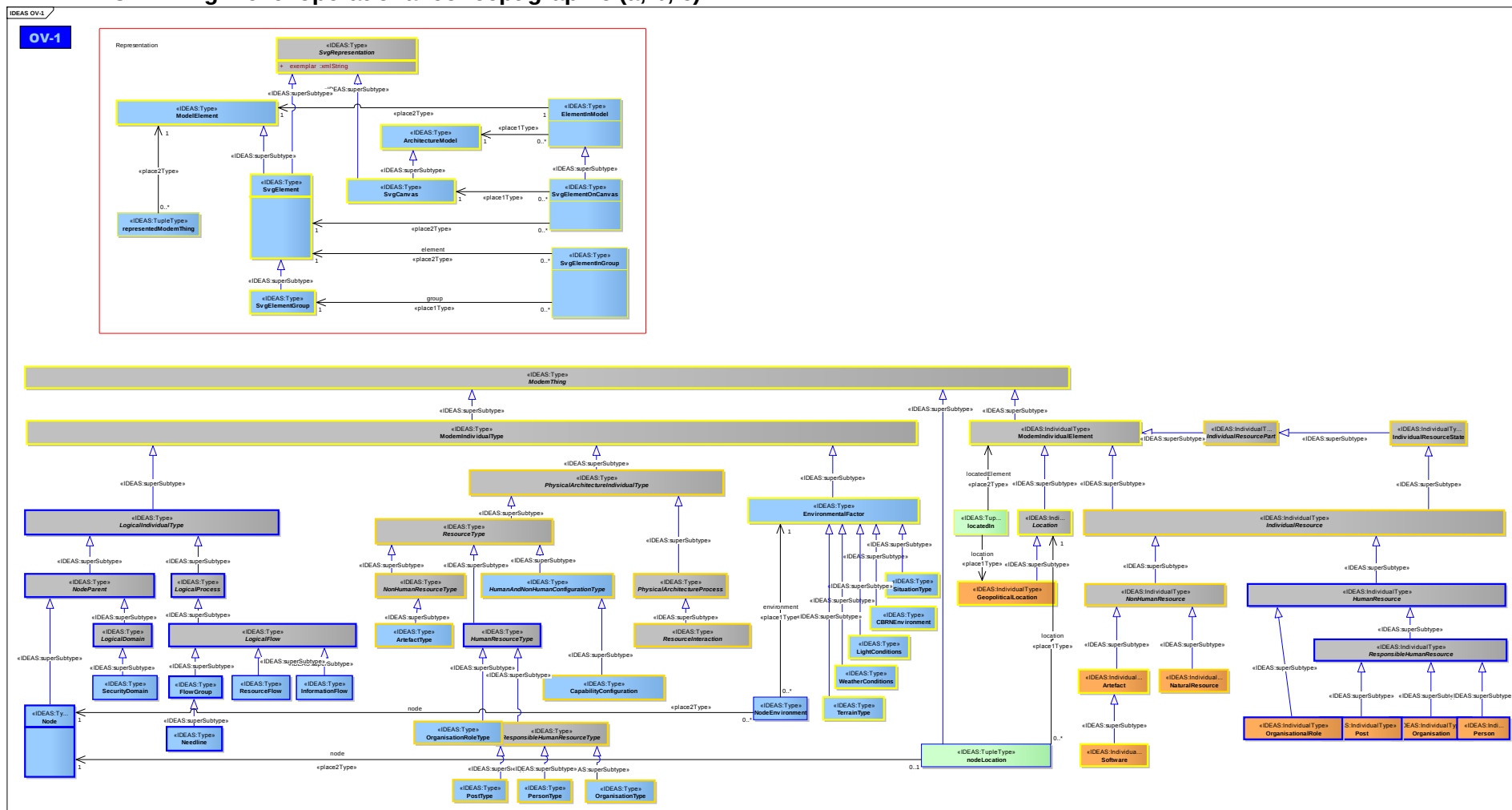


Figure 32 : OV-1

### 2.4.2 OV-2: Operational node relationship description

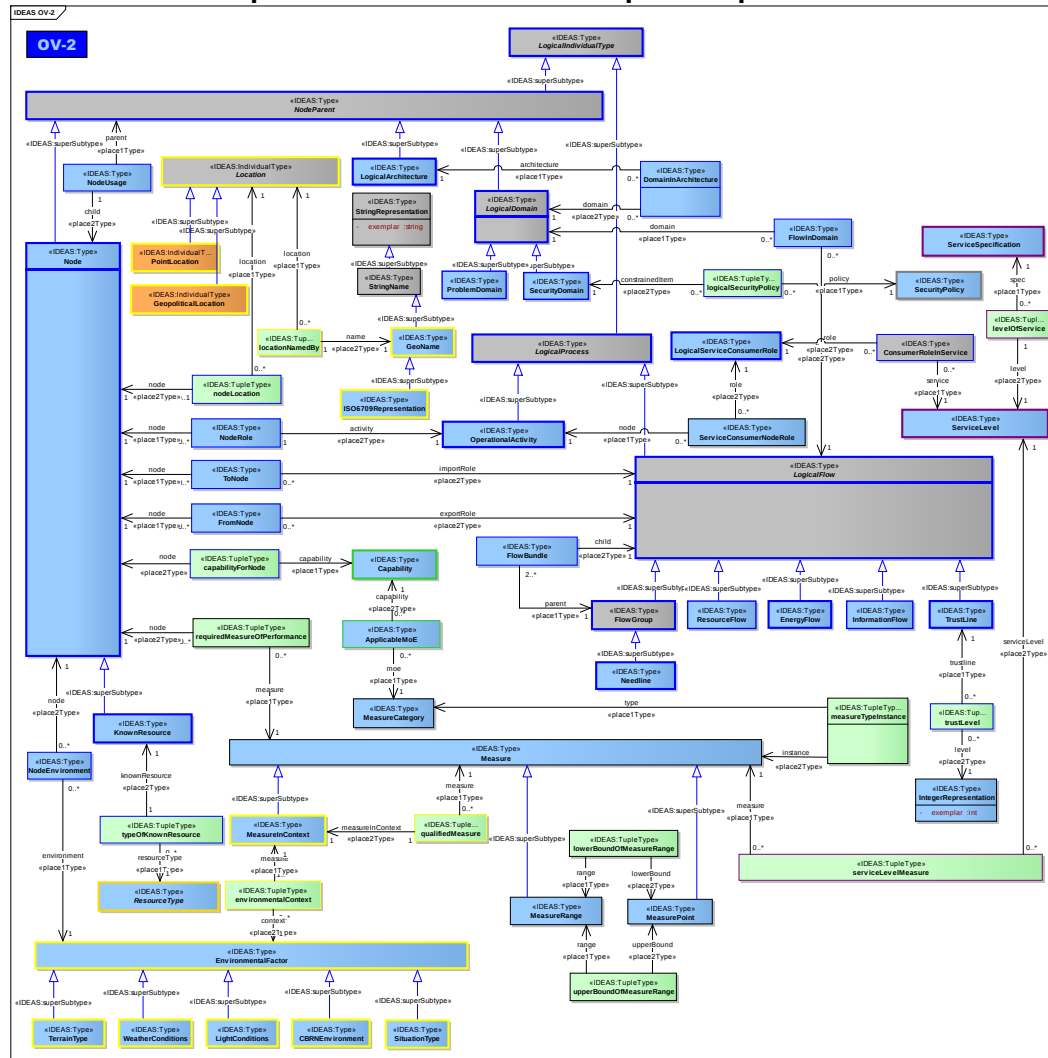


Figure 33 : OV-2

### 2.4.3 OV-3: Operational information exchange matrix

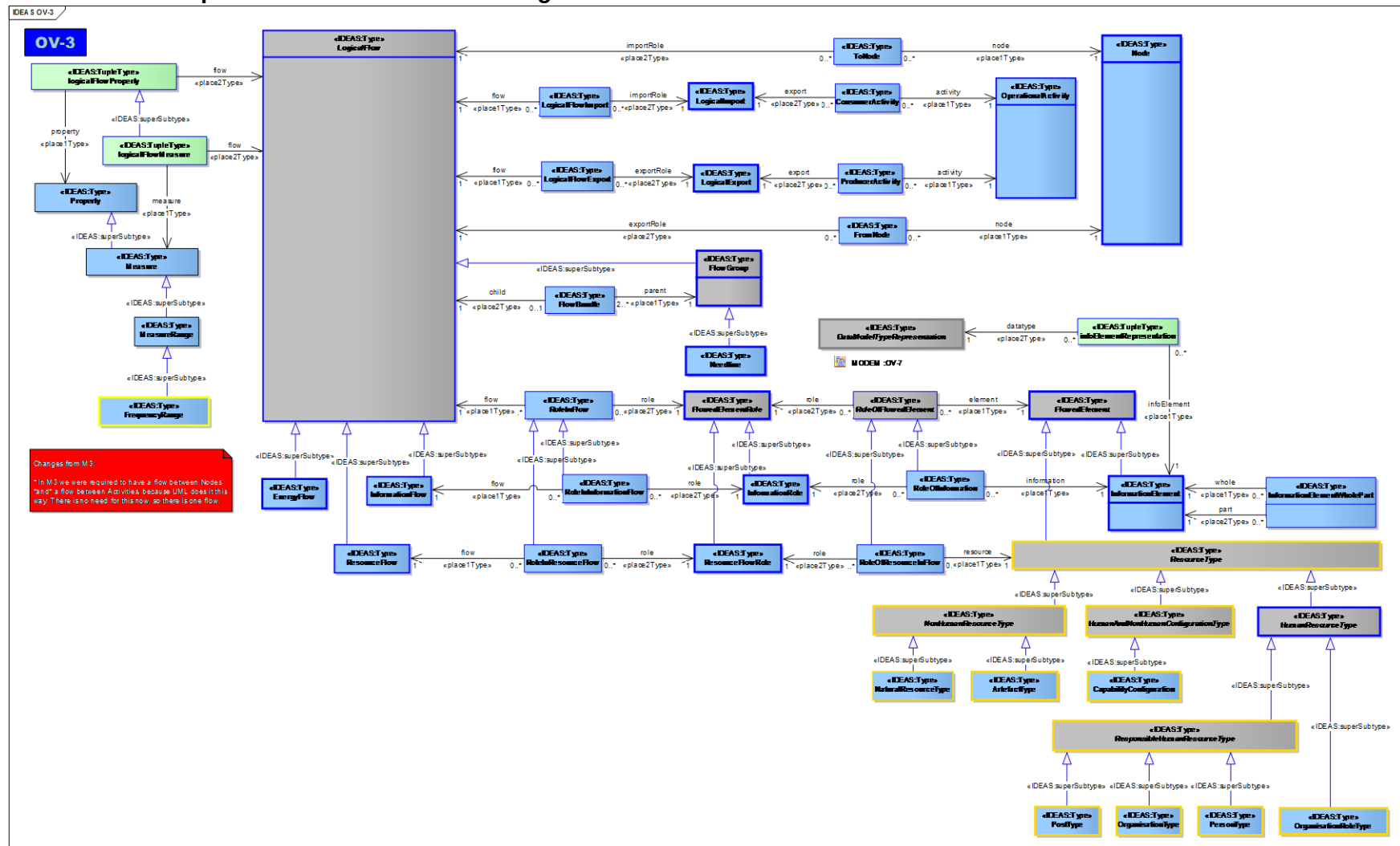


Figure 34 : OV-3

#### 2.4.4 OV-4: Organisational relationships chart

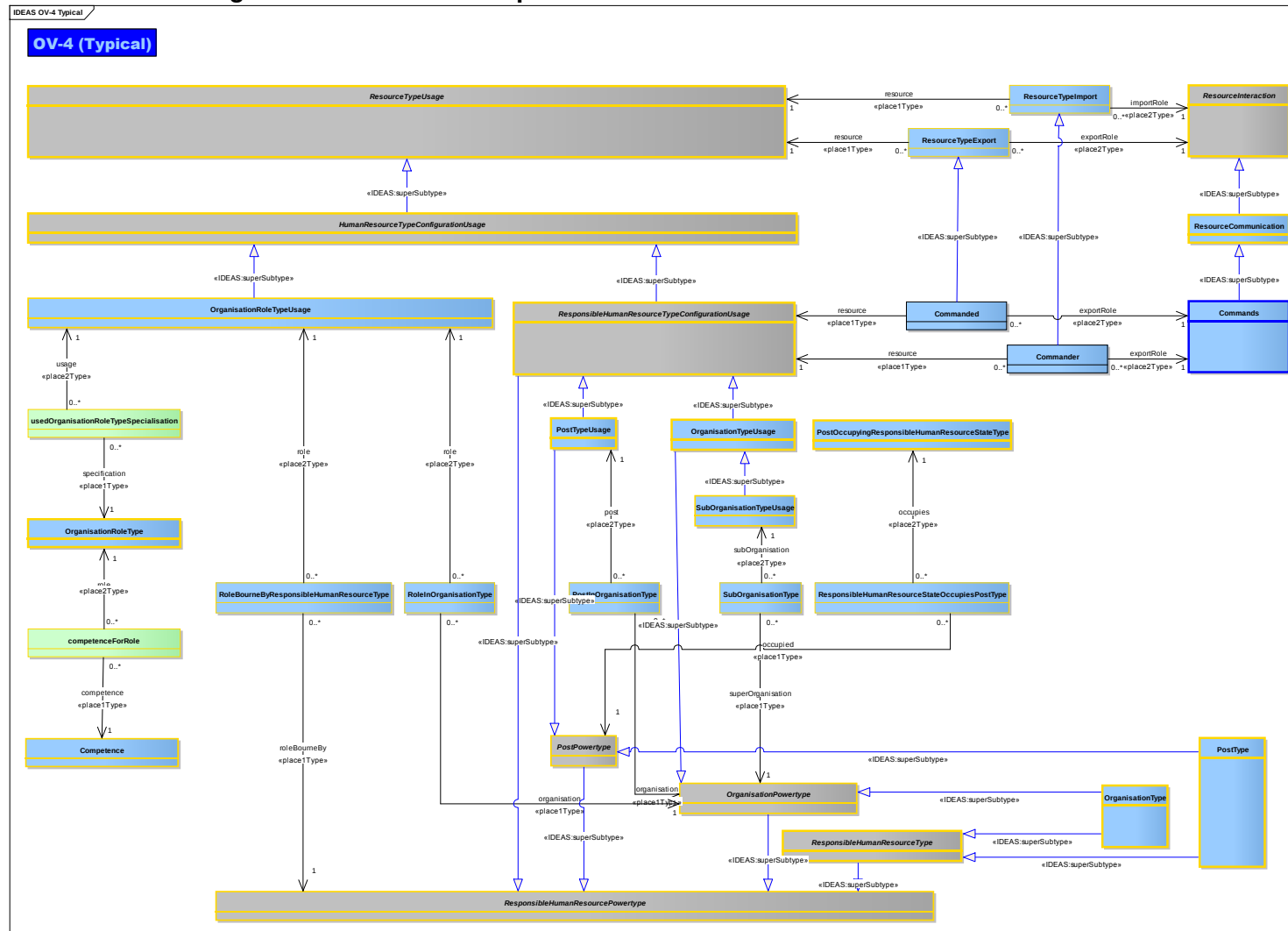


Figure 35 : OV-4 Typical

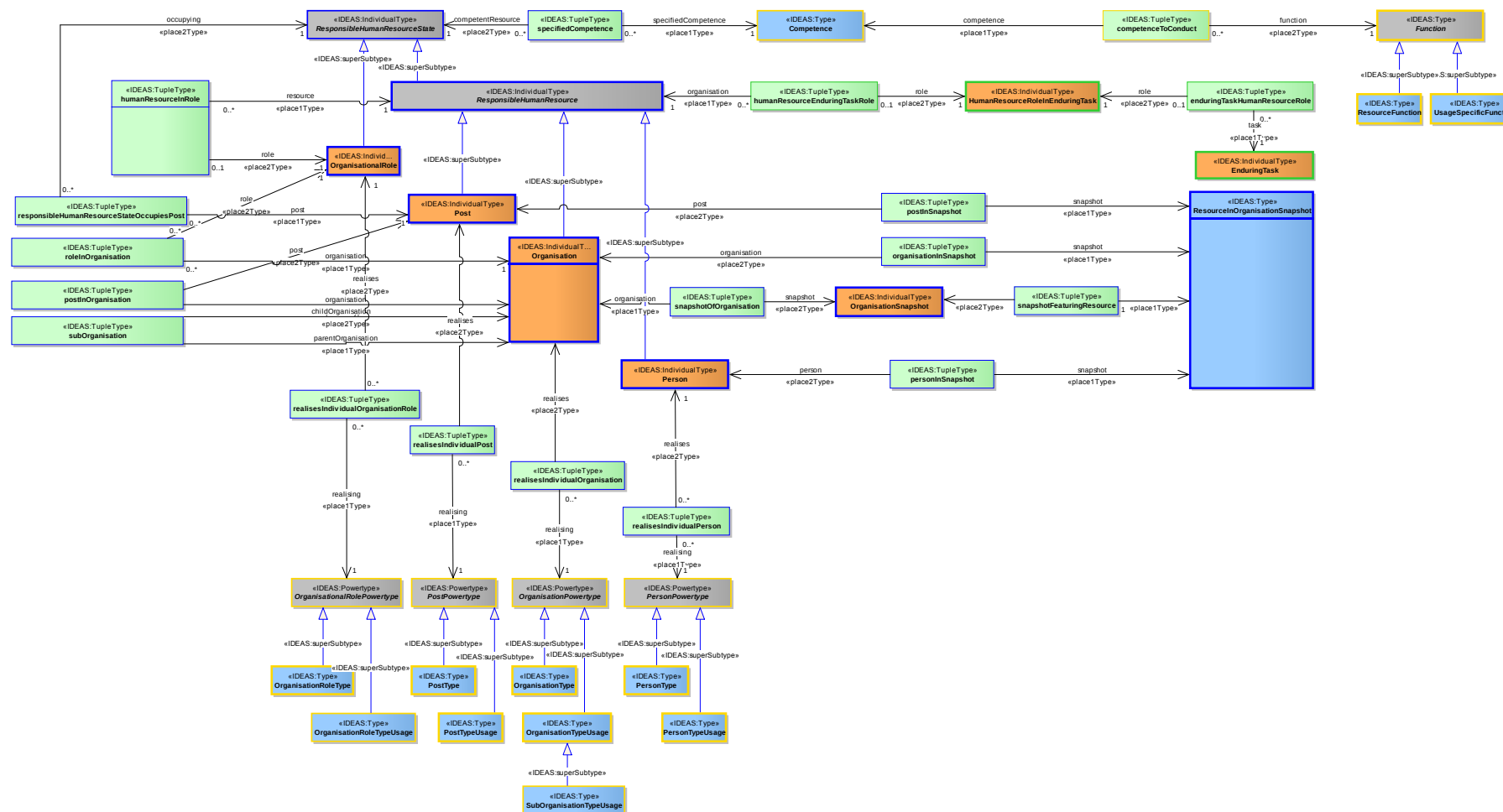


Figure 36 : OV-4 Actual

#### 2.4.5 OV-5: Operational activity model

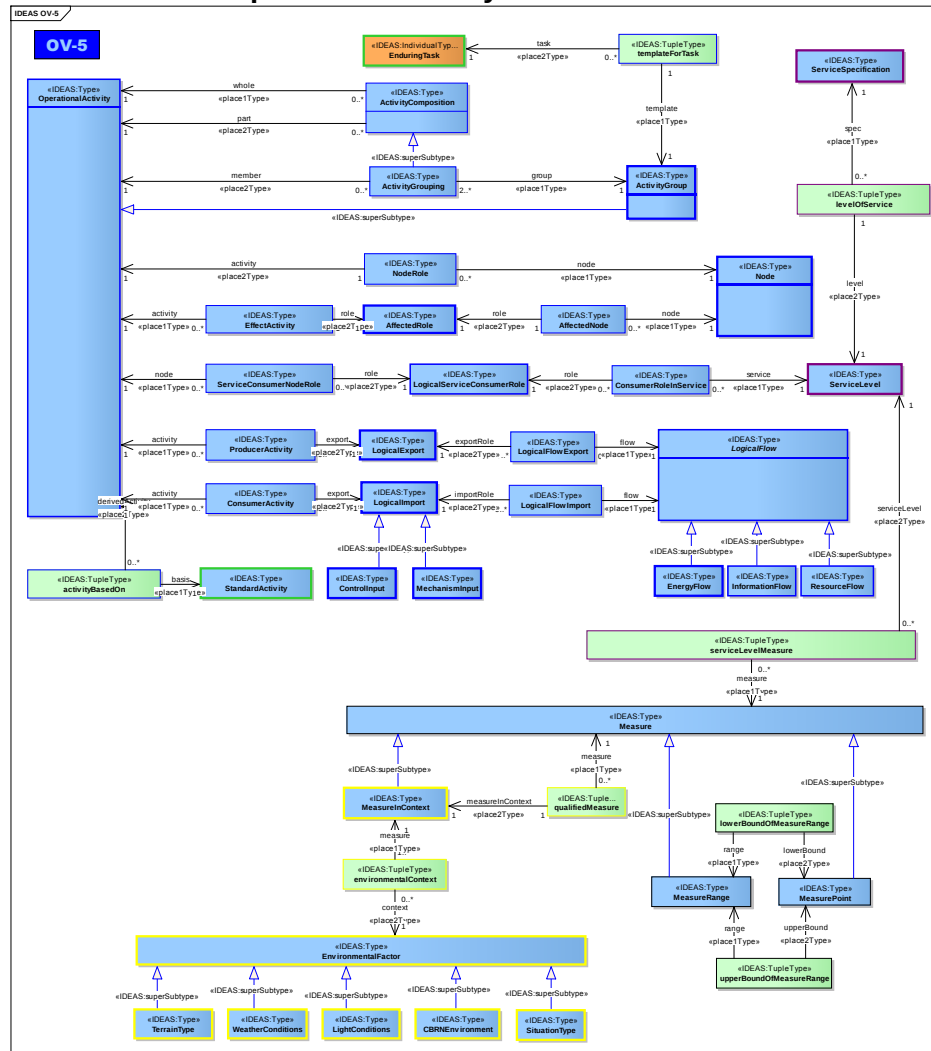


Figure 37 : OV-5

## 2.4.6 OV-6: Operational rules, state descriptions and event-trace description

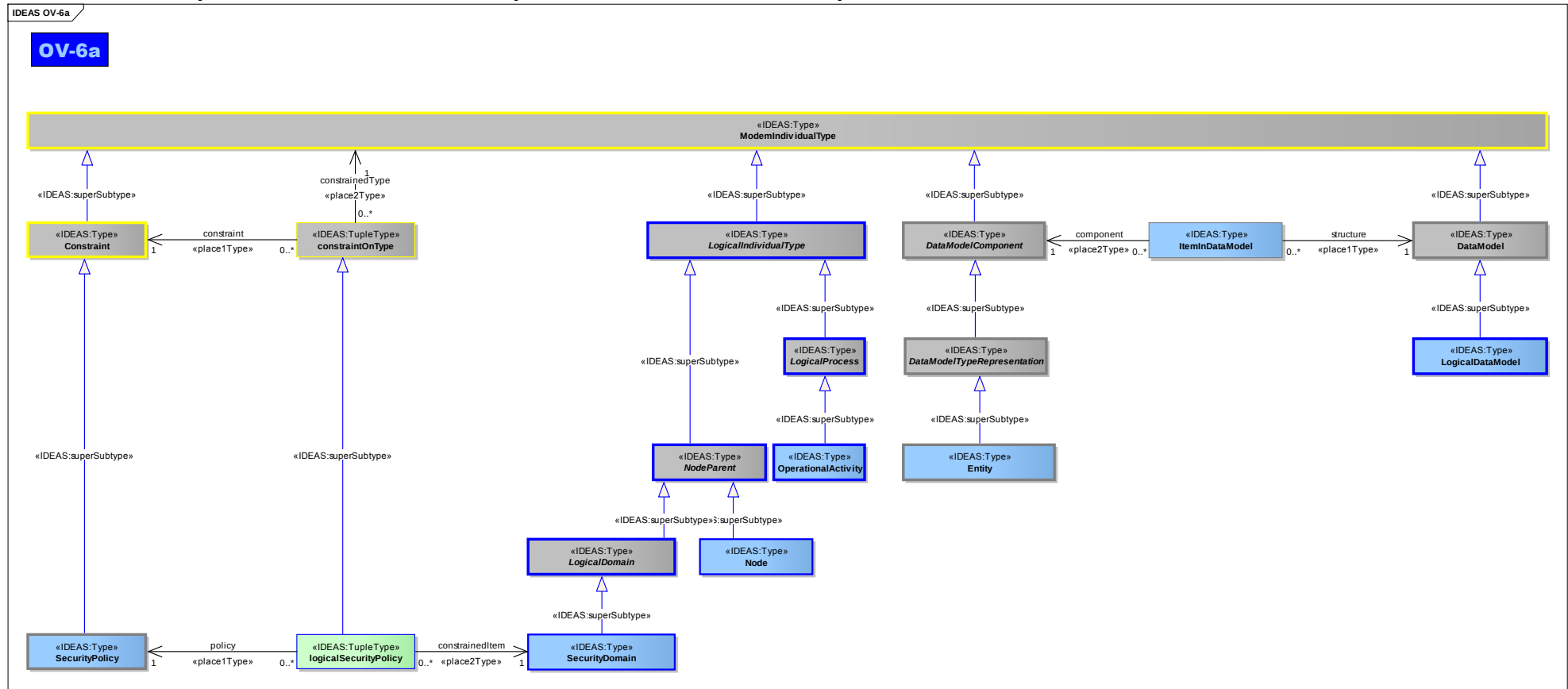


Figure 38 : OV-6a

# OV-6b

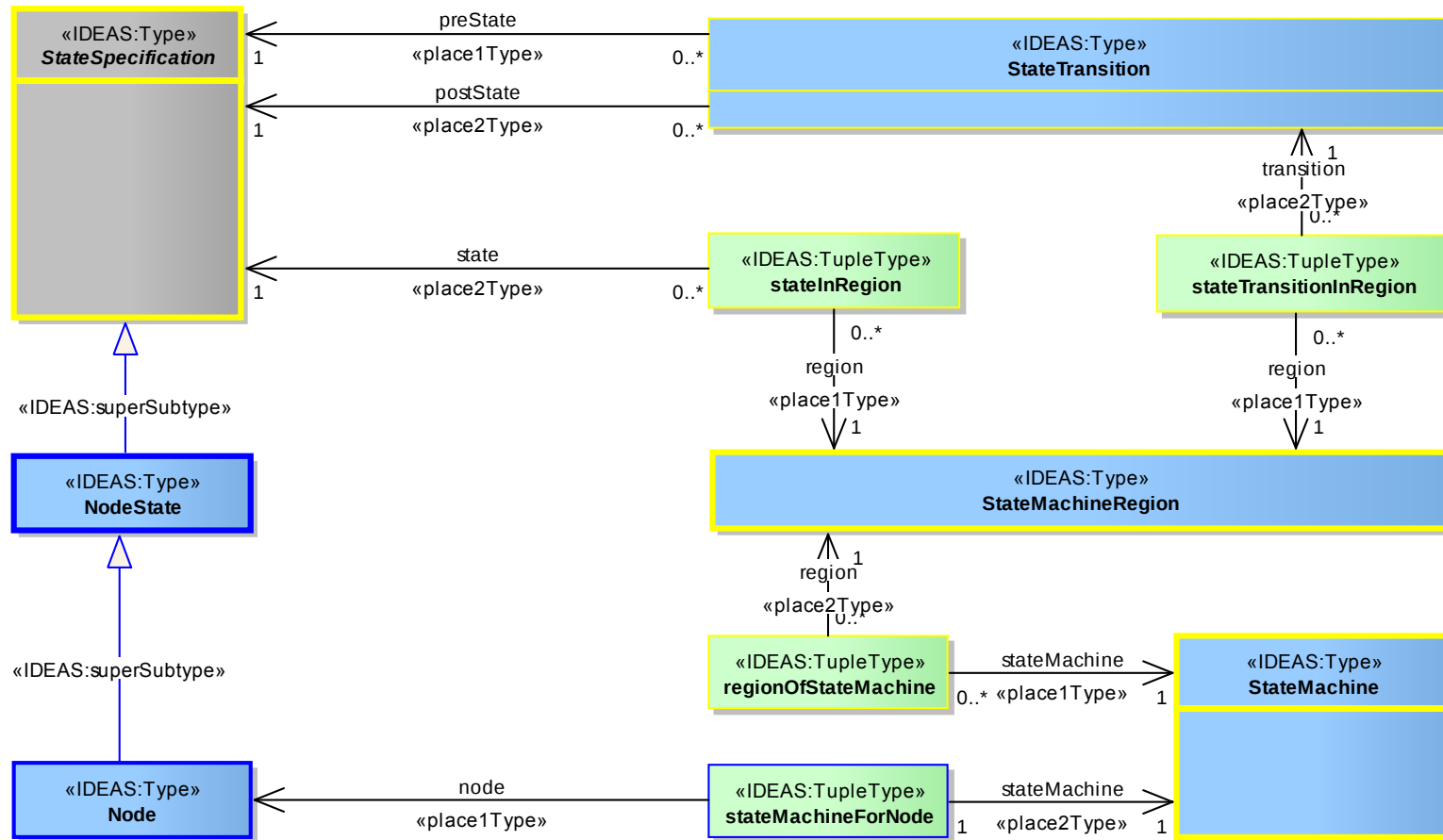


Figure 39 : OV-6b

## OV-6c

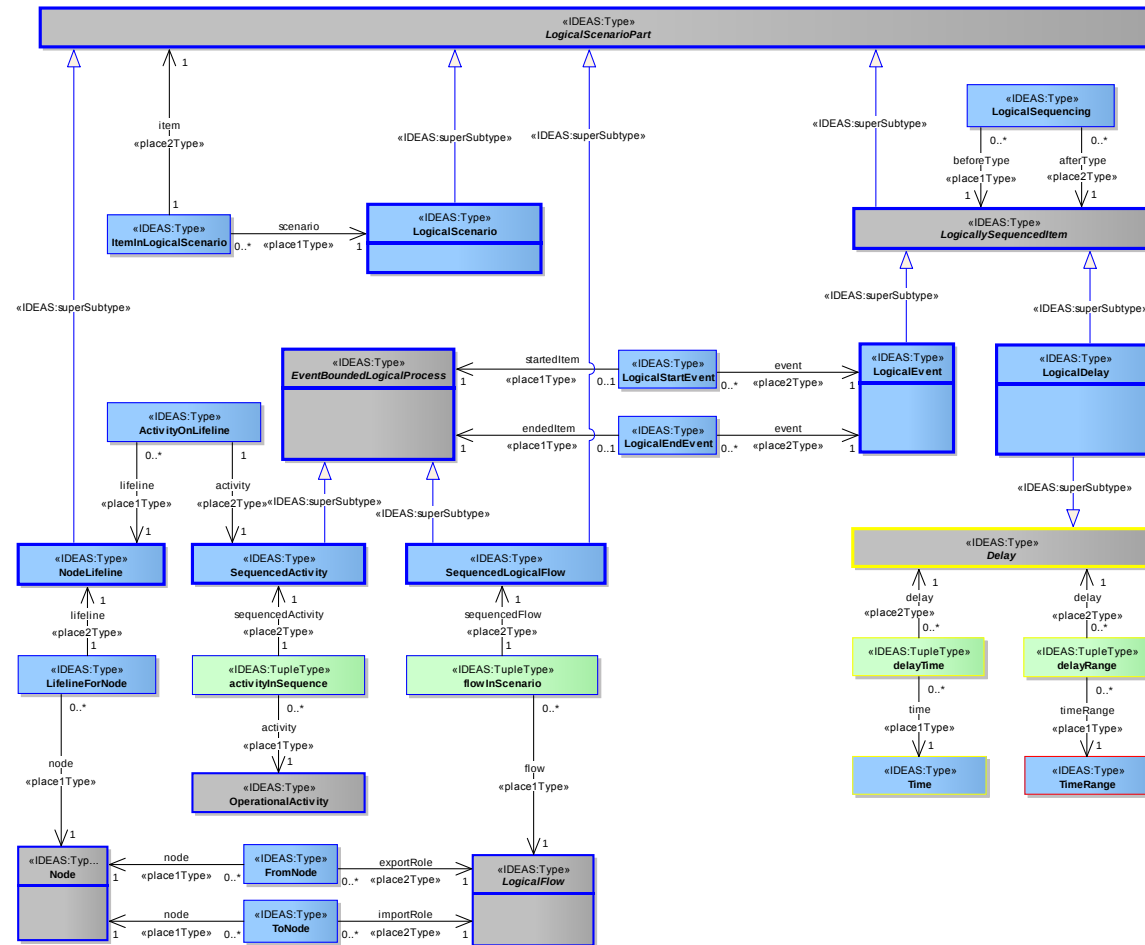


Figure 40 : OV-6c

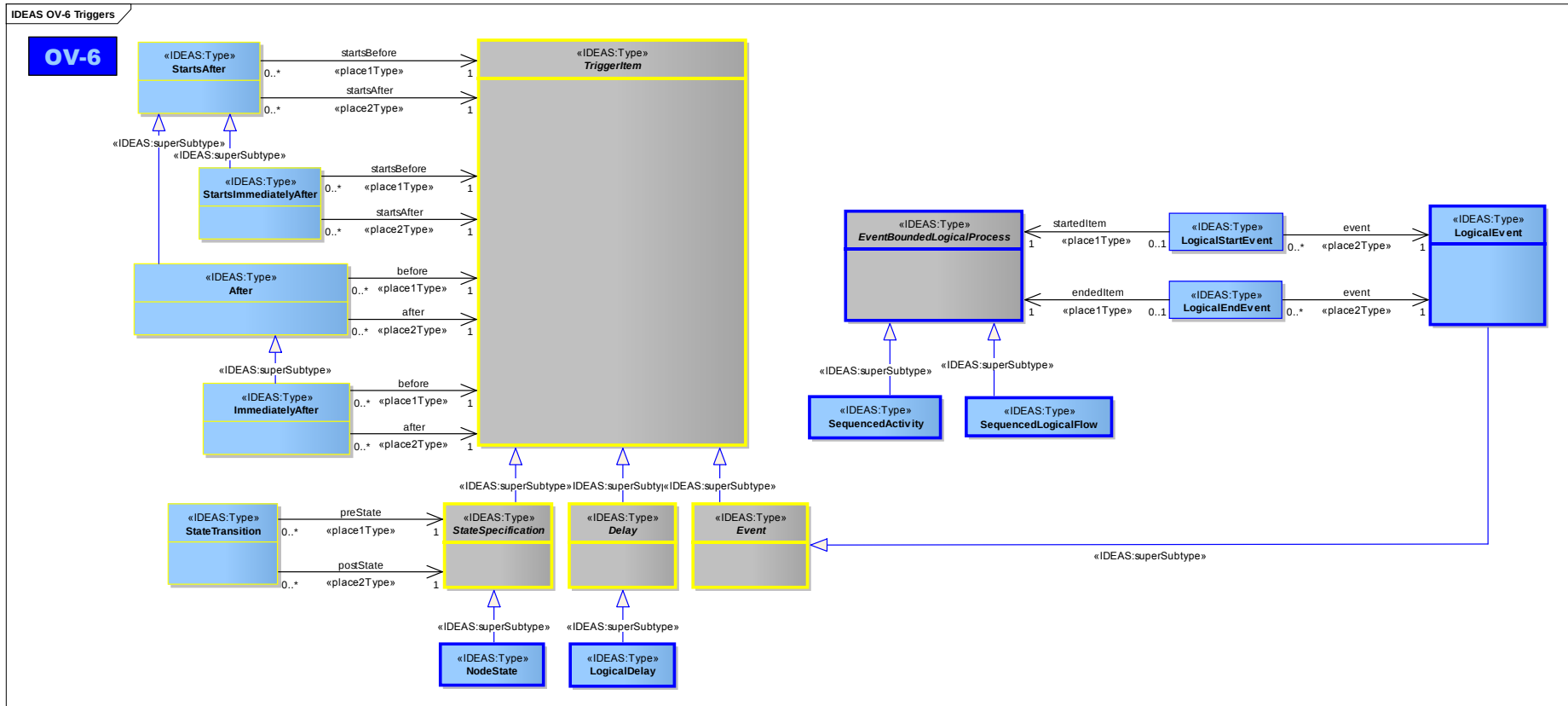


Figure 41 : OV-6 Triggers

## 2.4.7 OV-7: Information model

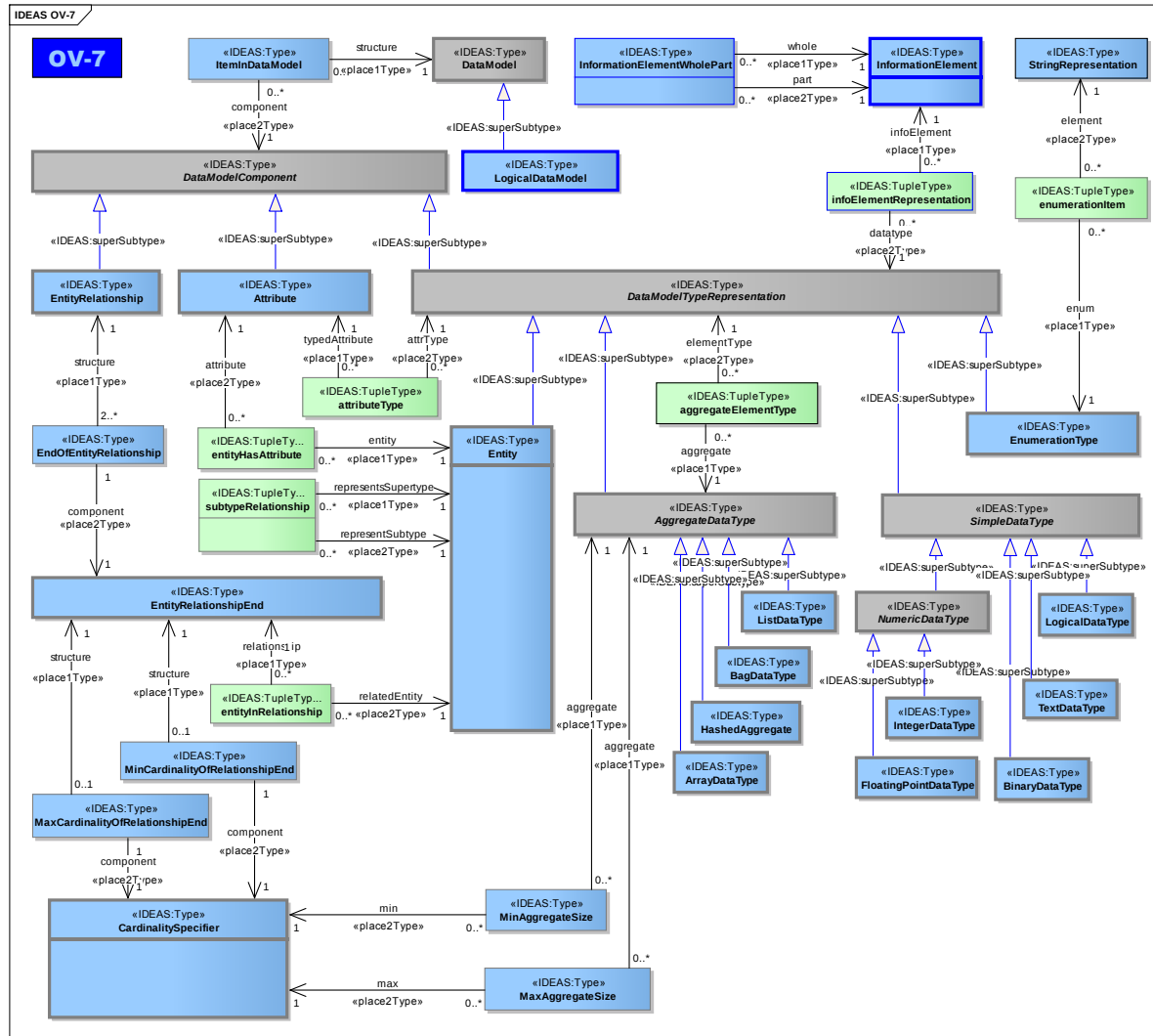


Figure 42 : OV-7

## 2.4.8 Operational Views elements list

| Operational Views                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Commands</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Commands - ResourceCommunication</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceCommunication where one ResponsibleHumanResourceTypeConfigurationUsage commands another.</p>                                                                                                                                                                                                                                                                                                                                                                                                |
| <p><b>HumanResource</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanResource - HumanResourceState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanResource - IndividualResource</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>HumanResource - HumanResourcePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualResource that is composed entirely of human resources. Note: was called "OrganisationalResource" in M3.</p>                                                                                                                     |
| <p><b>Manager</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Manager - OrganisationalRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>An OrganisationalRole where the Person's role in the Organisation is as a Manager. Example: when the Organisation is a Project, the role would be as project manager.</p>                                                                                                                                                                                                                                                                                                                        |
| <p><b>NodeRole</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NodeRole - RoleInLogicalProcess</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NodeRole - ParticipationExtentType</p> <p>Dependency (element - is instance of):</p> <p>Association (source - target): «place2Type»</p> <p>NodeRole - OperationalActivity</p> <p>Association (source - target): «place1Type»</p> <p>NodeRole - Node</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RoleInLogicalProcess which is the extent of a Node's participation in an OperationalActivity. Note: An OperationalActivity can only be conducted by one Node.</p> |
| <p><b>OperationalActivity</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OperationalActivity - LogicalProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProcessType that is a type of logical process, specified independently of how the process is carried out. Note: an OperationalActivity may only be carried out by a logical Node.</p>                                                                                                                                                                                                                                                                                                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <p><b>OrganisationalRole</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>OrganisationalRole - HumanResource</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>OrganisationalRole - OrganisationPart</p> <p>Dependency (element - is instance of):«IDEAS:powertypeInstance»</p> <p>OrganisationalRole - OrganisationalRolePowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>OrganisationalRole - ConstructedHumanResource</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>OrganisationalRole - ResponsibleHumanResourceState</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ConstructedHumanResource that is the state of the ResponsibleHumanResource (that part of its life) where it has the role in an Organisation. Where a role carries the authority to undertake a function - though the human resource given the role has the responsibility.</p> |
| <p><b>Person</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of):«IDEAS:powertypeInstance»</p> <p>Person - PersonPowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>Person - ResponsibleHumanResource</p> <p><u>Attributes:</u></p> <p>-</p> <p>An individual human being.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>ResourceInOrganisationSnapshot</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResourceInOrganisationSnapshot - Doubleton</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResourceInOrganisationSnapshot - SetOfOverlappingIndividuals</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResourceInOrganisationSnapshot - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SetOfOverlappingIndividuals whose members are an OrganisationSnapshot and</p>                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>ResponsibleHumanResource</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResponsibleHumanResource - ResponsibleHumanResourceState</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResponsibleHumanResource - AgentCapableOfResponsibility</p> <p>Dependency (element - is instance of):«IDEAS:powertypeInstance»</p> <p>ResponsibleHumanResource - ResponsibleHumanResourcePowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResponsibleHumanResource - Stakeholder</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResponsibleHumanResource - HumanResource</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                                                                     |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>-</p> <p>A Person, Post or Organisation. These can be held responsible for their actions, hence are responsible human resources.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>ResponsibleHumanResourceState</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i>«IDEAS:powertypeInstance»</p> <p>ResponsibleHumanResourceState - ResponsibleHumanResourceStatePowertype</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceState - AgentCapableOfResponsibilityState</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceState - ResponsibleHumanResourcePart</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceState - IndividualResourceState</p> <p><u>Attributes:</u></p> <p>-</p> <p>A temporal stage of a ResponsibleHumanResource.</p> |
| <p><b>ResponsibleOwner</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ResponsibleOwner - OrganisationalRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>An OrganisationProjectRole where the ResponsibleHumanResource is the responsible for the Organisation - e.g. a project owner.</p>                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>ServiceConsumerNodeRole</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ServiceConsumerNodeRole - ProcessWholeRoleExtentPartType</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ServiceConsumerNodeRole - ModemWholePartType</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>ServiceConsumerNodeRole - OperationalActivity</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>ServiceConsumerNodeRole - LogicalServiceConsumerRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProcessWholeRoleExtentType that relates an OperationalActivity to the role of a ServiceSpecification that supports it.</p>                                       |
| <p><b>humanResourceInRole</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i>«IDEAS:powertypeInstance»</p> <p>humanResourceInRole - RoleBourneByResponsibleHumanResourcePowertype</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>humanResourceInRole - individualResourceUsage</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>humanResourceInRole - stateOfResponsibleHumanResourceState</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>humanResourceInRole - ResponsibleHumanResource</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>humanResourceInRole - OrganisationalRole</p> <p><u>Attributes:</u></p>                              |

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| <p>-</p> <p>A responsibleHumanResourceState relationship between the OrganisationRole and the ResponsibleHumanResource that bears the responsibility. Note: the OrganisationRole cannot be passed on. Instead, a new instance of the role is created.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>personInSnapshot</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>personInSnapshot - resourceInSnapshot</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>personInSnapshot - Person</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>personInSnapshot - ResourceInOrganisationSnapshot</p> <p><u>Attributes:</u></p> <p>-</p> <p>A resourceInSnapshot where the resource is a Person.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>postInOrganisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>postInOrganisation - organisationWholePart</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>postInOrganisation - agentCapableOfResponsibilityWholeAndPart</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>postInOrganisation - individualResourceUsage</p> <p><i>Dependency (element - is instance of):</i>«IDEAS:powertypeInstance»</p> <p>postInOrganisation - PostInOrganisationPowertype</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>postInOrganisation - Organisation</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>postInOrganisation - Post</p> <p><u>Attributes:</u></p> <p>-</p> <p>An organisationWholePart that asserts a Post is part of an Organisation.</p>                                                                                                                                                                                        |
| <p><b>responsibleHumanResourceStateOccupiesPost</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>responsibleHumanResourceStateOccupiesPost - stateOfResponsibleHumanResourceState</p> <p><i>Dependency (element - is instance of):</i>«IDEAS:powertypeInstance»</p> <p>responsibleHumanResourceStateOccupiesPost - ResponsibleHumanResourceStateOccupiesPostPowertype</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>responsibleHumanResourceStateOccupiesPost - individualResourceStateUsage</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>responsibleHumanResourceStateOccupiesPost - ResponsibleHumanResourceState</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>responsibleHumanResourceStateOccupiesPost - Post</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResponsibleHumanResourceWholeState relationship between a Post and state of the ResponsibleHumanResource that is occupying the Post. Note: Any type of ResponsibleHumanResource's state can occupy a post.</p> |

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| <p><b>roleInOrganisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i>«IDEAS:powertypeInstance»</p> <p>roleInOrganisation - RoleInOrganisationPowertype</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>roleInOrganisation - individualResourceUsage</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>roleInOrganisation - responsibleHumanResourceWholePart</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>roleInOrganisation - Organisation</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>roleInOrganisation - OrganisationalRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResponsibleHumanResourceWholePart relationship between an Organisation and one of its OrganisationalRoles.</p>                                                                                                                                         |
| <p><b>subOrganisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>subOrganisation - individualResourceUsage</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>subOrganisation - organisationWholePart</p> <p><i>Dependency (element - is instance of):</i>«IDEAS:powertypeInstance»</p> <p>subOrganisation - SubOrganisationPowertype</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>subOrganisation - Organisation</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>subOrganisation - Organisation</p> <p><u>Attributes:</u></p> <p>-</p> <p>An organisationWholePart that asserts one Organisation is a component of another Organisation. Note: The childOrganisation is a component of the parentOrganisation, so this relation is not intended to model situations where a subsidiary Organisation moves from one parent to another.</p> |
| <p><b>ActivityComposition</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ActivityComposition - ProcessWholeAndPartType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ActivityComposition - TypicalWholePart</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>ActivityComposition - OperationalActivity</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>ActivityComposition - OperationalActivity</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart that relates a parent (whole) OperationalActivity to its child (part).</p>                                                                                                                                                                                                                                                                                                       |
| <p><b>ActivityGroup</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ActivityGroup - OperationalActivity</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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| <p>-</p> <p>An OperationalActivity that is entirely composed of other OperationalActivities.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>ActivityGrouping</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ActivityGrouping - ActivityComposition</p> <p>Association (source - target): «place1Type»</p> <p>ActivityGrouping - ActivityGroup</p> <p>Association (source - target): «place2Type»</p> <p>ActivityGrouping - OperationalActivity</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ActivityComposition where the parent Activity is an ActivityGroup.</p>                                                                                                                                                                                                                  |
| <p><b>ActivityOnLifeline</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ActivityOnLifeline - TypicalWholePart</p> <p>Association (source - target): «place2Type»</p> <p>ActivityOnLifeline - SequencedActivity</p> <p>Association (source - target): «place1Type»</p> <p>ActivityOnLifeline - NodeLifeline</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart where a SequencedActivity is part of a NodeLifeline. Note: a given SequencedActivity may appear on one and only one NodeLifeline.</p>                                                                                                                                 |
| <p><b>AffectedNode</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AffectedNode - ModemWholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AffectedNode - TypicalWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AffectedNode - IndividualRoleType</p> <p>Association (source - target): «place1Type»</p> <p>AffectedNode - Node</p> <p>Association (source - target): «place2Type»</p> <p>AffectedNode - AffectedRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualRoleType where the role extent is an AffectedRole and the whole is a Node.</p> |
| <p><b>AffectedRole</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AffectedRole - ModemIndividualType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AffectedRole - RoleExtentType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RoleExtentType that corresponds to the part of a Node affected by an Activity that acts upon it. Note: by "part", this includes temporal parts, so all of the Node may be affected for a period of time. This was</p>                                                                                                                                                           |

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| <p>previously &lt;&lt;ActsUpon&gt;&gt; in M3.</p> <p><b>Commanded</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Commanded - ResourceTypeExport</p> <p>Association (source - target): «place2Type»</p> <p>Commanded - Commands</p> <p>Association (source - target): «place1Type»</p> <p>Commanded - ResponsibleHumanResourceTypeConfigurationUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceTypeExport that asserts the ResponsibleHumanResourceTypeConfigurationUsage commanded participation in command.</p>                                                      |
| <p><b>Commander</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Commander - ResourceTypeImport</p> <p>Association (source - target): «place2Type»</p> <p>Commander - Commands</p> <p>Association (source - target): «place1Type»</p> <p>Commander - ResponsibleHumanResourceTypeConfigurationUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceTypeExport that asserts the ResponsibleHumanResourceTypeConfigurationUsage participation as the commander in the command.</p>                                                                                             |
| <p><b>ConstructedHumanResource</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ConstructedHumanResource - HumanResource</p> <p><u>Attributes:</u></p> <p>-</p> <p>A HumanResource that is intentionally constructed. An OrganisationRole, Post, or Organisation.</p>                                                                                                                                                                                                                                                                                                   |
| <p><b>ConsumerActivity</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ConsumerActivity - IndividualExchangeRoleType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ConsumerActivity - ModemWholePartType</p> <p>Association (source - target): «place1Type»</p> <p>ConsumerActivity - OperationalActivity</p> <p>Association (source - target): «place2Type»</p> <p>ConsumerActivity - LogicalImport</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualExchangeRoleType where an OperationalActivity is the consumer of a LogicalFlow.</p> |

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| <p><b>ConsumerRoleInService</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ConsumerRoleInService - AgentParticipationType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ConsumerRoleInService - ModemWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>ConsumerRoleInService - LogicalServiceConsumerRole</p> <p>Association (source - target): «place1Type»</p> <p>ConsumerRoleInService - ServiceLevel</p> <p><u>Attributes:</u></p> <p>-</p> <p>A AgentParticipationType that relates a ServiceSpecification to its role in supporting an OperationalActivity.</p>                                                   |
| <p><b>ControlInput</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ControlInput - LogicalImport</p> <p><u>Attributes:</u></p> <p>-</p> <p>A LogicalImport where the imported LogicalFlow controls the OperationalActivity. Note: this exists to provide compatibility with IDEF0.</p>                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>DomainInArchitecture</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>DomainInArchitecture - ModemWholePartType</p> <p>Association (source - target): «place1Type»</p> <p>DomainInArchitecture - LogicalArchitecture</p> <p>Association (source - target): «place2Type»</p> <p>DomainInArchitecture - LogicalDomain</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemWholePartType that asserts a LogicalDomain is part of a LogicalArchitecture.</p>                                                                                                                                                                                                                      |
| <p><b>EffectActivity</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EffectActivity - TypicalWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EffectActivity - ModemWholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EffectActivity - ProcessWholeRoleExtentPartType</p> <p>Association (source - target): «place1Type»</p> <p>EffectActivity - OperationalActivity</p> <p>Association (source - target): «place2Type»</p> <p>EffectActivity - AffectedRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProcessWholeRoleExtentPartType where the ProcessType is an OperationalActivity.</p> |

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| <p><b>EnergyFlow</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EnergyFlow - LogicalFlow</p> <p><u>Attributes:</u></p> <p>-</p> <p>A LogicalFlow where energy is transferred from one Node to another.</p>                                                                                                                                                                                                                                                                                                            |
| <p><b>EventBoundedLogicalProcess</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EventBoundedLogicalProcess - LogicalProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>A LogicalProcess that can have LogicalEvents marking its start and end points.</p>                                                                                                                                                                                                                                                              |
| <p><b>FlowBundle</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FlowBundle - TypicalWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FlowBundle - ExchangeWholeAndPartType</p> <p>Association (source - target): «place2Type»</p> <p>FlowBundle - LogicalFlow</p> <p>Association (source - target): «place1Type»</p> <p>FlowBundle - FlowGroup</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart where the whole is a FlowGroup and the part is a LogicalFlow.</p> |
| <p><b>FlowGroup</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FlowGroup - LogicalFlow</p> <p><u>Attributes:</u></p> <p>-</p> <p>A LogicalFlow that is composed of other LogicalFlows.</p>                                                                                                                                                                                                                                                                                                                            |
| <p><b>FlowInDomain</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FlowInDomain - ModemWholePartType</p> <p>Association (source - target): «place1Type»</p> <p>FlowInDomain - LogicalDomain</p> <p>Association (source - target): «place2Type»</p> <p>FlowInDomain - LogicalFlow</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemWholePartType that asserts a LogicalFlow lies within an LogicalDomain.</p>                                                                                                           |

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| <p><b>FlowedElement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FlowedElement - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType that can be flowed along a LogicalFlow.</p>                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>FlowedElementRole</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FlowedElementRole - ModemIndividualType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FlowedElementRole - ExchangedItemRoleType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ExchangedItemRoleType where a FlowedElement is exchanged along a LogicalFlow.</p>                                                                                                                                                                                              |
| <p><b>FromNode</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FromNode - RoleInLogicalProcess</p> <p>Association (source - target): «place2Type»</p> <p>FromNode - LogicalFlow</p> <p>Association (source - target): «place1Type»</p> <p>FromNode - Node</p> <p><u>Attributes:</u></p> <p>-</p> <p>An RoleInLogicalProcess where a LogicalFlow flows from a Node.</p>                                                                                                                                                                                               |
| <p><b>InformationElement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InformationElement - InformationInstanceType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InformationElement - Information</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InformationElement - FlowedElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>An InformationInstanceType that flows between OperationalActivities and Nodes. The structure of an InformationElement may be defined using a LogicalDataModel.</p> |
| <p><b>InformationElementWholePart</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InformationElementWholePart - TypicalWholePart</p> <p>Association (source - target): «place2Type»</p> <p>InformationElementWholePart - InformationElement</p> <p>Association (source - target): «place1Type»</p> <p>InformationElementWholePart - InformationElement</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                        |

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| <p>A TypicalWholePart where one InformationElement is a part of another.</p> <p><b>InformationFlow</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> InformationFlow - LogicalFlow<br/> <u>Attributes:</u><br/> -<br/> A LogicalFlow where the FlowedElement is information.</p>                                                                                                                                                                                             |
| <p><b>InformationRole</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> InformationRole - FlowedElementRole<br/> <u>Attributes:</u><br/> -<br/> A FlowedElementRole where information is flowed.</p>                                                                                                                                                                                                                                                                         |
| <p><b>ItemInLogicalScenario</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> ItemInLogicalScenario - ItemInScenario<br/> Association (source - target): «place2Type»<br/> ItemInLogicalScenario - LogicalScenarioPart<br/> Association (source - target): «place1Type»<br/> ItemInLogicalScenario - LogicalScenario<br/> <u>Attributes:</u><br/> -<br/> An ItemInScenario where the item (part) is a LogicalScenarioItem and the scenario (whole) is a LogicalScenario.</p> |
| <p><b>KnownResource</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> KnownResource - Node<br/> <u>Attributes:</u><br/> -<br/> A ResourceType that plays a part in a LogicalArchitecture. Note: An OV-2 is meant to show logical interactions between nodes. However, sometimes it is known that a connection runs to/from a particular type of resource.</p>                                                                                                                |
| <p><b>LifelineForNode</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> LifelineForNode - StateOfNode<br/> Association (source - target): «place2Type»<br/> LifelineForNode - NodeLifeline<br/> Association (source - target): «place1Type»<br/> LifelineForNode - Node<br/> <u>Attributes:</u><br/> -<br/> A StateOfNode that asserts that a NodeLifeLine is a typical temporal part of a Node.</p>                                                                         |

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| <p><b>LogicalDataModel</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalDataModel - DataModel</p> <p><u>Attributes:</u></p> <p>-</p> <p>A DataModel that is a specification of business information requirements as a formal data structure, where relationships and classes (entities) are used to specify the logic which underpins the information.</p>                                                                                                                                                                                                                                                                                                              |
| <p><b>LogicalDelay</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalDelay - LogicallySequencedItem</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalDelay - Delay</p> <p><u>Attributes:</u></p> <p>-</p> <p>A LogicalSequencedItem that is part of a LogicalScenario that has a specified temporal extent, but an unspecified spatial extent.</p>                                                                                                                                                                                                                                                                                  |
| <p><b>LogicalDomain</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalDomain - NodeParent</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NodeParent that is a collection of Nodes that share some common feature.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>LogicalEndEvent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalEndEvent - ModemTemporalWholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalEndEvent - EndBorderType</p> <p>Association (source - target): «place1Type»</p> <p>LogicalEndEvent - EventBoundedLogicalProcess</p> <p>Association (source - target): «place2Type»</p> <p>LogicalEndEvent - LogicalEvent</p> <p><u>Attributes:</u></p> <p>-</p> <p>An EndtBorderType that relates a LogicallySequencedItem to the LogicalEvent that marks its end</p> <p>Note: there may be no more than one LogicalEndEvent for a given LogicallySequencedItem.</p> |
| <p><b>LogicalEvent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalEvent - Event</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalEvent - LogicallySequencedItem</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Event that marks the beginning or end of a LogicalActivity.</p>                                                                                                                                                                                                                                                                                                                                                     |

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| <p><b>LogicalExport</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalExport - SendType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalExport - LogicalProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SendType where a LogicalFlow exports from a Node or OperationalActivity. Note: this is the equivalent of OpActivityOutputPin in M3.</p>                                                                                                                                                                    |
| <p><b>LogicalFlow</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalFlow - LogicalProcess</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalFlow - ExchangeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ExchangeType that flows between OperationalActivities and/or Nodes.</p>                                                                                                                                                                                                                                     |
| <p><b>LogicalFlowExport</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalFlowExport - ModemWholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalFlowExport - SendInExchangeType</p> <p>Association (source - target): «place2Type»</p> <p>LogicalFlowExport - LogicalExport</p> <p>Association (source - target): «place1Type»</p> <p>LogicalFlowExport - LogicalFlow</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SendInExchangeType where a LogicalFlow exports from a Node or OperationalActivity.</p>     |
| <p><b>LogicalFlowImport</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalFlowImport - ModemWholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalFlowImport - ReceiveInExchangeType</p> <p>Association (source - target): «place1Type»</p> <p>LogicalFlowImport - LogicalFlow</p> <p>Association (source - target): «place2Type»</p> <p>LogicalFlowImport - LogicalImport</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ReceiveInExchangeType where a LogicalFlow imports to a Node or OperationalActivity.</p> |

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| <p><b>LogicalImport</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalImport - ReceiveType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalImport - LogicalProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ReceiveType where a LogicalFlow imports to a Node or OperationalActivity. Note: this is the equivalent of OpActivityInputPin in M3.</p>    |
| <p><b>LogicalIndividualType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalIndividualType - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType that is specified independently of any implemenation mechanism (i.e. without specifying the ResourceType).</p>                                                                                               |
| <p><b>LogicalProcess</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalProcess - ProcessType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalProcess - LogicalIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProcessType used to specify functionality without being specific about the type of Resource that provides the functionality.</p> |
| <p><b>LogicalScenario</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalScenario - LogicalScenarioPart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalScenario - Scenario</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Scenario that does not specify particular ResourceTypes - i.e. one that consists of Nodes and LogicalProcesses.</p>                |
| <p><b>LogicalScenarioPart</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalScenarioPart - LogicalIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A LogicalIndividualType that is part of a LogicalScenario - note this can include other LogicalScenarios.</p>                                                                                                                        |
| <p><b>LogicalSequencing</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalSequencing - ImmediateBeforeAfterType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalSequencing - ModemThing</p> <p>Association (source - target): «place2Type»</p>                                                                                                            |

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| <p>LogicalSequencing - LogicallySequencedItem<br/> <i>Association (source - target):</i> «place1Type»<br/> LogicalSequencing - LogicallySequencedItem<br/> <u>Attributes:</u><br/> -<br/> An ImmediateBeforeAfterType that asserts one LogicallySequencedItem occurs immediately after the other.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>LogicalServiceConsumerRole</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> LogicalServiceConsumerRole - ModemIndividualType<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> LogicalServiceConsumerRole - ParticipationExtentType<br/> <u>Attributes:</u><br/> -<br/> A ParticipationExtentType which is the extent of an OperationalActivity's participation in as the consumer of a ServiceSpecification.</p>                                                                                                                                                                                                                                              |
| <p><b>LogicalStartEvent</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> LogicalStartEvent - ModemTemporalWholePartType<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> LogicalStartEvent - StartBorderType<br/> <i>Association (source - target):</i> «place2Type»<br/> LogicalStartEvent - LogicalEvent<br/> <i>Association (source - target):</i> «place1Type»<br/> LogicalStartEvent - EventBoundedLogicalProcess<br/> <u>Attributes:</u><br/> -<br/> A StartBorderType that relates an EventBoundedLogicalProcess to the LogicalEvent that marks its start. Note: there may be no more than one LogicalStartEvent for a given EventBoundedLogicalProcess.</p> |
| <p><b>LogicallySequencedItem</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> LogicallySequencedItem - LogicalScenarioPart<br/> <u>Attributes:</u><br/> -<br/> A LogicalScenarioPart which may be temporally ordered using LogicalSequencing.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>MechanismInput</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> MechanismInput - LogicalImport<br/> <u>Attributes:</u><br/> -<br/> A LogicalImport where the imported LogicalFlow provides a mechanism for conducting the OperationalActivity. Note: this exists to provide compatibility with IDEF0.</p>                                                                                                                                                                                                                                                                                                                                                                                      |
| <p><b>Needline</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> Needline - FlowGroup<br/> <u>Attributes:</u><br/> -</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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| <p>A FlowGroup that is a bundle of LogicalFlows between Nodes.</p> <p><b>Node</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> Node - NodeState<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> Node - BodyType<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> Node - NodeParent<br/> <u>Attributes:</u><br/> -<br/> A NodeState that is used in context of a NodeParent.</p>   |
| <p><b>NodeEnvironment</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Association (source - target):</i>«place1Type»<br/> NodeEnvironment - EnvironmentalFactor<br/> <i>Association (source - target):</i>«place2Type»<br/> NodeEnvironment - Node<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> NodeEnvironment - TypicalWholePart<br/> <u>Attributes:</u><br/> -<br/> A TypicalWholePart that indicates an of EnvironmentalFactor of the environment in which the Node will operate.</p> |
| <p><b>NodeLifeline</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> NodeLifeline - NodeState<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> NodeLifeline - LogicalScenarioPart<br/> <u>Attributes:</u><br/> -<br/> A NodeState whose extent is defined by a LogicalScenario.</p>                                                                                                                                  |
| <p><b>NodeParent</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> NodeParent - AgentType<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> NodeParent - LogicalIndividualType<br/> <u>Attributes:</u><br/> -<br/> A LogicalIndividualType that is any type of thing that has parts that are Nodes.</p>                                                                                                               |
| <p><b>NodeState</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> NodeState - LogicalIndividualType<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> NodeState - StateSpecification<br/> <u>Attributes:</u></p>                                                                                                                                                                                                      |

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| <p>-</p> <p>A LogicalIndividualType that is a type of state that a Node can be in. This includes the limit case of the whole-life state type - i.e. the Node itself.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>NodeUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NodeUsage - ModemWholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NodeUsage - AgentWholeAndPartType</p> <p>Association (source - target): «place2Type»</p> <p>NodeUsage - Node</p> <p>Association (source - target): «place1Type»</p> <p>NodeUsage - NodeParent</p> <p><u>Attributes:</u></p> <p>-</p> <p>An AgentWholeAndPartType where a NodeParent has a Node as a part.</p>                                                                                                                                                                                                  |
| <p><b>Organisation</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Organisation - OrganisationState</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Organisation - OrganisationPowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Organisation - ConstructedHumanResource</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Organisation - Undertaking</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Organisation - ResponsibleHumanResource</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ConstructedHumanResource which is an Organisation.</p> |
| <p><b>OrganisationPart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationPart - ResponsibleHumanResourcePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationPart - UndertakingPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResponsibleHumanResourcePart that is part of an Organisation.</p>                                                                                                                                                                                                                                                                                                                             |
| <p><b>OrganisationSnapshot</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationSnapshot - OrganisationPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>An OrganisationPart that is a timeslice of an Organisation or part of an Organisation (i.e. and incomplete snapshot) at a particular point in time. Note: most org charts represent a OrganisationSnapshot.</p>                                                                                                                                                                                                                                                                                                       |

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| <p><b>OrganisationState</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>OrganisationState - OrganisationStatePowertype</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>OrganisationState - OrganisationPart</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>OrganisationState - ResponsibleHumanResourceState</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>OrganisationState - UndertakingState</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResponsibleHumanResourceState which is a temporal part of an Organisation.</p>                                                                                                           |
| <p><b>Post</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>Post - ResponsibleHumanResource</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>Post - OrganisationPart</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>Post - ConstructedHumanResource</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>Post - PostPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ConstructedHumanResource that is a position in an Organisation that may be filled wholly or partly by a ResponsibleHumanResource; in other words, by an Organisation, Person or Post. As the position is in the Organisation, it is a part of the Organisation.</p> |
| <p><b>ProblemDomain</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ProblemDomain - LogicalDomain</p> <p><u>Attributes:</u></p> <p>-</p> <p>A LogicalDomain that contains (has parts that are) those Nodes which may be realised by physical resources specified in SV-1. There may be more than one alternative solution for a given ProblemDomain specified as a set of SV suites. There may be only one ProblemDomain in a LogicalArchitecture.</p>                                                                                                                                                                                                                                                                                                              |
| <p><b>ProducerActivity</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ProducerActivity - IndividualExchangeRoleType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ProducerActivity - ModemWholePartType</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>ProducerActivity - OperationalActivity</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>ProducerActivity - LogicalExport</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualExchangeRoleType where the involved ProcessType is an OperationalActivity that is the producer of a LogicalFlow.</p>                                                                                                                              |

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| <p><b>ResourceFlow</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceFlow - LogicalFlow</p> <p><u>Attributes:</u></p> <p>-</p> <p>A LogicalFlow where the flowed element is a ResourceType.</p>                                                                                                                                                                                                                                                                                                                                |
| <p><b>ResourceFlowRole</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceFlowRole - FlowedElementRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A FlowedElementRole where a ResourceType is flowed.</p>                                                                                                                                                                                                                                                                                                                        |
| <p><b>ResponsibleHumanResourcePart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResponsibleHumanResourcePart - ModemIndividualElement</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResponsibleHumanResourcePart - AgentCapableOfResponsibilityPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>An AgentCapableOfResponsibilityPart that is a part of a ResponsibleHumanResource.</p>                                                                                                    |
| <p><b>RoleInFlow</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleInFlow - TypicalWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleInFlow - ExchangedItemRoleInExchangeType</p> <p>Association (source - target): «place1Type»</p> <p>RoleInFlow - LogicalFlow</p> <p>Association (source - target): «place2Type»</p> <p>RoleInFlow - FlowedElementRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ExchangedItemRoleInExchangeType where the role in exchange is a LogicalFlow.</p> |
| <p><b>RoleInInformationFlow</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleInInformationFlow - RoleInFlow</p> <p>Association (source - target): «place1Type»</p> <p>RoleInInformationFlow - InformationFlow</p> <p>Association (source - target): «place2Type»</p> <p>RoleInInformationFlow - InformationRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RoleInFlow where Information is being flowed.</p>                                                                                                                     |

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| <p><b>RoleInLogicalProcess</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleInLogicalProcess - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleInLogicalProcess - CapableOfType</p> <p>Association (source - target): «place1Type»</p> <p>RoleInLogicalProcess - Node</p> <p>Association (source - target): «place2Type»</p> <p>RoleInLogicalProcess - LogicalProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CapableOfType that asserts that a Node conducts a LogicalProcess.</p> |
| <p><b>RoleInResourceFlow</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleInResourceFlow - RoleInFlow</p> <p>Association (source - target): «place1Type»</p> <p>RoleInResourceFlow - ResourceFlow</p> <p>Association (source - target): «place2Type»</p> <p>RoleInResourceFlow - ResourceFlowRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RoleInFlow where a ResourceType is being flowed.</p>                                                                                                                                    |
| <p><b>RoleOfFlowedElement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleOfFlowedElement - IndividualRoleAsExchangedItemType</p> <p>Association (source - target): «place1Type»</p> <p>RoleOfFlowedElement - FlowedElement</p> <p>Association (source - target): «place2Type»</p> <p>RoleOfFlowedElement - FlowedElementRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualRoleAsExchangedItemType where a FlowedElement is exchanged.</p>                                                                                 |
| <p><b>RoleOfInformation</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleOfInformation - RoleOfFlowedElement</p> <p>Association (source - target): «place1Type»</p> <p>RoleOfInformation - InformationElement</p> <p>Association (source - target): «place2Type»</p> <p>RoleOfInformation - InformationRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RoleOfFlowedElement where the flowed element is Information.</p>                                                                                                              |

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| <p><b>RoleOfResourceInFlow</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleOfResourceInFlow - RoleOfFlowedElement</p> <p>Association (source - target): «place1Type»</p> <p>RoleOfResourceInFlow - ResourceType</p> <p>Association (source - target): «place2Type»</p> <p>RoleOfResourceInFlow - ResourceFlowRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RoleOfFlowedElement where the flowed element is ResourceType.</p> |
| <p><b>SecurityDomain</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SecurityDomain - LogicalDomain</p> <p><u>Attributes:</u></p> <p>-</p> <p>A LogicalDomain whose parts all share a common SecurityPolicy.</p>                                                                                                                                                                                                                    |
| <p><b>SequencedActivity</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SequencedActivity - EventBoundedLogicalProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>A LogicalProcess that is the typical usage of an OperationalActivity in a NodeLifeLine.</p>                                                                                                                                                                        |
| <p><b>SequencedLogicalFlow</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SequencedLogicalFlow - EventBoundedLogicalProcess</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SequencedLogicalFlow - LogicalScenarioPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A LogicalProcess that is the typical usage of a LogicalFlow between two NodeLifeLines.</p>                                         |
| <p><b>StateOfNode</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StateOfNode - TypicalTemporalWholePart</p> <p>Association (source - target): «place2Type»</p> <p>StateOfNode - NodeState</p> <p>Association (source - target): «place1Type»</p> <p>StateOfNode - Node</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalTemporalWholePart that relates a Node to a NodeState.</p>                                                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <p><b>ToNode</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ToNode - RoleInLogicalProcess</p> <p>Association (source - target): «place2Type»</p> <p>ToNode - LogicalFlow</p> <p>Association (source - target): «place1Type»</p> <p>ToNode - Node</p> <p><u>Attributes:</u></p> <p>-</p> <p>An RoleInLogicalProcess where a LogicalFlow flows to a Node.</p>                                                                                                                                                                                                                              |
| <p><b>TrustLine</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>TrustLine - LogicalFlow</p> <p><u>Attributes:</u></p> <p>-</p> <p>A LogicalFlow that asserts that the trusting Party (either a Node or a KnownResource) trusts the trustedParty to a given level (indicated by the level attribute). Note: No unit of measure is associated with the level - security architects must define their own scale of trust levels for a given architecture or set of architectures.</p>                                                                                                        |
| <p><b>activityBasedOn</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>activityBasedOn - modemIndividualTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>activityBasedOn - StandardActivity</p> <p>Association (source - target): «place2Type»</p> <p>activityBasedOn - OperationalActivity</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that asserts and OperationalActivity is based on a StandardActivity - e.g. a specialist usage of doctrine.</p>                                                                  |
| <p><b>activityInSequence</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>activityInSequence - modemIndividualTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>activityInSequence - OperationalActivity</p> <p>Association (source - target): «place2Type»</p> <p>activityInSequence - SequencedActivity</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that relates an OperationaActivity to its usage (as a SequencedActivity) on a NodeLifeLine. Note: A SequencedActivity is based on only one OperationaActivity.</p> |
| <p><b>capabilityForNode</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>capabilityForNode - BodyTypeSuperSubType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>capabilityForNode - modemIndividualTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p>                                                                                                                                                                                                                                                                         |

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| <p>capabilityForNode - Capability<br/> <i>Association (source - target):</i> «place2Type»<br/> capabilityForNode - Node<br/> <u>Attributes:</u><br/> -<br/> A BodyTypeSuperSubType that asserts that a Node exhibits or is required to exhibit a Capability.</p>                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>flowInScenario</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> flowInScenario - modemIndividualTypeSpecialisation<br/> <i>Association (source - target):</i> «place1Type»<br/> flowInScenario - LogicalFlow<br/> <i>Association (source - target):</i> «place2Type»<br/> flowInScenario - SequencedLogicalFlow<br/> <u>Attributes:</u><br/> -<br/> A modemIndividualTypeSpecialisation that relates a LogicalFlow to its usage (as a SequencedLogicalFlow) in a LogicalScenario. Note: A SequencedLogicalFlow is based on only one LogicalFlow.</p>                                    |
| <p><b>infoElementRepresentation</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> infoElementRepresentation - representedByDataType<br/> <i>Association (source - target):</i>«place2Type»<br/> infoElementRepresentation - DataModelTypeRepresentation<br/> <i>Association (source - target):</i>«place1Type»<br/> infoElementRepresentation - InformationElement<br/> <u>Attributes:</u><br/> -<br/> A representedByDataType that asserts an InformationElement is represented by a DataModelTypeRepresentation.</p>                                                                          |
| <p><b>logicalFlowMeasure</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> logicalFlowMeasure - measureOfType<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> logicalFlowMeasure - logicalFlowProperty<br/> <i>Association (source - target):</i> «place2Type»<br/> logicalFlowMeasure - LogicalFlow<br/> <i>Association (source - target):</i> «place1Type»<br/> logicalFlowMeasure - MeasureableProperty<br/> <u>Attributes:</u><br/> -<br/> A logicalFlowProperty and a measureOfType - i.e. an assignment of a MeasureableProperty to a LogicalFlow.</p> |
| <p><b>logicalFlowProperty</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> logicalFlowProperty - ModemThing<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> logicalFlowProperty - propertyOfType<br/> <i>Association (source - target):</i> «place2Type»</p>                                                                                                                                                                                                                                                                                                 |

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| <p>logicalFlowProperty - LogicalFlow<br/> <i>Association (source - target):</i> «place1Type»<br/> logicalFlowProperty - Property<br/> <u>Attributes:</u><br/> -<br/> A propertyOfType where the Property applies to a LogicalFlow.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>logicalSecurityPolicy</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> logicalSecurityPolicy - constraintOnType<br/> <i>Association (source - target):</i>«place2Type»<br/> logicalSecurityPolicy - SecurityDomain<br/> <i>Association (source - target):</i>«place1Type»<br/> logicalSecurityPolicy - SecurityPolicy<br/> <u>Attributes:</u><br/> -<br/> A constraintOnType that sets the security policy for LogicalIndividualType.</p>                                                                                                                                                                                                   |
| <p><b>nodeLocation</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> nodeLocation - ModemThing<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> nodeLocation - couple<br/> <i>Association (source - target):</i>«place1Type»<br/> nodeLocation - Location<br/> <i>Association (source - target):</i>«place2Type»<br/> nodeLocation - Node<br/> <u>Attributes:</u><br/> -<br/> A couple used to assert the Location at/ in which a Node resides. Note: given that OV-2 is a logical model, more often than not, the environment rather than the actual location should be specified - i.e. use NodeEnvironment.</p> |
| <p><b>organisationInSnapshot</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> organisationInSnapshot - resourceInSnapshot<br/> <i>Association (source - target):</i> «place1Type»<br/> organisationInSnapshot - ResourceInOrganisationSnapshot<br/> <i>Association (source - target):</i> «place2Type»<br/> organisationInSnapshot - Organisation<br/> <u>Attributes:</u><br/> -<br/> A resourceInSnapshot where the resource is an Organisation.</p>                                                                                                                                                                                            |
| <p><b>postInOrganisation</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> postInOrganisation - organisationWholePart<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> postInOrganisation - agentCapableOfResponsibilityWholeAndPart</p>                                                                                                                                                                                                                                                                                                                                                                           |

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| <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> postInOrganisation - individualResourceUsage<br/> Dependency (element - is instance of): «IDEAS:powertypeInstance»<br/> postInOrganisation - PostInOrganisationPowertype<br/> Association (source - target): «place1Type»<br/> postInOrganisation - Organisation<br/> Association (source - target): «place2Type»<br/> postInOrganisation - Post</p> <p><u>Attributes:</u><br/> -<br/> An organisationWholePart that asserts a Post is part of an Organisation.</p>                                                                              |
| <p><b>postInSnapshot</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> postInSnapshot - resourceInSnapshot<br/> Association (source - target): «place1Type»<br/> postInSnapshot - ResourceInOrganisationSnapshot<br/> Association (source - target): «place2Type»<br/> postInSnapshot - Post<br/> <u>Attributes:</u><br/> -<br/> A resourceInSnapshot where the resource is a Post.</p>                                                                                                                                                            |
| <p><b>realisesIndividualOrganisation</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> Association (source - target): «place1Type»<br/> realisesIndividualOrganisation - OrganisationPowertype<br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> realisesIndividualOrganisation - realisesIndividualResource<br/> Association (source - target): «place2Type»<br/> realisesIndividualOrganisation - Organisation<br/> <u>Attributes:</u><br/> -<br/> A realisesIndividualResource that asserts a type of organisation is realised by an organisation.</p>                                       |
| <p><b>realisesIndividualOrganisationRole</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> Association (source - target): «place1Type»<br/> realisesIndividualOrganisationRole - OrganisationalRolePowertype<br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> realisesIndividualOrganisationRole - realisesIndividualResource<br/> Association (source - target): «place2Type»<br/> realisesIndividualOrganisationRole - OrganisationalRole<br/> <u>Attributes:</u><br/> -<br/> A realisesIndividualResource that asserts a type of organisation role is realised by an organisation role.</p> |

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| <p><b>realisesIndividualPerson</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place1Type»<br/> realisesIndividualPerson - PersonPowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> realisesIndividualPerson - realisedIndividualResource</p> <p>Association (source - target):«place2Type»<br/> realisesIndividualPerson - Person</p> <p><u>Attributes:</u></p> <p>-</p> <p>A realisedIndividualResource that asserts a type of person is realised by a person.</p>                                                                                                                                      |
| <p><b>realisesIndividualPost</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place1Type»<br/> realisesIndividualPost - PostPowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> realisesIndividualPost - realisedIndividualResource</p> <p>Association (source - target):«place2Type»<br/> realisesIndividualPost - Post</p> <p><u>Attributes:</u></p> <p>-</p> <p>A realisedIndividualResource that asserts a type of post is realised by a post.</p>                                                                                                                                                      |
| <p><b>realisesIndividualResource</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> realisesIndividualResource - modemIndividualTypeInstance</p> <p>Association (source - target):«place1Type»<br/> realisesIndividualResource - IndividualResourcePowertype</p> <p>Association (source - target):«place2Type»<br/> realisesIndividualResource - IndividualResource</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeInstance that asserts a type of Resource is realised by a resource.</p>                                                                                                |
| <p><b>requiredMeasureOfPerformance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> requiredMeasureOfPerformance - measureOfType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> requiredMeasureOfPerformance - ModemThing</p> <p>Association (source - target):«place1Type»<br/> requiredMeasureOfPerformance - Measure</p> <p>Association (source - target):«place2Type»<br/> requiredMeasureOfPerformance - Node</p> <p><u>Attributes:</u></p> <p>-</p> <p>A measureOfType that asserts a Node is required to achieve a level of performance specified by a Measure.</p> |

**resourceInSnapshot** «IDEAS:TupleType»

Connectors:

Association (source - target): «place1Type»

resourceInSnapshot - ResourceInOrganisationSnapshot

Association (source - target): «place2Type»

resourceInSnapshot - HumanResource

Generalization (element - is a subtype of): «IDEAS:superSubtype»

resourceInSnapshot - doubletonTypeInstance

Generalization (element - is a subtype of): «IDEAS:superSubtype»

resourceInSnapshot - overlapTypeIndividualInstance

Generalization (element - is a subtype of): «IDEAS:superSubtype»

resourceInSnapshot - modemIndividualTypeInstance

Attributes:

-

An overlapTypeIndividualInstance where the instance is an OrganisationalResource.

**responsibleHumanResourceWholePart** «IDEAS:TupleType»

Connectors:

Generalization (element - is a subtype of): «IDEAS:superSubtype»

responsibleHumanResourceWholePart - individualResourceWholePart

Generalization (element - is a subtype of): «IDEAS:superSubtype»

responsibleHumanResourceWholePart - agentCapableOfResponsibilityWholePart

Association (source - target): «place2Type»

responsibleHumanResourceWholePart - ResponsibleHumanResourcePart

Association (source - target): «place1Type»

responsibleHumanResourceWholePart - ResponsibleHumanResource

Attributes:

-

An agentCapableOfResponsibilityWholePart relationship between an OrganisationRole and the Organisation within which it has the role.

**snapshotFeaturingResource** «IDEAS:TupleType»

Connectors:

Generalization (element - is a subtype of): «IDEAS:superSubtype»

snapshotFeaturingResource - overlapTypeIndividualInstance

Generalization (element - is a subtype of): «IDEAS:superSubtype»

snapshotFeaturingResource - doubletonTypeInstance

Association (source - target): «place1Type»

snapshotFeaturingResource - ResourceInOrganisationSnapshot

Association (source - target): «place2Type»

snapshotFeaturingResource - OrganisationSnapshot

Generalization (element - is a subtype of): «IDEAS:superSubtype»

snapshotFeaturingResource - modemIndividualTypeInstance

Attributes:

-

An overlapTypeIndividualInstance where the instance is an OrganisationSnapshot.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>snapshotOfOrganisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>snapshotOfOrganisation - organisationWholePart</p> <p>Association (source - target): «place1Type»</p> <p>snapshotOfOrganisation - Organisation</p> <p>Association (source - target): «place2Type»</p> <p>snapshotOfOrganisation - OrganisationSnapshot</p> <p><u>Attributes:</u></p> <p>-</p> <p>An organisationWholePart where the whole is an Organisation and the part is an OrganisationSnapshot.</p>                                                                                                                                                                                                                                                      |
| <p><b>specifiedCompetence</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»</p> <p>specifiedCompetence - ResponsibleHumanResourceState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>specifiedCompetence - ModemThing</p> <p>Association (source - target): «place1Type»</p> <p>specifiedCompetence - Competence</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>specifiedCompetence - couple</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that asserts an ResponsibleHumanResourceState is specified to have a Competence. Note: Was called "actualCompetence" in M3.</p>                                                                                               |
| <p><b>stateMachineForNode</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateMachineForNode - appliedStateMachine</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateMachineForNode - ModemThing</p> <p>Association (source - target): «place1Type»</p> <p>stateMachineForNode - Node</p> <p>Association (source - target): «place2Type»</p> <p>stateMachineForNode - StateMachine</p> <p><u>Attributes:</u></p> <p>-</p> <p>An appliedStateMachine that relates a Node to its state machine.</p>                                                                                                                                                                                                        |
| <p><b>stateOfResponsibleHumanResourceState</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateOfResponsibleHumanResourceState - agentCapableOfResponsibilityWholeState</p> <p>Association (source - target): «place2Type»</p> <p>stateOfResponsibleHumanResourceState - ResponsibleHumanResourceState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateOfResponsibleHumanResourceState - individualResourceState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateOfResponsibleHumanResourceState - responsibleHumanResourceWholePart</p> <p>Association (source - target): «place1Type»</p> <p>stateOfResponsibleHumanResourceState - ResponsibleHumanResource</p> |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><u>Attributes:</u></p> <p>-</p> <p>An agentCapableOfResponsibilityWholeState relationship between a ResponsibleHumanResource and its ResponsibleHumanResourceState.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>templateForTask</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>templateForTask - modermIndividualTypeInstance</p> <p>Association (source - target): «place2Type»</p> <p>templateForTask - EnduringTask</p> <p>Association (source - target): «place1Type»</p> <p>templateForTask - ActivityGroup</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modermIndividualTypeInstance that relates an EnduringTask to an EnduringTaskTemplate that specifies it.</p>                                                                                                       |
| <p><b>trustLevel</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>trustLevel - ModermThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>trustLevel - representedBy</p> <p>Association (source - target): «place2Type»</p> <p>trustLevel - IntegerRepresentation</p> <p>Association (source - target): «place1Type»</p> <p>trustLevel - TrustLine</p> <p><u>Attributes:</u></p> <p>-</p> <p>A representedBy that uses an IntegerRepresentation to specify an arbitrary level of trust between the Nodes connected by a Trustline.</p> |
| <p><b>typeOfKnownResource</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>typeOfKnownResource - modermIndividualTypeSpecialisation</p> <p>Association (source - target): «place2Type»</p> <p>typeOfKnownResource - KnownResource</p> <p>Association (source - target): «place1Type»</p> <p>typeOfKnownResource - ResourceType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modermIndividualTypeSpecialisation where a KnownResource is a subtype of a ResourceType.</p>                                                                                                |

## 2.4.9 Operational Views additional diagrams.

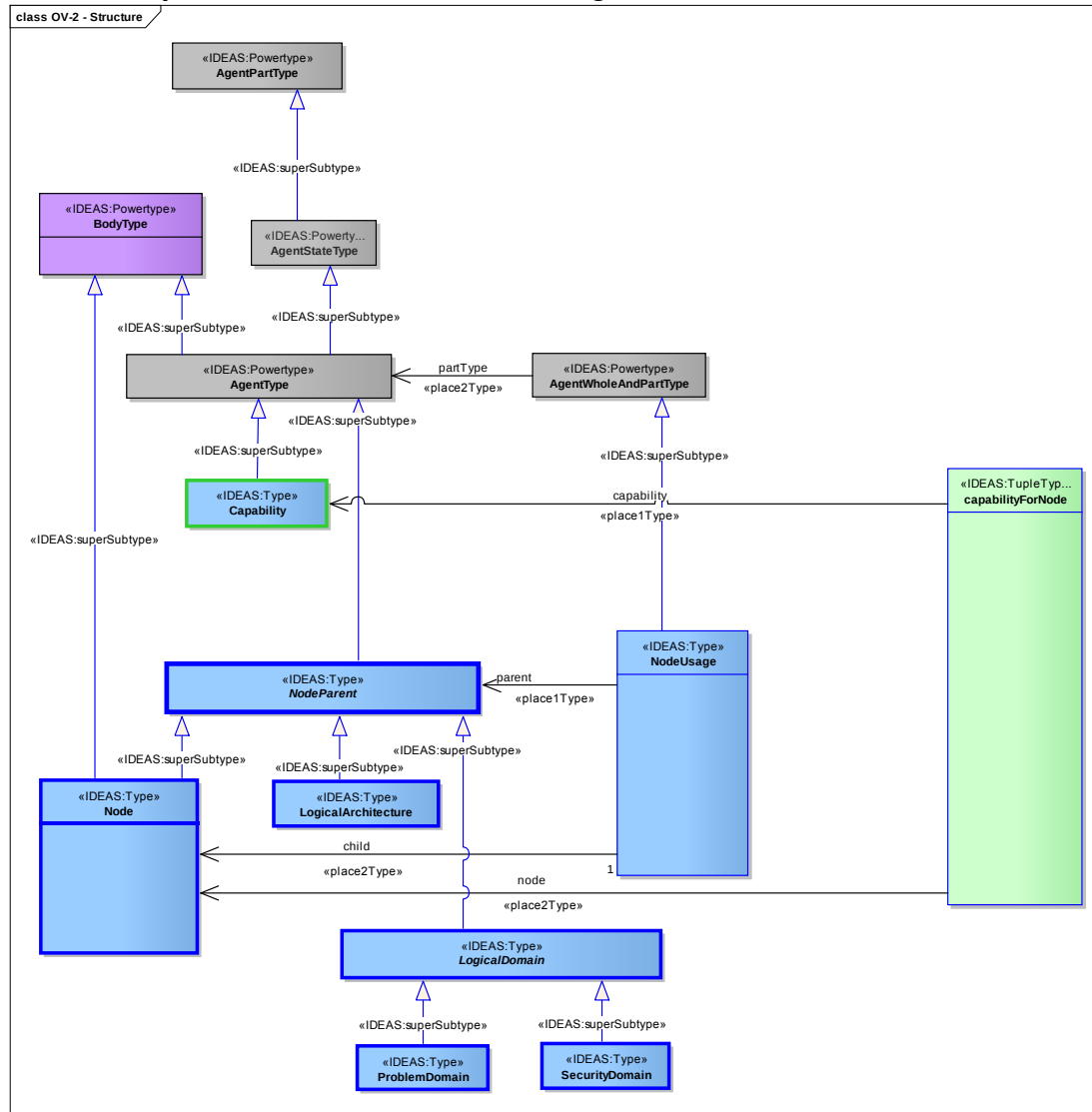


Figure 43 : OV-2 Structure

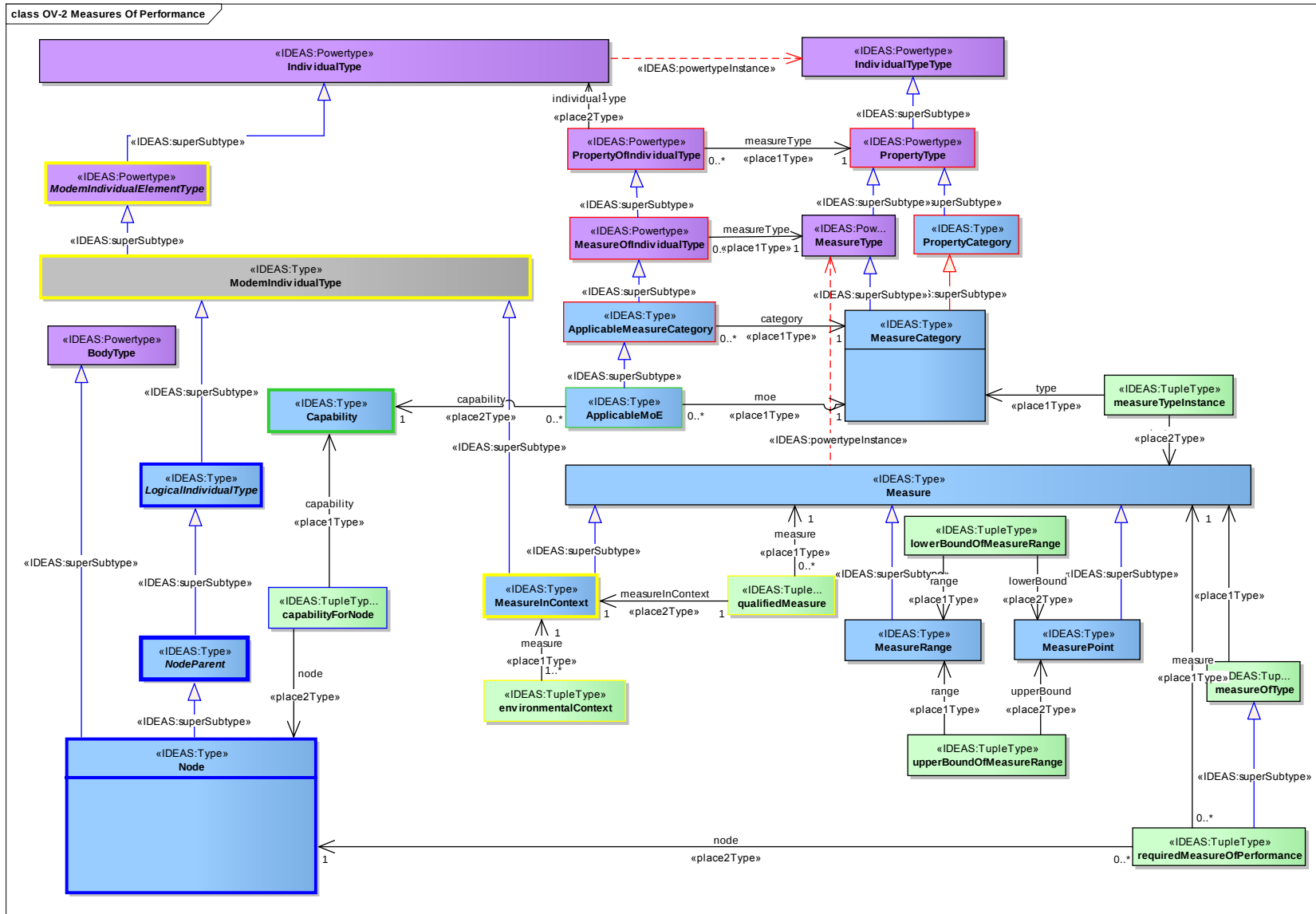


Figure 44 : Measures of performance

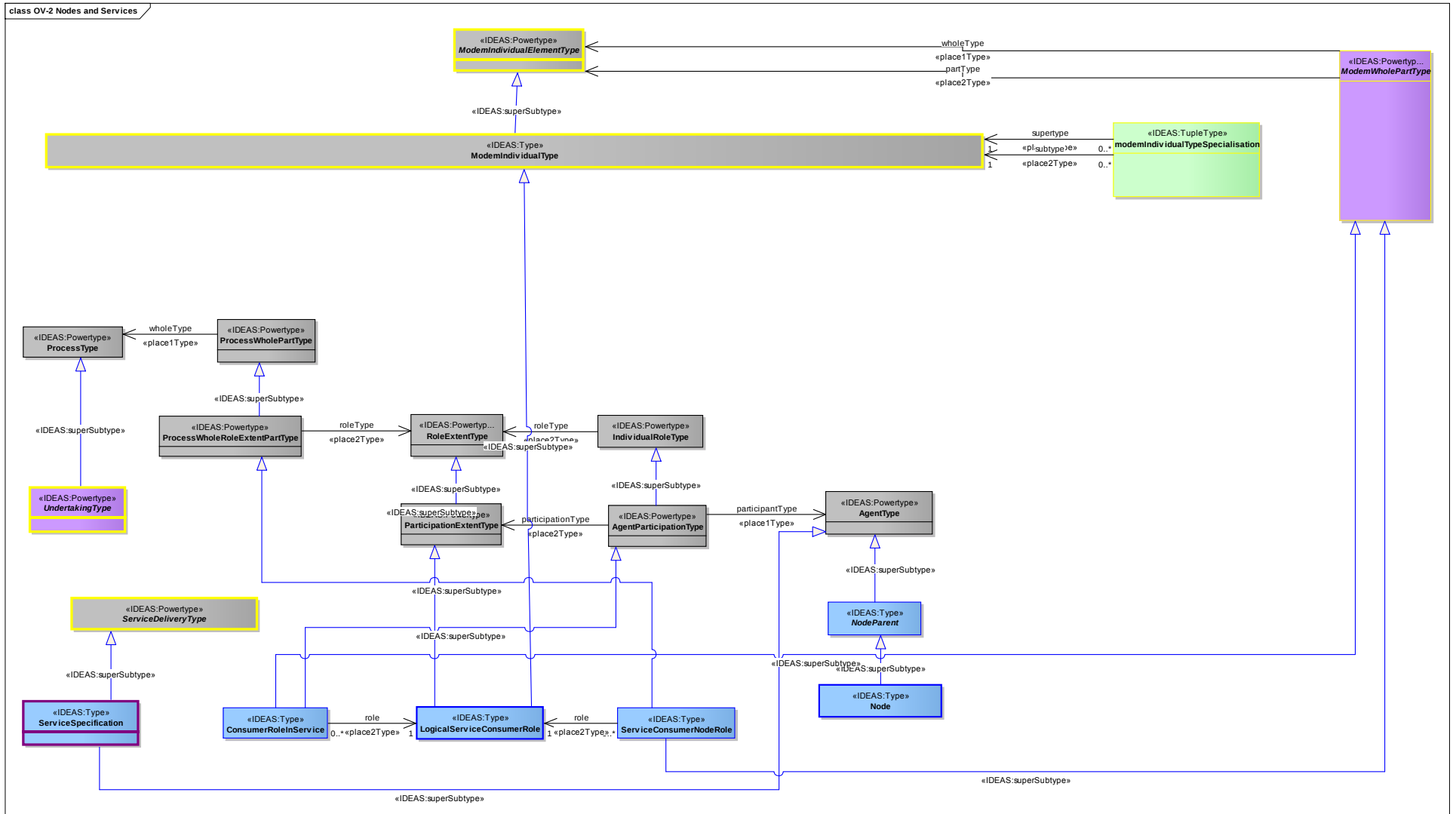


Figure 45 : Nodes and Services

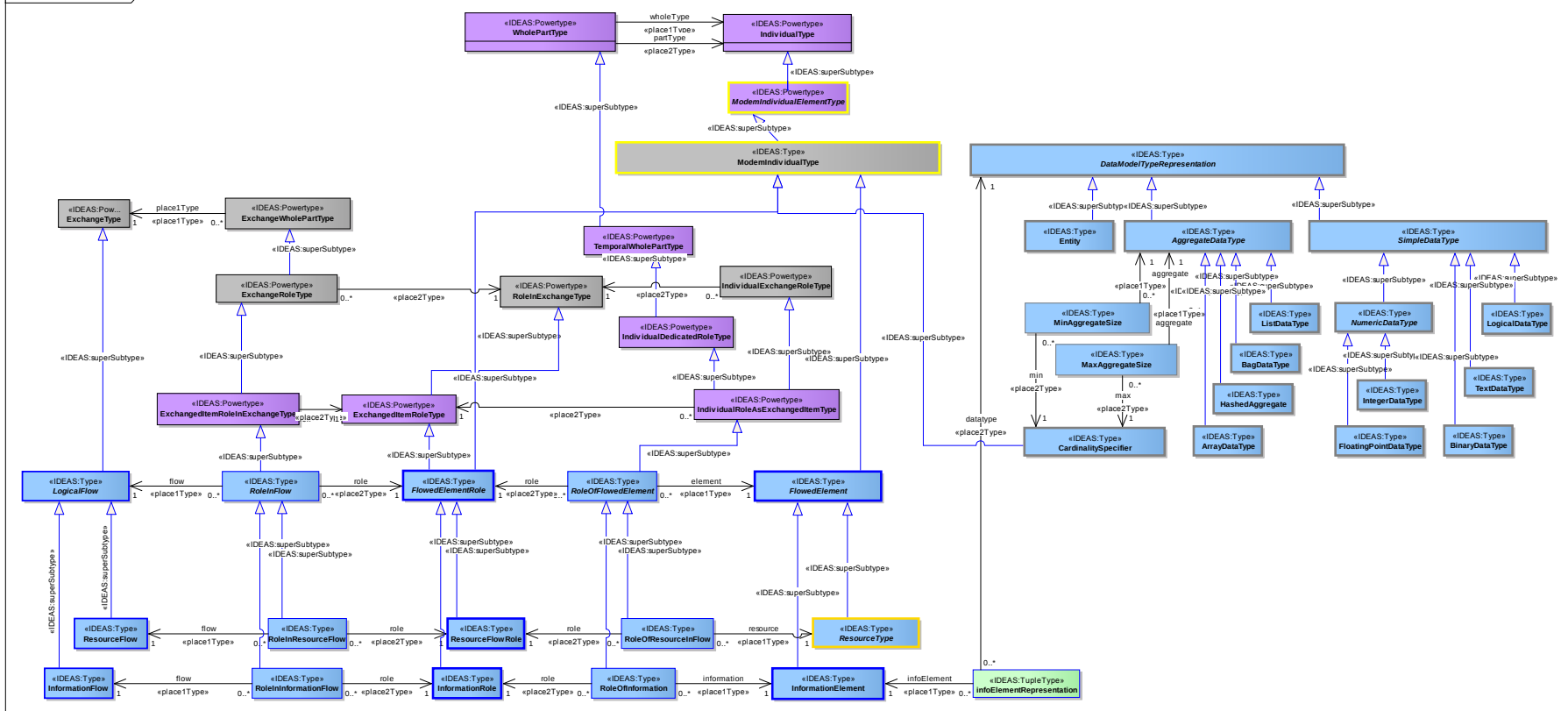


Figure 46 : OV-2/3 – Flowed Elements

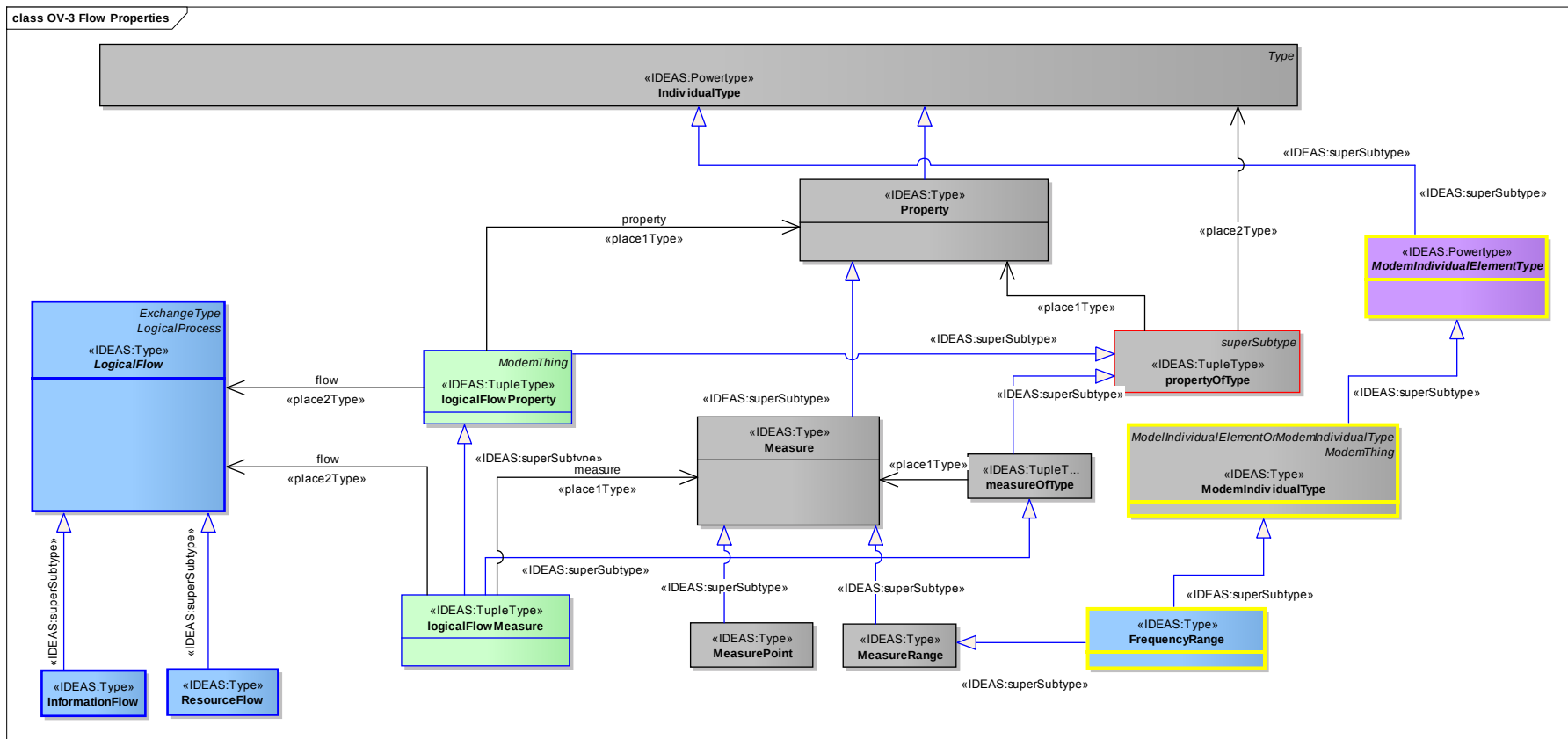


Figure 47 : Flow Properties

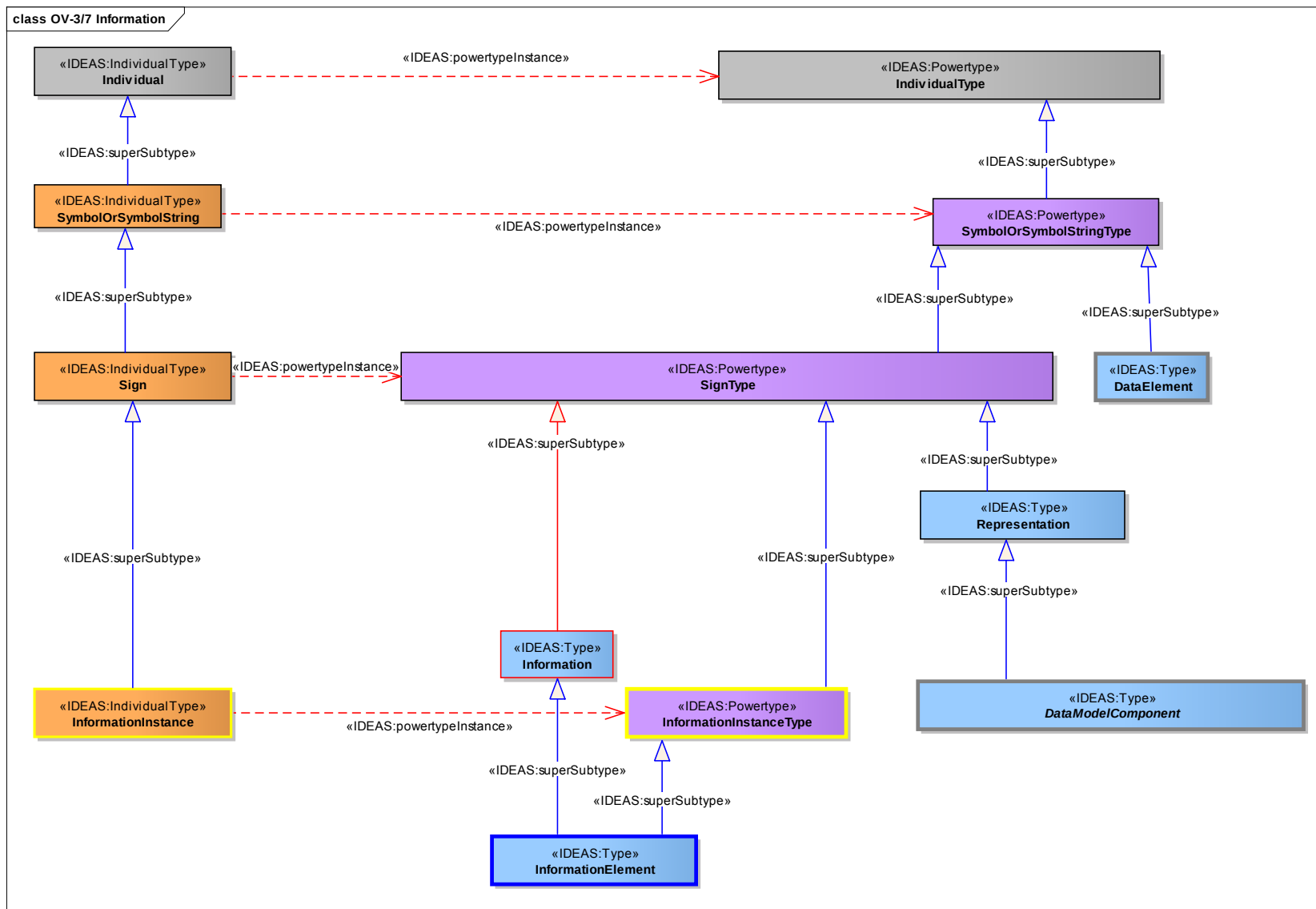


Figure 48 : OV-3/7 Information



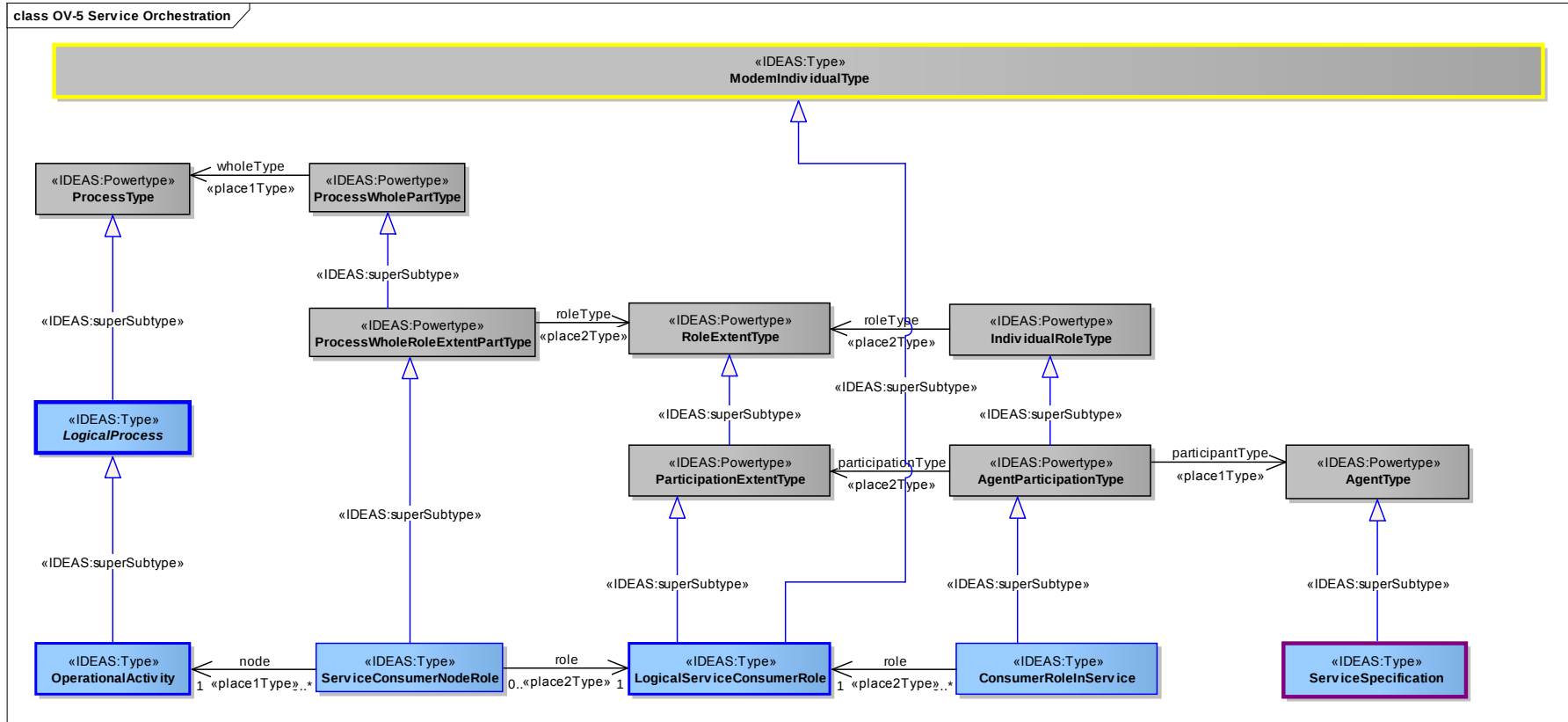


Figure 50 : OV-5 Service Orchestration





## 2.5 Service views

### 2.5.1 SOV-1: Service taxonomy

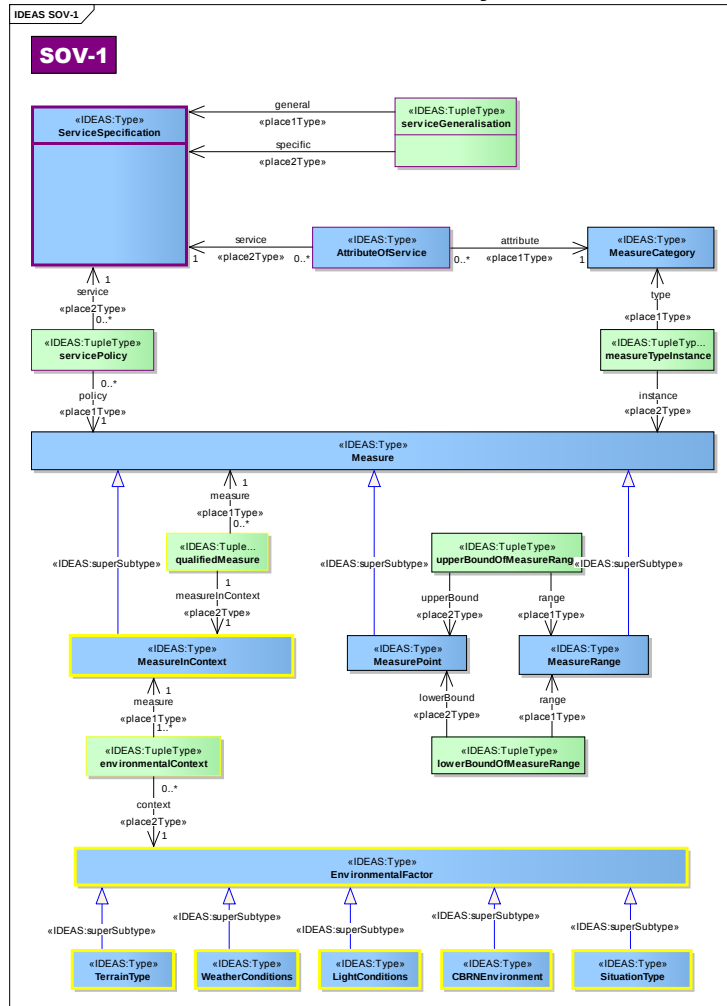


Figure 53 : SOV-1

## 2.5.2 SOV-2: Service interface specification

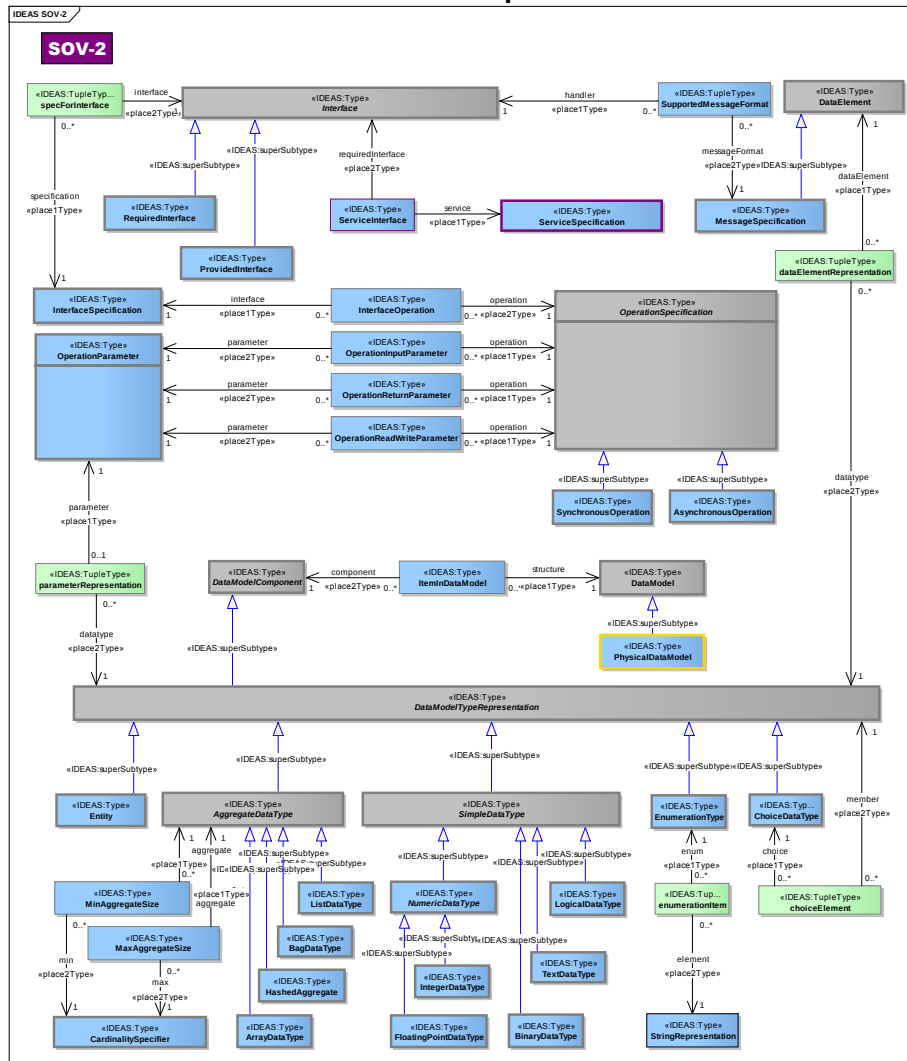


Figure 54 : SOV-2

### 2.5.3 SOV-3: Capability to service mapping

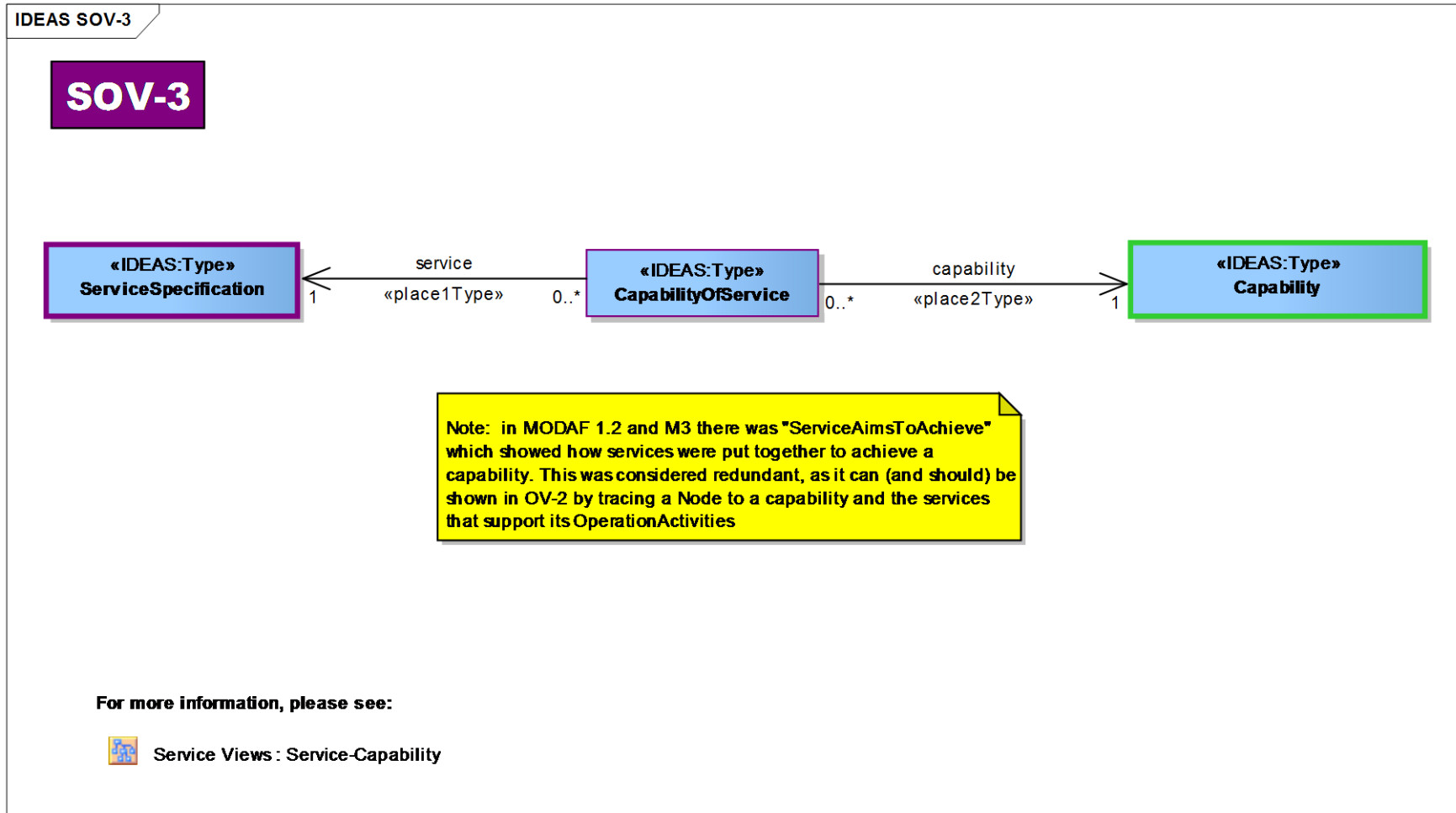


Figure 55 : SOV-3

#### 2.5.4 SOV-4: Service constraints, state model and interaction specification

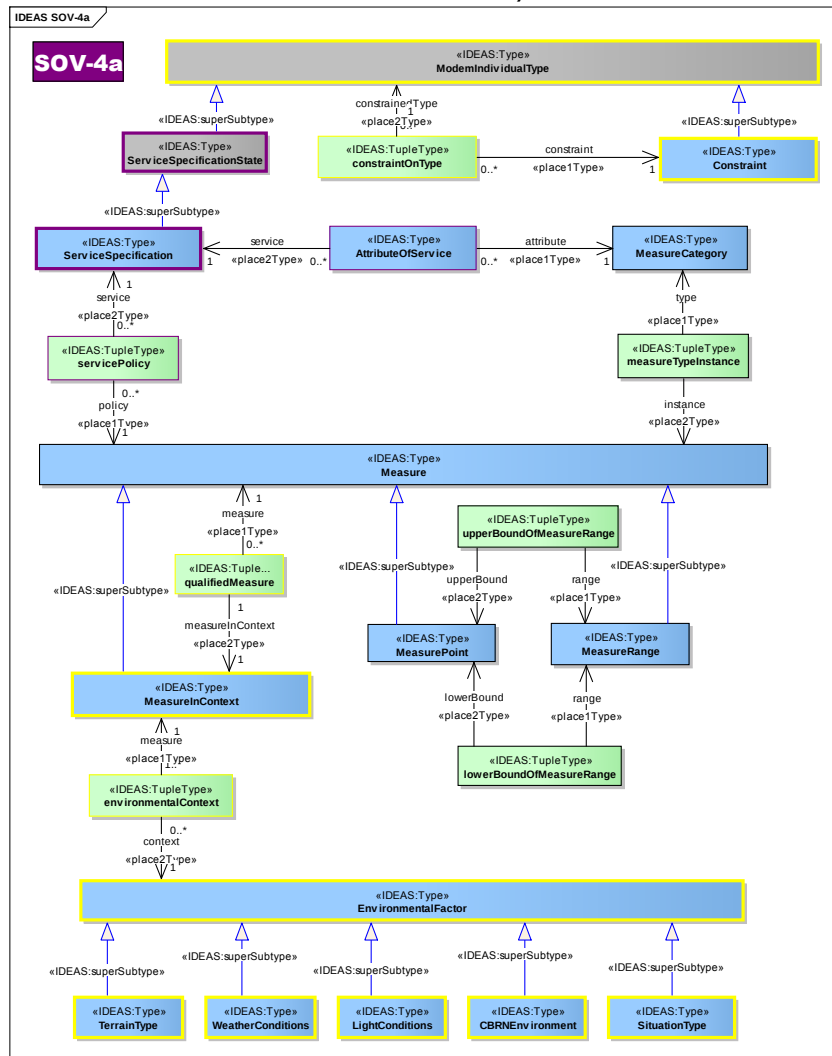


Figure 56 : SOV-4a

## SOV-4b

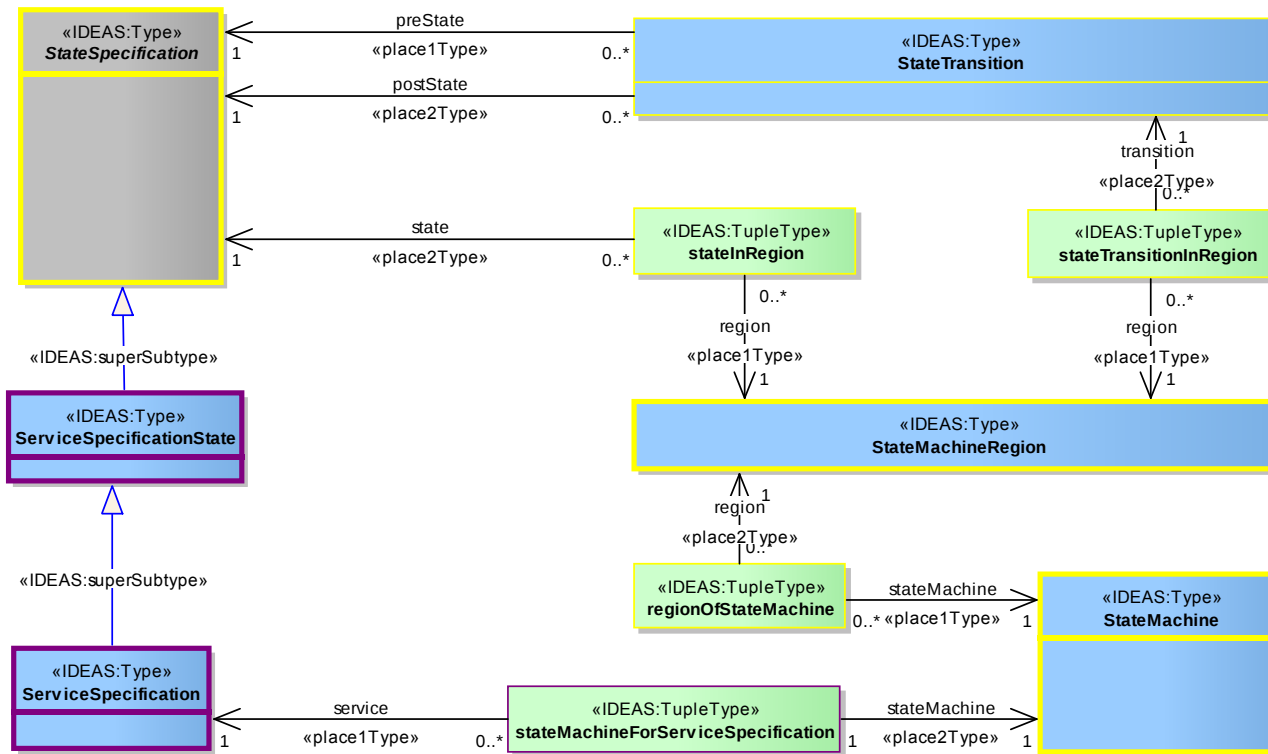


Figure 57 : SOV-4b

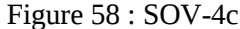


Figure 58 : SOV-4c

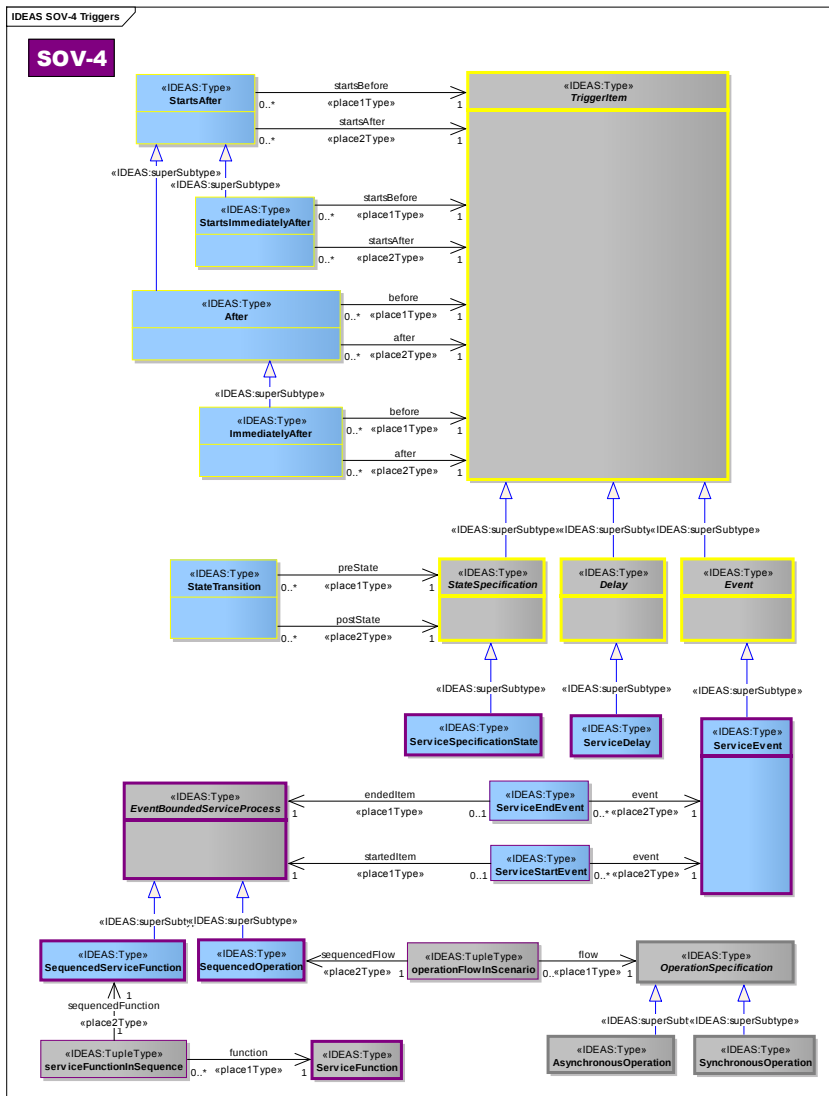


Figure 59 : SOV-4 Triggers

## 2.5.5 SOV-5: Service functionality

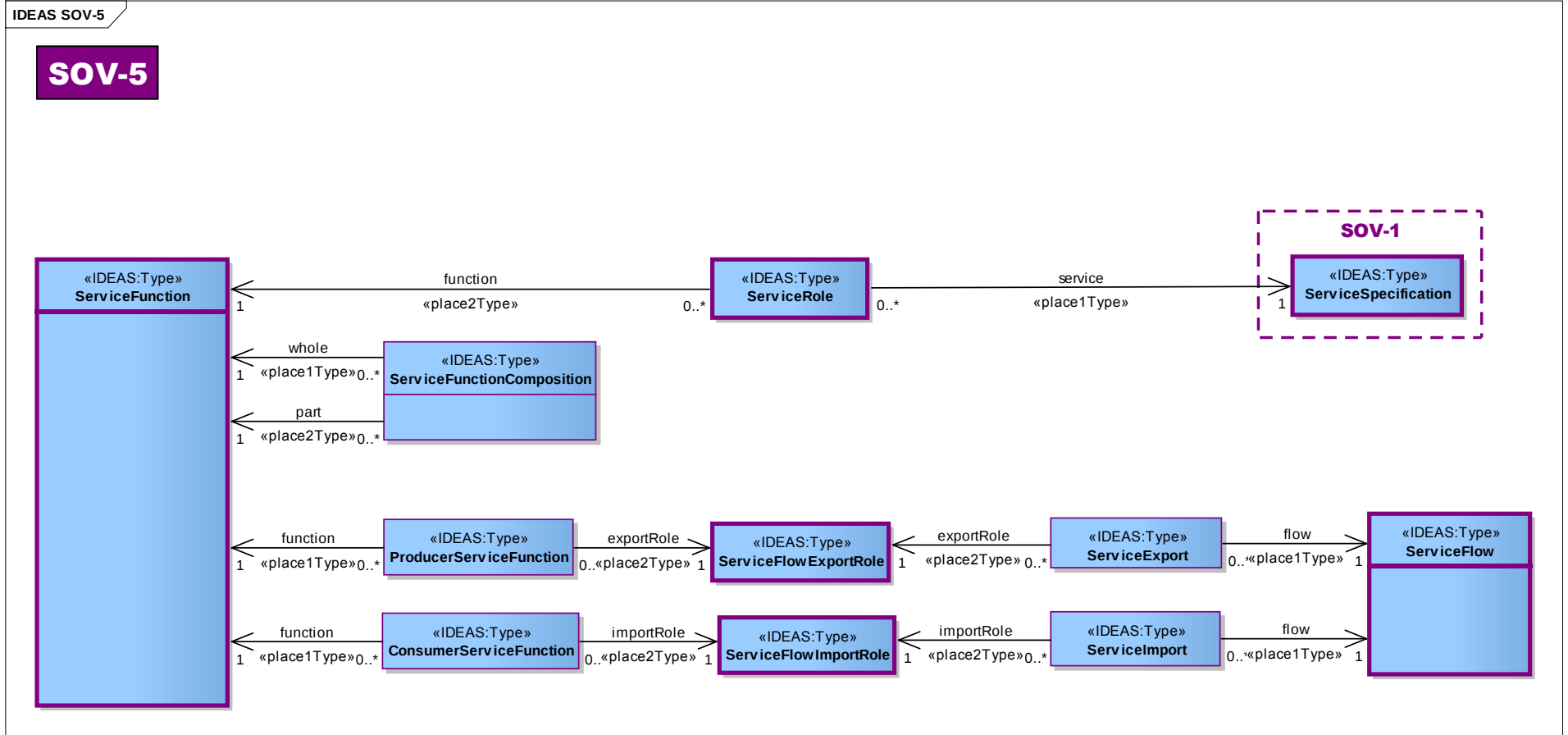


Figure 60 : SOV-5

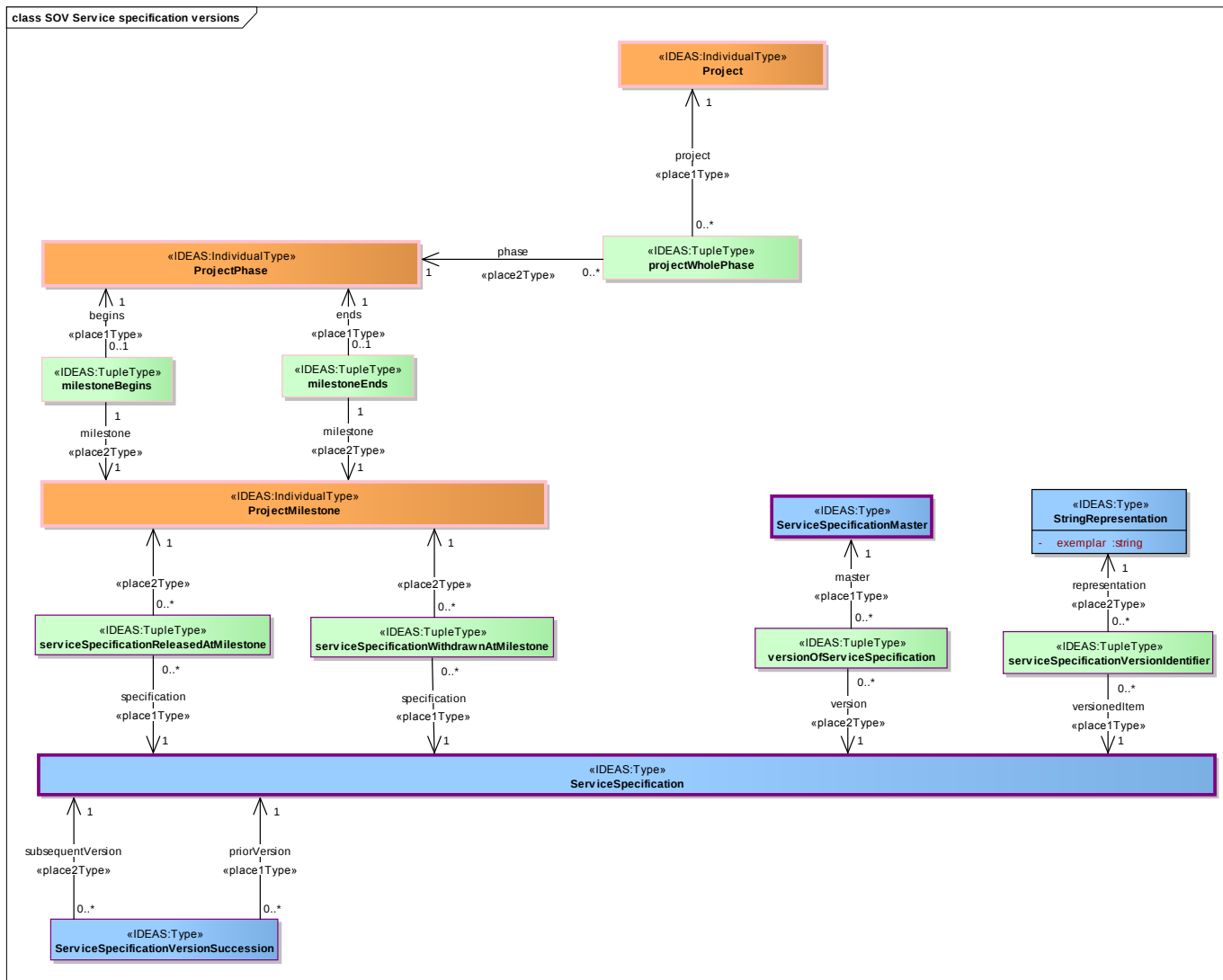


Figure 61 : SOV Service specification versions

## 2.5.6 Service Views elements list

Service Views

**AttributeOfService** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

AttributeOfService - ApplicableMeasureCategory

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

AttributeOfService - ModemThing

*Association (source - target):* «place1Type»

AttributeOfService - MeasureCategory

*Association (source - target):* «place2Type»

AttributeOfService - ServiceSpecification

Attributes:

-

An ApplicableMeasureCategory that relates a ServiceSpecification to a MeasureCategory as a means of indicating a way that service performance can be measured.

**CapabilityOfService** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

CapabilityPartOfService - TypicalWholePart

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

CapabilityPartOfService - ServiceDeliveryWholePartType

*Association (source - target):* «place2Type»

CapabilityPartOfService - Capability

*Association (source - target):* «place1Type»

CapabilityPartOfService - ServiceSpecification

Attributes:

-

A TypicalWholePart that relates a Service to the specification of its underlying capability

Note: in MODAF 1.2 and M3 there was "ServiceAimsToAchieve" which showed how services were put together to achieve a capability. This was considered redundant, as it can (and should) be shown in OV-2 by tracing a Node to a capability and the services that support its OperationActivities.

**ConsumerServiceFunction** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

ConsumerServiceFunction - IndividualExchangeRoleType

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

ConsumerServiceFunction - ModemWholePartType

*Association (source - target):* «place1Type»

ConsumerServiceFunction - ServiceFunction

*Association (source - target):* «place2Type»

ConsumerServiceFunction - ServiceFlowImportRole

Attributes:

-

An IndividualExchangeRoleType where the role is a ServiceFlowImportRole and the consumer is a Serviceunction

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| <p><b>EventBoundedServiceProcess</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EventBoundedServiceProcess - ServiceProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ServiceProcess that has ServiceEvents marking its beginning and end.</p>                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>ItemInServiceScenario</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ItemInServiceScenario - ItemInScenario</p> <p>Association (source - target): «place2Type»</p> <p>ItemInServiceScenario - ServiceScenarioPart</p> <p>Association (source - target): «place1Type»</p> <p>ItemInServiceScenario - ServiceScenario</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ItemInScenario where the Scenario is a ServiceScenario.</p>                                                                                                                                                                                                       |
| <p><b>LifelineForService</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LifelineForService - TypicalTemporalWholePart</p> <p>Association (source - target): «place2Type»</p> <p>LifelineForService - ServiceLifeline</p> <p>Association (source - target): «place1Type»</p> <p>LifelineForService - ServiceSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalTemporalWholePart that asserts a ServiceLifeLine is a typical temporal part of a ServiceSpecification.</p>                                                                                                                                                   |
| <p><b>ProducerServiceFunction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProducerServiceFunction - IndividualExchangeRoleType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProducerServiceFunction - ModemWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>ProducerServiceFunction - ServiceFlowExportRole</p> <p>Association (source - target): «place1Type»</p> <p>ProducerServiceFunction - ServiceFunction</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualExchangeRoleType where the role is a ServiceFlowExportRole and the producer is a ServiceFunction.</p> |
| <p><b>SequencedOperation</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SequencedOperation - ServiceScenarioPart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SequencedOperation - EventBoundedServiceProcess</p>                                                                                                                                                                                                                                                                                                                                                                                      |

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| <p><u>Attributes:</u></p> <p>-</p> <p>A ServiceScenarioPart that is the typical occurrence of an OperationSpecification.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>SequencedServiceFunction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>SequencedServiceFunction - ServiceScenarioPart</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>SequencedServiceFunction - ServiceProcess</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>SequencedServiceFunction - EventBoundedServiceProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>An EventBoundedServiceProcess whose instances are special cases of ServiceFunctions that take part in ServiceScenarios.</p>                                                                                                             |
| <p><b>ServiceConsumer</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceConsumer - ServiceOrConsumer</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceConsumer - Node</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Node that interacts with one or more services.</p>                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>ServiceDelay</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceDelay - ServiceSequencedItem</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceDelay - Delay</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ServiceSequencedItem that has a specified temporal extent, but an unspecified spatial extent.</p>                                                                                                                                                                                                                                                                                                                     |
| <p><b>ServiceEndEvent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceEndEvent - EndBorderType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceEndEvent - ModemTemporalWholePartType</p> <p>Association (source - target):«place1Type»</p> <p>ServiceEndEvent - EventBoundedServiceProcess</p> <p>Association (source - target):«place2Type»</p> <p>ServiceEndEvent - ServiceEvent</p> <p><u>Attributes:</u></p> <p>-</p> <p>An EndBorderType that relates a EventBoundedServiceProcess to the ServiceEvent that marks its end. Note: there may be no more than one ServiceEndEvent for a given EventBoundedServiceProcess.</p> |

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| <p><b>ServiceEvent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceEvent - ServiceSequencedItem</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceEvent - Event</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Event that marks the beginning or end of a EventBoundedServiceProcess.</p>                                                                                                 |
| <p><b>ServiceExport</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceImport - SendInExchangeType</p> <p>Association (source - target):«place1Type»</p> <p>ServiceImport - ServiceFlow</p> <p>Association (source - target):«place2Type»</p> <p>ServiceImport - ServiceFlowExportRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ReceiveInExchangeType where the receiver is a ServiceSpecification or ServiceFunction.</p> |
| <p><b>ServiceFlow</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceFlow - ServiceProcess</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceFlow - ExchangeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ExchangeType where two ServiceSpecifications interact.</p>                                                                                                                   |
| <p><b>ServiceFlowExportRole</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceFlowExportRole - ModemIndividualType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceFlowExportRole - SendType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SendType where the sender is a ServiceSpecification or ServiceFunction.</p>                                                                   |
| <p><b>ServiceFlowImportRole</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceFlowImportRole - ReceiveType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceFlowImportRole - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RecieveType where the receiver is a ServiceSpecification or ServiceFunction.</p>                                                           |

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| <p><b>ServiceFunction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceFunction - ModemIndividualType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceFunction - ServiceProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ServiceProcess carried out by a ServiceSpecification</p>                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>ServiceFunctionComposition</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceFunctionComposition - TypicalWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceFunctionComposition - ProcessWholeAndPartType</p> <p>Association (source - target): «place2Type»</p> <p>ServiceFunctionComposition - ServiceFunction</p> <p>Association (source - target): «place1Type»</p> <p>ServiceFunctionComposition - ServiceFunction</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart that relates a parent (whole) ServiceFunction to its child (part) ServiceFunction. Note: was called "ActivityComposition" in M3.</p> |
| <p><b>ServiceImport</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceImport - ReceiveInExchangeType</p> <p>Association (source - target): «place1Type»</p> <p>ServiceImport - ServiceFlow</p> <p>Association (source - target): «place2Type»</p> <p>ServiceImport - ServiceFlowImportRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ReceiveInExchangeType where the receiver is a ServiceSpecification or ServiceFunction.</p>                                                                                                                                                                                                                                             |
| <p><b>ServiceInterface</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ServiceInterface - TypicalWholePart</p> <p>Association (source - target): «place2Type»</p> <p>ServiceInterface - Interface</p> <p>Association (source - target): «place1Type»</p> <p>ServiceInterface - ServiceSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart that relates a ServiceSpecification to an Interface that it requires or provides.</p>                                                                                                                                                                                                                             |

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| <p><b>ServiceLevel</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceLevel - ModemIndividualType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceLevel - BodyType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceLevel - AgentType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceLevel - DispositionalProperty</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceLevel - ServiceDeliveryType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ServiceDeliveryType based on a ServiceSpecification that sets a level of service using of Measures that correspond to ServiceAttributes.</p> |
| <p><b>ServiceLifeline</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceLifeline - ServiceOrConsumer</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceLifeline - ServiceSpecificationState</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ServiceSpecificationState whose extent is defined by a ServiceScenario.</p>                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>ServiceOrConsumer</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceOrConsumer - ServiceScenarioPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ServiceScenarioPart that is either a ServiceLifeline or a ServiceConsumer.</p> <p>[ABSTRACT]</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>ServiceProcess</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceProcess - ProcessType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceProcess - ModemWholePartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProcessType conducted by a ServiceSpecification.</p>                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>ServiceRole</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceRole - ProcessPartOfBodyType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ServiceRole - TypicalWholePart</p> <p>Association (source - target):«place2Type»</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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| ServiceRole - ServiceFunction<br>Association (source - target):«place1Type»<br>ServiceRole - ServiceSpecification<br><u>Attributes:</u><br>-<br>A ProcessPartOfBodyType that asserts that a ServiceFunction is part of a ServiceSpecification.                                                                                                                                                                                                                                                         |
| <b>ServiceScenario</b> «IDEAS:Type»<br><u>Connectors:</u><br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>ServiceScenario - ServiceScenarioPart<br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>ServiceScenario - Scenario<br><u>Attributes:</u><br>-<br>A Scenario that describes the order of interactions with a ServiceSpecification.                                                                                                                  |
| <b>ServiceScenarioPart</b> «IDEAS:Type»<br><u>Connectors:</u><br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>ServiceScenarioPart - ModemIndividualType<br><u>Attributes:</u><br>-<br>A ModemIndividualType that features in (i.e. is part of) a ServiceScenario.                                                                                                                                                                                                                |
| <b>ServiceSequencedItem</b> «IDEAS:Type»<br><u>Connectors:</u><br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>ServiceSequencedItem - ServiceScenarioPart<br><u>Attributes:</u><br>-<br>A ServiceScenarioPart that can be sequenced by ServiceSequencing.                                                                                                                                                                                                                        |
| <b>ServiceSequencing</b> «IDEAS:Type»<br><u>Connectors:</u><br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>ServiceSequencing - ImmediateBeforeAfterType<br>Association (source - target):«place2Type»<br>ServiceSequencing - ServiceSequencedItem<br>Association (source - target):«place1Type»<br>ServiceSequencing - ServiceSequencedItem<br><u>Attributes:</u><br>-<br>An ImmediateBeforeAfterType that asserts one ServiceSequencedItem happens immediately before another. |
| <b>ServiceSpecification</b> «IDEAS:Type»<br><u>Connectors:</u><br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>ServiceSpecification - ServiceDeliveryType<br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>ServiceSpecification - BodyType<br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>ServiceSpecification - AgentType                                                                                                           |

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| <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> ServiceSpecification - DispositionalProperty<br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> ServiceSpecification - ServiceSpecificationState<br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> ServiceSpecification - SubjectOfForecast<br/> <u>Attributes:</u><br/> -<br/> A ServiceDeliveryType that is the specification of a ServiceDelivery. Note: was called "Service" in M3.</p>                                                                                                                                                                                                     |
| <p><b>ServiceSpecificationComposition</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> ServiceSpecificationComposition - TypicalWholePart<br/> Association (source - target):«place1Type»<br/> ServiceSpecificationComposition - ServiceSpecification<br/> Association (source - target):«place2Type»<br/> ServiceSpecificationComposition - ServiceSpecification<br/> <u>Attributes:</u><br/> -<br/> A TypicalWholePart that states that a ServiceSpecification reuses other ServiceSpecifications, i.e. is specified on top of the ones reused.</p>                                                                                                |
| <p><b>ServiceSpecificationMaster</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> ServiceSpecificationMaster - ModemIndividualType<br/> <u>Attributes:</u><br/> -<br/> A ModemIndividualType that is the master specification from which ServiceSpecifications are versioned.</p>                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>ServiceSpecificationState</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> ServiceSpecificationState - ServiceDeliveryStateType<br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> ServiceSpecificationState - ModemIndividualType<br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> ServiceSpecificationState - StateSpecification<br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> ServiceSpecificationState - AgentStateType<br/> <u>Attributes:</u><br/> -<br/> A ServiceDeliveryStateType that is a type of temporal state typical of a ServiceSpecification.</p> |
| <p><b>ServiceSpecificationVersionSuccession</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> ServiceSpecificationVersionSuccession - BeforeAfterType<br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> ServiceSpecificationVersionSuccession - ModemThing<br/> Association (source - target):«place1Type»<br/> ServiceSpecificationVersionSuccession - ServiceSpecification</p>                                                                                                                                                                                                                                              |

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| <p>Association (source - target):«place2Type»<br/>ServiceSpecificationVersionSuccession - ServiceSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A BeforeAfterType that asserts that one ServiceSpecification succeeds another. Note: both ServiceSpecifications must be versions of the same ServiceSpecificationMaster.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>ServiceStartEvent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/>ServiceStartEvent - ModemTemporalWholePartType<br/>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/>ServiceStartEvent - StartBorderType<br/>Association (source - target):«place2Type»<br/>ServiceStartEvent - ServiceEvent<br/>Association (source - target):«place1Type»<br/>ServiceStartEvent - EventBoundedServiceProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StartBorderType that relates an EventBoundedServiceProcess to the ServiceEvent that marks its start. Note: there may be no more than one ServiceStartEvent for a given ServiceSequencedProcess.</p>                                                                                                 |
| <p><b>StateOfServiceSpecification</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/>StateOfServiceSpecification - AgentWholeStateType<br/>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/>StateOfServiceSpecification - ServiceDeliveryWholeStateType<br/>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/>StateOfServiceSpecification - TypicalTemporalWholePart<br/>Association (source - target):«place1Type»<br/>StateOfServiceSpecification - ServiceSpecification<br/>Association (source - target):«place2Type»<br/>StateOfServiceSpecification - ServiceSpecificationState</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ServiceDeliveryWholeStateType that relates a ServiceSpecification to one of its temporal states.</p> |
| <p><b>levelOfService</b> «IDEAS:TuplеType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/>levelOfService - modemIndividualTypeSpecialisation<br/>Association (source - target):«place2Type»<br/>levelOfService - ServiceLevel<br/>Association (source - target):«place1Type»<br/>levelOfService - ServiceSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation where a ServiceLevel is sets levels of service based on a ServiceSpecification.</p>                                                                                                                                                                                                                                                                                                 |

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| <p><b>operationCaller</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>operationCaller - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>operationCaller - couple</p> <p>Association (source - target):«place1Type»</p> <p>operationCaller - ServiceOrConsumer</p> <p>Association (source - target):«place2Type»</p> <p>operationCaller - SequencedOperation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts a ServiceOrConsumer invokes a SequencedOperation on a ServiceLifeline.</p>                                                                         |
| <p><b>operationFlowInScenario</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>operationFlowInScenario - modemIndividualTypeSpecialisation</p> <p>Association (source - target):«place1Type»</p> <p>operationFlowInScenario - OperationSpecification</p> <p>Association (source - target):«place2Type»</p> <p>operationFlowInScenario - SequencedOperation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that relates an OperationSpecification to its usage (as a SequencedOperation) in a ServiceScenario. Note: A SequencedOperation is based on only one OperationSpecification.</p> |
| <p><b>operationOwner</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>operationOwner - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>operationOwner - couple</p> <p>Association (source - target):«place2Type»</p> <p>operationOwner - SequencedOperation</p> <p>Association (source - target):«place1Type»</p> <p>operationOwner - ServiceLifeline</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple where a SequencedOperation is run by a ServiceLifeline.</p>                                                                                                            |
| <p><b>serviceFunctionInSequence</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>serviceFunctionInSequence - modemIndividualTypeSpecialisation</p> <p>Association (source - target):«place1Type»</p> <p>serviceFunctionInSequence - ServiceFunction</p> <p>Association (source - target):«place2Type»</p> <p>serviceFunctionInSequence - SequencedServiceFunction</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that relates a ServiceFunction to a SequencedServiceFunction that is a case of it being used in a ServiceScenario.</p>                                                   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>serviceGeneralisation</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> serviceGeneralisation - modemIndividualTypeSpecialisation<br/> <i>Association (source - target):</i>«place1Type»<br/> serviceGeneralisation - ServiceSpecification<br/> <i>Association (source - target):</i>«place2Type»<br/> serviceGeneralisation - ServiceSpecification<br/> <u>Attributes:</u><br/> -<br/> A modemIndividualTypeSpecialisation where one ServiceSpecification is a specialisation of another.</p>                                                                                                                                                   |
| <p><b>serviceLevelMeasure</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> serviceLevelMeasure - ModemThing<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> serviceLevelMeasure - measureOfType<br/> <i>Association (source - target):</i>«place1Type»<br/> serviceLevelMeasure - Measure<br/> <i>Association (source - target):</i>«place2Type»<br/> serviceLevelMeasure - ServiceLevel<br/> <u>Attributes:</u><br/> -<br/> A measureOfType that specifies a ServiceLevel.</p>                                                                                                                                      |
| <p><b>servicePolicy</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> servicePolicy - ModemThing<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> servicePolicy - measureOfType<br/> <i>Association (source - target):</i>«place1Type»<br/> servicePolicy - Measure<br/> <i>Association (source - target):</i>«place2Type»<br/> servicePolicy - ServiceSpecification<br/> <u>Attributes:</u><br/> -<br/> A measureOfType where the Measure specifies a policy for a ServiceSpecification. Note: The Measure must correspond to a given MeasureCategory that is an attributeOfService for the ServiceSpecification.</p> |
| <p><b>serviceSpecificationReleasedAtMilestone</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Association (source - target):</i>«place2Type»<br/> serviceSpecificationReleasedAtMilestone - ProjectMilestone<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> serviceSpecificationReleasedAtMilestone - couple<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> serviceSpecificationReleasedAtMilestone - ModemThing<br/> <i>Association (source - target):</i>«place1Type»<br/> serviceSpecificationReleasedAtMilestone - ServiceSpecification<br/> <u>Attributes:</u><br/> -</p>                                                                            |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>A couple that indicates that a ServiceSpecification is released at a ProjectMilestone.</p> <p><b>serviceSpecificationVersionIdentifier</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>serviceSpecificationVersionIdentifier - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>serviceSpecificationVersionIdentifier - representedBy</p> <p>Association (source - target):«place2Type»</p> <p>serviceSpecificationVersionIdentifier - StringRepresentation</p> <p>Association (source - target):«place1Type»</p> <p>serviceSpecificationVersionIdentifier - ServiceSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A representedBy that asserts that a StringRepresentation represents the version identifier of a ServiceSpecification.</p> |
| <p><b>serviceSpecificationWithdrawnAtMilestone</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>serviceSpecificationWithdrawnAtMilestone - ModemThing</p> <p>Association (source - target):«place2Type»</p> <p>serviceSpecificationWithdrawnAtMilestone - ProjectMilestone</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>serviceSpecificationWithdrawnAtMilestone - couple</p> <p>Association (source - target):«place1Type»</p> <p>serviceSpecificationWithdrawnAtMilestone - ServiceSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that indicates that a ServiceSpecification is withdrawn at a ProjectMilestone.</p>                                                                                                                         |
| <p><b>stateMachineForServiceSpecification</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>stateMachineForServiceSpecification - appliedStateMachine</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>stateMachineForServiceSpecification - ModemThing</p> <p>Association (source - target):«place1Type»</p> <p>stateMachineForServiceSpecification - ServiceSpecification</p> <p>Association (source - target):«place2Type»</p> <p>stateMachineForServiceSpecification - StateMachine</p> <p><u>Attributes:</u></p> <p>-</p> <p>An appliedStateMachine that relates a ServiceSpecification to its state machine.</p>                                                                                                                                                |

**versionOfServiceSpecification** «IDEAS:TupleType»

Connectors:

*Generalization (element - is a subtype of):*«IDEAS:superSubtype»

versionOfServiceSpecification - modemIndividualTypeSpecialisation

*Association (source - target):*«place1Type»

versionOfServiceSpecification - ServiceSpecificationMaster

*Association (source - target):*«place2Type»

versionOfServiceSpecification - ServiceSpecification

Attributes:

-

A modemIndividualTypeSpecialisation that asserts that a ServiceSpecification is a version of a ServiceSpecificationMaster.

## 2.5.7 Service Views additional diagrams.

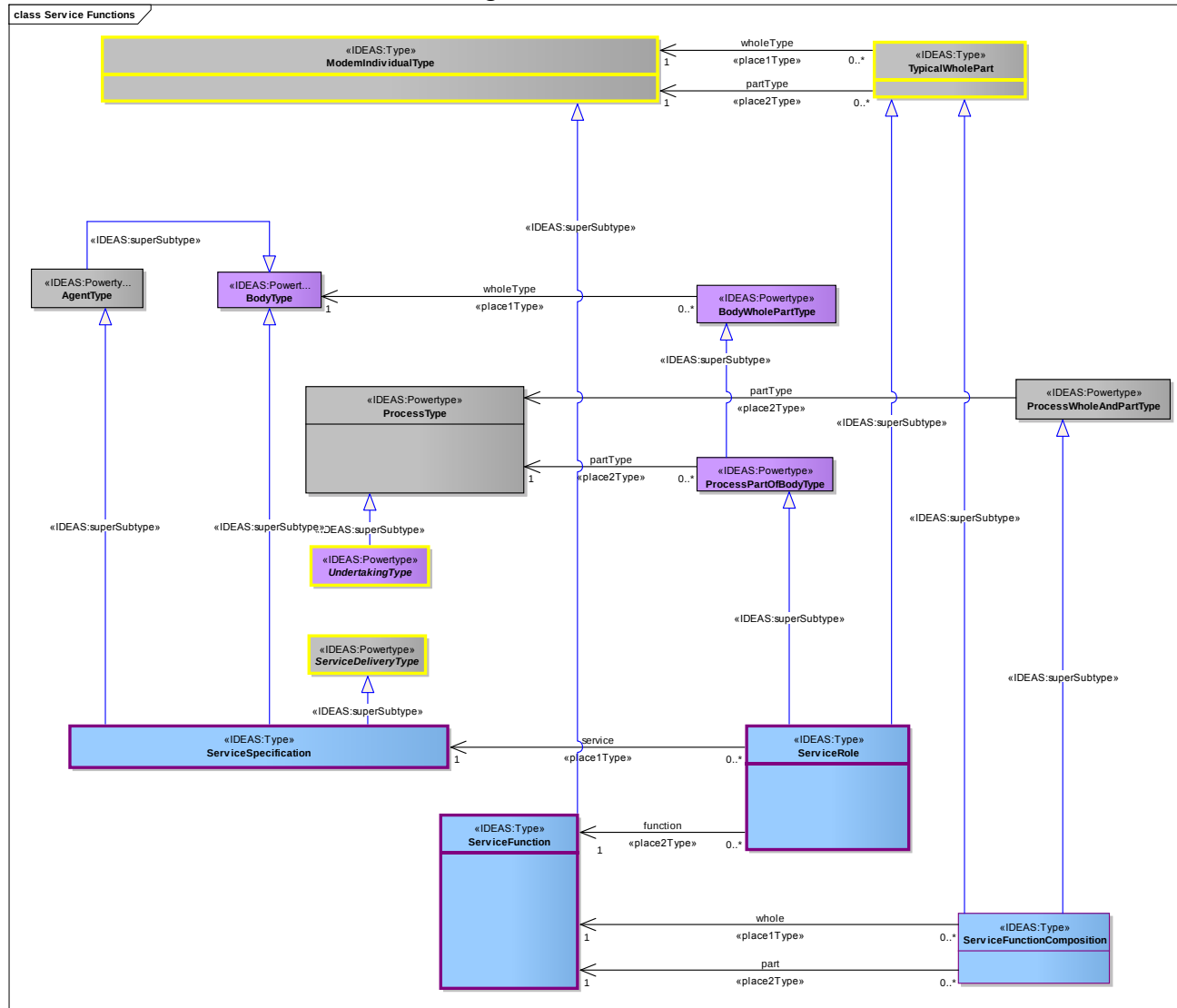


Figure 62 : Service Functions

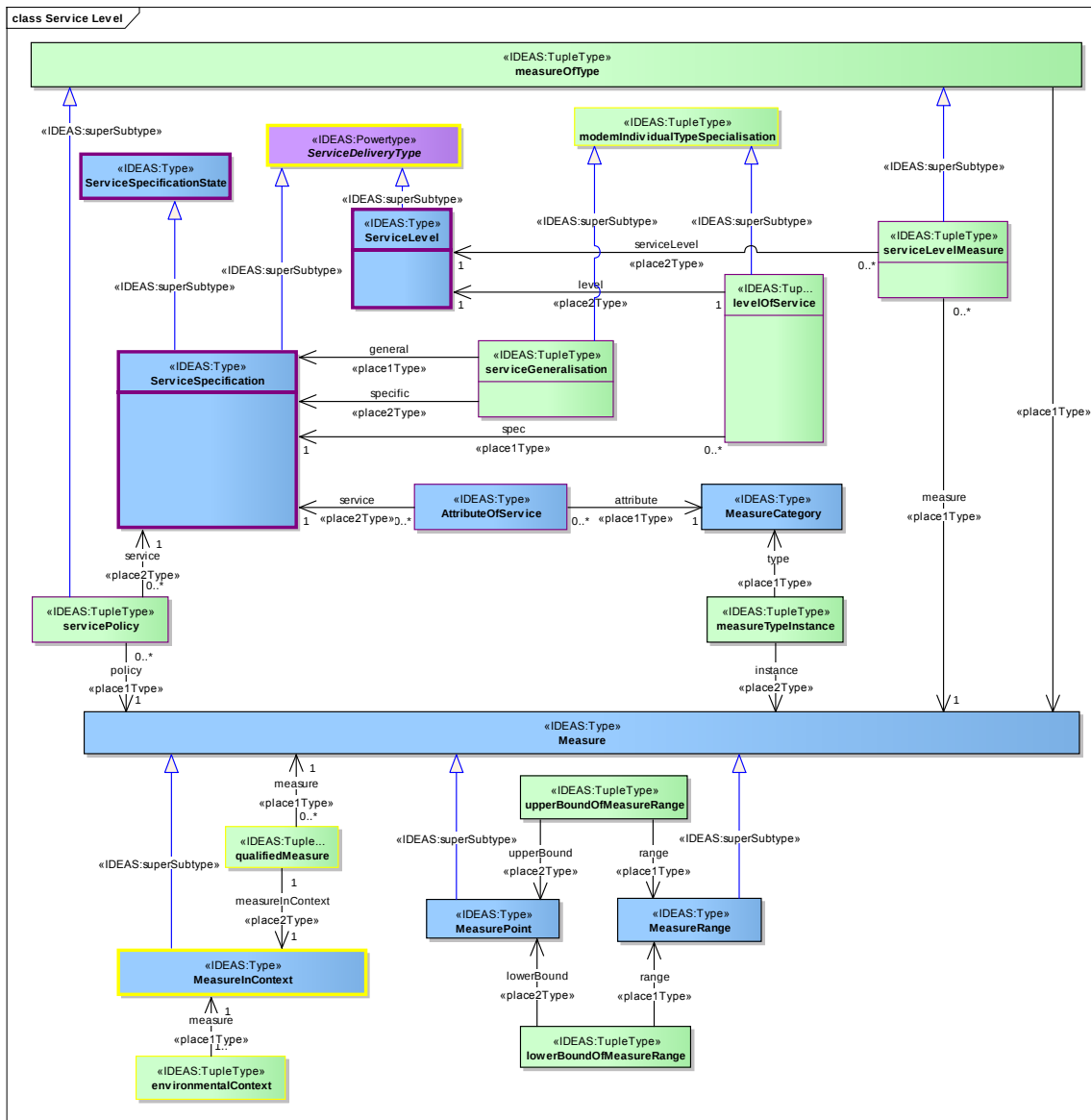


Figure 63 : Service Level

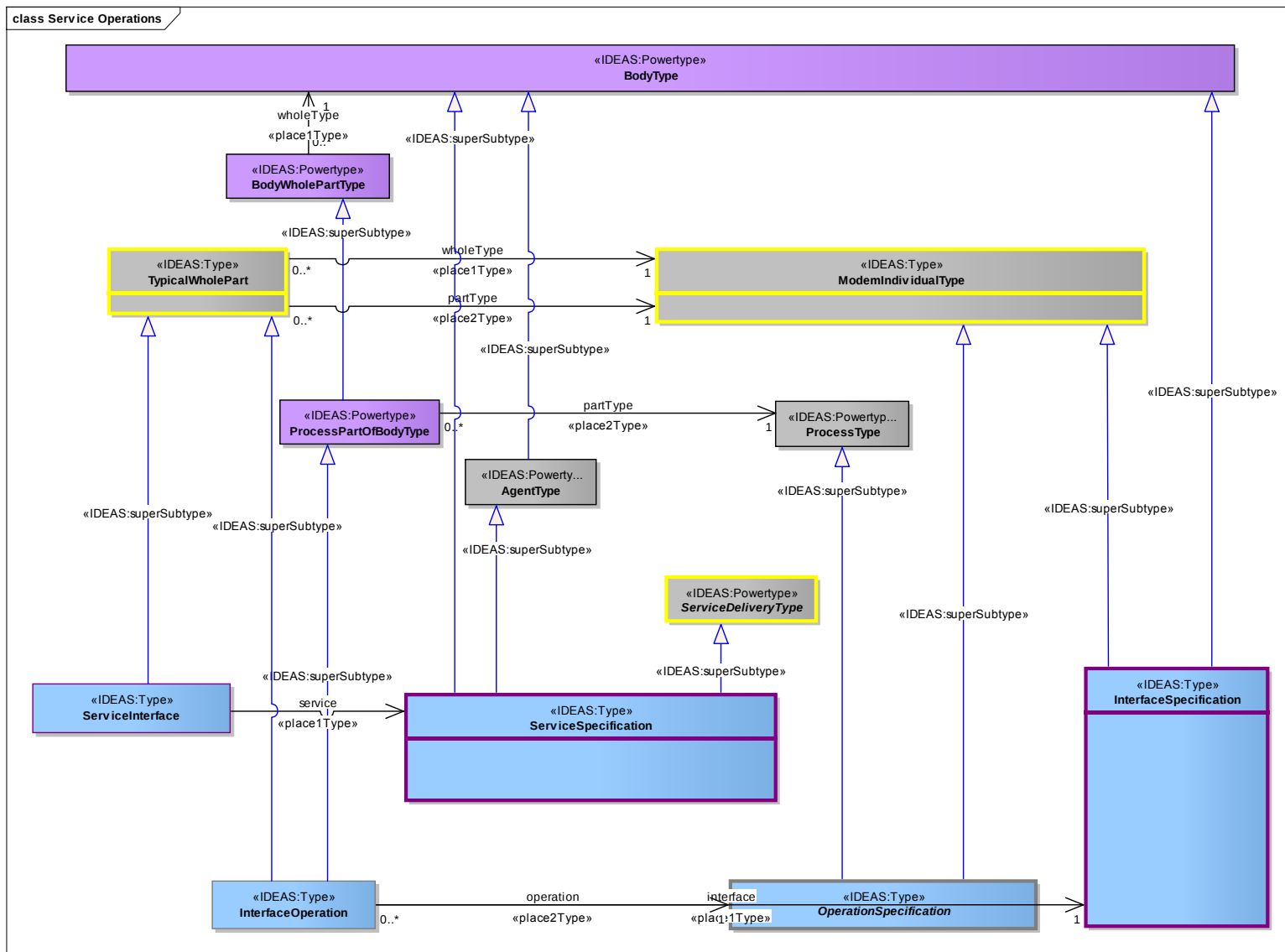


Figure 64 : Service Operations

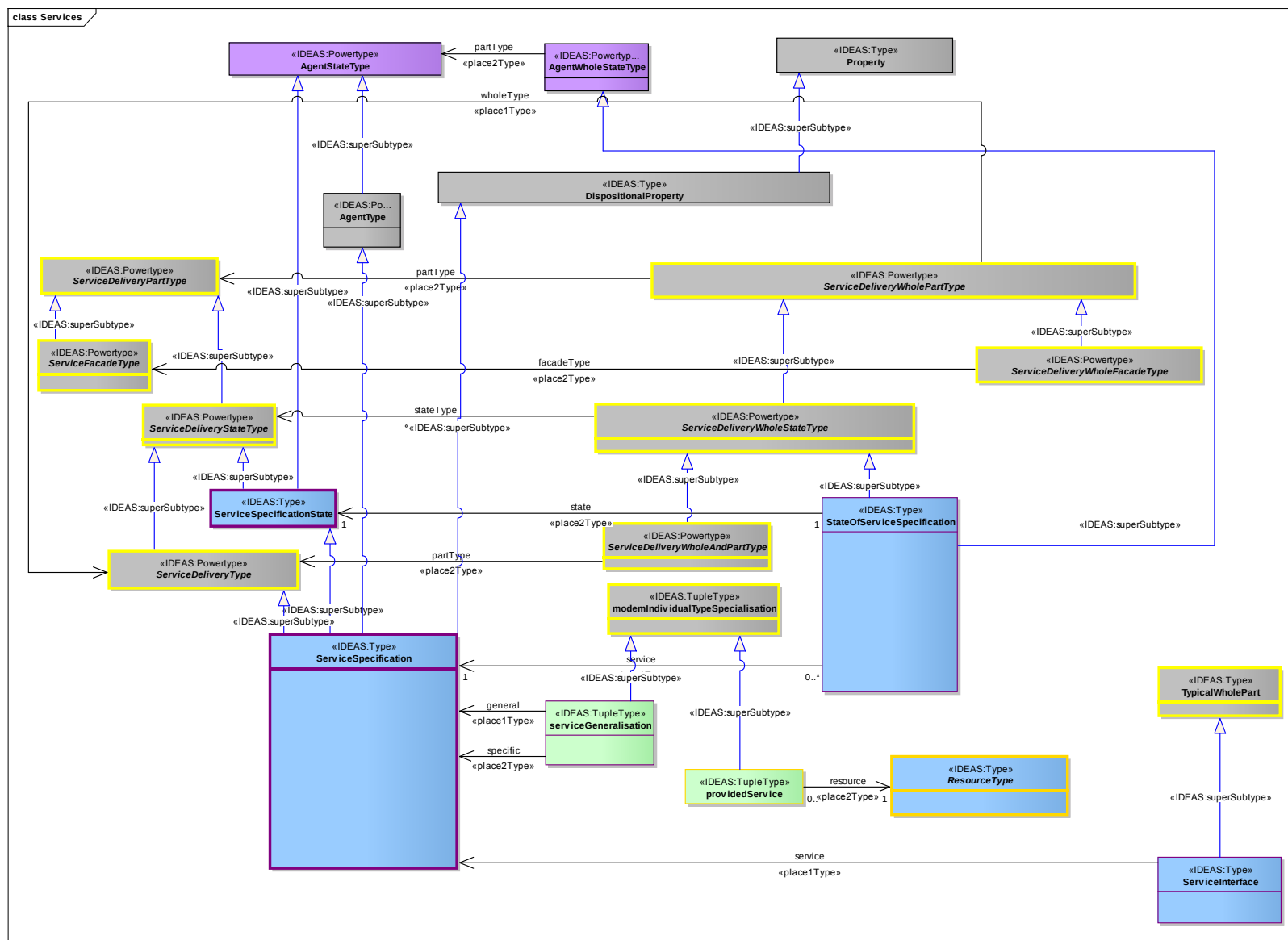


Figure 65 : Services

## 2.6

## System views

### 2.6.1

### SV-1: Resource interaction specification

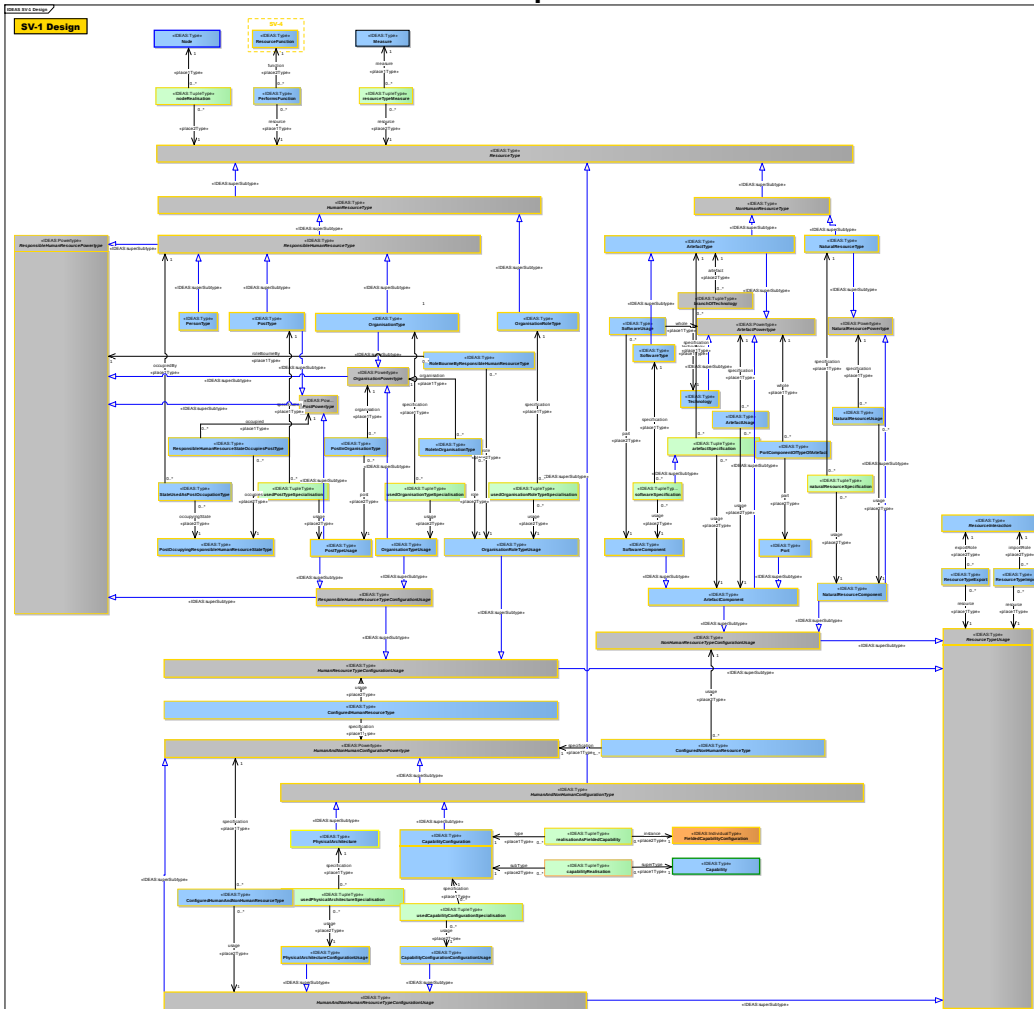
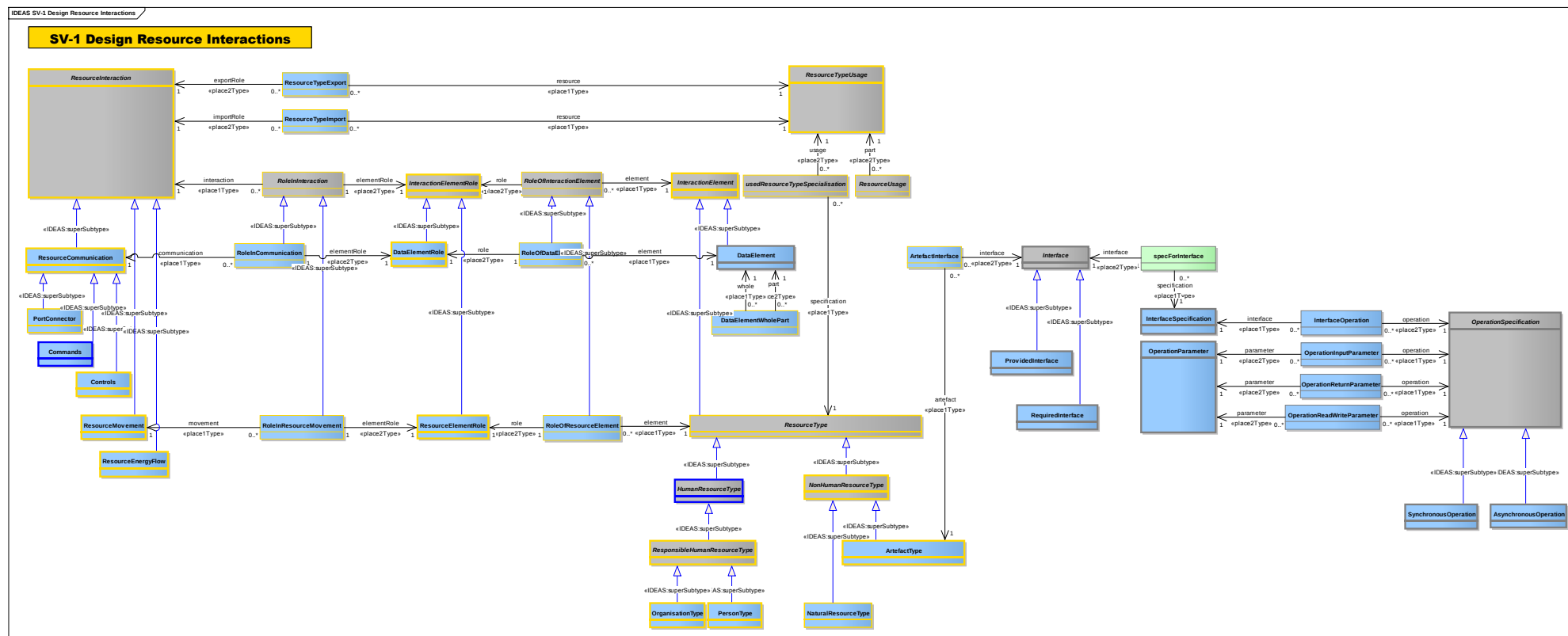


Figure 66 : SV-1 Design



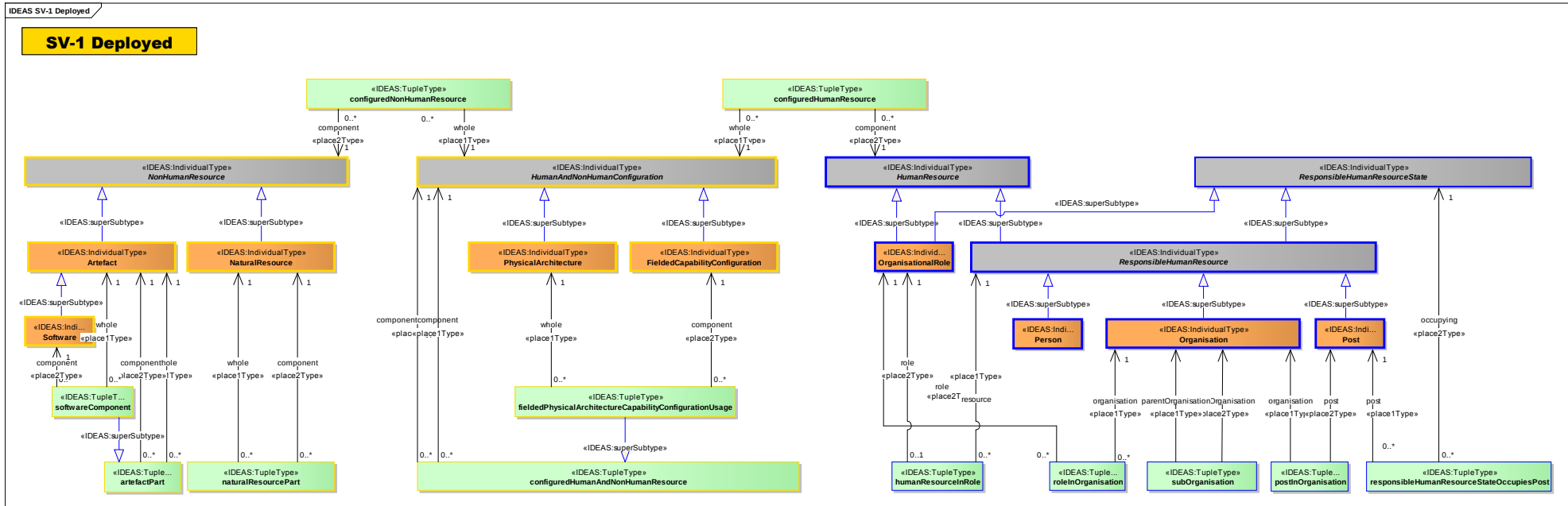


Figure 68 : SV-1 Deployed

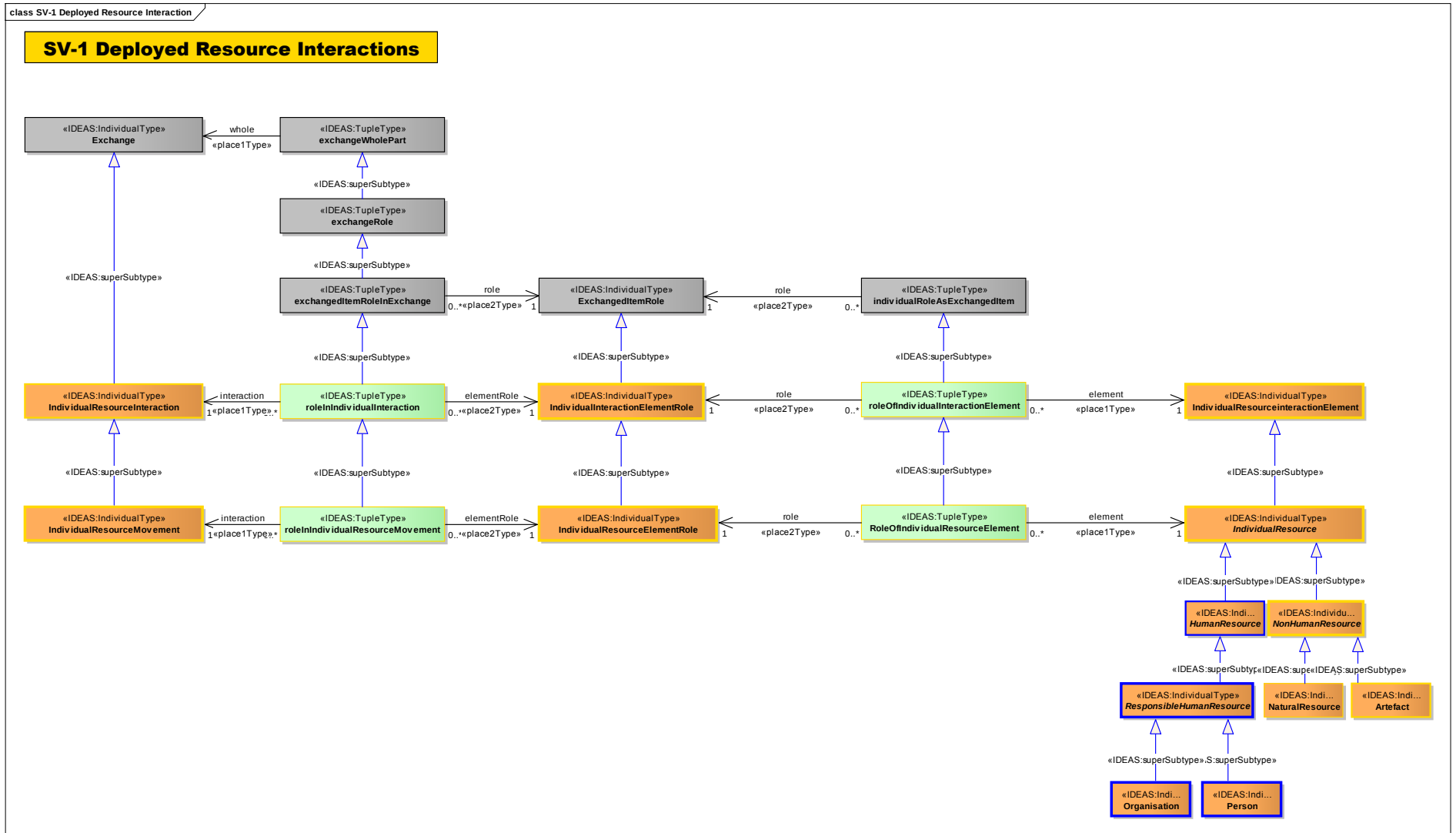


Figure 69 : SV-1 Deployed Resource Interaction

## 2.6.2 SV-2: System port specification, connectivity description and clusters

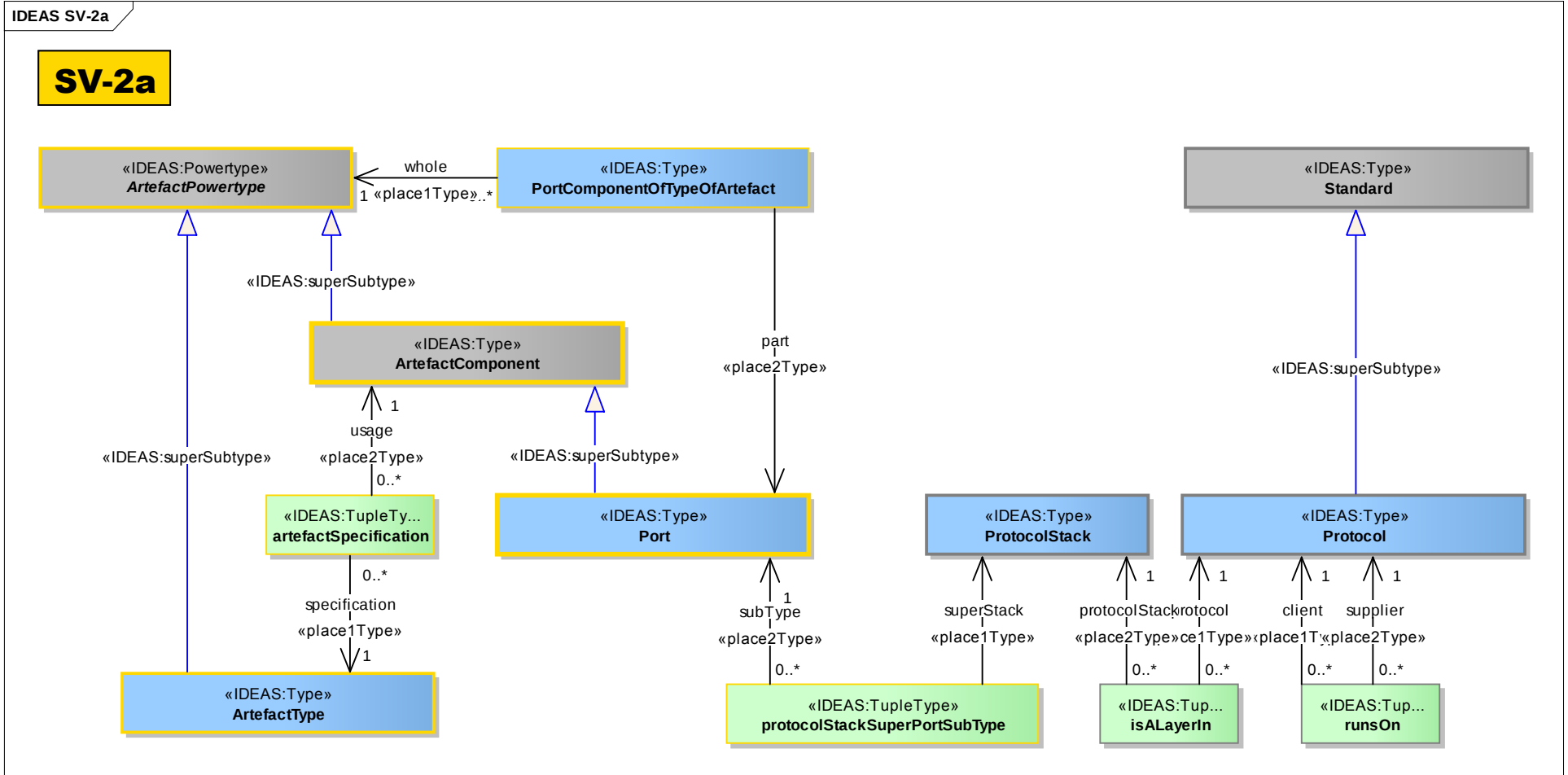


Figure 70 : SV-2a

## SV-2b

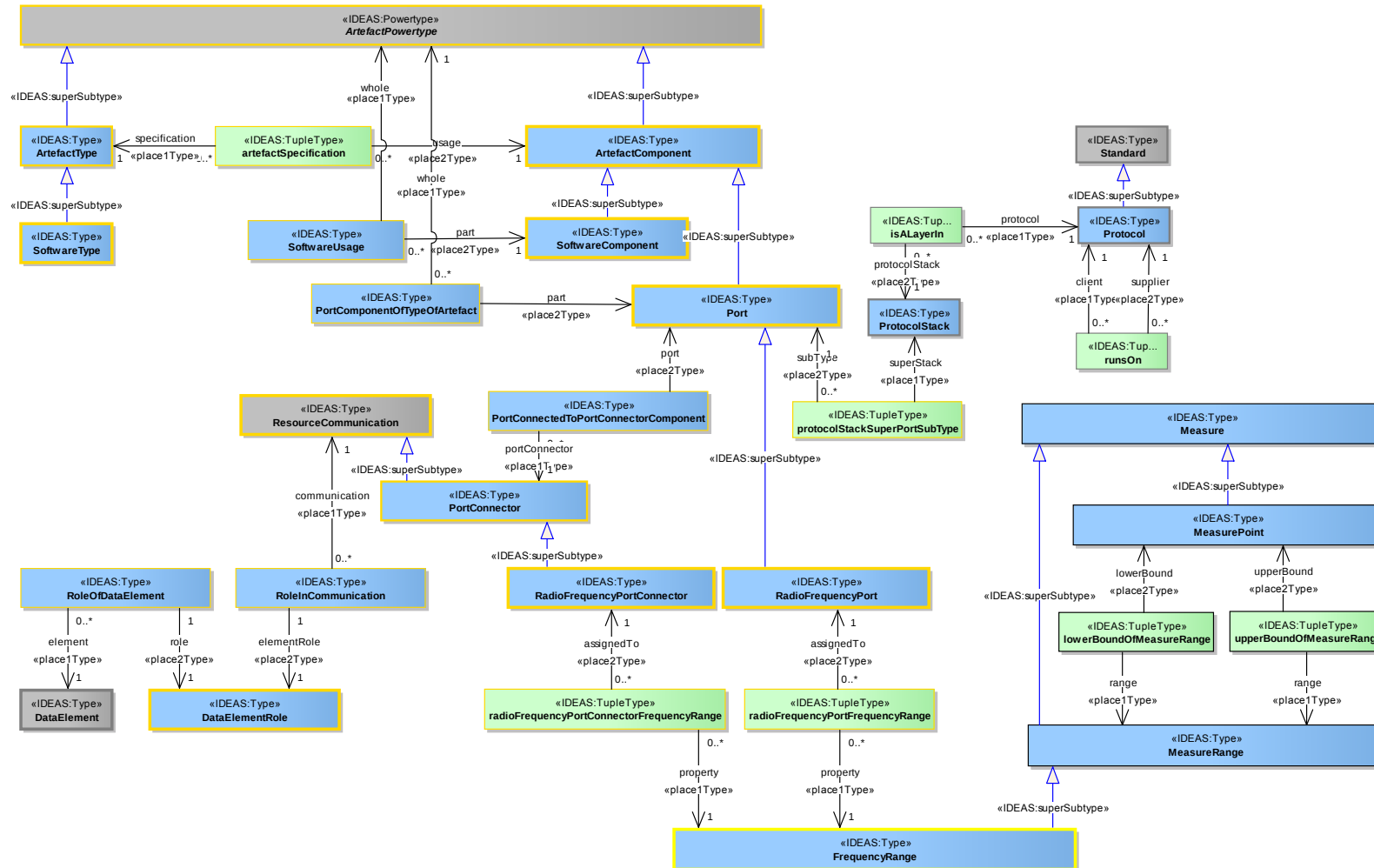


Figure 71 : SV-2b

## SV-2c

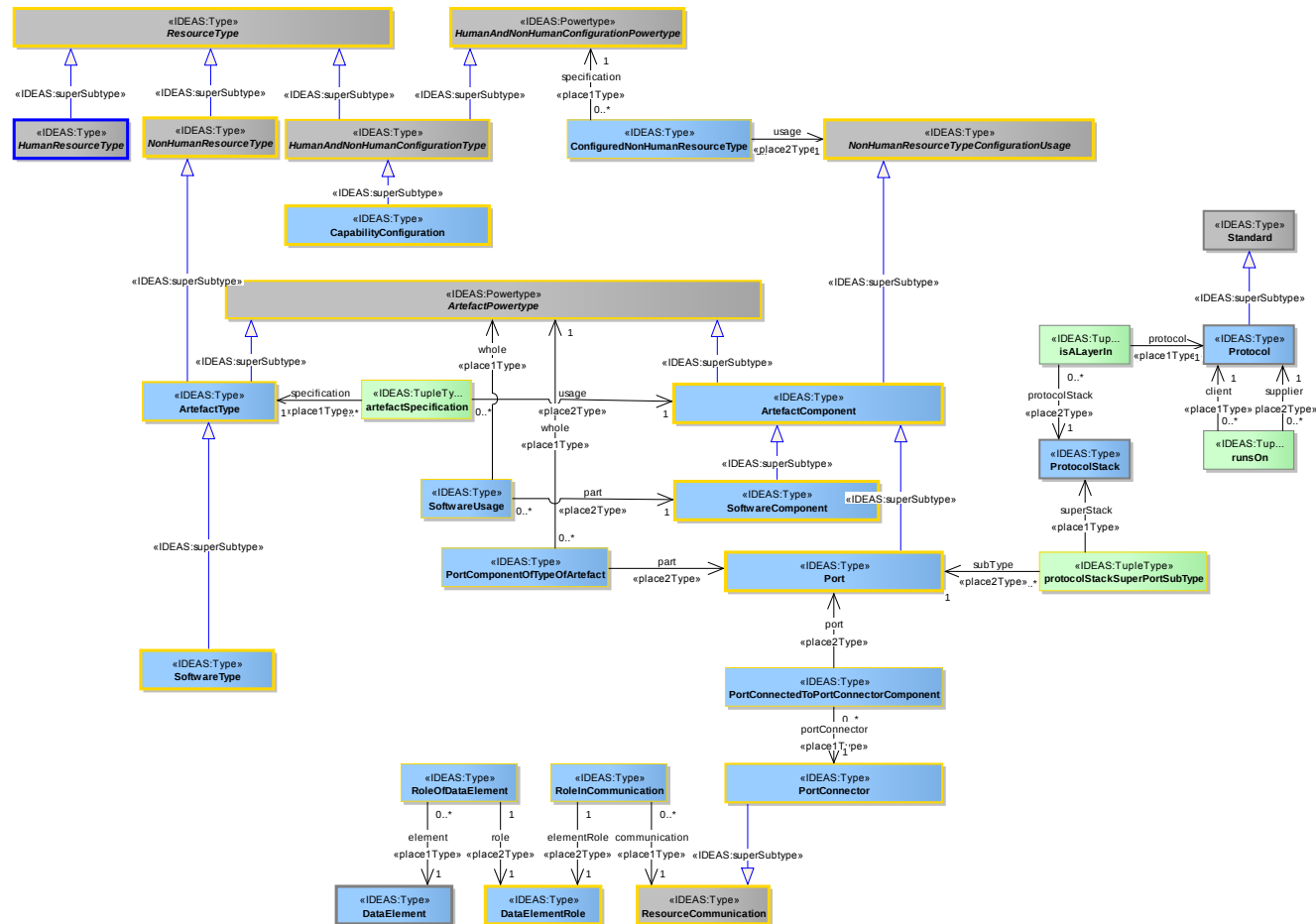


Figure 72 : SV-2c

### 2.6.3 SV-3: Resource interaction matrix

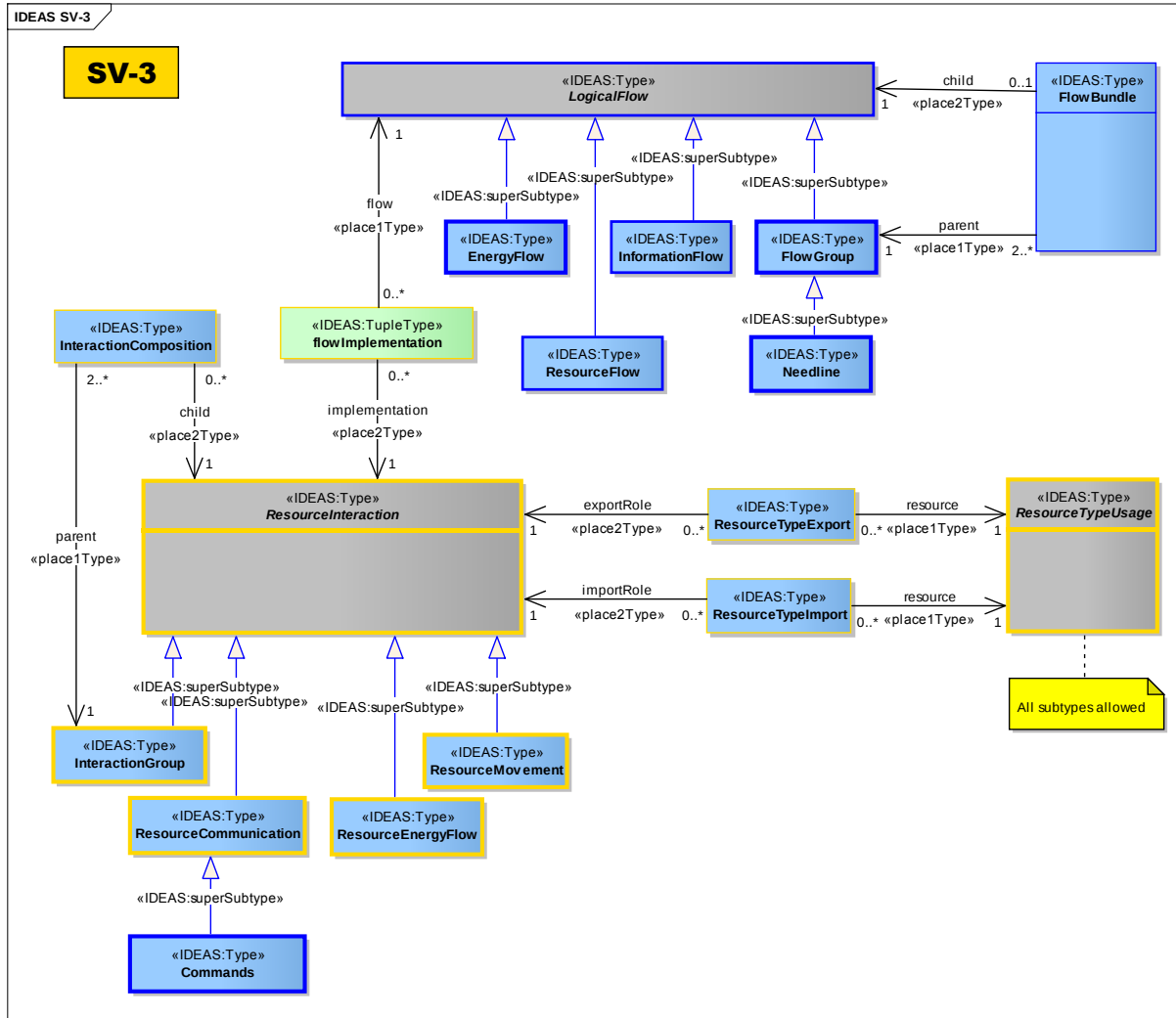


Figure 73 : SV-3

## 2.6.4 SV-4: Functionality description

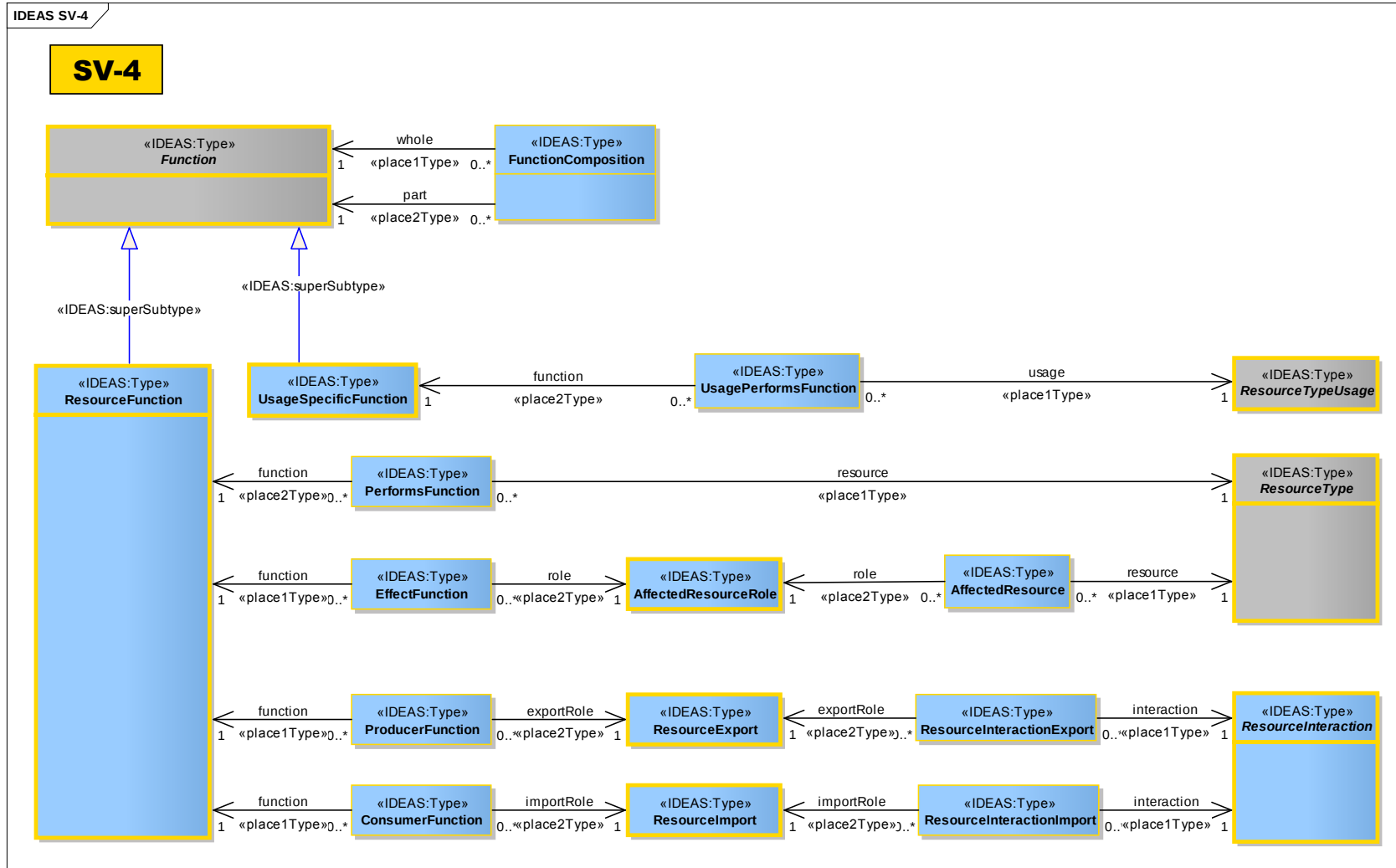


Figure 74 : SV-4

## 2.6.5 SV-5: Function operational activity/ service function traceability matrix

IDEAS SV-5

### SV-5

Note that in MODEM we need to be more precise about how an activity maps to a function. In previous versions of MODAF, if more than one Function realised an activity (or vice versa) we simply created more relationships. However, that led to ambiguity because in a trade-off of multiple SVs for an OV, the multiple relationships could be understood as options.

In MODEM, it is clear. If several activities are realised by one function, an ActivityGroup is created containing those activities and it is that group that maps to the function. Similarly for multiple functions realising one OperationalActivity, or many functions that together realise a group of OperationalActivities.

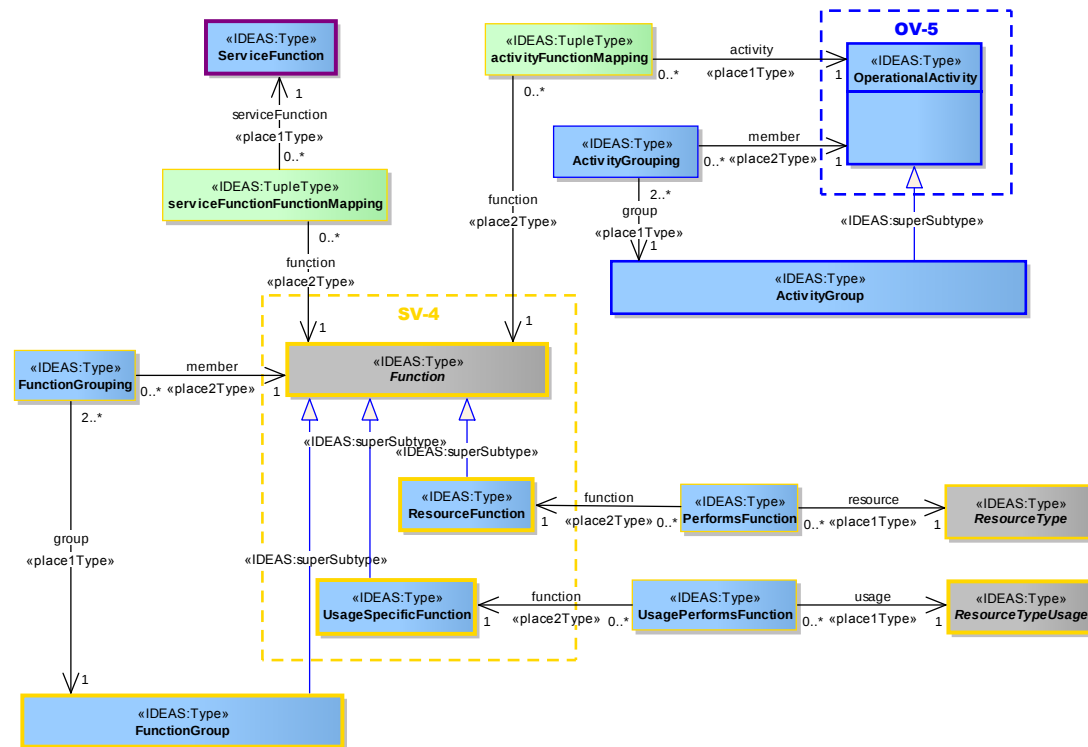


Figure 75 : SV-5

### 2.6.6 SV-6: Systems data exchange matrix

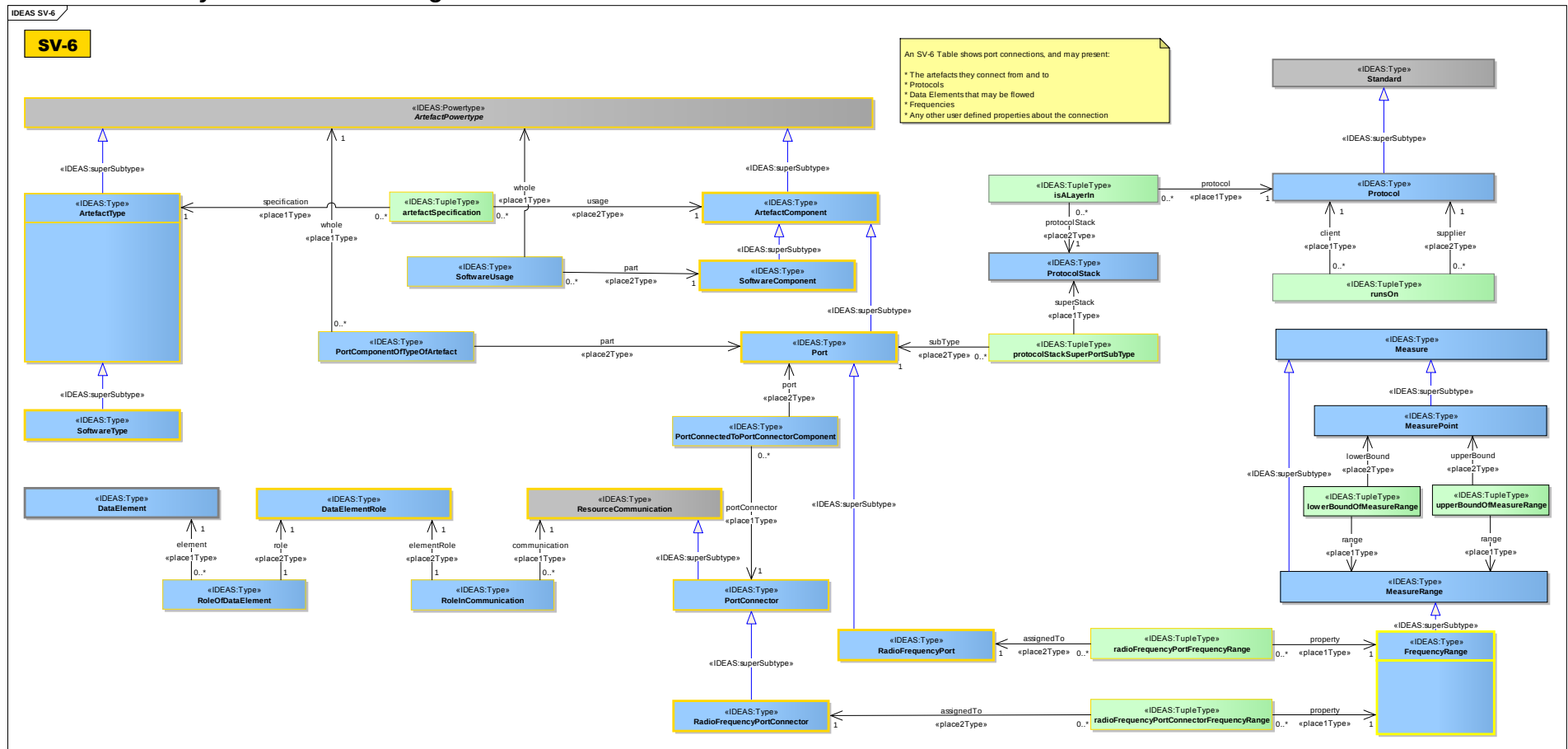


Figure 76 : SV-6

## 2.6.7 SV-7: Resource performance parameters matrix

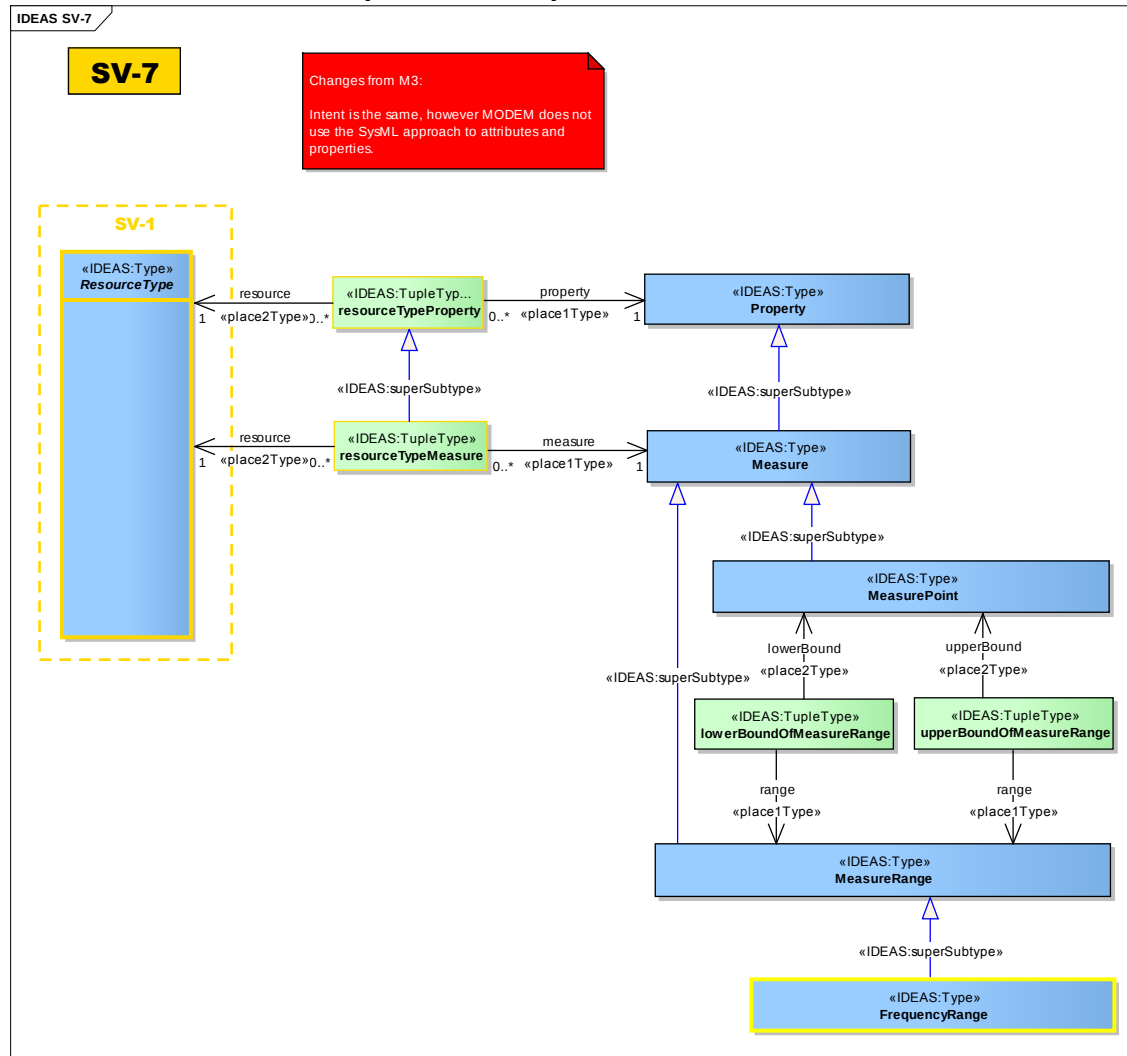


Figure 77 : SV-7

## 2.6.8 SV-8: Capability configuration management

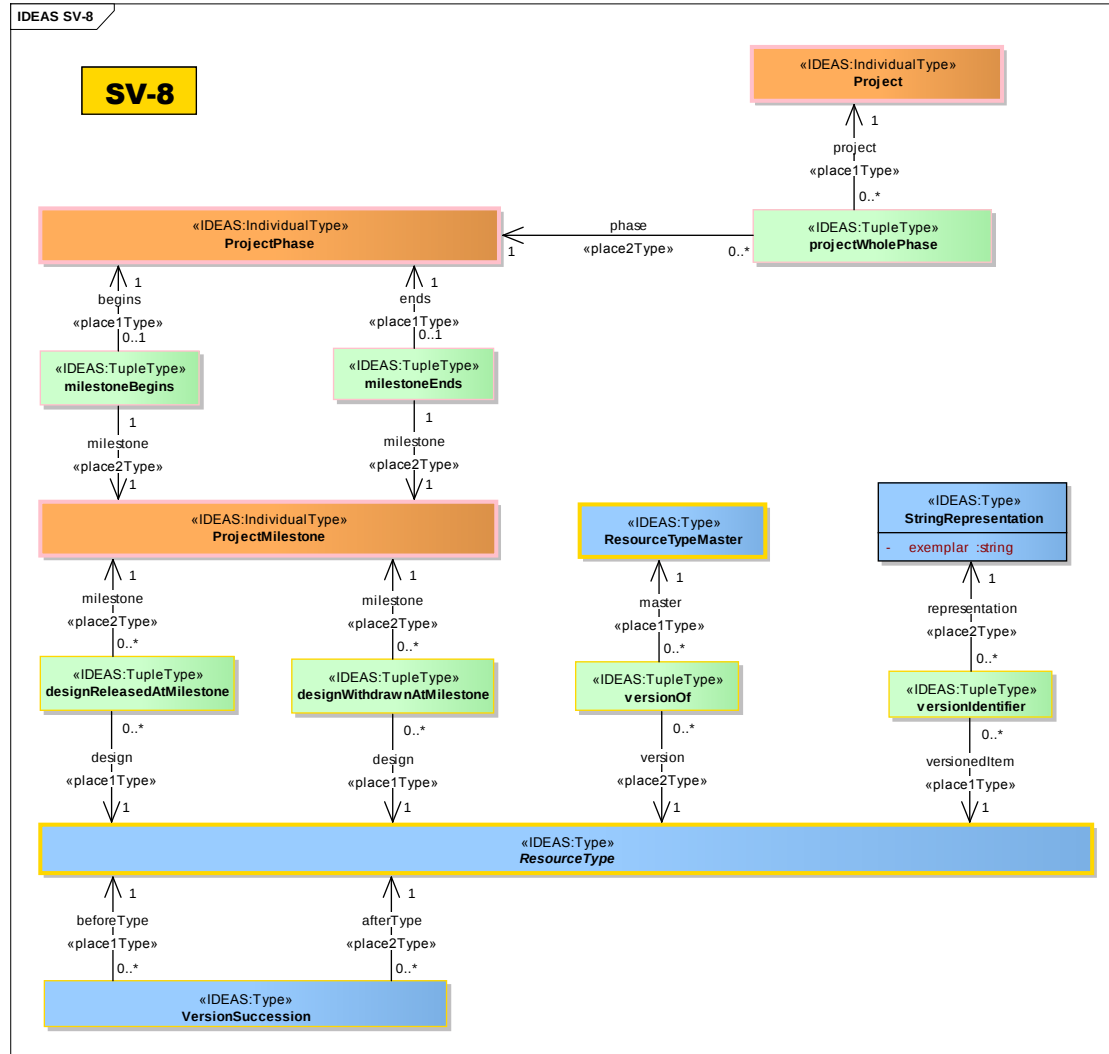


Figure 78 : SV-8

## 2.6.9 SV-9: Technology and skills forecast

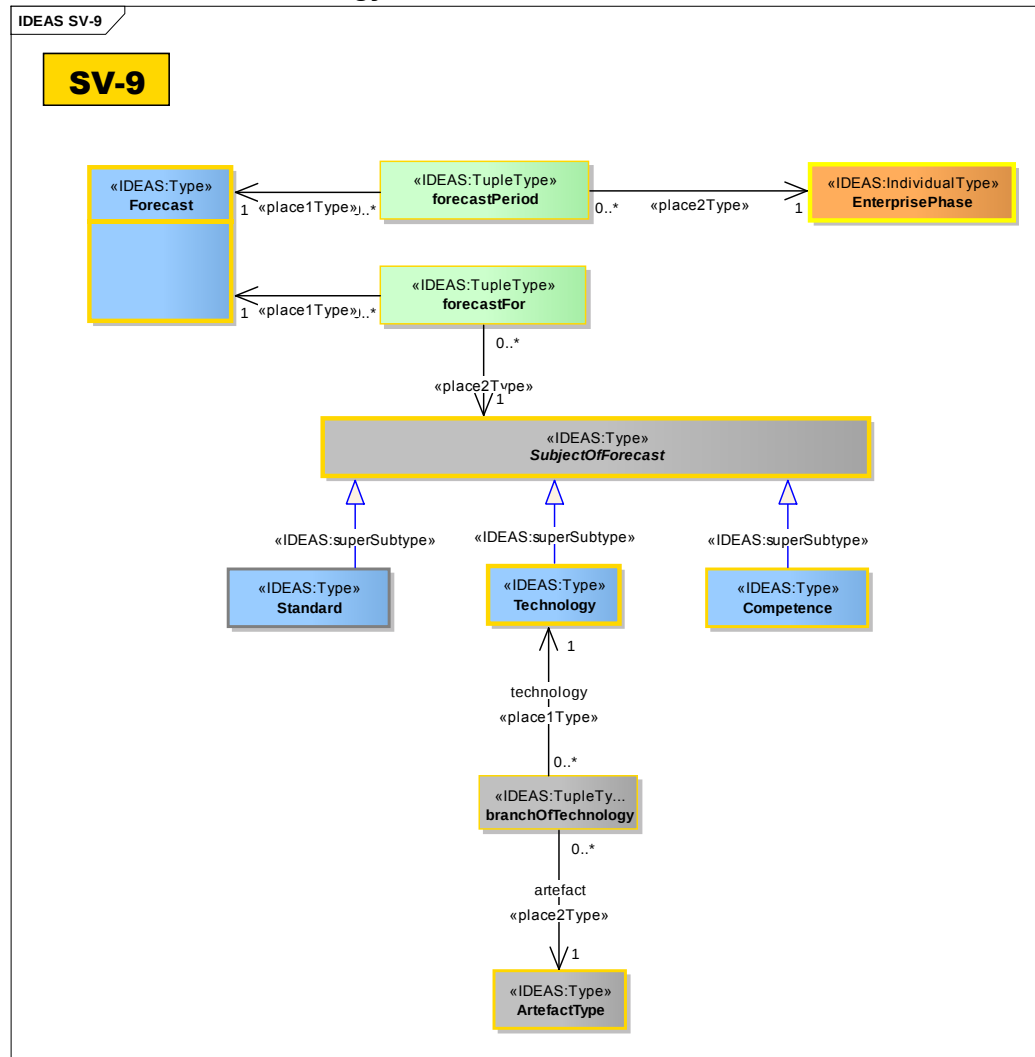


Figure 79 : SV-9

#### 2.6.10 SV-10: Resource constraints, state transition and event-trace description

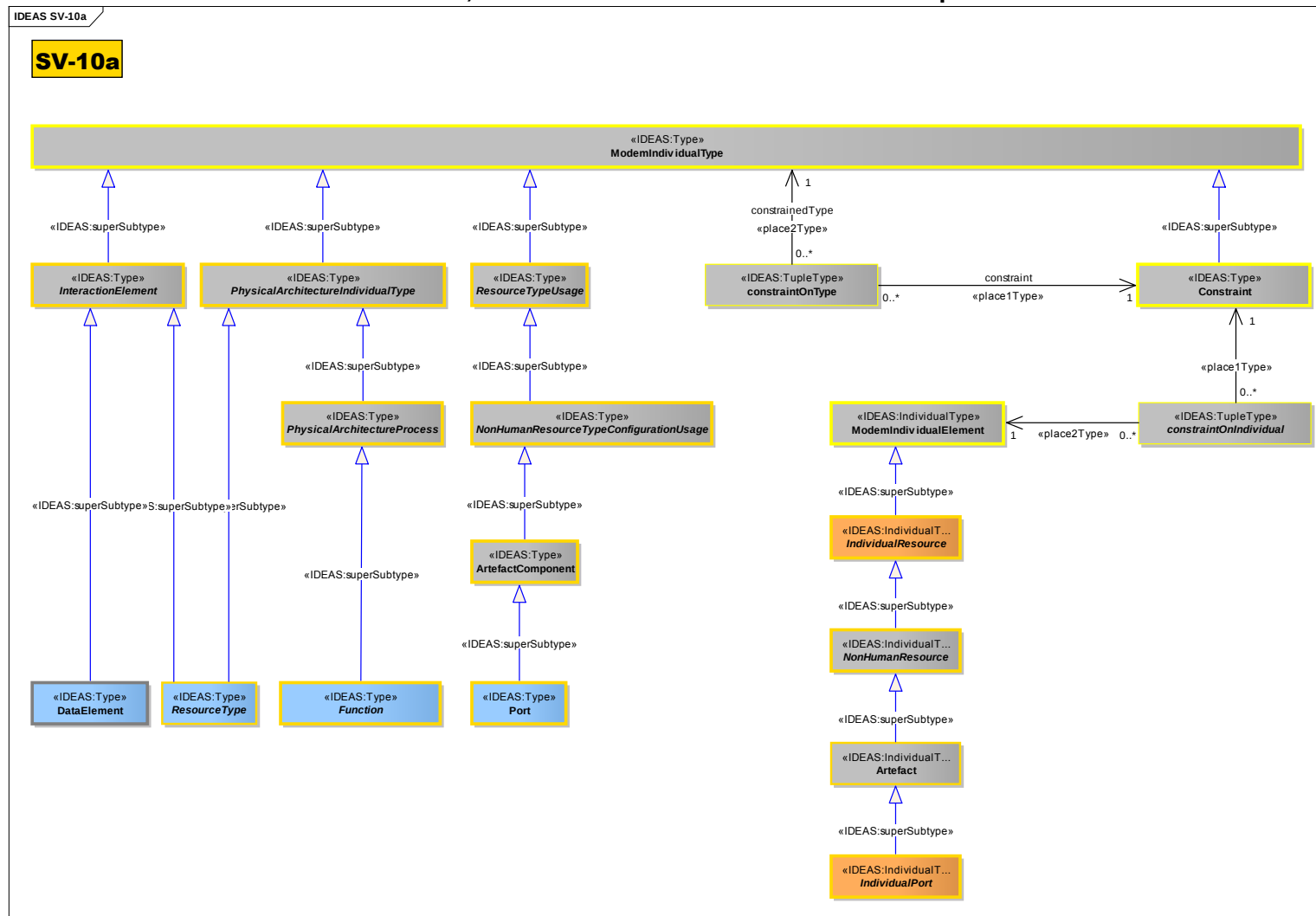


Figure 80 : SV-10a

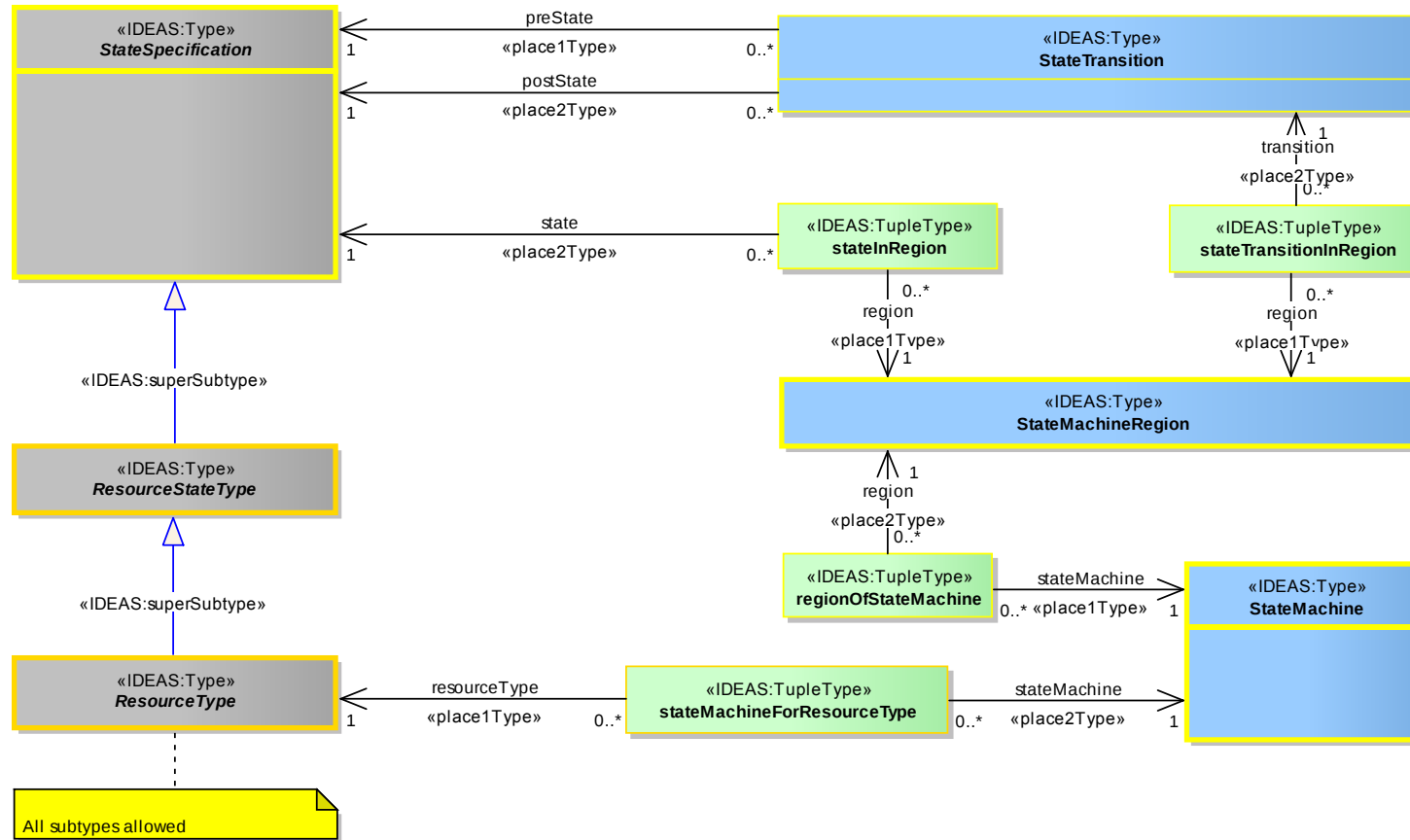
**SV-10b**

Figure 81 : SV-10b

## SV-10c

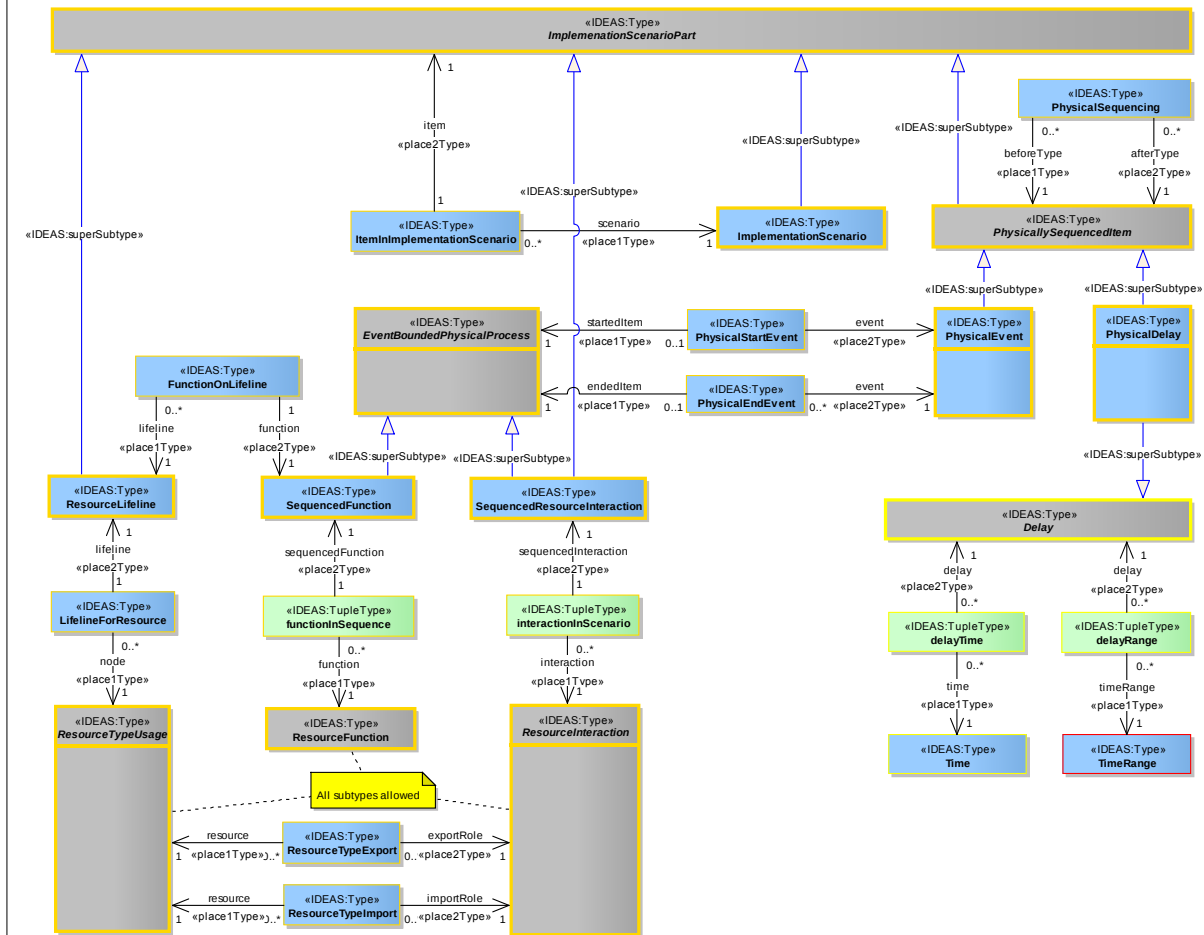


Figure 82 : SV-10c

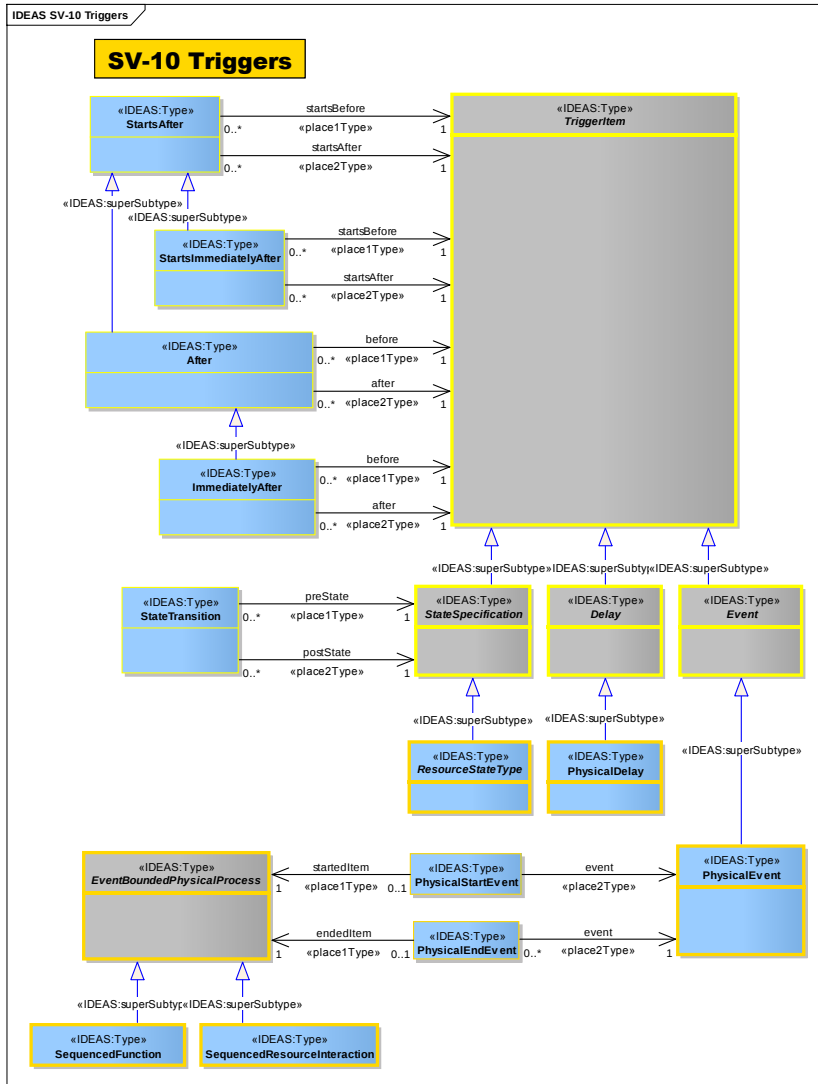


Figure 83 : SV-10 Triggers

## 2.6.11 SV-11: Physical schema

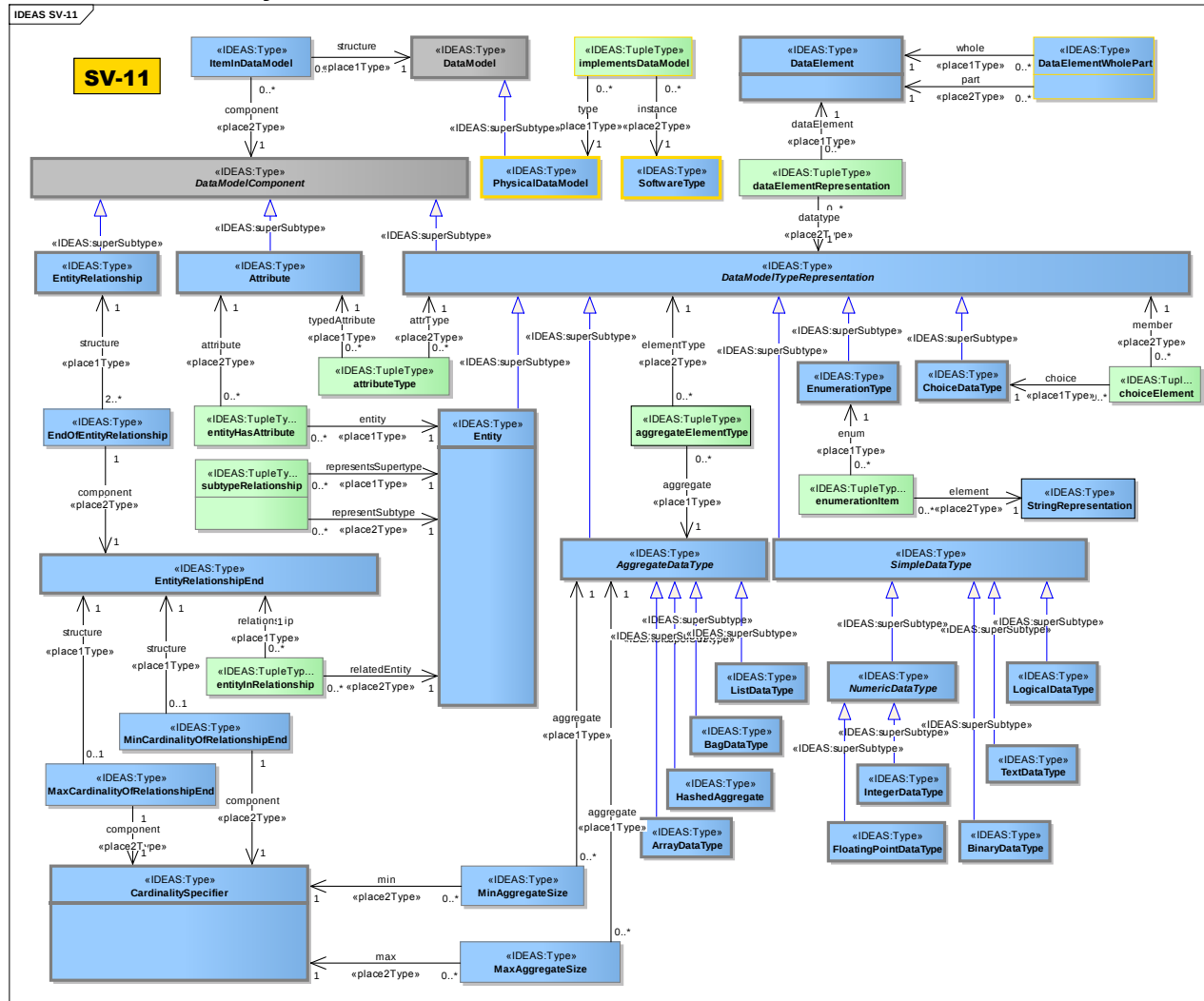


Figure 84 : SV-11

### 2.6.12 SV-12: Service provision and service composition

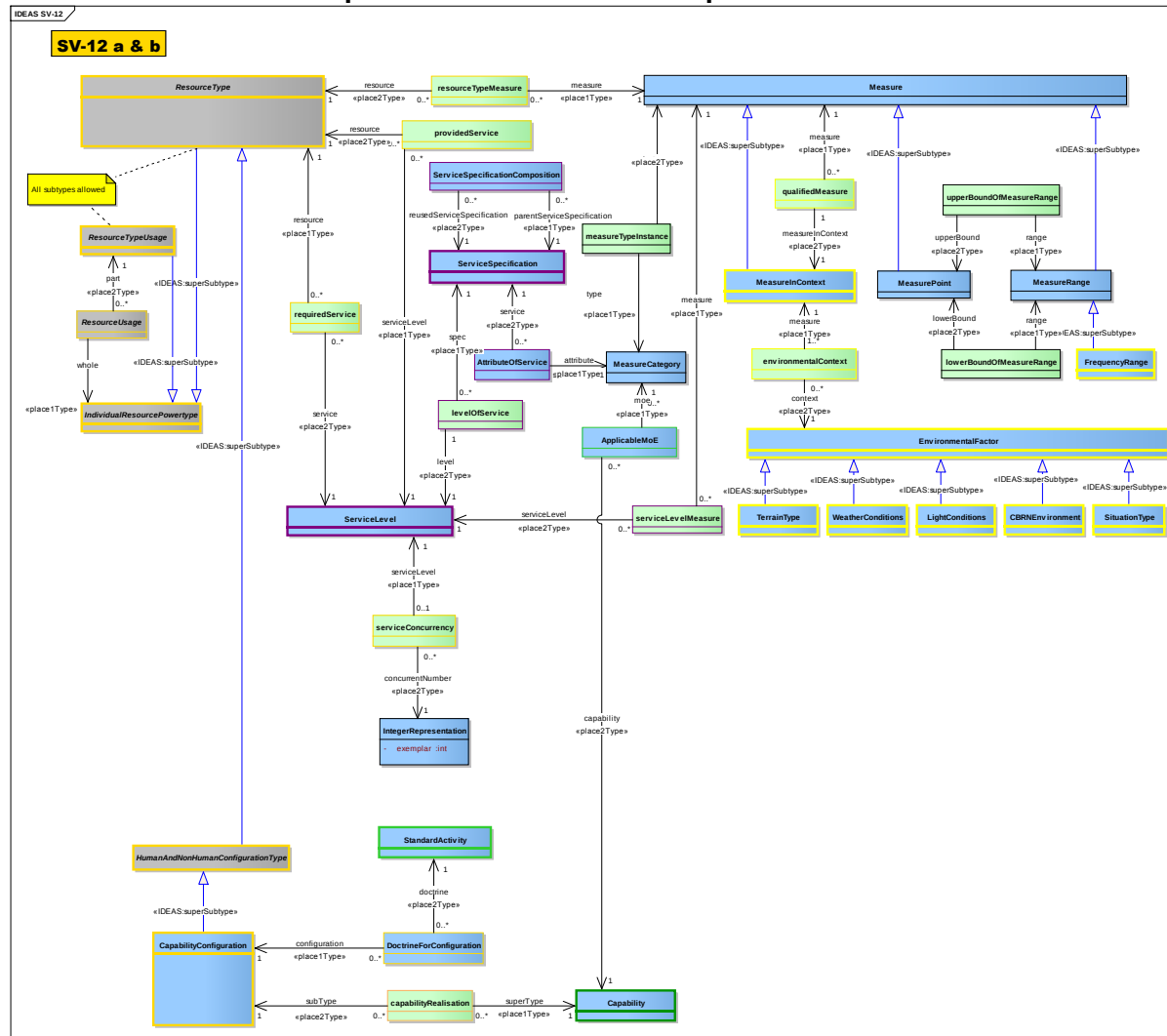


Figure 85 : SV-12

### 2.6.13 System Views elements list

| System Views                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>AffectedResource</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AffectedResource - IndividualRoleType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AffectedResource - TypicalWholePart</p> <p>Association (source - target): «place1Type»</p> <p>AffectedResource - ResourceType</p> <p>Association (source - target): «place2Type»</p> <p>AffectedResource - AffectedResourceRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualRoleType where the role extent is an AffectedResourceRole and the whole is a ResourceType.</p> |
| <p><b>AffectedResourceRole</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AffectedResourceRole - RoleExtentType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AffectedResourceRole - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType that is the role played by a ResourceType when it is acted upon by a Function.</p>                                                                                                                                                                                     |
| <p><b>Artefact</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Artefact - NonHumanResource</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Artefact - ArtefactPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualResource that is non-human and man-made. Examples are "car", "radio", "diesel", etc.</p>                                                                                                                                                                                                                  |
| <p><b>ArtefactComponent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ArtefactComponent - ArtefactPowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ArtefactComponent - NonHumanResourceTypeConfigurationUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NonHumanResourceTypeConfigurationUsage that is a type of Artefact that is used as a component of an ArtefactType.</p>                                                                                                                                                         |
| <p><b>ArtefactInterface</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ArtefactInterface - TypicalWholePart</p> <p>Association (source - target): «place1Type»</p> <p>ArtefactInterface - ArtefactType</p>                                                                                                                                                                                                                                                                                                                                                                       |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <p><i>Association (source - target):</i>«place2Type»</p> <p>ArtefactInterface - Interface</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart that relates an ArtefactType to the Interface it provides or requires.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>ArtefactType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ArtefactType - ArtefactPowertype</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>ArtefactType - NonHumanResourceType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A type of man-made object. Examples are "car", "radio", "diesel", etc.</p> <p>Note: It has no human components.</p>                                                                                                                                                                                                                                                                                                                |
| <p><b>ArtefactUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ArtefactUsage - NonHumanResourceUsage</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>ArtefactUsage - ArtefactPowertype</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>ArtefactUsage - ArtefactComponent</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NonHumanResourceUsage that asserts a ArtefactComponent is used by an ArtefactType.</p>                                                                                                                                                                                                                                                            |
| <p><b>CapabilityConfiguration</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>CapabilityConfiguration - HumanAndNon-HumanConfigurationType</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>CapabilityConfiguration - FieldedCapabilityConfigurationPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A composite structure representing the physical and human resources (and their interactions) that when brought together provide one or more Capabilities. A CapabilityConfiguration is a set of Resources configured to provide a capability, and should be guided by [doctrine] which may take the form of Standard or OperationalConstraint stereotypes.</p> |
| <p><b>CapabilityConfigurationConfigurationUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>CapabilityConfigurationConfigurationUsage - HumanAndNonHumanResourceTypeConfigurationUsage</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>CapabilityConfigurationConfigurationUsage - FieldedCapabilityConfigurationPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A HumanAndNonHumanResourceTypeConfigurationUsage that is a type of CapabilityConfiguration.</p>                                                                                                                                                                                               |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <p><b>Competence</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Competence - ResponsibleHumanResourceStateType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Competence - SubjectOffForecast</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResponsibleHumanResourceStateType where each instance is a state of a ResponsibleHumanResource that possesses a specific set of abilities defined by knowledge, skills and attitude.</p>                                                                                                                                                                                                            |
| <p><b>ConfiguredHumanAndNonHumanResourceType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ConfiguredHumanAndNonHumanResourceType - HumanAndNonHumanConfigurationTypeResourceUsage</p> <p>Association (source - target): «place1Type»</p> <p>ConfiguredHumanAndNonHumanResourceType - HumanAndNonHumanConfigurationPowertype</p> <p>Association (source - target): «place2Type»</p> <p>ConfiguredHumanAndNonHumanResourceType - HumanAndNonHumanResourceTypeConfigurationUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A resourceUsage that asserts that a state of a type of HumanAndNonHumanResouce is typically a component of a HumanAndNonHumanConfigurationType.</p> |
| <p><b>ConfiguredHumanResourceType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ConfiguredHumanResourceType - HumanAndNonHumanConfigurationTypeResourceUsage</p> <p>Association (source - target): «place1Type»</p> <p>ConfiguredHumanResourceType - HumanAndNonHumanConfigurationPowertype</p> <p>Association (source - target): «place2Type»</p> <p>ConfiguredHumanResourceType - HumanResourceTypeConfigurationUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A resourceUsage that asserts that a state of a type of HumanResouce is typically a component of a HumanAndNonHumanConfigurationType.</p>                                                                   |
| <p><b>ConfiguredNonHumanResourceType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ConfiguredNonHumanResourceType - HumanAndNonHumanConfigurationTypeResourceUsage</p> <p>Association (source - target): «place1Type»</p> <p>ConfiguredNonHumanResourceType - HumanAndNonHumanConfigurationPowertype</p> <p>Association (source - target): «place2Type»</p> <p>ConfiguredNonHumanResourceType - NonHumanResourceTypeConfigurationUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A resourceUsage that asserts that a state of a type of NonHumanResouce is typically a component of a HumanAndNonHumanConfigurationType.</p>                                                 |
| <p><b>ConsumerFunction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ConsumerFunction - ModemWholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ConsumerFunction - IndividualExchangeRoleType</p>                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <p>Association (source - target): «place1Type»<br/> ConsumerFunction - Function<br/> Association (source - target): «place2Type»<br/> ConsumerFunction - ResourceImport<br/> <u>Attributes:</u><br/> -<br/> An IndividualExchangeRoleType where the role is a ResourceImport and the consumer is a Function.</p>                                                                                                                                                                                                                                                                                                                            |
| <p><b>Controls</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> Controls - ResourceCommunication<br/> <u>Attributes:</u><br/> -<br/> A ResourceCommunication where one InteractionElement controls another.</p>                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>DataElementRole</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> DataElementRole - InteractionElementRole<br/> <u>Attributes:</u><br/> -<br/> An InteractionElementRole where the element is a DataElement.</p>                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>DataElementWholePart</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> DataElementWholePart - TypicalWholePart<br/> Association (source - target): «place2Type»<br/> DataElementWholePart -DataElement<br/> Association (source - target): «place1Type»<br/> DataElementWholePart - DataElement<br/> <u>Attributes:</u><br/> -<br/> A TypicalWholePart where one DataElement is a part of another.</p>                                                                                                                                                              |
| <p><b>DoctrineForConfiguration</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> DoctrineForConfiguration - ModemWholePartType<br/> Association (source - target): «place1Type»<br/> DoctrineForConfiguration - CapabilityConfiguration<br/> Association (source - target): «place2Type»<br/> DoctrineForConfiguration - StandardActivity<br/> <u>Attributes:</u><br/> -<br/> A ModemWholePartType that asserts a StandardActivity is part of a CapabilityConfiguration - i.e. in order to deliver the Capability, the configuration must follow doctrinal processes.</p> |

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| <p><b>EffectFunction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EffectFunction - ProcessWholeRoleExtentPartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EffectFunction - TypicalWholePart</p> <p>Association (source - target): «place1Type»</p> <p>EffectFunction - ResourceFunction</p> <p>Association (source - target): «place2Type»</p> <p>EffectFunction - AffectedResourceRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart that relates a ResourceFunction to the AffectedResourceRole played by a ResourceType when acted upon by the ResourceFunction.</p>                                                                                                                                   |
| <p><b>EventBoundedPhysicalProcess</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EventBoundedPhysicalProcess - PhysicalArchitectureProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PhysicalArchitectureProcess that can have PhysicalEvents marking its start and end points.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>FieldedCapabilityConfiguration</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>FieldedCapabilityConfiguration - FieldedCapabilityConfigurationPowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FieldedCapabilityConfiguration - HumanAndNon-HumanConfiguration</p> <p><u>Attributes:</u></p> <p>-</p> <p>An actual, fully-realised capability. A FieldedCapability must indicate its configuration (HumanAndNon-HumanConfiguration). Example: "HMS Iron Duke, configured and crewed, operating under the appropriate doctrine". Note - the CapabilityConfiguration that this realises would specify a UK Type 23 Frigate, the crew, the weapons systems, etc. Note: was called FieldedCapability in M3</p> |
| <p><b>FieldedCapabilityConfigurationPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FieldedCapabilityConfigurationPowertype - HumanAndNonHumanConfigurationPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of FieldedCapabilityConfiguration.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>Forecast</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Forecast - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType that is the forecasted future states of one or more SubjectOfforecasts for the forecast period.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <p><b>Function</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Function - PhysicalArchitectureProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PhysicalArchitectureProcess that is either carried out by a ResourceType or a ResourceTypeUsage.</p>                                                                                                                                                                                                                                                                                                                |
| <p><b>FunctionComposition</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FunctionComposition - TypicalWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FunctionComposition - ProcessWholeAndPartType</p> <p>Association (source - target): «place2Type»</p> <p>FunctionComposition - Function</p> <p>Association (source - target): «place1Type»</p> <p>FunctionComposition - Function</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart that relates a parent (whole) Function to its child (part) Function.</p> |
| <p><b>FunctionGroup</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FunctionGroup - Function</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Function that is entirely composed of other Functions</p>                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>FunctionGrouping</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FunctionGrouping - FunctionComposition</p> <p>Association (source - target): «place1Type»</p> <p>FunctionGrouping - FunctionGroup</p> <p>Association (source - target): «place2Type»</p> <p>FunctionGrouping - Function</p> <p><u>Attributes:</u></p> <p>-</p> <p>A FunctionComposition where the parent is a FunctionGroup.</p>                                                                                                                                                               |
| <p><b>FunctionOnLifeline</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>FunctionOnLifeline - TypicalWholePart</p> <p>Association (source - target): «place2Type»</p> <p>FunctionOnLifeline - SequencedFunction</p> <p>Association (source - target): «place1Type»</p> <p>FunctionOnLifeline - ResourceLifeline</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                                                                |

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| <p>A TypicalWholePart where a SequencedFunction is part of a ResourceLifeline. Note: a given SequencedFunction may appear on one and only one ResourceLifeline.</p> <p><b>HumanAndNonHumanConfiguration</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanAndNonHumanConfiguration - IndividualResource</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>HumanAndNonHumanConfiguration - HumanAndNonHumanConfigurationPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualResource that is composed of both human and non-human resources.</p> |
| <p><b>HumanAndNonHumanConfigurationPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanAndNonHumanConfigurationPowertype - IndividualResourcePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of HumanAndNonHumanConfiguration.</p>                                                                                                                                                                                                                                                                                                                                   |
| <p><b>HumanAndNonHumanConfigurationType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanAndNonHumanConfigurationType - ResourceType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanAndNonHumanConfigurationType - HumanAndNonHumanConfigurationPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceType that has both Human and Non-Human components.</p>                                                                                                                                                                                          |
| <p><b>HumanAndNonHumanConfigurationTypeResourceUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>HumanAndNonHumanConfigurationTypeResourceUsage - HumanAndNonHumanConfigurationPowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanAndNonHumanConfigurationTypeResourceUsage - ResourceUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A resourceUsage that asserts that a state of a type of HumanResource is typically a component of a HumanAndNonHumanConfigurationType.</p>                                                                                              |
| <p><b>HumanAndNonHumanResourceTypeConfigurationUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanAndNonHumanResourceTypeConfigurationUsage - ResourceTypeUsage</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanAndNonHumanResourceTypeConfigurationUsage - HumanAndNonHumanConfigurationPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>ResourceTypeUsage that is a type of state or part of a HumanAndNonHumanResource that is used by (a part of, a component of) another HumanAndNonHumanResourceType .</p>                                        |
| <p><b>HumanResourcePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanResourcePowertype - IndividualResourcePowertype</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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| <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>The powertype of HumanResource.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>HumanResourceState</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanResourceState - IndividualResourceState</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>An IndividualResourceState that is a temporal state of a HumanResource.</p>                                                                                                                                                                                                                                                                           |
| <p><b>HumanResourceType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanResourceType - ResourceType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanResourceType - HumanResourcePowertype</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>A ResourceType that is a type of HumanResource. A PersonType, PostType, OrganisationType or OrganisationRoleType. [ABSTRACT]</p> <p>Note: was called "OrganisationalResource" in M3 v1.2. Note: was called "OrganisationalResourceType" in M3.</p> |
| <p><b>HumanResourceTypeConfigurationUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanResourceTypeConfigurationUsage - HumanResourcePowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanResourceTypeConfigurationUsage - ResourceTypeUsage</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>A state or part of a HumanResourceType that is used by (a part of, a component of) another HumanResourceType.</p>                                                                       |
| <p><b>HumanResourceTypeUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>HumanResourceTypeUsage - HumanResourceType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>HumanResourceTypeUsage - ResourceUsage</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>A resourceUsage that ia a type of humanResource which asserts a given HumanResourceType belongs to an ResourceTypeUsage.</p>                                                                                                                                 |
| <p><b>ImplemenationScenarioPart</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ImplemenationScenarioPart - PhysicalArchitectureIndividualType</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>A ModemIndividualType that features in (i.e. is part of) an ImplemenationScenario.</p>                                                                                                                                                                                                                                                 |

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| <p><b>ImplementationScenario</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ImplementationScenario - Scenario</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ImplementationScenario – ImplementationScenarioPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Scenario that features ResourceTypes, their Functions and Interactions.</p>                                                                                                                                                                                                      |
| <p><b>IndividualInteractionElementRole</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualInteractionElementRole - ExchangedItemRole</p> <p>Dependency (element - is instance of):«IDEAS:powertypeInstance»</p> <p>IndividualInteractionElementRole - IndividualInteractionElementRolePowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualInteractionElementRole - ModemIndividualElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ExchangedItemRole that is a role in an IndividualResourceInteraction.</p> |
| <p><b>IndividualInteractionElementRolePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualInteractionElementRolePowertype - ExchangedItemRoleType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualInteractionElementRolePowertype - ModemIndividualElementType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of IndividualInteractionElementRole.</p>                                                                                                                                                    |
| <p><b>IndividualPort</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of):«IDEAS:powertypeInstance»</p> <p>IndividualPort - IndividualPortPowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualPort - Artefact</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Artefact that is a port or interface provided by (and part of) an Artefact. Note: subsumes "SystemPort" and "SoftwarePort" in M3.</p>                                                                                                                                                              |
| <p><b>IndividualPortConnectedToPortConnectorPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualPortConnectedToPortConnectorPowertype - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualPortConnectedToPortConnectorPowertype - CoupleType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of IndividualPortConnectedToPortConnector.</p>                                                                                                                                                       |

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| <p><b>IndividualPortConnector</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualPortConnector - IndividualResourceInteraction</p> <p>Dependency (element - is instance of):«IDEAS:powertypeInstance»</p> <p>IndividualPortConnector - IndividualPortConnectorPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualResourceInteraction that has a protocolStackTypeIndividualPortConnector to a ProtocolStack.</p>                      |
| <p><b>IndividualPortConnectorPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualPortConnectorPowertype - ExchangeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of IndividualPortConnector.</p>                                                                                                                                                                                                                                  |
| <p><b>IndividualPortPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualPortPowertype - IndividualResourcePartPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of IndividualPort.</p>                                                                                                                                                                                                                                          |
| <p><b>IndividualRadioFrequencyPort</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualRadioFrequencyPort - IndividualPort</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualPort that use radio frequency.</p>                                                                                                                                                                                                                                 |
| <p><b>IndividualRadioFrequencyPortConnector</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of):«IDEAS:powertypeInstance»</p> <p>IndividualRadioFrequencyPortConnector - IndividualRadioFrequencyPortConnectorPowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualRadioFrequencyPortConnector - IndividualPortConnector</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualPortConnector that connects two ports using a radio frequency.</p> |
| <p><b>IndividualRadioFrequencyPortConnectorPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualRadioFrequencyPortConnectorPowertype - IndividualPortConnectorPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of IndividualRadioFrequencyPortConnector.</p>                                                                                                                                                                    |

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| <p><b>IndividualResource</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualResource - IndividualResourceInteractionElement</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualResource - Body</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualResource - ModemIndividualElement</p> <p>Dependency (element - is instance of):«IDEAS:powertypeInstance»</p> <p>IndividualResource - IndividualResourcePowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualResource - IndividualResourceState</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualElement that is an IndividualOrganisationalResource, an ItemOfMateriel or a ResourceConfiguration.</p> |
| <p><b>IndividualResourceElementRole</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of):«IDEAS:powertypeInstance»</p> <p>IndividualResourceElementRole - IndividualResourceElementRolePowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualResourceElementRole - IndividualInteractionElementRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualInteractionElementRole that is a role in an IndividualResourceMovement.</p>                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>IndividualResourceElementRolePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualResourceElementRolePowertype - IndividualInteractionElementRolePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of IndividualResourceElementRole.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>IndividualResourceInteraction</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualResourceInteraction - Exchange</p> <p>Dependency (element - is instance of):«IDEAS:powertypeInstance»</p> <p>IndividualResourceInteraction - IndividualResourceInteractionPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Exchange between IndividualResourceInteractionElements.</p>                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>IndividualResourceInteractionElementPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IndividualResourceInteractionElementPowertype - ModemIndividualElementType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of IndividualResourceInteractionElement.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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| <p><b>IndividualResourceInteractionPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> IndividualResourceInteractionPowertype - ModemIndividualElementType<br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> IndividualResourceInteractionPowertype - ExchangeType</p> <p><u>Attributes:</u><br/> -<br/> The powertype of IndividualResourceInteraction.</p>                                                  |
| <p><b>IndividualResourceMovement</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u><br/> Dependency (element - is instance of): «IDEAS:powertypeInstance»<br/> IndividualResourceMovement - IndividualResourceMovementPowertype<br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> IndividualResourceMovement - IndividualResourceInteraction</p> <p><u>Attributes:</u><br/> -<br/> An IndividualResourceInteraction between IndividualResources.</p>                                         |
| <p><b>IndividualResourceMovementPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> IndividualResourceMovementPowertype - IndividualResourceInteractionPowertype</p> <p><u>Attributes:</u><br/> -<br/> The powertype of IndividualResourceMovement.</p>                                                                                                                                                                                |
| <p><b>IndividualResourcePart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u><br/> Dependency (element - is instance of): «IDEAS:powertypeInstance»<br/> IndividualResourcePart - IndividualResourcePartPowertype<br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> IndividualResourcePart - ModemIndividualElement</p> <p><u>Attributes:</u><br/> -<br/> A ModemIndividualElement that is a part of an IndividualResource. Note: an IndividualResource is an improper part of itself.</p> |
| <p><b>IndividualResourcePartPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> IndividualResourcePartPowertype - ModemIndividualElementType</p> <p><u>Attributes:</u><br/> -<br/> The powertype of IndividualResourcePart.</p>                                                                                                                                                                                                        |
| <p><b>IndividualResourcePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> IndividualResourcePowertype - IndividualResourceStatePowertype<br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> IndividualResourcePowertype - BodyType</p>                                                                                                                                                                       |

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| <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>The powertype of IndividualResourceState</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>IndividualResourceState</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>IndividualResourceState – IndividualResourcePart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>IndividualResourceState - IndividualResourceStatePowertype</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>A ModemIndividualElement that is either a IndividualResource or a proper state of one.</p>                                                                                                           |
| <p><b>IndividualResourceStatePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>IndividualResourceStatePowertype - IndividualResourcePartPowertype</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>The powertype of IndividualResourceState.</p>                                                                                                                                                                                                                                                                            |
| <p><b>IndividualResourceStateUsagePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>IndividualResourceStateUsagePowertype - ModemTemporalWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>IndividualResourceStateUsagePowertype - IndividualResourceStatePowertype</p> <p>Association (source - target): «place1Type»</p> <p>IndividualResourceStateUsagePowertype - IndividualResourcePowertype</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>The powertype of IndividualResourceStateUsage.</p> |
| <p><b>IndividualResourceStateWholeAndPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>IndividualResourceStateWholeAndPartType - ModemWholePartType</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>The powertype of IndividualResourceStateWholeAndPart.</p>                                                                                                                                                                                                                                                               |
| <p><b>IndividualResourceUsagePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>IndividualResourceUsagePowertype - ModemWholePartType</p> <p>Association (source - target): «place1Type»</p> <p>IndividualResourceUsagePowertype - IndividualResourcePowertype</p> <p>Association (source - target): «place2Type»</p> <p>IndividualResourceUsagePowertype - IndividualResourcePartPowertype</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>The powertype of individualResourceUsage.</p>                                   |

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| <p><b>IndividualResourceInteractionElement</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i>«IDEAS:powertypeInstance»</p> <p>IndividualResourceInteractionElement - IndividualResourceInteractionElementPowertype</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>IndividualResourceInteractionElement - ModemIndividualElement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualElement that is a exchanged in an IndividualResourceInteraction.</p> |
| <p><b>InteractionComposition</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>InteractionComposition - TypicalWholePart</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>InteractionComposition - ResourceInteraction</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>InteractionComposition - InteractionGroup</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart where one ResourceInteraction is part of an InteractionGroup.</p> |
| <p><b>InteractionElement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>InteractionElement - IndividualResourceInteractionElementPowertype</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>InteractionElement - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType that can be flowed between Resources in a ResourceInteraction.</p> <p>[ABSTRACT]</p>                                               |
| <p><b>InteractionElementRole</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>InteractionElementRole - IndividualInteractionElementRolePowertype</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>InteractionElementRole - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType that is the Role played by an InteractionElement in a ResourceInteraction.</p> <p>[ABSTRACT]</p>                           |

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| <p><b>InteractionGroup</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InteractionGroup - ResourceInteraction</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceInteraction that is composed of other ResourceInteractions.</p>                                                                                                                                                                                                                                                                            |
| <p><b>ItemInImplementationScenario</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ItemInImplementationScenario - ItemInScenario</p> <p>Association (source - target): «place2Type»</p> <p>ItemInImplementationScenario - ImplementationScenarioPart</p> <p>Association (source - target): «place1Type»</p> <p>ItemInImplementationScenario - ImplementationScenario</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ItemInScenario where the Scenario is an ImplementationScenario.</p>                        |
| <p><b>LifelineForResource</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LifelineForResource - TypicalTemporalWholePart</p> <p>Association (source - target): «place2Type»</p> <p>LifelineForResource - ResourceLifeline</p> <p>Association (source - target): «place1Type»</p> <p>LifelineForResource - ResourceType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalTemporalWholePart that asserts a ResourceLifeLine is a typical temporal part of a Resource.</p>                                    |
| <p><b>NaturalResource</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NaturalResource - NonHumanResource</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>NaturalResource - NaturalResourcePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualResource that is non-human and natural. Examples are "rock", "tree", "animal", etc.</p>                                                                                                                  |
| <p><b>NaturalResourceComponent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NaturalResourceComponent - NaturalResourcePowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NaturalResourceComponent - NonHumanResourceTypeConfigurationUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NonHumanResourceTypeConfigurationUsage that is a type of NaturalResource, a specialisation of NaturalResourceType, that is used as a component of a NaturalResourceType.</p> |

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| <p><b>NaturalResourcePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NaturalResourcePowertype - NonHumanResourcePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of NaturalResource.</p>                                                                                                                                                                                                                                                                         |
| <p><b>NaturalResourceType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NaturalResourceType - NaturalResourcePowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NaturalResourceType - NonHumanResourceType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NonHumanResourceType that is a type of NaturalResource.</p>                                                                                                                                       |
| <p><b>NaturalResourceUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NaturalResourceUsage - NonHumanResourceUsage</p> <p>Association (source - target): «place1Type»</p> <p>NaturalResourceUsage - NaturalResourcePowertype</p> <p>Association (source - target): «place2Type»</p> <p>NaturalResourceUsage - NaturalResourceComponent</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NonHumanResourceUsage that asserts that a NaturalResourceComponent is used by a NaturalResourceType.</p> |
| <p><b>NonHumanResource</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NonHumanResource - NonHumanResourceState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NonHumanResource - IndividualResource</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>NonHumanResource - NonHumanResourcePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualResource that is non-human.</p>                                |
| <p><b>NonHumanResourcePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NonHumanResourcePowertype - IndividualResourcePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of NonHumanResource.</p>                                                                                                                                                                                                                                                                    |

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| <p><b>NonHumanResourceState</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NonHumanResourceState - IndividualResourceState</p> <p><u>Attributes:</u></p> <p>-</p> <p>A state of a NonHumanResource.</p>                                                                                                                                                                                                                                                                                                               |
| <p><b>NonHumanResourceType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NonHumanResourceType - ResourceType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NonHumanResourceType - NonHumanResourcePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceType that is a type of NonHumanResource (i.e. an Artefact or NaturalResource). [ABSTRACT]</p>                                                                                                                                 |
| <p><b>NonHumanResourceTypeConfigurationUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NonHumanResourceTypeConfigurationUsage - NonHumanResourcePowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NonHumanResourceTypeConfigurationUsage - ResourceTypeUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NonHumanResourceTypeConfigurationUsage that is a type of state or part of a NonHumanResource that is used by (a part of, a component of) another NonHumanResourceType.</p> |
| <p><b>NonHumanResourceUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NonHumanResourceUsage - ResourceUsage</p> <p>Association (source - target): «place1Type»</p> <p>NonHumanResourceUsage - NonHumanResourcePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceUsage that asserts a type of NonHumanResource is used by a ResourceType.</p>                                                                                                                                                                   |
| <p><b>OrganisationPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationPowertype - ResponsibleHumanResourcePowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationPowertype - OrganisationStatePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of Organisation.</p>                                                                                                                                                                        |
| <p><b>OrganisationRoleType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationRoleType - OrganisationalRolePowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p>                                                                                                                                                                                                                                                                                                                        |

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| <p>OrganisationRoleType - HumanResourceType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A type of role a human resource may carry out in an organisation. This is not used as a component of a ResourceType. Note: was called "RoleType" in M3.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>OrganisationRoleTypeUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationRoleTypeUsage - HumanResourceTypeConfigurationUsage</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationRoleTypeUsage - OrganisationalRolePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A HumanResourceTypeConfigurationUsage that is a type of OrganisationRole , a specialisation of OrganisationRoleType, that is used as a component of a ResourceType.</p>                                                                                                                              |
| <p><b>OrganisationType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationType - OrganisationPowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationType - ResponsibleHumanResourceType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResponsibleHumanResourceType and a ConstructedHumanResourceType that is a type of Organisation. This is not used as a component of a ResourceType. Examples: Government Department, Commercial Company, Accounting Department.</p>                                                                                                         |
| <p><b>OrganisationTypeUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationTypeUsage - ResponsibleHumanResourceTypeConfigurationUsage</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationTypeUsage - OrganisationPowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationTypeUsage - OrganisationStatePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResponsibleHumanResourceTypeConfigurationUsage that is a type of Organisation, a specialisation of OrganisationType, that is used as a component of a ResourceType.</p> |
| <p><b>OrganisationalRolePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationalRolePowertype - HumanResourcePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of OrganisationalRole.</p>                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b>PerformsFunction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PerformsFunction - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PerformsFunction - CapableOfType</p> <p>Association (source - target): «place2Type»</p>                                                                                                                                                                                                                                                                                                                                                           |

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| <p>PerformsFunction - ResourceFunction<br/> Association (source - target):«place1Type»<br/> PerformsFunction - ResourceType<br/> <u>Attributes:</u><br/> -<br/> A CapableOf that asserts a Function is conducted by a ResourceType.</p>                                                                                                                                                                                                                                                                                                   |
| <p><b>PersonPowertype</b> «IDEAS:Powertype»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> PersonPowertype - ResponsibleHumanResourcePowertype<br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> PersonPowertype - AgentCapableOfResponsibilityStateType<br/> <u>Attributes:</u><br/> -<br/> The powertype of Person.</p>                                                                                                                                      |
| <p><b>PersonType</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> PersonType - PersonPowertype<br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> PersonType - ResponsibleHumanResourceType<br/> <u>Attributes:</u><br/> -<br/> A ResponsibleHumanResourceType that is a type of person.</p>                                                                                                                                                     |
| <p><b>PhysicalArchitecture</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> Dependency (element - is instance of):«IDEAS:powertypeInstance»<br/> PhysicalArchitecture - PhysicalArchitecturePowertype<br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> PhysicalArchitecture - HumanAndNonHumanConfiguration<br/> <u>Attributes:</u><br/> -<br/> An actual, fully-realised physical architecture.</p>                                                                                                      |
| <p><b>PhysicalArchitectureConfigurationUsage</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> PhysicalArchitectureConfigurationUsage - PhysicalArchitecturePowertype<br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> PhysicalArchitectureConfigurationUsage - HumanAndNonHumanResourceTypeConfigurationUsage<br/> <u>Attributes:</u><br/> -<br/> A HumanAndNonHumanResourceTypeConfigurationUsage that is a type of PhysicalArchitecture.</p> |
| <p><b>PhysicalArchitectureIndividualType</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> PhysicalArchitectureIndividualType - ModemIndividualType<br/> <u>Attributes:</u><br/> -</p>                                                                                                                                                                                                                                                                                   |

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| <p>A ModemIndividualType that is involved in a PhysicalArchitecture.</p> <p><b>PhysicalArchitecturePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PhysicalArchitecturePowertype - HumanAndNonHumanConfigurationPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of PhysicalArchitecture.</p>                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>PhysicalArchitectureProcess</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PhysicalArchitectureProcess - PhysicalArchitectureIndividualType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PhysicalArchitectureProcess - ProcessType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProcessType typically conducted by ResourcesTypes.</p>                                                                                                                                                                                                                                                                                                  |
| <p><b>PhysicalDataModel</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PhysicalDataModel - DataModel</p> <p><u>Attributes:</u></p> <p>-</p> <p>A DataModel that is an implementable specification of a data structure. A PhysicalDataModel realises a LogicalDataModel, taking into account implementation restrictions and performance issues whilst still enforcing the constraints, relationships and typing of the logical model.</p>                                                                                                                                                                                                                                      |
| <p><b>PhysicalDelay</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PhysicalDelay - PhysicallySequencedItem</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PhysicalDelay - Delay</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PhysicallySequencedItem that has a specified temporal extent, but an unspecified spatial extent.</p>                                                                                                                                                                                                                                                                                                               |
| <p><b>PhysicalEndEvent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PhysicalEndEvent - EndBorderType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PhysicalEndEvent - ModemWholePartType</p> <p>Association (source - target): «place1Type»</p> <p>PhysicalEndEvent - EventBoundedPhysicalProcess</p> <p>Association (source - target): «place2Type»</p> <p>PhysicalEndEvent - PhysicalEvent</p> <p><u>Attributes:</u></p> <p>-</p> <p>An EndBorderType that relates a EventBoundedPhysicalProcess to the PhysicalEvent that marks its end. Note: there may be no more than one LogicalEndEvent for a given EventBoundedPhysicalProcess</p> |

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| <p><b>PhysicalEvent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PhysicalEvent - Event</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PhysicalEvent - PhysicallySequencedItem</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Event that marks the beginning or end of a EventBoundedPhysicalProcess.</p>                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>PhysicalSequencing</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PhysicalSequencing - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PhysicalSequencing - ImmediateBeforeAfterType</p> <p>Association (source - target):«place1Type»</p> <p>PhysicalSequencing - PhysicallySequencedItem</p> <p>Association (source - target):«place2Type»</p> <p>PhysicalSequencing - PhysicallySequencedItem</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ImmediateBeforeAfterType that asserts one PhysicallySequencedItem occurs immediately after the other.</p>                                                                                             |
| <p><b>PhysicalStartEvent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PhysicalStartEvent - StartBorderType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PhysicalStartEvent - ModemWholePartType</p> <p>Association (source - target):«place2Type»</p> <p>PhysicalStartEvent - PhysicalEvent</p> <p>Association (source - target):«place1Type»</p> <p>PhysicalStartEvent - EventBoundedPhysicalProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StartBorderType that relates an EventBoundedPhysicalProcess to the LogicalEvent that marks its start.</p> <p>Note: there may be no more than one LogicalStartEvent for a given LogicallySequencedProcess.</p> |
| <p><b>PhysicallySequencedItem</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PhysicallySequencedItem - ImplemenationScenarioPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ImplemenationScenarioPart that is physically sequenced; i.e it has a PhysicalSequencing relation.</p>                                                                                                                                                                                                                                                                                                                                                                                                                |

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| <p><b>Port</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>Port - ArtefactComponent</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>Port - IndividualPortPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ArtefactComponent that is a type of IndividualPort. Note: was called "ResourcePort" in M3.</p>                                                                                                                                                                                                                                                                                      |
| <p><b>PortComponentOfArtefactPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PortComponentOfArtefactPowertype - ModemWholePartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of portComponentOfArtefact.</p>                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>PortComponentOfTypeOfArtefact</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PortComponentOfTypeOfArtefact - PortComponentOfArtefactPowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PortComponentOfTypeOfArtefact - NonHumanResourceUsage</p> <p>Association (source - target):«place2Type»</p> <p>PortComponentOfTypeOfArtefact - Port</p> <p>Association (source - target):«place1Type»</p> <p>PortComponentOfTypeOfArtefact - ArtefactPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NonHumanResourceUsage that asserts a Port is a component of a type of Artefact.</p> |
| <p><b>PortConnectedToPortConnectorComponent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PortConnectedToPortConnectorComponent - IndividualPortConnectedToPortConnectorPowertype</p> <p>Association (source - target):«place2Type»</p> <p>PortConnectedToPortConnectorComponent - Port</p> <p>Association (source - target):«place1Type»</p> <p>PortConnectedToPortConnectorComponent - PortConnector</p> <p><u>Attributes:</u></p> <p>-</p> <p>An PortConnectedToPortConnectorComponent that is a type of IndividualPortConnectedToPortConnector that asserts a Port is a part of a PortConnector.</p>                        |
| <p><b>PortConnector</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PortConnector - ResourceCommunication</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PortConnector - IndividualPortConnectorPowertype</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                                                                                                                                                                                                   |

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| <p>A ResourceCommunication that has a protocolStackSuperResourcePortConnectorTypeSubType to a ProtocolStack. Note: was called "ResourcePortConnector" in M3.</p> <p><b>PostInOrganisationPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place2Type»</p> <p>PostInOrganisationPowertype - PostPowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PostInOrganisationPowertype - IndividualResourceUsagePowertype</p> <p>Association (source - target):«place1Type»</p> <p>PostInOrganisationPowertype - OrganisationPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of PostInOrganisation.</p>                                                                                                       |
| <p><b>PostInOrganisationType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PostInOrganisationType - PostInOrganisationPowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PostInOrganisationType - HumanResourceTypeUsage</p> <p>Association (source - target):«place1Type»</p> <p>PostInOrganisationType - OrganisationPowertype</p> <p>Association (source - target):«place2Type»</p> <p>PostInOrganisationType - PostTypeUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A resourceUsage that asserts that a post exists in an OrganisationType of the type specified by the related PostType. Note: posts in organisations may or may not be filled. Note: was called "Post" in M3.</p> |
| <p><b>PostOccupyingResponsibleHumanResourceStateType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PostOccupyingResponsibleHumanResourceStateType - ResponsibleHumanResourceStateType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PostOccupyingResponsibleHumanResourceStateType - ResourceStateTypeUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceStateTypeUsage that has a type of state of a Post that is occupied by a type of ResponsibleHumanResource.</p>                                                                                                                                                                                                                   |
| <p><b>PostPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PostPowertype - ResponsibleHumanResourcePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of Post.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>PostType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PostType - ResponsibleHumanResourceType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>PostType - PostPowertype</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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| <p>-</p> <p>An ConstructedHumanResourceType and ResponsibleHumanResourceType specifying a type of Post. This is not used as a component of a ResourceType. A type of point of contact or responsible person.</p> <p>Note that this is the type of post - e.g. Desk Officer, Commander, etc.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p><b>PostTypeUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PostTypeUsage - ResponsibleHumanResourceTypeConfigurationUsage</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PostTypeUsage - PostPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResponsibleHumanResourceTypeConfigurationUsage that is a type of Post, a specialisation of PostType, which is used as a component of a ResourceType. E.g. The specialisation of the PostType, Commander, may be a component of the Land Component - the Commander Land Component.</p>                                                                                                                                                          |
| <p><b>ProducerFunction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProducerFunction - IndividualExchangeRoleType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProducerFunction - ModemWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>ProducerFunction - ResourceExport</p> <p>Association (source - target): «place1Type»</p> <p>ProducerFunction - ResourceFunction</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualExchangeRoleType where the role is a ResourceExport and the producer is a ResourceFunction.</p>                                                                                                                                                 |
| <p><b>RadioFrequencyPort</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RadioFrequencyPort - Port</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Port that is a type of RadioFrequencyPort.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>RadioFrequencyPortConnectedToPortConnectorComponent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>RadioFrequencyPortConnectedToPortConnectorComponent - RadioFrequencyPortConnector</p> <p>Association (source - target): «place2Type»</p> <p>RadioFrequencyPortConnectedToPortConnectorComponent - RadioFrequencyPort</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RadioFrequencyPortConnectedToPortConnectorComponent - PortConnectedToPortConnectorComponent</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualPortConnectedToPortConnectorPowertype that is a type of IndividualRadioFrequencyPortConnectedToPortConnector that asserts a RadioFrequencyPort is a part of a RadioFrequencyPortConnector.</p> |

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| <p><b>RadioFrequencyPortConnector</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RadioFrequencyPortConnector - IndividualRadioFrequencyPortConnectorPowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RadioFrequencyPortConnector - PortConnector</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourcePortConnector that is a type of IndividualRadioFrequencyPortConnector.</p> |
| <p><b>ResourceCommunication</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceCommunication - ResourceInteraction</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceInteraction where DataElements are exchanged.</p>                                                                                                                                                                                            |
| <p><b>ResourceElementRole</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceElementRole - IndividualResourceElementRolePowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceElementRole - InteractionElementRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>An InteractionElementRole where the flowed element is a ResourceType.</p>                                   |
| <p><b>ResourceEnergyFlow</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceEnergyFlow - ResourceInteraction</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceInteraction where energy is transferred between ResourceUsages.</p>                                                                                                                                                                                |
| <p><b>ResourceExport</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceExport - SendType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceExport - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SendType where the sender is a ResourceType or Function</p>                                                                                               |
| <p><b>ResourceFunction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceFunction - Function</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Function carried out by a ResourceType.</p>                                                                                                                                                                                                                               |

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| <p><b>ResourceImport</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceImport - ReceiveType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceImport - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ReceiveType where the receiver is a ResourceType or Function.</p>                                                                                                                                                                                                                                                            |
| <p><b>ResourceInteraction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceInteraction - IndividualResourceInteractionPowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceInteraction - PhysicalArchitectureProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ExchangeType where two ResourceTypes interact.</p> <p>Examples: data exchange between systems, conversations between people, people using systems, flows of materiel from one resource to another, etc.</p>                                                               |
| <p><b>ResourceInteractionExport</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceInteractionExport - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceInteractionExport - SendInExchangeType</p> <p>Association (source - target): «place2Type»</p> <p>ResourceInteractionExport - ResourceExport</p> <p>Association (source - target): «place1Type»</p> <p>ResourceInteractionExport - ResourceInteraction</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SendInExchangeType where the sender is a ResourceType or Function.</p>         |
| <p><b>ResourceInteractionImport</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceInteractionImport - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceInteractionImport - ReceiveInExchangeType</p> <p>Association (source - target): «place2Type»</p> <p>ResourceInteractionImport - ResourceImport</p> <p>Association (source - target): «place1Type»</p> <p>ResourceInteractionImport - ResourceInteraction</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RecieveInExchangeType where the receiver is a ResourceType or Function.</p> |

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| <p><b>ResourceLifeline</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceLifeline - ImplemenationScenarioPart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResourceLifeline - ResourceStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceStateType whose extent is defined by an ImplemenationScenario.</p>                                                                                                                                                                                               |
| <p><b>ResourceMovement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResourceMovement - ResourceInteraction</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResourceMovement - IndividualResourceMovementPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceInteraction where the element that flows is a ResourceType.</p>                                                                                                                                                                                        |
| <p><b>ResourceStateType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResourceStateType - StateSpecification</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResourceStateType - IndividualResourceStatePowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResourceStateType - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A type of state that a ResourceType may have.</p>                                                                                           |
| <p><b>ResourceStateTypeUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResourceStateTypeUsage - IndividualResourceStatePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualResourceStatePowertype that has a type of state of a Resource that is used by another type of Resource.</p>                                                                                                                                                                                                                                                     |
| <p><b>ResourceStateUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResourceStateUsage - IndividualResourceStateUsagePowertype</p> <p>Association (source - target):«place2Type»</p> <p>ResourceStateUsage - ResourceStateTypeUsage</p> <p>Association (source - target): «place1Type»</p> <p>ResourceStateUsage - IndividualResourceStatePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A IndividualResourceStateUsagePowertype that is a type of resource state relation that asserts a type of resource state is used by a type of resource.</p> |

**ResourceType** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):*«IDEAS:superSubtype»

ResourceType - IndividualResourcePowertype

*Generalization (element - is a subtype of):*«IDEAS:superSubtype»

ResourceType - FlowedElement

*Generalization (element - is a subtype of):*«IDEAS:superSubtype»

ResourceType - ResourceStateType

*Generalization (element - is a subtype of):*«IDEAS:superSubtype»

ResourceType - InteractionElement

*Generalization (element - is a subtype of):*«IDEAS:superSubtype»

ResourceType - PhysicalArchitectureIndividualType

Attributes:

-

A PhysicalArchitectureIndividualType that is a type of IndividualResource. This is not used as a component of a ResourceType, but may use components. [ABSTRACT]

**ResourceTypeExport** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):*«IDEAS:superSubtype»

ResourceTypeExport - CapableOfType

*Generalization (element - is a subtype of):*«IDEAS:superSubtype»

ResourceTypeExport - ModemThing

*Association (source - target):*«place2Type»

ResourceTypeExport - ResourceInteraction

*Association (source - target):*«place1Type»

ResourceTypeExport - ResourceTypeUsage

Attributes:

-

A CapableOfType where a ResourceInteraction exports from a ResourceTypeUsage.

**ResourceTypeImport** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):*«IDEAS:superSubtype»

ResourceTypeImport - ModemThing

*Generalization (element - is a subtype of):*«IDEAS:superSubtype»

ResourceTypeImport - CapableOfType

*Association (source - target):*«place2Type»

ResourceTypeImport - ResourceInteraction

*Association (source - target):*«place1Type»

ResourceTypeImport - ResourceTypeUsage

Attributes:

-

A CapableOfType where a ResourceInteraction imports from a ResourceTypeUsage.

**ResourceTypeMaster** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):*«IDEAS:superSubtype»

ResourceTypeMaster - ModemIndividualType

*Generalization (element - is a subtype of):*«IDEAS:superSubtype»

ResourceTypeMaster - IndividualResourcePowertype

Attributes:

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| <p>A ModemIndividualType that is the master specification from which ResourceTypes are versioned.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>ResourceTypeUsage</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> ResourceTypeUsage - IndividualResourcePowertype<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> ResourceTypeUsage - ModemIndividualType<br/> <u>Attributes:</u><br/> -<br/> A ModemIndividualType, that is a component of a ResourceType that is used by (a component of) another ResourceType.</p>                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>ResourceUsage</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> ResourceUsage - IndividualResourceUsagePowertype<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> ResourceUsage - ModemThing<br/> <i>Association (source - target):</i>«place1Type»<br/> ResourceUsage - IndividualResourcePowertype<br/> <i>Association (source - target):</i>«place2Type»<br/> ResourceUsage - ResourceTypeUsage<br/> <u>Attributes:</u><br/> -<br/> A ModemWholePartType that is a relationship between types of IndividualResources which asserts the ResourceTypeUsage is part of the ResourceType. The relationship is abstract, and one of its subtypes should be used to describe *how* a ResourceTypeUsage is part of a ResourceType. Note: was called "ResourceUsage" in M3.</p> |
| <p><b>ResponsibleHumanResourcePowertype</b> «IDEAS:Powertype»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> ResponsibleHumanResourcePowertype - ResponsibleHumanResourceStatePowertype<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> ResponsibleHumanResourcePowertype - AgentCapableOfResponsibilityType<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> ResponsibleHumanResourcePowertype - HumanResourcePowertype<br/> <u>Attributes:</u><br/> -<br/> The powertype of ResponsibleHumanResource.</p>                                                                                                                                                                                                                                                   |
| <p><b>ResponsibleHumanResourceStateOccupiesPostPowertype</b> «IDEAS:Powertype»<br/> <u>Connectors:</u><br/> <i>Association (source - target):</i>«place1Type»<br/> ResponsibleHumanResourceStateOccupiesPostPowertype - PostPowertype<br/> <i>Association (source - target):</i>«place2Type»<br/> ResponsibleHumanResourceStateOccupiesPostPowertype - ResponsibleHumanResourceStatePowertype<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> ResponsibleHumanResourceStateOccupiesPostPowertype - IndividualResourceStateUsagePowertype<br/> <u>Attributes:</u><br/> -<br/> The powertype of responsibleHumanResourceStateOccupiesPost.</p>                                                                                                                                                                                                            |

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| <p><b>ResponsibleHumanResourceStateOccupiesPostType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceStateOccupiesPostType - ResourceStateUsage</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceStateOccupiesPostType - ResponsibleHumanResourceStateOccupiesPostPowertype</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>ResponsibleHumanResourceStateOccupiesPostType - PostPowertype</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>ResponsibleHumanResourceStateOccupiesPostType - PostOccupyingResponsibleHumanResourceStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceStateUsage that asserts a ResponsibleHumanResourceTypeConfigurationUsage (i.e. a OrganisationRoleType, a PostTypeUsage or a OrganisationTypeUsage) occupies a PostType. Note it is a state of the ResponsibleHumanResourceTypeConfigurationUsage that occupies the PostType, as it can only occupy it for a period of time. Furthermore, many states of ResponsibleHumanResourceTypeConfigurationUsages can occupy the post across time. Typically, only one state occupies the post at a point in time.</p> |
| <p><b>ResponsibleHumanResourceStatePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceStatePowertype - IndividualResourceStatePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ResponsibleHumanResourceState.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>ResponsibleHumanResourceStateType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceStateType - ResponsibleHumanResourceStatePowertype</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceStateType - ResourceStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A type of state that a ResponsibleHumanResourceType may have.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>ResponsibleHumanResourceType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceType - HumanResourceType</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceType - ResponsibleHumanResourcePowertype</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceType - ResponsibleHumanResourceStateType</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceType - Stakeholder</p> <p><u>Attributes:</u></p> <p>-</p> <p>A HumanResourceType that is a type of ResponsibleHumanResource. A PostType, OrganisationType or a PersonType.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <p><b>ResponsibleHumanResourceTypeConfigurationUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceTypeConfigurationUsage - ResponsibleHumanResourcePowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ResponsibleHumanResourceTypeConfigurationUsage - HumanResourceTypeConfigurationUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A state or part of a ResponsibleHumanResourceType that is used by (a part of, a component of) another ResponsibleHumanResourceType.</p>                                                                                                                                                                                                                                 |
| <p><b>RoleBourneByResponsibleHumanResourcePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>RoleBourneByResponsibleHumanResourcePowertype - ResponsibleHumanResourcePowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleBourneByResponsibleHumanResourcePowertype - IndividualResourceUsagePowertype</p> <p>Association (source - target): «place2Type»</p> <p>RoleBourneByResponsibleHumanResourcePowertype - OrganisationalRolePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of roleBourneByResponsibleHumanResource.</p>                                                                                                                                                                                              |
| <p><b>RoleBourneByResponsibleHumanResourceType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleBourneByResponsibleHumanResourceType - HumanResourceTypeUsage</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleBourneByResponsibleHumanResourceType - RoleBourneByResponsibleHumanResourcePowertype</p> <p>Association (source - target): «place2Type»</p> <p>RoleBourneByResponsibleHumanResourceType - OrganisationRoleTypeUsage</p> <p>Association (source - target): «place1Type»</p> <p>RoleBourneByResponsibleHumanResourceType - ResponsibleHumanResourcePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A HumanResourceTypeUsage that asserts that a ResponsibleHumanResourcePowertype has an OrganisationRoleTypeUsage.</p> |
| <p><b>RoleInCommunication</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleInCommunication - RoleInInteraction</p> <p>Association (source - target): «place1Type»</p> <p>RoleInCommunication - ResourceCommunication</p> <p>Association (source - target): «place2Type»</p> <p>RoleInCommunication - DataElementRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RoleInInteraction where the exchanged element is a DataElement exchanged over a ResourceCommunication.</p>                                                                                                                                                                                                                                                                                                |

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| <p><b>RoleInIndividualInteractionPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleInIndividualInteractionPowertype - ExchangedItemRoleInExchangeType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleInIndividualInteractionPowertype - ModemIndividualElementType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of RoleInIndividualInteraction.</p>                                                                                                                                                                                                                                                                                                |
| <p><b>RoleInIndividualResourceMovementPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleInIndividualResourceMovementPowertype - RoleInIndividualInteractionPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of RoleInIndividualResourceMovement.</p>                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>RoleInInteraction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleInInteraction - TypicalWholePart</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleInInteraction - RoleInIndividualInteractionPowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleInInteraction - ModemWholePartType</p> <p>Association (source - target):«place2Type»</p> <p>RoleInInteraction - InteractionElementRole</p> <p>Association (source - target):«place1Type»</p> <p>RoleInInteraction - ResourceInteraction</p> <p><u>Attributes:</u></p> <p>-</p> <p>An TypicalWholePart where the involving exchange is a ResourceInteraction. [ABSTRACT]</p> |
| <p><b>RoleInOrganisationPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleInOrganisationPowertype - IndividualResourceUsagePowertype</p> <p>Association (source - target):«place2Type»</p> <p>RoleInOrganisationPowertype - OrganisationalRolePowertype</p> <p>Association (source - target):«place1Type»</p> <p>RoleInOrganisationPowertype - OrganisationPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of roleInOrganisation.</p>                                                                                                                                                                                                                                          |

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| <p><b>RoleInOrganisationType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleInOrganisationType - HumanResourceTypeUsage</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleInOrganisationType - RoleInOrganisationPowertype</p> <p>Association (source - target):«place1Type»</p> <p>RoleInOrganisationType - OrganisationPowertype</p> <p>Association (source - target):«place2Type»</p> <p>RoleInOrganisationType - OrganisationRoleTypeUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A HumanResourceTypeUsage that is a type of roleInOrganisation which asserts that a given OrganisationRoleTypeUsage belongs to an OrganisationPowertype.</p> |
| <p><b>RoleInResourceMovement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleInResourceMovement - RoleInInteraction</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleInResourceMovement - RoleInIndividualResourceMovementPowertype</p> <p>Association (source - target):«place2Type»</p> <p>RoleInResourceMovement - ResourceElementRole</p> <p>Association (source - target):«place1Type»</p> <p>RoleInResourceMovement - ResourceMovement</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RoleInInteraction where the interaction is a ResourceMovement.</p>                                                                                          |
| <p><b>RoleOfDataElement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleOfDataElement - RoleOfInteractionElement</p> <p>Association (source - target):«place1Type»</p> <p>RoleOfDataElement - DataElement</p> <p>Association (source - target):«place2Type»</p> <p>RoleOfDataElement - DataElementRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RoleOfInteractionElement where the element is a DataElement.</p>                                                                                                                                                                                                                                                                   |
| <p><b>RoleOfIndividualInteractionElementPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleOfIndividualInteractionElementPowertype - IndividualRoleAsExchangedItemType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RoleOfIndividualInteractionElementPowertype - ModemIndividualElementType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of RoleOfIndividualInteractionElement.</p>                                                                                                                                                                                                                                          |

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| <p><b>RoleOfIndividualResourceElementPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleOfIndividualResourceElementPowertype - RoleOfIndividualInteractionElementPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of RoleOfIndividualResourceElement.</p>                                                                                                                                                                                                                                                                                                                                   |
| <p><b>RoleOfInteractionElement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleOfInteractionElement - TypicalWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleOfInteractionElement - ModemWholePartType</p> <p>Association (source - target): «place1Type»</p> <p>RoleOfInteractionElement - InteractionElement</p> <p>Association (source - target): «place2Type»</p> <p>RoleOfInteractionElement - InteractionElementRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart relating an InteractionElement to its role in a ResourceInteraction. [ABSTRACT]</p> |
| <p><b>RoleOfResourceElement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleOfResourceElement - RoleOfIndividualResourceElementPowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleOfResourceElement - RoleOfInteractionElement</p> <p>Association (source - target): «place1Type»</p> <p>RoleOfResourceElement - ResourceType</p> <p>Association (source - target): «place2Type»</p> <p>RoleOfResourceElement - ResourceElementRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RoleOfInteractionElement where the element is a ResourceType.</p>                              |
| <p><b>SequencedFunction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SequencedFunction - EventBoundedPhysicalProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>An EventBoundedPhysicalProcess that is the typical usage of a Function in a ResourceLifeLine.</p>                                                                                                                                                                                                                                                                                                                                                          |

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| <p><b>SequencedResourceInteraction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SequencedResourceInteraction - ImplementationScenarioPart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SequencedResourceInteraction - EventBoundedPhysicalProcess</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ImplementationScenarioPart that is the typical occurrence of a ResourceInteraction between two ResourceLifelines</p> |
| <p><b>Software</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Software - Artefact</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Software - SoftwarePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>An executable computer programme, or fragment of an executable programme (e.g. a subroutine, class, etc.)</p>                                                                                         |
| <p><b>SoftwareComponent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SoftwareComponent - ArtefactComponent</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SoftwareComponent - SoftwarePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A type of Software that is a hostingArtefactWholesoftwareTypePart of an ArtefactType. In other words, a type of Software that is hosted by an ArtefactType.</p>             |
| <p><b>SoftwarePowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SoftwarePowertype - ArtefactPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of Software.</p>                                                                                                                                                                                                                                                              |
| <p><b>SoftwareType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SoftwareType - ArtefactType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SoftwareType - SoftwarePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Artefact that is a type of Software.</p>                                                                                                                                                     |

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| <p><b>SoftwareUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SoftwareUsage - NonHumanResourceUsage</p> <p>Association (source - target): «place2Type»</p> <p>SoftwareUsage - SoftwareComponent</p> <p>Association (source - target): «place1Type»</p> <p>SoftwareUsage - ArtefactPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NonHumanResourceUsage that asserts a SoftwareComponent is used by an ArtefactType.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>StateUsedAsPostOccupationType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StateUsedAsPostOccupationType - UsedResourceState</p> <p>Association (source - target): «place1Type»</p> <p>StateUsedAsPostOccupationType - ResponsibleHumanResourceType</p> <p>Association (source - target): «place2Type»</p> <p>StateUsedAsPostOccupationType - PostOccupyingResponsibleHumanResourceStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A UsedResourceState that asserts a ResponsibleHumanResourceType occupies a PostOccupyingResponsibleHumanResourceStateType.</p>                                                                                                                                                                                                                                                                                                                                    |
| <p><b>SubOrganisationPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SubOrganisationPowertype - IndividualResourceUsagePowertype</p> <p>Association (source - target): «place2Type»</p> <p>SubOrganisationPowertype - OrganisationStatePowertype</p> <p>Association (source - target): «place1Type»</p> <p>SubOrganisationPowertype - OrganisationPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of subOrganisation.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b>SubOrganisationType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SubOrganisationType - HumanResourceTypeUsage</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SubOrganisationType - SubOrganisationPowertype</p> <p>Association (source - target): «place2Type»</p> <p>SubOrganisationType - SubOrganisationTypeUsage</p> <p>Association (source - target): «place1Type»</p> <p>SubOrganisationType - OrganisationPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A HumanResourceTypeUsage that is a type of subOrganisation which asserts that a state of one type of Organisation, the OrganisationType, is typically the parent of another, the OrganisationTypeUsage. In other words, one type of Organisation is typically the parent of another for a period of time. E.g. a squadron may be part of a battalion. Note: was called "SubOrganisation" in M3.</p> |

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| <p><b>SubOrganisationTypeUsage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>SubOrganisationTypeUsage - OrganisationTypeUsage</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>SubOrganisationTypeUsage - OrganisationStatePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>An OrganisationTypeUsage that is type of Organisation that is a sub-organisation of another type of organisation.</p>                                                                                                                                                    |
| <p><b>SubjectOfForecast</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>SubjectOfForecast - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType that is the subject of a Forecast.</p>                                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>Technology</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>Technology - ArtefactPowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>Technology - SubjectOfForecast</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ArtefactPowertype that is a class of Artefact that defines a branch of engineering or computer science.</p>                                                                                                                                                                                                                  |
| <p><b>UsagePerformsFunction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>UsagePerformsFunction - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>UsagePerformsFunction - CapableOfType</p> <p>Association (source - target):«place2Type»</p> <p>UsagePerformsFunction - UsageSpecificFunction</p> <p>Association (source - target):«place1Type»</p> <p>UsagePerformsFunction - ResourceTypeUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CapableOfType where a ResourceUsage is capable of conducting a UsageSpecificFunction.</p>     |
| <p><b>UsageSpecificFunction</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>UsageSpecificFunction - Function</p> <p>Association (source - target):«place2Type»</p> <p>UsagePerformsFunction - UsageSpecificFunction</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PhysicalArchitectureProcess that is a particular usage of a Function. Note: this is used where there is a requirement to distinguish between two uses of a ResourceType which both have the same functionality, but put to different purposes. This is particularly important for tracing back to OV-5 Activities.</p> |

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| <p><b>UsedResourceState</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>UsedResourceState - ResourceStateUsage</p> <p>Association (source - target): «place2Type»</p> <p>UsedResourceState - ResourceStateTypeUsage</p> <p>Association (source - target): «place1Type»</p> <p>UsedResourceState - ResourceType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A IndividualResourceStateUsagePowertype that is a type of IndividualResourceState Usage that asserts a type of resource state is used by a type of resource.</p>                                                                                 |
| <p><b>VersionSuccession</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>VersionSuccession - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>VersionSuccession - BeforeAfterType</p> <p>Association (source - target): «place2Type»</p> <p>VersionSuccession - ResourceType</p> <p>Association (source - target): «place1Type»</p> <p>VersionSuccession - ResourceType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A BeforeAfterType that asserts one ResourceType succeeds another. Note: both ResourceTypes must be versions of the same ResourceTypeMaster.</p> |
| <p><b>activityFunctionMapping</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>activityFunctionMapping - modemIndividualTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>activityFunctionMapping - OperationalActivity</p> <p>Association (source - target): «place2Type»</p> <p>activityFunctionMapping - Function</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that relates an OperationalActivity or ActivityGroup to the Function or FunctionGroup that realises it.</p>                                                             |
| <p><b>artefactPart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>artefactPart - individualResourceUsage</p> <p>Association (source - target): «place2Type»</p> <p>artefactPart - Artefact</p> <p>Association (source - target): «place1Type»</p> <p>artefactPart - Artefact</p> <p><u>Attributes:</u></p> <p>-</p> <p>An individualResourceUsage that asserts one artefact is part of another.</p>                                                                                                                                                                                                 |

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| <p><b>artefactSpecification</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>artefactSpecification - usedNonHumanResourceTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>artefactSpecification - ArtefactType</p> <p>Association (source - target): «place2Type»</p> <p>artefactSpecification - ArtefactComponent</p> <p><u>Attributes:</u></p> <p>-</p> <p>An usedNonHumanResourceTypeSpecialisation that asserts that an ArtefactTypeUsage. is a specialisation of an ArtefactType.</p>                                                                     |
| <p><b>branchOfTechnology</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>branchOfTechnology - modemIndividualTypeSpecialisation</p> <p>Association (source - target): «place2Type»</p> <p>branchOfTechnology - ArtefactType</p> <p>Association (source - target): «place1Type»</p> <p>branchOfTechnology - Technology</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that asserts an ArtefactType belongs to a branch of Technology.</p>                                                                                                                   |
| <p><b>capabilityInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»</p> <p>capabilityInstance - HumanAndNonHumanConfiguration</p> <p>Association (source - target): «place1Type»</p> <p>capabilityInstance - Capability</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>capabilityInstance - modemIndividualTypeInstance</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeInstance where the instance is a HumanAndNon-HumanConfiguration and the type is a Capability. This asserts that an individual configuration of people and equipment has a Capability.</p> |
| <p><b>capabilityRealisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>capabilityRealisation - modemIndividualTypeSpecialisation</p> <p>Association (source - target): «place2Type»</p> <p>capabilityRealisation - CapabilityConfiguration</p> <p>Association (source - target): «place1Type»</p> <p>capabilityRealisation - Capability</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that relates a CapabilityConfiguration to a Capability.</p>                                                                                                    |

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| <p><b>competenceForRole</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>competenceForRole - requiredCompetence</p> <p>Association (source - target): «place1Type»</p> <p>competenceForRole - Competence</p> <p>Association (source - target): «place2Type»</p> <p>competenceForRole - OrganisationRoleType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A requiredCompetence that asserts an OrganisationRoleType requires a Competence.</p>                                                                                                                                         |
| <p><b>competenceToConduct</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>competenceToConduct - requiredCompetence</p> <p>Association (source - target): «place1Type»</p> <p>competenceToConduct - Competence</p> <p>Association (source - target): «place2Type»</p> <p>competenceToConduct - Function</p> <p><u>Attributes:</u></p> <p>-</p> <p>A requiredCompetence that asserts a competence is required by the HumanResource to conduct the Function. Note: was called "toConduct" in M3.</p>                                                                                 |
| <p><b>configuredHumanAndNonHumanResource</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>configuredHumanAndNonHumanResource - individualResourceUsage</p> <p>Association (source - target): «place1Type»</p> <p>configuredHumanAndNonHumanResource - HumanAndNonHumanConfiguration</p> <p>Association (source - target): «place2Type»</p> <p>configuredHumanAndNonHumanResource - HumanAndNonHumanConfiguration</p> <p><u>Attributes:</u></p> <p>-</p> <p>An individualResourceUsage that asserts a HumanAndNonHumanConfiguration uses another HumanAndNonHumanConfiguration.</p> |
| <p><b>configuredHumanResource</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>configuredHumanResource - individualResourceUsage</p> <p>Association (source - target): «place2Type»</p> <p>configuredHumanResource - HumanResource</p> <p>Association (source - target): «place1Type»</p> <p>configuredHumanResource - HumanAndNonHumanConfiguration</p> <p><u>Attributes:</u></p> <p>-</p> <p>An individualResourceUsage that asserts that a HumanAndNonHumanConfiguration uses a HumanResource.</p>                                                                              |

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| <p><b>configuredNonHumanResource</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>configuredNonHumanResource - individualResourceUsage</p> <p>Association (source - target): «place2Type»</p> <p>configuredNonHumanResource - NonHumanResource</p> <p>Association (source - target): «place1Type»</p> <p>configuredNonHumanResource - HumanAndNonHumanConfiguration</p> <p><u>Attributes:</u></p> <p>-</p> <p>n individualResourceUsage that asserts that a NonHumanResource uses a HumanAndNonHumanConfiguration.</p>                                                                                                                                                                                                                                                |
| <p><b>connected</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>connected - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>connected - couple</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts two things are connected.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>fieldedConfiguration</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>fieldedConfiguration - resourceTypeInstance</p> <p>Association (source - target): «place2Type»</p> <p>fieldedConfiguration - FieldedCapabilityConfiguration</p> <p>Association (source - target): «place1Type»</p> <p>fieldedConfiguration - CapabilityConfiguration</p> <p><u>Attributes:</u></p> <p>-</p> <p>A resourceTypeInstance where the type is a CapabilityConfiguration and the instance is a FieldedCapabilityConfiguration.</p>                                                                                                                                                                                                                                               |
| <p><b>fieldedPhysicalArchitectureCapabilityConfigurationUsage</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>fieldedPhysicalArchitectureCapabilityConfigurationUsage - configuredHumanAndNonHumanResource</p> <p>Association (source - target): «place2Type»</p> <p>fieldedPhysicalArchitectureCapabilityConfigurationUsage - FieldedCapabilityConfiguration</p> <p>Association (source - target): «place1Type»</p> <p>fieldedPhysicalArchitectureCapabilityConfigurationUsage - PhysicalArchitecture</p> <p><u>Attributes:</u></p> <p>-</p> <p>A configuredHumanAndNonHumanResource usage of a FieldedPhysicalArchitecture by a FieldedCapabilityConfiguration. Asserts that a FieldedCapabilityConfiguration is a component of a FieldedPhysicalArchitecture.</p> |

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| <p><b>flowImplementation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>flowImplementation - modemIndividualTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>flowImplementation - LogicalFlow</p> <p>Association (source - target): «place2Type»</p> <p>flowImplementation - ResourceInteraction</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation where a ResourceInteraction implements a LogicalFlow.</p>                                                                                                                                                                                                                                      |
| <p><b>forecastFor</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>forecastFor - ModemThing</p> <p>Association (source - target): «place2Type»</p> <p>forecastFor - SubjectOfForecast</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>forecastFor - couple</p> <p>Association (source - target): «place1Type»</p> <p>forecastFor - Forecast</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that relates the Forecast to the SubjectOfForecast.</p>                                                                                                                                                                                                                       |
| <p><b>forecastPeriod</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>forecastPeriod - couple</p> <p>Association (source - target): «place1Type»</p> <p>forecastPeriod - Forecast</p> <p>Association (source - target): «place2Type»</p> <p>forecastPeriod - EnterprisePhase</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>forecastPeriod - ModemThing</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that relates the Forecast to the EnterprisePhase that it covers. Note: if a forecast does not correspond to an existing EnterprisePhase, new EnterprisePhases can be created to cover the period - i.e. you can have as many EnterprisePhases as are needed.</p> |
| <p><b>functionInSequence</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>functionInSequence - modemIndividualTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>functionInSequence - ResourceFunction</p> <p>Association (source - target): «place2Type»</p> <p>functionInSequence - SequencedFunction</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that relates a ResourceFunction to its usage (as a SequencedFunction) on a ResourceLifeLine. Note: A SequencedFunction is based on only one Function</p>                                                                                                                                    |

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| <p><b>implementsDataModel</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>implementsDataModel - couple</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>implementsDataModel - SoftwareType</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>implementsDataModel - PhysicalDataModel</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts that a SoftwareType implements a PhysicalDataModel.</p>                                                                                                                                                                                                                                                                                                                   |
| <p><b>individualPortConnectedToPortConnector</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Association (source - target):</i>«place1Type»</p> <p>individualPortConnectedToPortConnector - IndividualPortConnector</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>individualPortConnectedToPortConnector - IndividualPort</p> <p><i>Dependency (element - is instance of):</i>«IDEAS:powertypeInstance»</p> <p>individualPortConnectedToPortConnector - IndividualPortConnectedToPortConnectorPowertype</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>individualPortConnectedToPortConnector - connected</p> <p><u>Attributes:</u></p> <p>-</p> <p>A connected relationship that asserts that an IndividualResourcePort is a part of an IndividualResourcePortConnection.</p> |
| <p><b>individualRadioFrequencyPortConnectedToPortConnector</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>individualRadioFrequencyPortConnectedToPortConnector - individualPortConnectedToPortConnector</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>individualRadioFrequencyPortConnectedToPortConnector - IndividualRadioFrequencyPortConnector</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>individualRadioFrequencyPortConnectedToPortConnector - IndividualRadioFrequencyPort</p> <p><u>Attributes:</u></p> <p>-</p> <p>A individualPortConnectedToPortConnector that asserts that an IndividualRadioFrequencyPort is a part of an IndividualRadioFrequencyPortConnection.</p>                                  |
| <p><b>individualResourceState</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>individualResourceState - individualResourceWholePart</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>individualResourceState - modemTemporalWholePart</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>individualResourceState - IndividualResourceState</p> <p><u>Attributes:</u></p> <p>-</p> <p>An individualResourceWholePart and a modemTemporalWholePart that links an IndividualResource to one of its states.</p>                                                                                                                                                                                                |

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| <p><b>individualResourceStateUsage</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> individualResourceStateUsage - individualResourceState</p> <p><i>Dependency (element - is instance of):</i>«IDEAS:powertypeInstance»<br/> individualResourceStateUsage - IndividualResourceStateUsagePowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>An individualResourceState that is a usage relation between the used IndividualResourceState and individualResource.</p>                                                                                                                                                                                                                               |
| <p><b>individualResourceStateWholeAndPart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> individualResourceStateWholeAndPart - modemWholePart</p> <p><i>Dependency (element - is instance of):</i>«IDEAS:powertypeInstance»<br/> individualResourceStateWholeAndPart - IndividualResourceStateWholeAndPartType</p> <p><i>Association (source - target):</i>«place2Type»<br/> individualResourceStateWholeAndPart - IndividualResourceState</p> <p><i>Association (source - target):</i>«place1Type»<br/> individualResourceStateWholeAndPart - IndividualResourceState</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemWholePart where both the whole and part are IndividualResourceStates.</p> |
| <p><b>individualResourceUsage</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> individualResourceUsage - individualResourceWholePart</p> <p><i>Dependency (element - is instance of):</i>«IDEAS:powertypeInstance»<br/> individualResourceUsage - IndividualResourceUsagePowertype</p> <p><i>Association (source - target):</i>«place1Type»<br/> individualResourceUsage - IndividualResource</p> <p><i>Association (source - target):</i>«place2Type»<br/> individualResourceUsage - IndividualResource</p> <p><u>Attributes:</u></p> <p>-</p> <p>An individualResourceWholePart relationship where one IndividualResource uses a part (or all) of another.</p>                                    |
| <p><b>individualResourceWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> individualResourceWholePart - modemWholePart</p> <p><i>Association (source - target):</i> «place2Type»<br/> individualResourceWholePart - IndividualResourcePart</p> <p><i>Association (source - target):</i> «place1Type»<br/> individualResourceWholePart - IndividualResource</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemWholePart where the whole is an IndividualResource and the part is an IndividualResourcePart.</p>                                                                                                                                                                             |

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| <p><b>interactionInScenario</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>interactionInScenario - modermIndividualTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>interactionInScenario - ResourceInteraction</p> <p>Association (source - target): «place2Type»</p> <p>interactionInScenario - SequencedResourceInteraction</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modermIndividualTypeSpecialisation that relates a ResourceInteraction to its usage (as a SequencedResourceInteraction) in an ImplementationScenario. Note: A SequencedResourceInteraction is based on only one ResourceInteraction</p>                                        |
| <p><b>measureOfIndividualResourcePerformance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>measureOfIndividualResourcePerformance - modermIndividualTypeInstance</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>measureOfIndividualResourcePerformance - measureOfIndividual</p> <p>Association (source - target): «place1Type»</p> <p>measureOfIndividualResourcePerformance - Measure</p> <p>Association (source - target): «place2Type»</p> <p>measureOfIndividualResourcePerformance - IndividualResource</p> <p><u>Attributes:</u></p> <p>-</p> <p>A measureOfIndividual that specifies the level of performance of an IndividualResource.</p> |
| <p><b>naturalResourcePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>naturalResourcePart - individualResourceUsage</p> <p>Association (source - target): «place2Type»</p> <p>naturalResourcePart - NaturalResource</p> <p>Association (source - target): «place1Type»</p> <p>naturalResourcePart - NaturalResource</p> <p><u>Attributes:</u></p> <p>-</p> <p>An individualResourceUsage that asserts one NaturalResource is part of another.</p>                                                                                                                                                                                                                                 |
| <p><b>naturalResourceSpecification</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>naturalResourceSpecification - usedNonHumanResourceTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>naturalResourceSpecification - NaturalResourceType</p> <p>Association (source - target): «place2Type»</p> <p>naturalResourceSpecification - NaturalResourceComponent</p> <p><u>Attributes:</u></p> <p>-</p> <p>A usedNonHumanResourceTypeSpecialisation that asserts that a NaturalResourceTypeUsage is a specialisation of a NaturalResourceType.</p>                                                                                                             |

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| <p><b>nodeRealisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubType»</p> <p>nodeRealisation - bodyTypeSuperSubType</p> <p>Association (source - target):«place1Type»</p> <p>nodeRealisation - Node</p> <p>Association (source - target):«place2Type»</p> <p>nodeRealisation - ResourceType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubType»</p> <p>nodeRealisation - modemIndividualTypeSpecialisation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubType that asserts that a ResourceType provides the functionality specified by an operational node.</p>                                                 |
| <p><b>portComponentOfArtefact</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubType»</p> <p>portComponentOfArtefact - individualResourceWholePart</p> <p>Dependency (element - is instance of):«IDEAS:powertypeInstance»</p> <p>portComponentOfArtefact - PortComponentOfArtefactPowertype</p> <p>Association (source - target):«place2Type»</p> <p>portComponentOfArtefact - IndividualPort</p> <p>Association (source - target):«place1Type»</p> <p>portComponentOfArtefact - Artefact</p> <p><u>Attributes:</u></p> <p>-</p> <p>An individualResourceWholePart where the whole is an IndividualResource and the part is an ResourcePort.</p> |
| <p><b>protocolStackSuperResourcePortConnectorTypeSubType</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubType»</p> <p>protocolStackSuperResourcePortConnectorTypeSubType - protocolStackSuperSubType</p> <p>Association (source - target):«place2Type»</p> <p>protocolStackSuperResourcePortConnectorTypeSubType - PortConnector</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubType relation with a superType ProtocolStack and a subType ResourcePortConnectorType.</p>                                                                                                                                                                 |
| <p><b>protocolStackSuperPortSubType</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubType»</p> <p>protocolStackSuperPortSubType - protocolStackSuperSubType</p> <p>Association (source - target):«place2Type»</p> <p>protocolStackSuperPortSubType - Port</p> <p>Association (source - target):«place1Type»</p> <p>protocolStackSuperPortSubType - ProtocolStack</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubType relation with a superType ProtocolStack and a subType Port.</p>                                                                                                                                                       |

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| <p><b>protocolStackSuperSubType</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>protocolStackSuperSubType - modemIndividualTypeSpecialisation</p> <p>Association (source - target):«place1Type»</p> <p>protocolStackSuperSubType - ProtocolStack</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation relation with a superType ProtocolStack.</p>                                                                                           |
| <p><b>protocolStackTypeIndividualPortConnector</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>protocolStackTypeIndividualPortConnector - protocolStackTypeInstance</p> <p>Association (source - target):«place2Type»</p> <p>protocolStackTypeIndividualPortConnector - IndividualPortConnector</p> <p><u>Attributes:</u></p> <p>-</p> <p>A typeInstance relation between the type ProtocolStack and the instance IndividualResourcePortConnection.</p>               |
| <p><b>protocolStackTypeInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>protocolStackTypeInstance - modemIndividualTypeInstance</p> <p>Association (source - target):«place1Type»</p> <p>protocolStackTypeInstance - ProtocolStack</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeInstance that asserts that a ProtocolStack has a ResoucePort as an instance.</p>                                                                            |
| <p><b>protocolStackTypePortInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>protocolStackTypePortInstance - protocolStackTypeInstance</p> <p>Association (source - target):«place2Type»</p> <p>protocolStackTypePortInstance - IndividualPort</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProtocolStackTypeInstance that asserts that a ProtocolStack has a ResourcePort as an instance.</p>                                                                  |
| <p><b>providedService</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>providedService - modemIndividualTypeSpecialisation</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>providedService - bodyTypeSuperSubType</p> <p>Association (source - target):«place2Type»</p> <p>providedService - ResourceType</p> <p>Association (source - target):«place1Type»</p> <p>providedService - ServiceLevel</p> <p><u>Attributes:</u></p> <p>-</p> |

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| <p>A superSubtype that asserts that a Resource delivers a Service to a specified ServiceLevel.</p> <p><b>radioFrequencyPortConnectorFrequencyRange</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>radioFrequencyPortConnectorFrequencyRange - radioFrequencyRangeAssignment</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>radioFrequencyPortConnectorFrequencyRange - RadioFrequencyPortConnector</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>radioFrequencyPortConnectorFrequencyRange - FrequencyRange</p> <p><u>Attributes:</u></p> <p>-</p> <p>A radioFrequencyRangeAssignment that asserts a radio frequency range has been assigned to a RadioFrequencyPortConnector.</p> |
| <p><b>radioFrequencyPortFrequencyRange</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>radioFrequencyPortFrequencyRange - radioFrequencyRangeAssignment</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>radioFrequencyPortFrequencyRange - RadioFrequencyPort</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>radioFrequencyPortFrequencyRange - FrequencyRange</p> <p><u>Attributes:</u></p> <p>-</p> <p>A radioFrequencyRangeAssignment that asserts a radio frequency range has been assigned to a RadioFrequencyPort.</p>                                                                                                                                                          |
| <p><b>radioFrequencyRangeAssignment</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>radioFrequencyRangeAssignment - measureOfType</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>radioFrequencyRangeAssignment - FrequencyRange</p> <p><u>Attributes:</u></p> <p>-</p> <p>A measureOfType that asserts a radio frequency range has been assigned.</p>                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>realisationAsFieldedCapability</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>realisationAsFieldedCapability - modemIndividualTypeInstance</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>realisationAsFieldedCapability - FieldedCapabilityConfiguration</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>realisationAsFieldedCapability - CapabilityConfiguration</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeInstance that relates a CapabilityConfiguration to a FieldedCapabilityConfiguration.</p>                                                                                                                                                     |

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| <p><b>requiredCompetence</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place1Type»</p> <p>requiredCompetence - Competence</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>requiredCompetence - couple</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>requiredCompetence -ModemThing</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts a Competence is required.</p>                                                                                                                                        |
| <p><b>requiredService</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>requiredService - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>requiredService - couple</p> <p>Association (source - target):«place1Type»</p> <p>requiredService - ResourceType</p> <p>Association (source - target):«place2Type»</p> <p>requiredService - ServiceLevel</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts a ResourceType requires a Service (to a given ServiceLevel) in order to function.</p> |
| <p><b>resourceTypeInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>resourceTypeInstance - modemIndividualTypeInstance</p> <p>Association (source - target):«place2Type»</p> <p>resourceTypeInstance - IndividualResource</p> <p>Association (source - target):«place1Type»</p> <p>resourceTypeInstance - ResourceType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeInstance that relates an IndividualResource to its ResourceType.</p>                                                                               |
| <p><b>resourceTypeMeasure</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>resourceTypeMeasure - measureOfType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>resourceTypeMeasure - resourceTypeProperty</p> <p>Association (source - target):«place1Type»</p> <p>resourceTypeMeasure - Measure</p> <p>Association (source - target):«place2Type»</p> <p>resourceTypeMeasure - ResourceType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A measureOfType where the type is a ResourceType.</p>                       |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <p><b>resourceTypeProperty</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>resourceTypeProperty - propertyOfType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>resourceTypeProperty - modermIndividualTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>resourceTypeProperty - Property</p> <p>Association (source - target): «place2Type»</p> <p>resourceTypeProperty - ResourceType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A propertyOfType where the type is a ResourceType.</p>                                                                                                                                                                                                       |
| <p><b>roleInIndividualInteraction</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>roleInIndividualInteraction - exchangedItemRoleInExchange</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>roleInIndividualInteraction - RoleInIndividualInteractionPowertype</p> <p>Association (source - target): «place2Type»</p> <p>roleInIndividualInteraction - IndividualInteractionElementRole</p> <p>Association (source - target): «place1Type»</p> <p>roleInIndividualInteraction - IndividualResourceInteraction</p> <p><u>Attributes:</u></p> <p>-</p> <p>n exchangedItemRoleInExchange that asserts the IndividualInteractionElementRole is a component of the exchange.</p>                                               |
| <p><b>roleOfIndividualResourceElement</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleOfIndividualResourceElement - roleOfIndividualInteractionElement</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>RoleOfIndividualResourceElement - RoleOfIndividualResourceElementPowertype</p> <p>Association (source - target): «place1Type»</p> <p>RoleOfIndividualResourceElement - IndividualResource</p> <p>Association (source - target): «place2Type»</p> <p>RoleOfIndividualResourceElement - IndividualResourceElementRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>An roleOfIndividualInteractionElement that asserts the IndividualResourceElementRole is the thing being exchanged by the IndividualResource.</p> |
| <p><b>roleInIndividualResourceMovement</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>roleInIndividualResourceMovement - RoleInIndividualResourceMovementPowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>roleInIndividualResourceMovement - roleInIndividualInteraction</p> <p>Association (source - target): «place2Type»</p> <p>roleInIndividualResourceMovement - IndividualResourceElementRole</p> <p>Association (source - target): «place1Type»</p> <p>roleInIndividualResourceMovement - IndividualResourceMovement</p>                                                                                                                                                                                 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><u>Attributes:</u></p> <p>-</p> <p>A roleInIndividualInteraction that asserts the IndividualResourceElementRole is a component of the exchange.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>roleOfIndividualInteractionElement</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>roleOfIndividualInteractionElement - RoleOfIndividualInteractionElementPowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>roleOfIndividualInteractionElement - individualRoleAsExchangedItem</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>roleOfIndividualInteractionElement - modemWholePart</p> <p>Association (source - target): «place1Type»</p> <p>roleOfIndividualInteractionElement - IndividualResourceInteractionElement</p> <p>Association (source - target): «place2Type»</p> <p>roleOfIndividualInteractionElement - IndividualInteractionElementRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>An individualRoleAsExchangedItem that asserts the IndividualResourceInteractionElement is the thing being exchanged by the IndividualResourceInteractionElement.</p> |
| <p><b>serviceConcurrency</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>serviceConcurrency - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>serviceConcurrency - representedBy</p> <p>Association (source - target): «place2Type»</p> <p>serviceConcurrency - IntegerRepresentation</p> <p>Association (source - target): «place1Type»</p> <p>serviceConcurrency - ServiceLevel</p> <p><u>Attributes:</u></p> <p>-</p> <p>A representedBy that assigns an IntegerRepresentation for the number of concurrent ServiceSpecifications required for a ServiceLevel.</p>                                                                                                                                                                                                                                                                                                                                   |
| <p><b>serviceFunctionFunctionMapping</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>serviceFunctionFunctionMapping - ServiceFunction</p> <p>Association (source - target): «place2Type»</p> <p>serviceFunctionFunctionMapping - Function</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>serviceFunctionFunctionMapping - modemIndividualTypeSpecialisation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that relates an OperationalActivity or ActivityGroup to the Function or FunctionGroup that realises it.</p>                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>softwareComponent</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>softwareComponent - artefactPart</p> <p>Association (source - target): «place2Type»</p> <p>softwareComponent - Software</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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| <p><i>Association (source - target):</i>«place1Type»<br/>softwareComponent - Software</p> <p><u>Attributes:</u></p> <p>-</p> <p>An artefactPart that asserts that a Software is component of an Artefact.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>softwareSpecification</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>softwareSpecification - artefactSpecification</p> <p><i>Association (source - target):</i>«place1Type»<br/>softwareSpecification - SoftwareType</p> <p><i>Association (source - target):</i>«place2Type»<br/>softwareSpecification - SoftwareComponent</p> <p><u>Attributes:</u></p> <p>-</p> <p>An artefactSpecification that asserts that a SoftwareComponent is a specialisation of a SoftwareType.</p>                                                                                                                                                                                  |
| <p><b>stateMachineForResourceType</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>stateMachineForResourceType - ModemThing</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>stateMachineForResourceType - appliedStateMachine</p> <p><i>Association (source - target):</i>«place1Type»<br/>stateMachineForResourceType - ResourceType</p> <p><i>Association (source - target):</i>«place2Type»<br/>stateMachineForResourceType - StateMachine</p> <p><u>Attributes:</u></p> <p>-</p> <p>A appliedStateMachine that relates a ResourceType to its state machine.</p>                                                                    |
| <p><b>usedCapabilityConfigurationSpecialisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>usedCapabilityConfigurationSpecialisation - usedHumanAndNonHumanConfigurationTypeSpecialisation</p> <p><i>Association (source - target):</i>«place1Type»<br/>usedCapabilityConfigurationSpecialisation - CapabilityConfiguration</p> <p><i>Association (source - target):</i>«place2Type»<br/>usedCapabilityConfigurationSpecialisation - CapabilityConfigurationConfigurationUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>An usedHumanAndNonHumanConfigurationTypeSpecialisation between CapabilityConfiguration and CapabilityConfigurationConfigurationUsage.</p> |
| <p><b>usedHumanAndNonHumanConfigurationTypeSpecialisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>usedHumanAndNonHumanConfigurationTypeSpecialisation - usedResourceTypeSpecialisation</p> <p><i>Association (source - target):</i>«place1Type»<br/>usedHumanAndNonHumanConfigurationTypeSpecialisation - HumanAndNonHumanConfigurationType</p> <p><i>Association (source - target):</i>«place2Type»<br/>usedHumanAndNonHumanConfigurationTypeSpecialisation - HumanAndNonHumanResourceTypeConfigurationUsage</p>                                                                                                                                               |

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| <p><u>Attributes:</u></p> <p>-</p> <p>A usedResourceTypeSpecialisation that asserts that an HumanAndNonHumanConfigurationType is a superType of a UsedHumanAndNonHumanConfigurationType.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>usedNonHumanResourceTypeSpecialisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>usedNonHumanResourceTypeSpecialisation - usedResourceTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>usedNonHumanResourceTypeSpecialisation - NonHumanResourceType</p> <p>Association (source - target): «place2Type»</p> <p>usedNonHumanResourceTypeSpecialisation - NonHumanResourceTypeConfigurationUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>An usedNonHumanResourceTypeSpecialisation between NonHumanResourceType and NonHumanResourceTypeConfigurationUsage.</p>                                   |
| <p><b>usedOrganisationRoleTypeSpecialisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>usedOrganisationRoleTypeSpecialisation - usedResourceTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>usedOrganisationRoleTypeSpecialisation - OrganisationRoleType</p> <p>Association (source - target): «place2Type»</p> <p>usedOrganisationRoleTypeSpecialisation - OrganisationRoleTypeUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>An usedResourceTypeSpecialisation that asserts a OrganisationRoleTypeUsage is a specialisation of a OrganisationRoleType.</p>                                         |
| <p><b>usedOrganisationTypeSpecialisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>usedOrganisationTypeSpecialisation - usedResourceTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>usedOrganisationTypeSpecialisation - OrganisationType</p> <p>Association (source - target): «place2Type»</p> <p>usedOrganisationTypeSpecialisation - OrganisationTypeUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>An usedResourceTypeSpecialisation that asserts a OrganisationTypeUsage is a specialisation of a OrganisationType.</p>                                                                         |
| <p><b>usedPhysicalArchitectureSpecialisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>usedPhysicalArchitectureSpecialisation - usedHumanAndNonHumanConfigurationTypeSpecialisation</p> <p>Association (source - target): «place1Type»</p> <p>usedPhysicalArchitectureSpecialisation - PhysicalArchitecture</p> <p>Association (source - target): «place2Type»</p> <p>usedPhysicalArchitectureSpecialisation - PhysicalArchitectureConfigurationUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>An usedHumanAndNonHumanConfigurationTypeSpecialisation between PhysicalArchitecture and PhysicalArchitectureConfigurationUsage.</p> |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <p><b>usedPostTypeSpecialisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>usedPostTypeSpecialisation - usedResourceTypeSpecialisation</p> <p>Association (source - target):«place1Type»</p> <p>usedPostTypeSpecialisation - PostType</p> <p>Association (source - target):«place2Type»</p> <p>usedPostTypeSpecialisation - PostTypeUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>An usedResourceTypeSpecialisation that asserts a PostTypeUsage is a specialisation of a PostType.</p>                                                                           |
| <p><b>usedResourceTypeSpecialisation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>usedResourceTypeSpecialisation - modemIndividualTypeSpecialisation</p> <p>Association (source - target):«place1Type»</p> <p>usedResourceTypeSpecialisation - ResourceType</p> <p>Association (source - target):«place2Type»</p> <p>usedResourceTypeSpecialisation - ResourceTypeUsage</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubtype that asserts that a ResourceType is a superType of ResourceTypeUsage.</p>                                                             |
| <p><b>versionIdentifier</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>versionIdentifier - representedBy</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>versionIdentifier - ModemThing</p> <p>Association (source - target):«place2Type»</p> <p>versionIdentifier - StringRepresentation</p> <p>Association (source - target):«place1Type»</p> <p>versionIdentifier - ResourceType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A representedBy that asserts a StringRepresentation represents the version identifier of a ResourceType.</p> |
| <p><b>versionOf</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>versionOf - modemIndividualTypeSpecialisation</p> <p>Association (source - target):«place1Type»</p> <p>versionOf - ResourceTypeMaster</p> <p>Association (source - target):«place2Type»</p> <p>versionOf - ResourceType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that asserts a ResourceType is a version of a ResourceTypeMaster.</p>                                                                                                                               |

## 2.6.14 System Views additional diagrams.

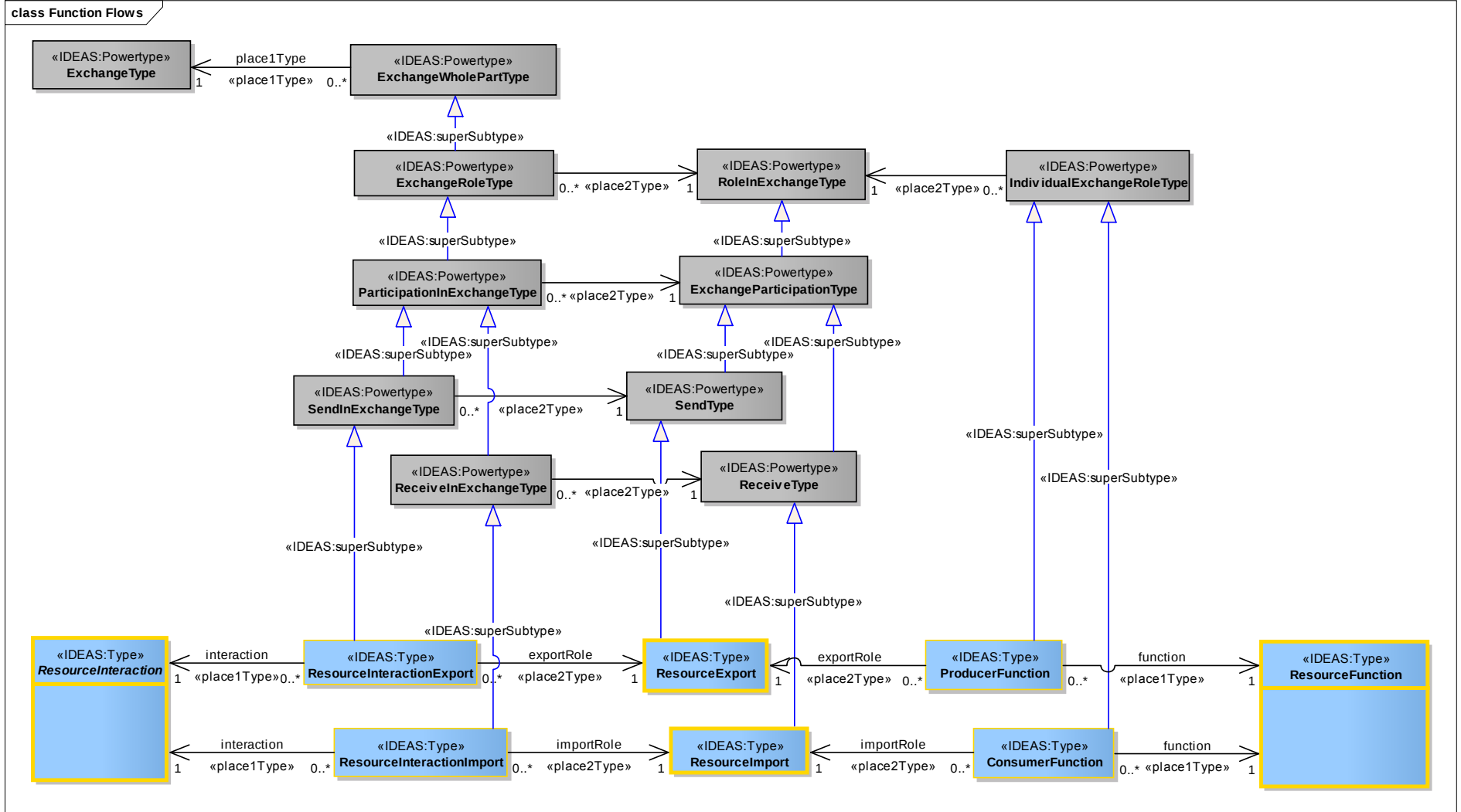


Figure 86 : Function Flows

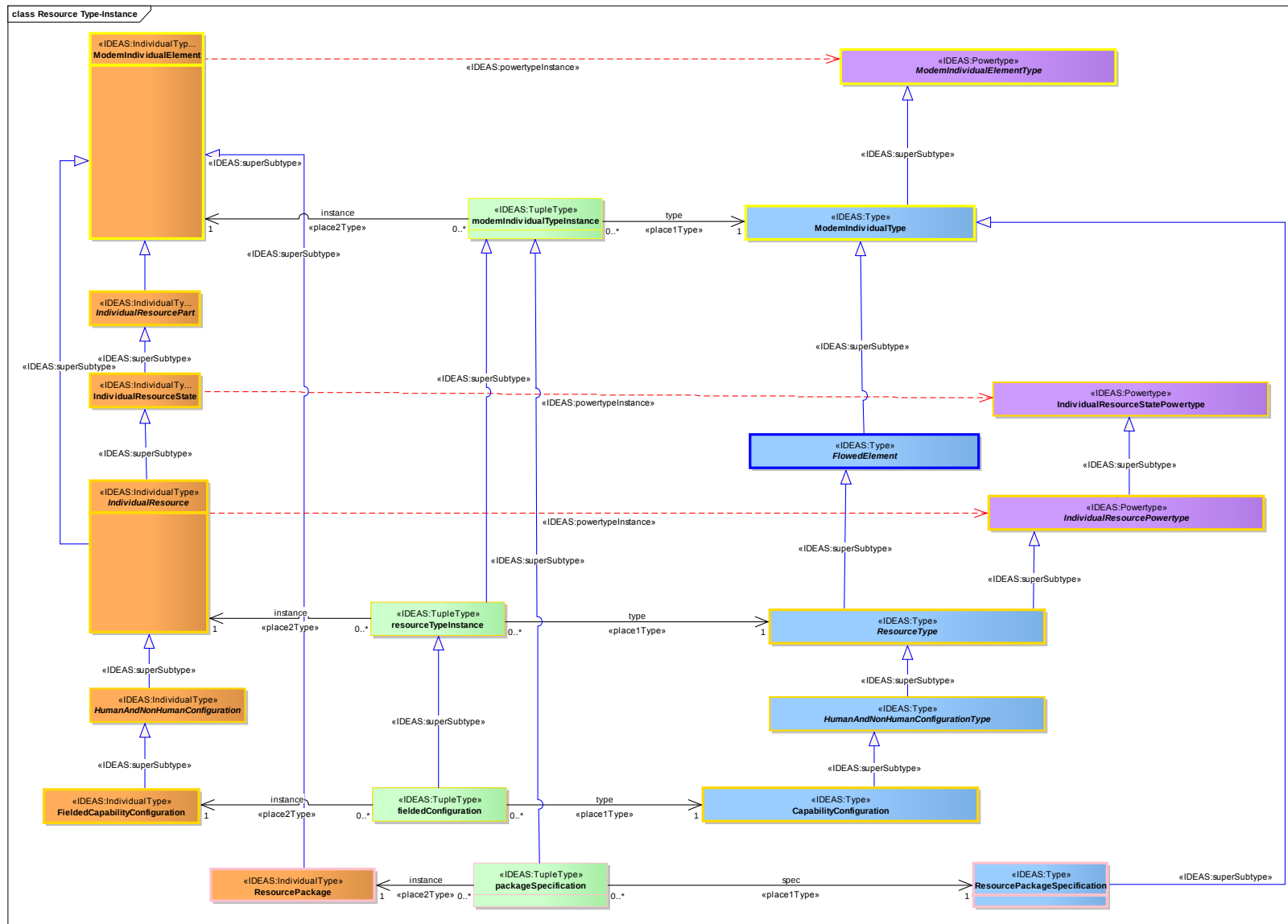


Figure 87 : Resource Type - Instance



Figure 88 : SV-1 Deployed Resource Interaction - IndividualResourceInteraction



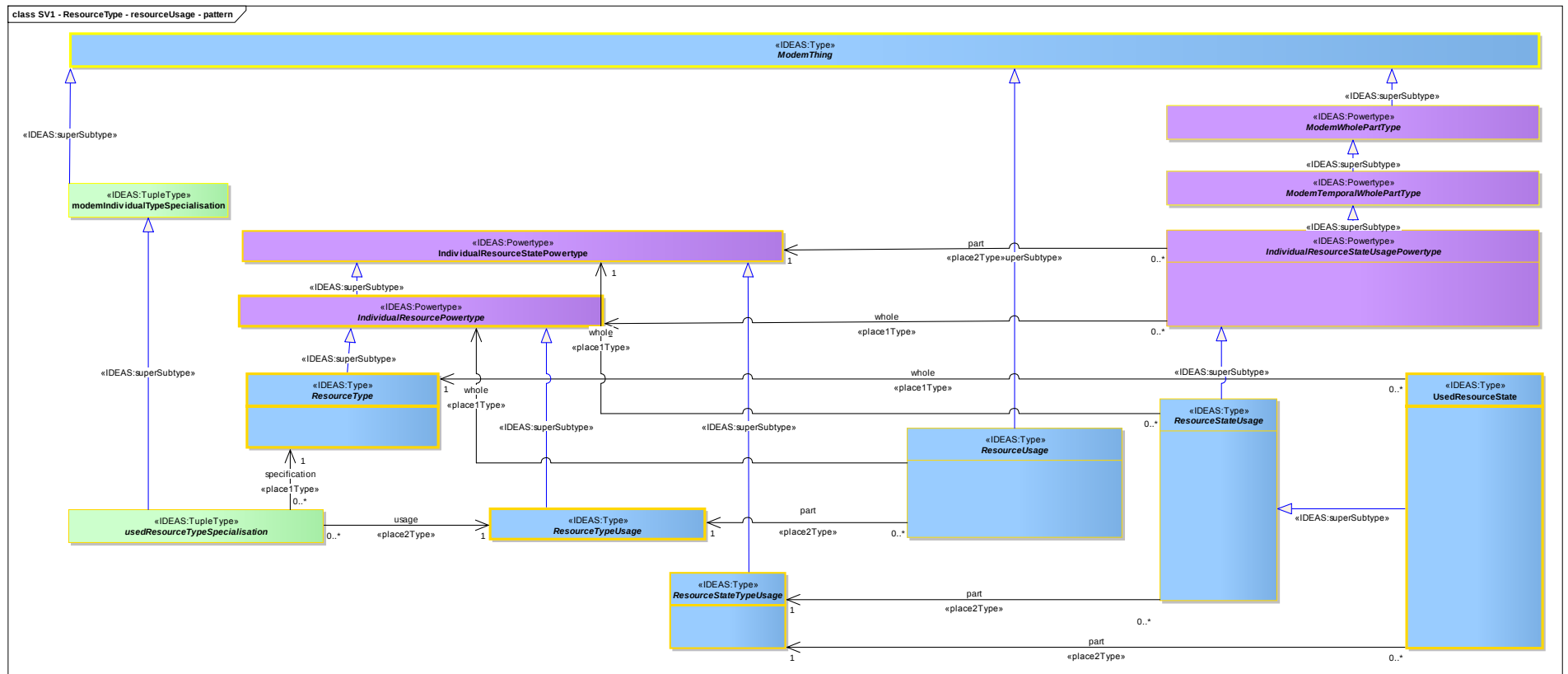


Figure 90 : SV1 - ResourceType - resourceUsage - pattern

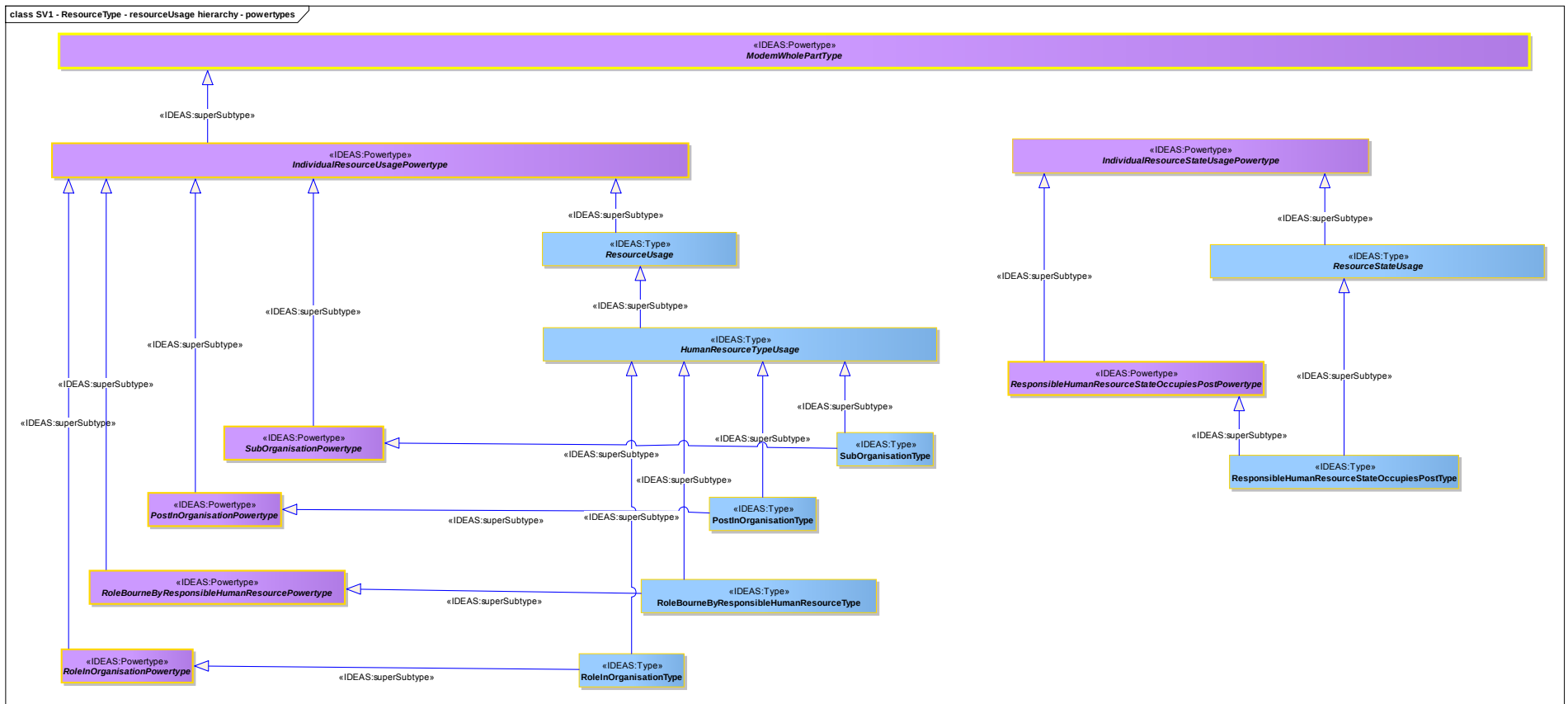


Figure 91 : SV1 - ResourceType - resourceUsage hierarchy - powertypes



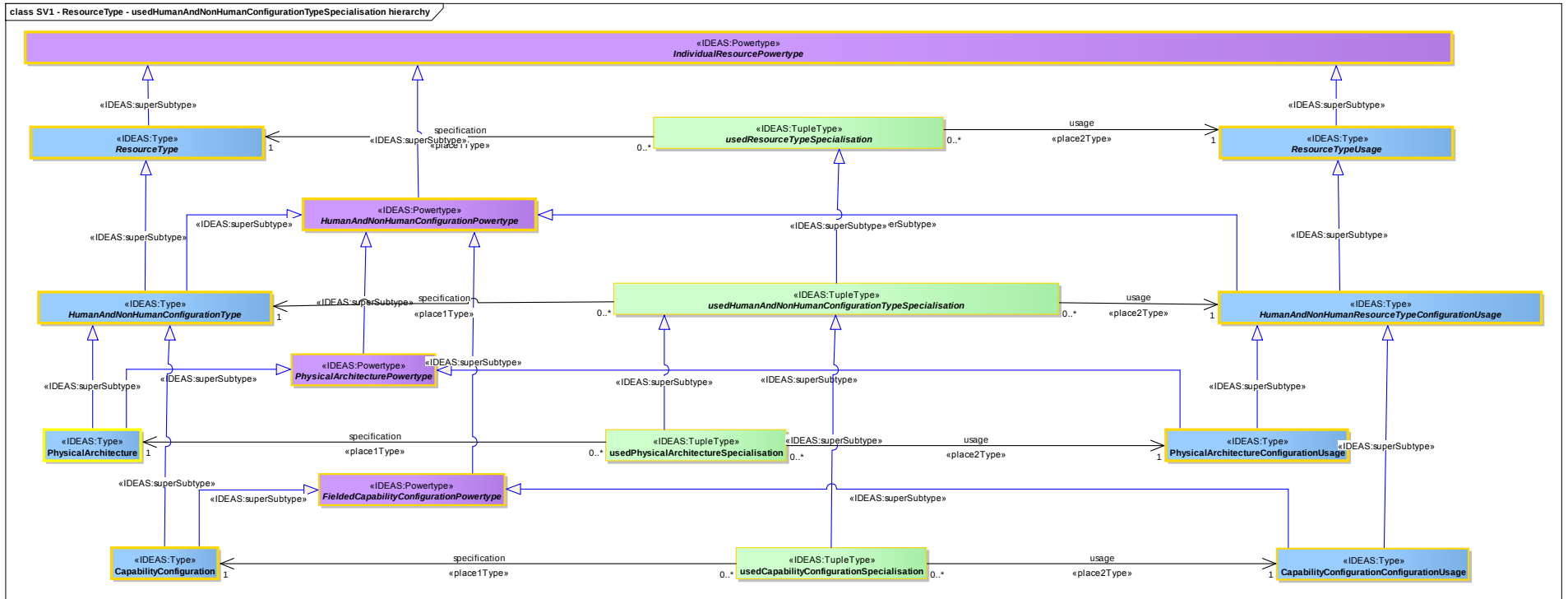


Figure 93 : SV1 - ResourceType - usedHumanAndNonHumanConfigurationTypeSpecialisation hierarchy

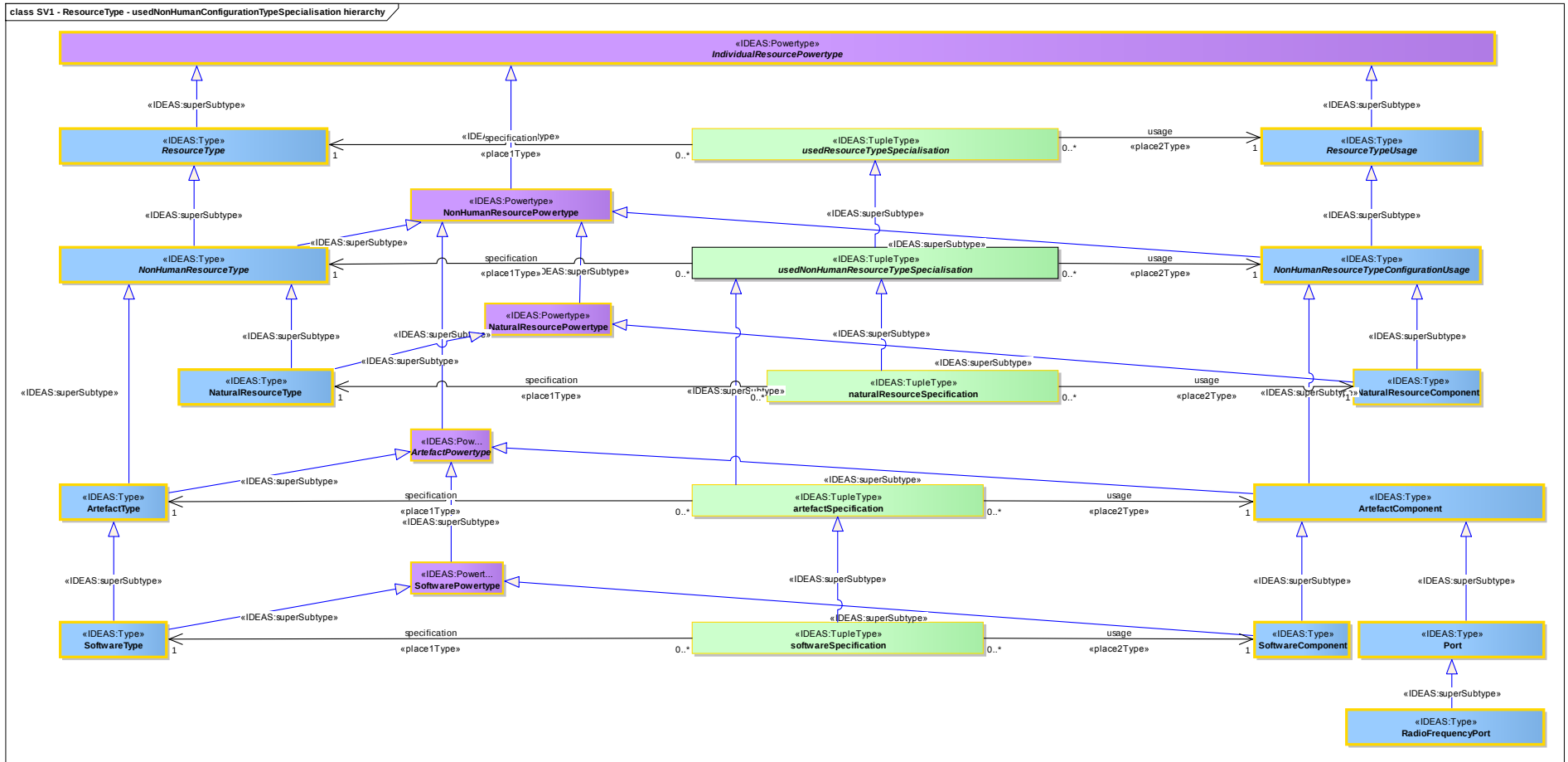


Figure 94 : SV1 - ResourceType - usedNonHumanConfigurationTypeSpecialisation hierarchy

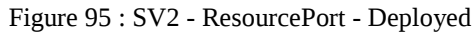


Figure 95 : SV2 - ResourcePort - Deployed

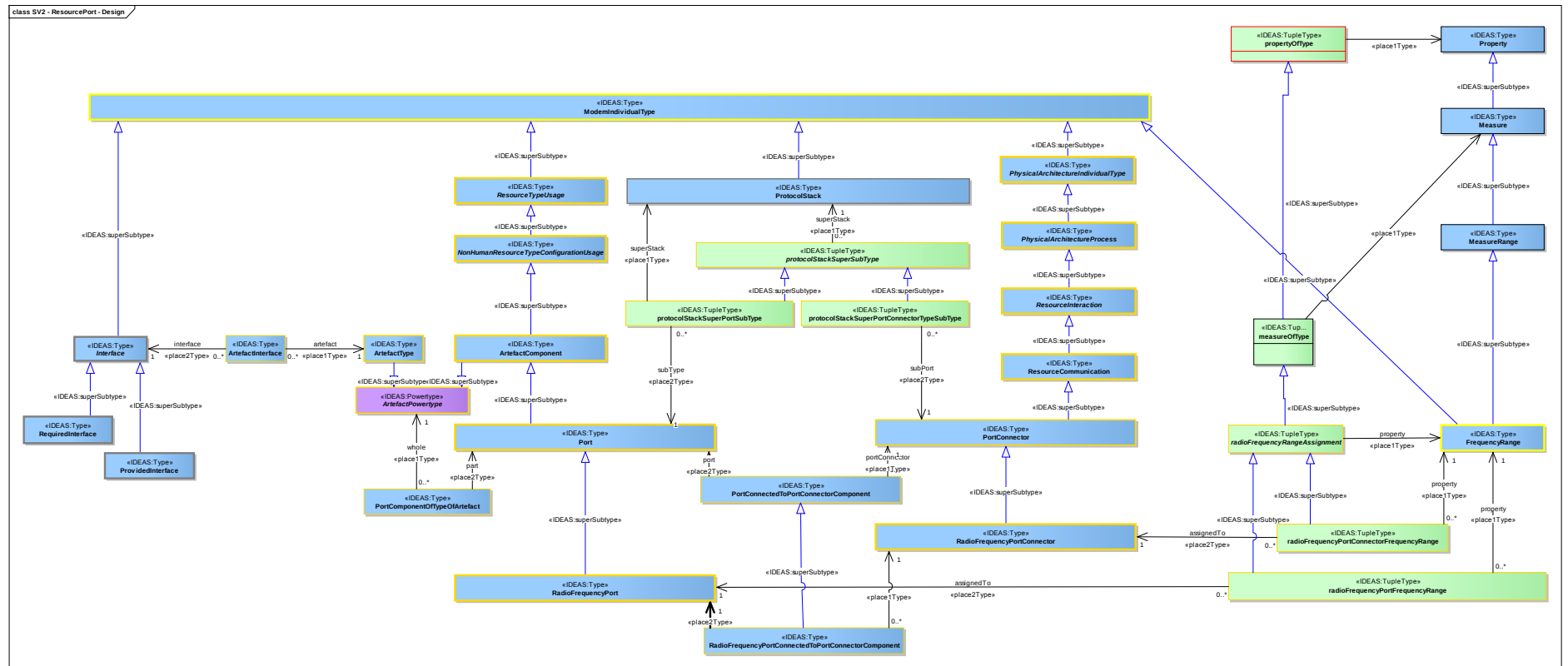


Figure 96 : SV2 - ResourcePort - Design

## 2.7 Technical standards views

### 2.7.1 TV-1: Standards profile, TV-2: Standards forecast

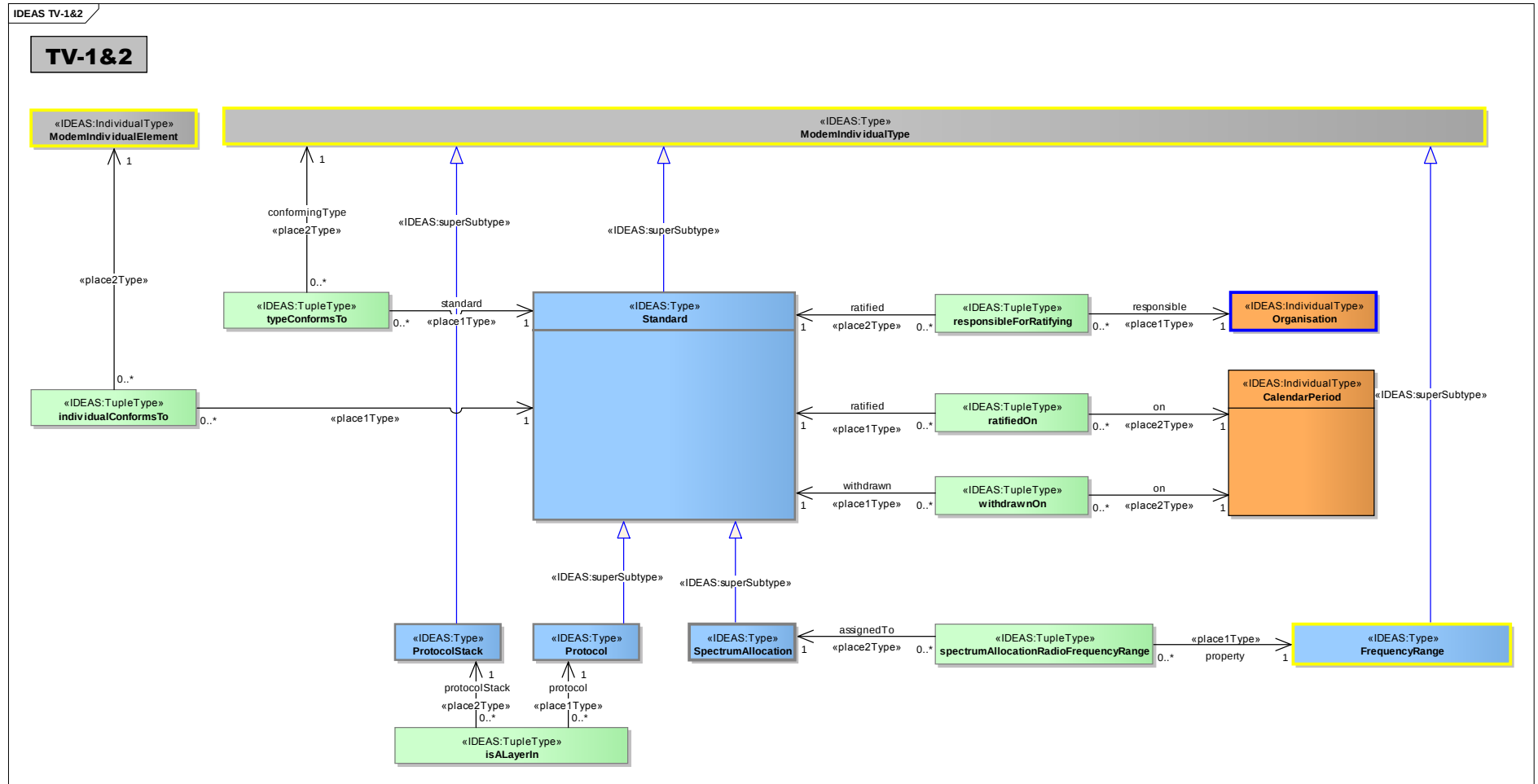


Figure 97 : TV-1&2

### 2.7.2 TV-3: Standard configuration

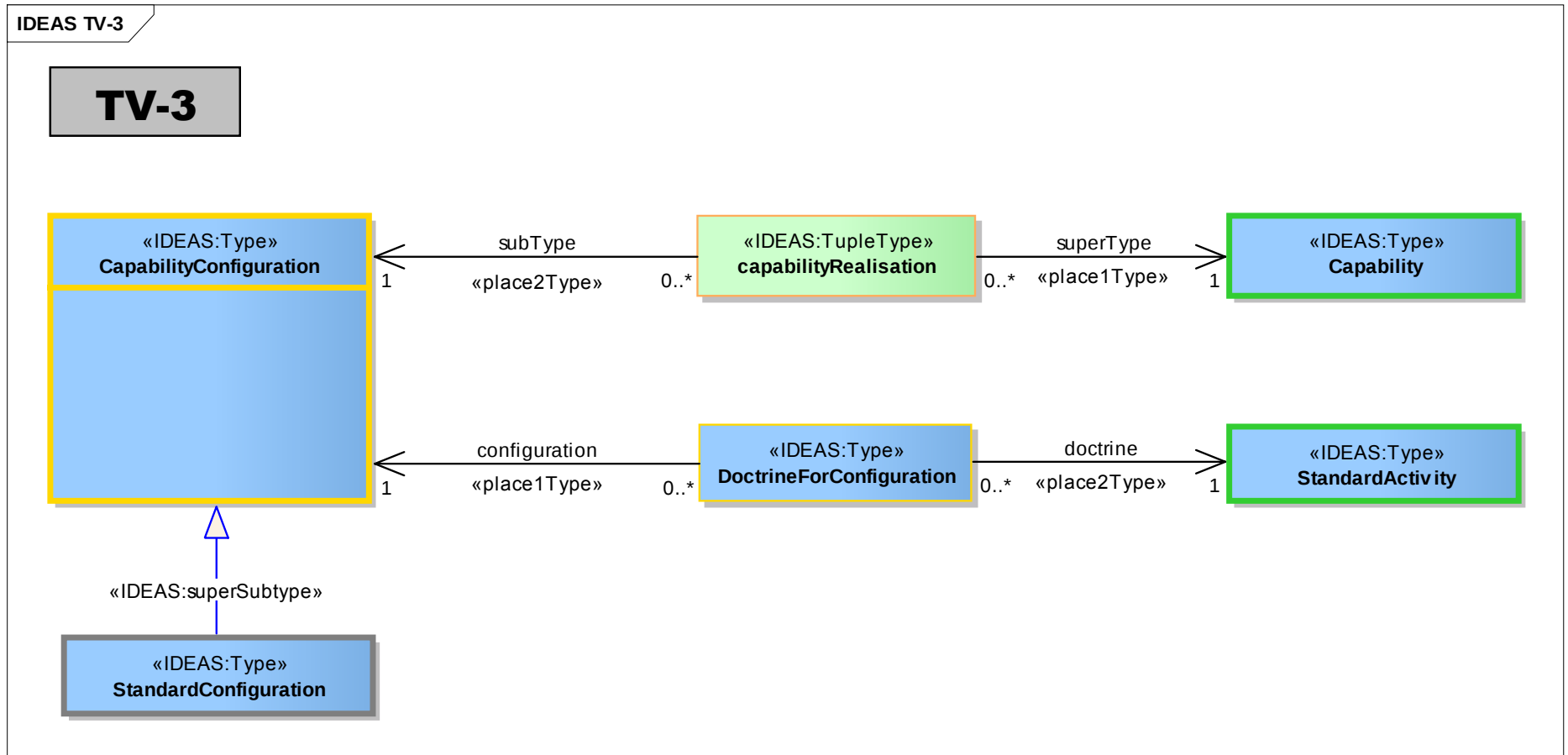


Figure 98 : TV-3

### 2.7.3 Protocols

IDEAS TV-1&2 Protocols

## TV-1&2 Protocols

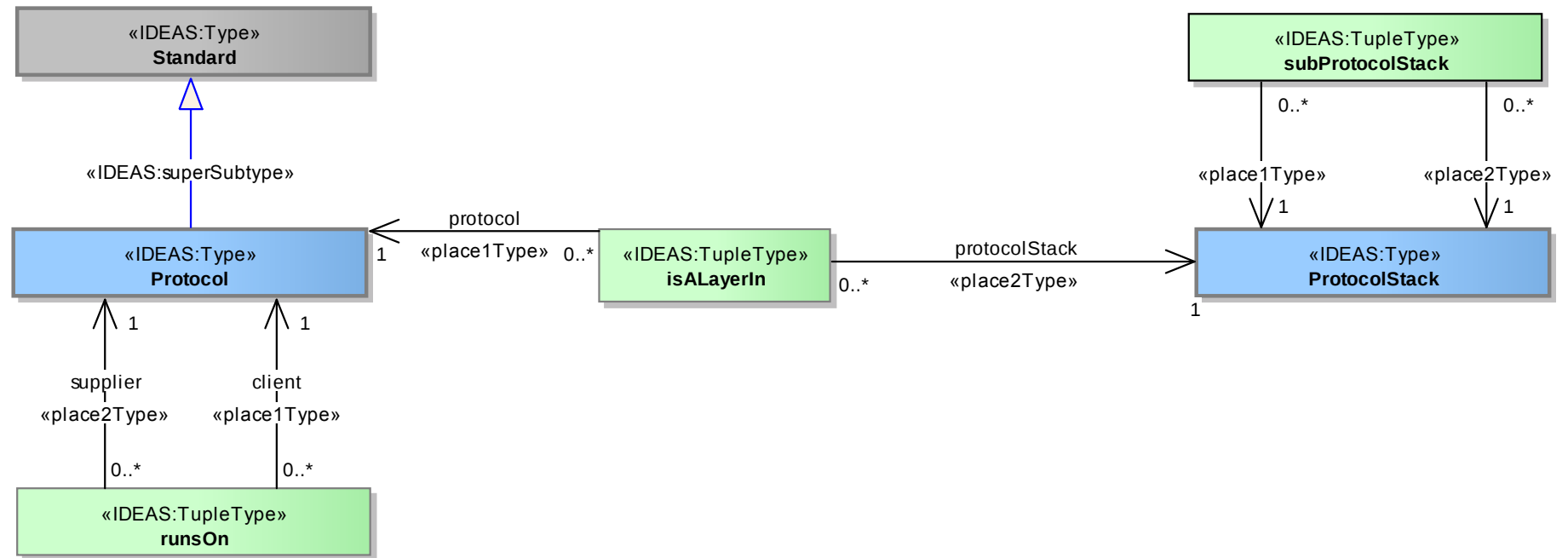


Figure 99 : TV-1&2 Protocols

## 2.7.4 Technical standards Views elements list

| Technical Standard Views                                                                                                                                                                                                                                                                                                                                                               |
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| <p><b>AggregateDataType</b> «IDEAS:Type»<br/><u>Connectors:</u><br/><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>AggregateDataType - DataModelTypeRepresentation<br/><u>Attributes:</u><br/>-<br/>A DataModelTypeRepresentation which is an aggregate of other DataModelTypeRepresentations.</p>                                                         |
| <p><b>ArrayDataType</b> «IDEAS:Type»<br/><u>Connectors:</u><br/><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>ArrayDataType - AggregateDataType<br/><u>Attributes:</u><br/>-<br/>An AggregateDataType whose members are addressed using a numeric index.</p>                                                                                              |
| <p><b>AsynchronousOperation</b> «IDEAS:Type»<br/><u>Connectors:</u><br/><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>AsynchronousOperation - OperationSpecification<br/><u>Attributes:</u><br/>-<br/>An OperationSpecification where the caller and called do not wait for each other to complete the communication.</p>                                 |
| <p><b>Attribute</b> «IDEAS:Type»<br/><u>Connectors:</u><br/><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>Attribute - DataModelComponent<br/><u>Attributes:</u><br/>-<br/>A DataModelComponent that is a defined property of an Entity.</p>                                                                                                              |
| <p><b>BagDataType</b> «IDEAS:Type»<br/><u>Connectors:</u><br/><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>BagDataType - AggregateDataType<br/><u>Attributes:</u><br/>-<br/>An AggregateDataType whose members are not kept in any particular order - i.e. there is no way to address a particular member.</p>                                           |
| <p><b>BinaryDataType</b> «IDEAS:Type»<br/><u>Connectors:</u><br/><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>BinaryDataType - SimpleDataType<br/><u>Attributes:</u><br/>-<br/>A SimpleDataType whose instances are binary objects.<br/>Note: Data Models may instantiate several different BinaryDataTypes - e.g. "BLOB", "MPEG", "varbinary", etc.</p> |

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| <p><b>CardinalitySpecifier</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>CardinalitySpecifier - ModemIndividualType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>CardinalitySpecifier - IntegerRepresentation</p> <p><u>Attributes:</u></p> <p>exemplar</p> <p>An IntegerRepresentation that specifies the cardinality of an EntityRelationshipEnd.</p>           |
| <p><b>ChoiceDataType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ChoiceDataType - DataModelTypeRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A DataModelTypeRepresentation which represents a choice of datatypes, restricted by the architect to a list. Note: Also known as a SELECT in some data modelling languages (e.g. ISO10303-11).</p>                                        |
| <p><b>DataElement</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>DataElement - InteractionElement</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>DataElement – SymbolOrSymbolStringType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SymbolOrSymbolStringType that represents interactions between resource elements.</p>                                             |
| <p><b>DataModel</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>DataModel - StructuredRepresentation</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>DataModel - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StructuredRepresentation defining the structure of data, showing classifications of data elements and relationships between them.</p> |
| <p><b>DataModelComponent</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>DataModelComponent - Representation</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>DataModelComponent - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Representation that can be part of a DataModel.</p>                                                                  |
| <p><b>DataModelTypeRepresentation</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>DataModelTypeRepresentation - DataModelComponent</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                                                      |

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| <p>-</p> <p>A DataModelComponent that can be used to represent the type of something.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>EndOfEntityRelationship</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EndOfEntityRelationship - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EndOfEntityRelationship - RepresentationInStructure</p> <p>Association (source - target): «place2Type»</p> <p>EndOfEntityRelationship - EntityRelationshipEnd</p> <p>Association (source - target): «place1Type»</p> <p>EndOfEntityRelationship - EntityRelationship</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RepresentationStructure where an EntityRelationship has 2 or more EntityRelationshipEnds.</p> |
| <p><b>Entity</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Entity - DataModelTypeRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A DataModelComponent that defines an item of interest.</p>                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>EntityRelationship</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EntityRelationship - StructuredRepresentation</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EntityRelationship - DataModelComponent</p> <p><u>Attributes:</u></p> <p>-</p> <p>A DataModelComponent that represents a relationship between two or more Entities.</p>                                                                                                                                                                                                                                    |
| <p><b>EntityRelationshipEnd</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EntityRelationshipEnd - StructuredRepresentation</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EntityRelationshipEnd - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A DataModelComponent that is one end of an EntityRelationship.</p>                                                                                                                                                                                                                                             |
| <p><b>EnumerationType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EnumerationType - DataModelTypeRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A DataModelTypeRepresentation which consists of named values.</p>                                                                                                                                                                                                                                                                                                                                                                                  |

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| <p><b>FloatingPointDataType</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> FloatingPointDataType - NumericDataType<br/> <u>Attributes:</u><br/> -<br/> A NumericDataType whose instances are real numbers. Note: Data Models may instantiate several different IntegerDataTypes - e.g. "float", "double", "real", etc.</p>                                                                                                                                                                                                                                              |
| <p><b>HashedAggregate</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> HashedAggregate - AggregateDataType<br/> <u>Attributes:</u><br/> -<br/> An AggregateDataType whose members are indexed using an identifier.</p>                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>IntegerDataType</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> IntegerDataType - NumericDataType<br/> <u>Attributes:</u><br/> -<br/> A NumericDataType whose instances are integer numbers. Note: Data Models may instantiate several different IntegerDataTypes - e.g. "LongInt", "short", "word", etc.</p>                                                                                                                                                                                                                                                      |
| <p><b>Interface</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> Interface - ModemIndividualType<br/> <u>Attributes:</u><br/> -<br/> A ModemIndividualType that is an interface either provided or required by another ModemIndividualType.</p>                                                                                                                                                                                                                                                                                                                           |
| <p><b>InterfaceOperation</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> InterfaceOperation - ProcessPartOfBodyType<br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> InterfaceOperation - TypicalWholePart<br/> Association (source - target): «place1Type»<br/> InterfaceOperation - InterfaceSpecification<br/> Association (source - target): «place2Type»<br/> InterfaceOperation - OperationSpecification<br/> <u>Attributes:</u><br/> -<br/> A TypicalWholePart that relates an OperationSpecification to its InterfaceSpecification.</p> |
| <p><b>InterfaceSpecification</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> InterfaceSpecification - ModemIndividualType<br/> Generalization (element - is a subtype of):«IDEAS:superSubtype»<br/> InterfaceSpecification - BodyType<br/> <u>Attributes:</u></p>                                                                                                                                                                                                                                                                                                        |

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| <p>-</p> <p>A ModemIndividualType that is a part of another ModemIndividualType that defines how it communicates.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>ItemInDataModel</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ItemInDataModel - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ItemInDataModel - RepresentationInStructure</p> <p>Association (source - target): «place2Type»</p> <p>ItemInDataModel - DataModelComponent</p> <p>Association (source - target): «place1Type»</p> <p>ItemInDataModel - DataModel</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RepresentationInStructure where a DataModelComponent is part of a DataModel.</p>                      |
| <p><b>ListDataType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ListDataType - AggregateDataType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An AggregateDataType whose members are stored and accessed as an ordered list.</p>                                                                                                                                                                                                                                                                                                                                     |
| <p><b>LogicalDataType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LogicalDataType - SimpleDataType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SimpleDataType whose instances are true/false or true/false/unknown. Note: Data Models may instantiate several different LogicalDataTypes - e.g. "Boolean", "YesNo", "BOOL", etc.</p>                                                                                                                                                                                                                             |
| <p><b>MaxAggregateSize</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>MaxAggregateSize - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>MaxAggregateSize - RepresentationInStructure</p> <p>Association (source - target): «place1Type»</p> <p>MaxAggregateSize - AggregateDataType</p> <p>Association (source - target): «place2Type»</p> <p>MaxAggregateSize - CardinalitySpecifier</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RepresentationInStructure that specifies the maximum size of an AggregateDataType.</p> |

**MaxCardinalityOfRelationshipEnd** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

MaxCardinalityOfRelationshipEnd - RepresentationInStructure

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

MaxCardinalityOfRelationshipEnd - ModemThing

*Association (source - target):* «place2Type»

MaxCardinalityOfRelationshipEnd - CardinalitySpecifier

*Association (source - target):* «place1Type»

MaxCardinalityOfRelationshipEnd - EntityRelationshipEnd

Attributes:

-

A RepresentationInStructure that asserts a CardinalitySpecifier is part of an EntityRelationshipEnd, and that it represents the maximum cardinality value of that end.

Note: If no Maximum Cardinality is specified (i.e. there is no instance of this tuple type related to the EntityRelationshipEnd) then the default is "many" or "\*".

**MessageSpecification** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

MessageSpecification - DataElement

Attributes:

-

A DataElement that specifies the content of a message.

**MinAggregateSize** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

MinAggregateSize - RepresentationInStructure

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

MinAggregateSize - ModemThing

*Association (source - target):* «place1Type»

MinAggregateSize - AggregateDataType

*Association (source - target):* «place2Type»

MinAggregateSize - CardinalitySpecifier

Attributes:

-

A RepresentationInStructure that specifies the minimum size of an AggregateDataType.

**MinCardinalityOfRelationshipEnd** «IDEAS:Type»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

MinCardinalityOfRelationshipEnd - RepresentationInStructure

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

MinCardinalityOfRelationshipEnd - ModemThing

*Association (source - target):* «place2Type»

MinCardinalityOfRelationshipEnd - CardinalitySpecifier

*Association (source - target):* «place1Type»

MinCardinalityOfRelationshipEnd - EntityRelationshipEnd

Attributes:

-

A RepresentationInStructure that asserts a CardinalitySpecifier is part of an EntityRelationshipEnd, and that it represents the minimum cardinality value of that end. Note: If no Minimum Cardinality is specified (i.e. there is no instance of this tuple type related to the EntityRelationshipEnd) then the default is zero.

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| <p><b>NumericDataType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>NumericDataType - SimpleDataType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SimpleDataType whose instances are numbers.</p>                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>OperationInputParameter</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>OperationInputParameter - TypicalWholePart</p> <p>Association (source - target):«place1Type»</p> <p>OperationInputParameter - OperationSpecification</p> <p>Association (source - target):«place2Type»</p> <p>OperationInputParameter - OperationParameter</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart where an OperationParameter is passed into a OperationSpecification.</p>                                                                                |
| <p><b>OperationParameter</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>OperationParameter - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType that is a part of an OperationSpecification</p> <p>OperationParameters are passed in and out of OperationSpecifications.</p>                                                                                                                                                                                                                                                |
| <p><b>OperationReadWriteParameter</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>OperationReadWriteParameter - TypicalWholePart</p> <p>Association (source - target):«place1Type»</p> <p>OperationReadWriteParameter - OperationSpecification</p> <p>Association (source - target):«place2Type»</p> <p>OperationReadWriteParameter - OperationParameter</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart where an OperationParameter is passed into a OperationSpecification that can then be modified and the result read after processing.</p> |
| <p><b>OperationReturnParameter</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>OperationReturnParameter - TypicalWholePart</p> <p>Association (source - target):«place1Type»</p> <p>OperationReturnParameter - OperationSpecification</p> <p>Association (source - target):«place2Type»</p> <p>OperationReturnParameter - OperationParameter</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TypicalWholePart where an OperationParameter is passed out of an OperationSpecification.</p>                                                                         |

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| <p><b>OperationSpecification</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>OperationSpecification - ModemIndividualType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>OperationSpecification - ProcessType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType that is an invokable part of an InterfaceSpecification.</p> <p>[ABSTRACT]</p> |
| <p><b>Protocol</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>Protocol - Standard</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Standard for communication.</p>                                                                                                                                                                                                                             |
| <p><b>ProtocolStack</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ProtocolStack - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ModemIndividualType that is all the Individuals which conform to one or more specified protocols (ordered into a stack) that may be implemented by one or more ResourcePorts. Note: was called "ImplementedProtocol" in M3.</p>        |
| <p><b>ProvidedInterface</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ProvidedInterface - Interface</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Interface describing what a ServiceSpecification or a ResourceType is capable of providing when invoked by an external element.</p>                                                                                                     |
| <p><b>RequiredInterface</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>RequiredInterface - Interface</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Interface describing what a ServiceSpecification or a ResourceType requires from an external element.</p>                                                                                                                               |
| <p><b>SecurityPolicy</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>SecurityPolicy - Constraint</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Constraint that is concerned with security.</p>                                                                                                                                                                                               |

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| <p><b>SimpleDataType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>SimpleDataType - DataModelTypeRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A DataModelTypeRepresentation that is used to specify the type of a literal (e.g. text, integer, floating point number, etc.)</p>                                                                                                                                                                                                                                                                          |
| <p><b>SpectrumAllocation</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>SpectrumAllocation - Standard</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Standard specifying a particular frequency range of the electromagnetic spectrum that is allotted to a particular usage.</p>                                                                                                                                                                                                                                                                                        |
| <p><b>Standard</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>Standard - SubjectOfForecast</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>Standard - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ratified and peer-reviewed specification that is used to guide or constrain the architecture. A Standard may be applied to any element in the architecture.</p>                                                                                                                                                   |
| <p><b>StandardConfiguration</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>StandardConfiguration - CapabilityConfiguration</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CapabilityConfiguration that has been designated as a standard configuration.</p>                                                                                                                                                                                                                                                                                                              |
| <p><b>SupportedMessageFormat</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>supportedMessageFormat - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>supportedMessageFormat - couple</p> <p>Association (source - target):«place1Type»</p> <p>supportedMessageFormat - Interface</p> <p>Association (source - target):«place2Type»</p> <p>supportedMessageFormat - MessageSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that relates an Interface to a MessageSpecification that it can support.</p> |
| <p><b>SynchronousOperation</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>SynchronousOperation - OperationSpecification</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                 |

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| <p>-</p> <p>An OperationSpecification where the caller and called wait for each other to complete the communication.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>TextDataType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>TextDataType - SimpleDataType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SimpleDataType whose instances are text literals. Note: Data Models may instantiate several different TextDataTypes - e.g. "String", "XML Text", "WideString", etc.</p>                                                                                                                                                                                                                                                                                                          |
| <p><b>aggregateElementType</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>aggregateElementType - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>aggregateElementType - couple</p> <p>Association (source - target):«place1Type»</p> <p>aggregateElementType - AggregateDataType</p> <p>Association (source - target):«place2Type»</p> <p>aggregateElementType - DataModelTypeRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that relates an AggregateDataType to the DataModelTypeRepresentation that specifies the data type of each of its elements.</p> |
| <p><b>attributeType</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>attributeType - couple</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>attributeType - ModemThing</p> <p>Association (source - target):«place2Type»</p> <p>attributeType - DataModelTypeRepresentation</p> <p>Association (source - target):«place1Type»</p> <p>attributeType - Attribute</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that relates an Attribute to the DataModelTypeRepresentation that specifies its type.</p>                                                                                 |
| <p><b>choiceElement</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>choiceElement - couple</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>choiceElement - ModemThing</p> <p>Association (source - target):«place1Type»</p> <p>choiceElement - ChoiceDataType</p> <p>Association (source - target):«place2Type»</p> <p>choiceElement - DataModelTypeRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts a DataModelTypeRepresentation is a valid choice in a ChoiceDataType.</p>                                                                                |

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| <p><b>conformsTo</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>conformsTo - couple</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>conformsTo - ModemThing</p> <p>Association (source - target): «place1Type»</p> <p>conformsTo - Standard</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts a thing in the architecture model conforms to a standard.</p>                                                                                                                                             |
| <p><b>dataElementRepresentation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>dataElementRepresentation - representedByDataType</p> <p>Association (source - target): «place1Type»</p> <p>dataElementRepresentation - DataElement</p> <p>Association (source - target): «place2Type»</p> <p>dataElementRepresentation - DataModelTypeRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A representedByDataType that asserts an DataElement is represented by a DataModelTypeRepresentation.</p>                                              |
| <p><b>entityHasAttribute</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>entityHasAttribute - couple</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>entityHasAttribute - ModemThing</p> <p>Association (source - target): «place2Type»</p> <p>entityHasAttribute - Attribute</p> <p>Association (source - target): «place1Type»</p> <p>entityHasAttribute - Entity</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple asserting that an Entity has an Attribute.</p>                                                  |
| <p><b>entityInRelationship</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>entityInRelationship - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>entityInRelationship - couple</p> <p>Association (source - target): «place2Type»</p> <p>entityInRelationship - Entity</p> <p>Association (source - target): «place1Type»</p> <p>entityInRelationship - EntityRelationshipEnd</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple relating a RelationshipInDataModel to one of the Entities it relates.</p> |

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| <p><b>enumerationItem</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>enumerationItem - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>enumerationItem - couple</p> <p>Association (source - target):«place2Type»</p> <p>enumerationItem - StringRepresentation</p> <p>Association (source - target):«place1Type»</p> <p>enumerationItem - EnumerationType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Couple that relates a StringRepresentation to an EnumerationType of which it is an element.</p>                                                                                                                                 |
| <p><b>individualConformsTo</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place1Type»</p> <p>individualConformsTo - Standard</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>individualConformsTo - conformsTo</p> <p>Association (source - target):«place2Type»</p> <p>individualConformsTo - ModemIndividualElement</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>individualConformsTo - modemIndividualTypeInstance</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeInstance that asserts that an element in the architecture conforms to a Standard.</p>                                                                               |
| <p><b>isALayerIn</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IsALayerIn - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>IsALayerIn - superSubtype</p> <p>Association (source - target):«place2Type»</p> <p>IsALayerIn - Protocol</p> <p>Association (source - target):«place1Type»</p> <p>IsALayerIn - ProtocolStack</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubtype that asserts that a ProtocolStack is a kind of Protocol. The Protocol is a layer in the ProtocolStack. The order of the layering is determined by the Protocols' runsOn relations. Note: amalgamates "ProtocolLayer" and "ImplementedOn" in M3.</p> |
| <p><b>parameterRepresentation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>parameterRepresentation - representedByDataType</p> <p>Association (source - target):«place2Type»</p> <p>parameterRepresentation - DataModelTypeRepresentation</p> <p>Association (source - target):«place1Type»</p> <p>parameterRepresentation - OperationParameter</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                                                                                                                 |

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| <p>-</p> <p>A representedBy that links an OperationParameter to its datatype (DataModelTypeRepresentation).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>ratifiedOn</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ratifiedOn - ModemThing</p> <p>Association (source - target):«place2Type»</p> <p>ratifiedOn - CalendarPeriod</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ratifiedOn - couple</p> <p>Association (source - target):«place1Type»</p> <p>ratifiedOn - Standard</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts a Standard has been ratified on a date.</p>                                                                                                                                                  |
| <p><b>representedByDataType</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>representedByDataType - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>representedByDataType - representedBy</p> <p>Association (source - target):«place2Type»</p> <p>representedByDataType - DataModelTypeRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A representedBy that asserts a Thing is represented by a DataModelTypeRepresentation.</p>                                                                                                                                         |
| <p><b>responsibleForRatifying</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>responsibleForRatifying - couple</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>responsibleForRatifying - ModemThing</p> <p>Association (source - target):«place2Type»</p> <p>responsibleForRatifying - Standard</p> <p>Association (source - target):«place1Type»</p> <p>responsibleForRatifying - Organisation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts than an Organisation is responsible for the ratification of a standard.</p> <p>Note: was called "RatificationBody" in M3.</p> |
| <p><b>runsOn</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>runsOn - couple</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>runsOn - ModemThing</p> <p>Association (source - target):«place1Type»</p> <p>runsOn - Protocol</p>                                                                                                                                                                                                                                                                                                                                                               |

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| <p><i>Association (source - target):</i>«place2Type»<br/>runsOn - Protocol</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts that one Protocol (client) may be implemented on another (supplier). This determines the layer order in the ProtocolStack.</p>                                                                                                                                                                                                                                                                                                                                                                                |
| <p><b>specForInterface</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>SpecForInterface - modemIndividualTypeSpecialisation</p> <p><i>Association (source - target):</i>«place2Type»<br/>SpecForInterface - Interface</p> <p><i>Association (source - target):</i>«place1Type»<br/>SpecForInterface - InterfaceSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that relates an Interface to the InterfaceSpecification that specifies it.</p>                                                                              |
| <p><b>spectrumAllocationRadioFrequencyRange</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Association (source - target):</i>«place1Type»<br/>spectrumAllocationRadioFrequencyRange - FrequencyRange</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>spectrumAllocationRadioFrequencyRange - radioFrequencyRangeAssignment</p> <p><i>Association (source - target):</i>«place2Type»<br/>spectrumAllocationRadioFrequencyRange - SpectrumAllocation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A radioFrequencyRangeAssignment that asserts a spectrum allocation has been assigned to a frequency range.</p> |
| <p><b>subProtocolStack</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Association (source - target):</i>«place1Type»<br/>subProtocolStack - ProtocolStack</p> <p><i>Association (source - target):</i>«place2Type»<br/>subProtocolStack - ProtocolStack</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>subProtocolStack - superSubtype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubtype that asserts that one ProtocolStack is a superType of another.</p>                                                                                                                                         |
| <p><b>subtypeRelationship</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>subtypeRelationship - ModemThing</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/>subtypeRelationship - couple</p> <p><i>Association (source - target):</i>«place1Type»<br/>subtypeRelationship - Entity</p> <p><i>Association (source - target):</i>«place2Type»<br/>subtypeRelationship - Entity</p>                                                                                                                                                      |

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| <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts that the type represented by one Entity is a subtype of the type represented by the other Entity.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>typeConformsTo</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>typeConformsTo - modemIndividualTypeSpecialisation</p> <p>Association (source - target):«place2Type»</p> <p>typeConformsTo - ModemIndividualType</p> <p>Association (source - target):«place1Type»</p> <p>typeConformsTo - Standard</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>typeConformsTo - conformsTo</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation that asserts a type in the architecture conforms to a Standard.</p> |
| <p><b>withdrawnOn</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>withdrawnOn - ModemThing</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>WithdrawnOn - couple</p> <p>Association (source - target):«place2Type»</p> <p>WithdrawnOn - CalendarPeriod</p> <p>Association (source - target):«place1Type»</p> <p>WithdrawnOn - Standard</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts a Standard has been withdrawn on a date.</p>                                                                                     |

### 2.7.5 Technical standards Views additional diagrams.

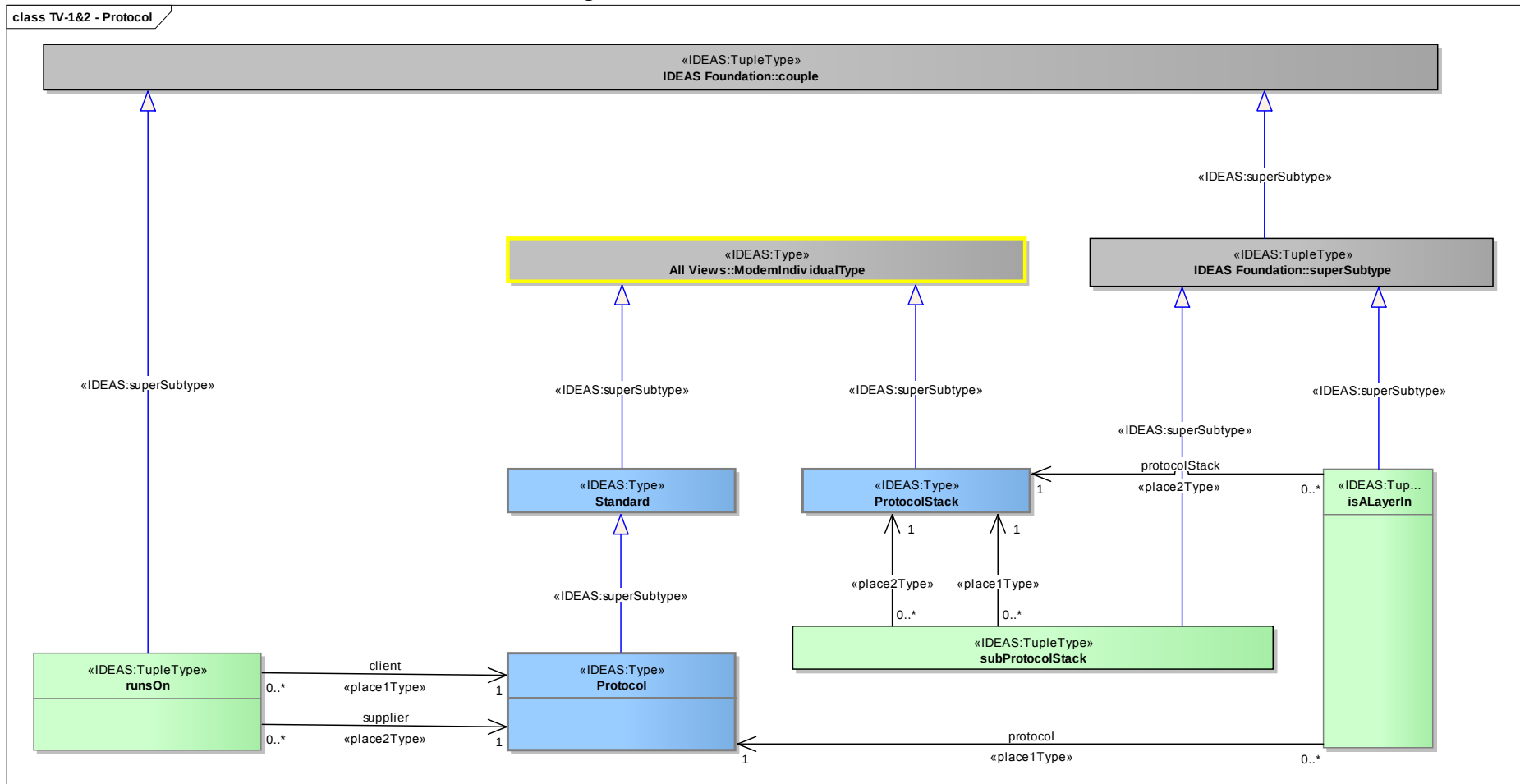


Figure 100 : TV-1&2 - Protocol

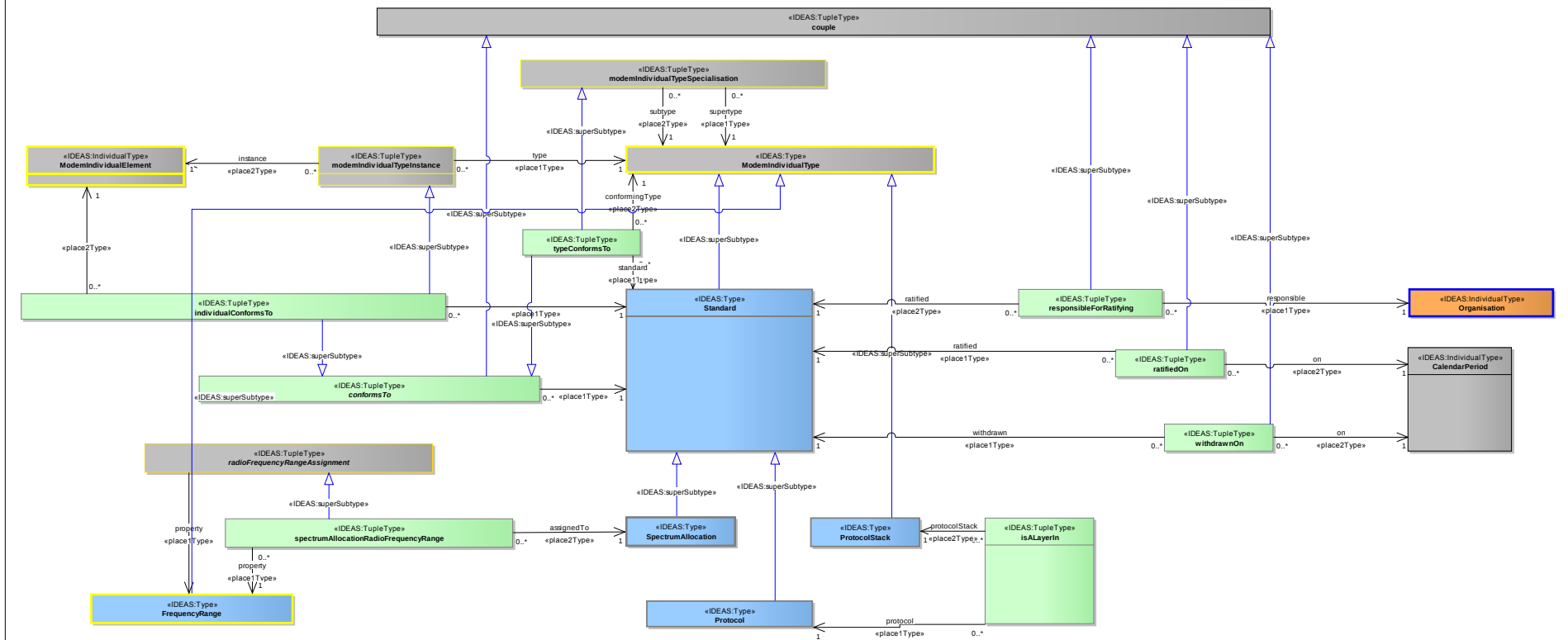


Figure 101 : TV-1&amp;2 - Standard

## 2.8

## Acquisition views

### 2.8.1

### AcV-1: Acquisition clusters

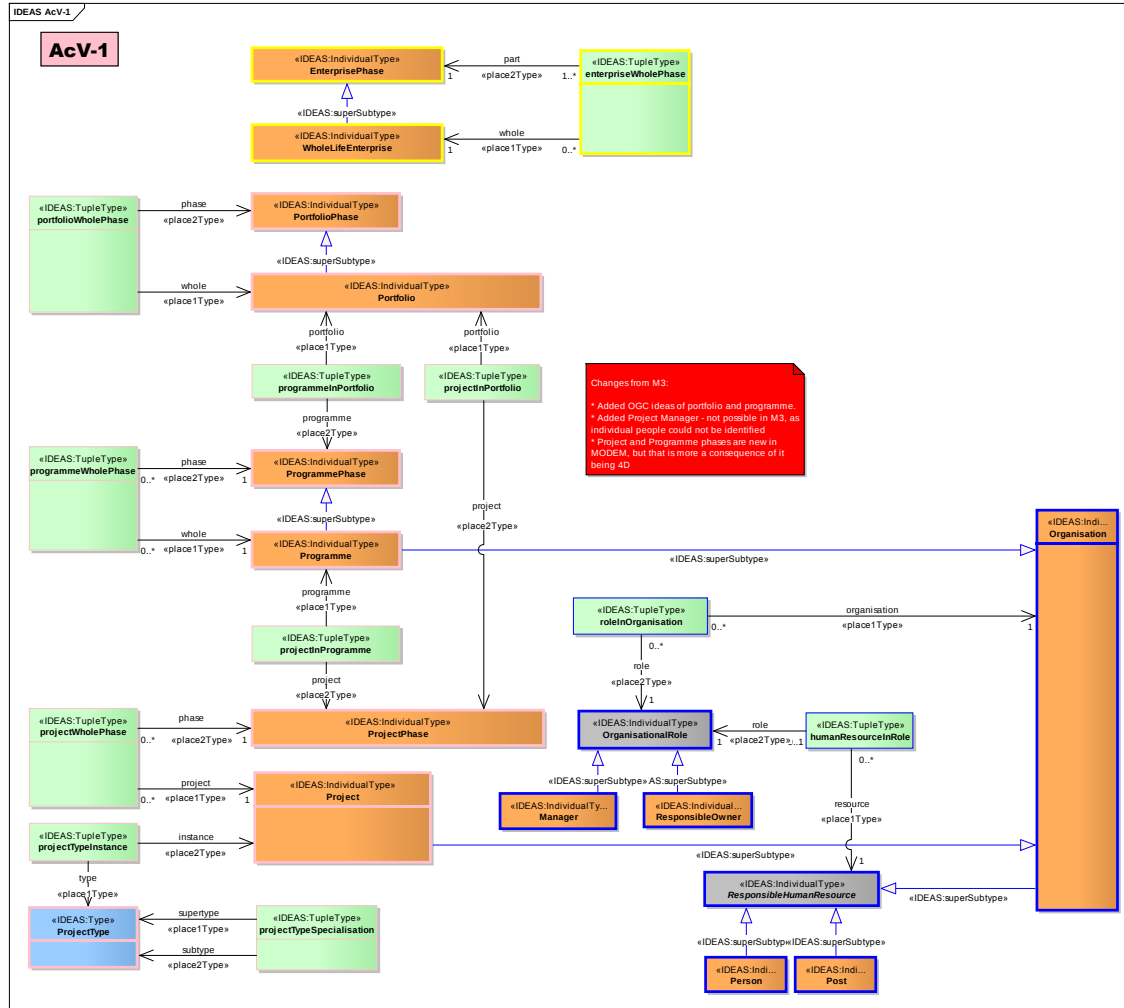


Figure 102 : AcV-1

### 2.8.2 AcV-2: Programme timelines

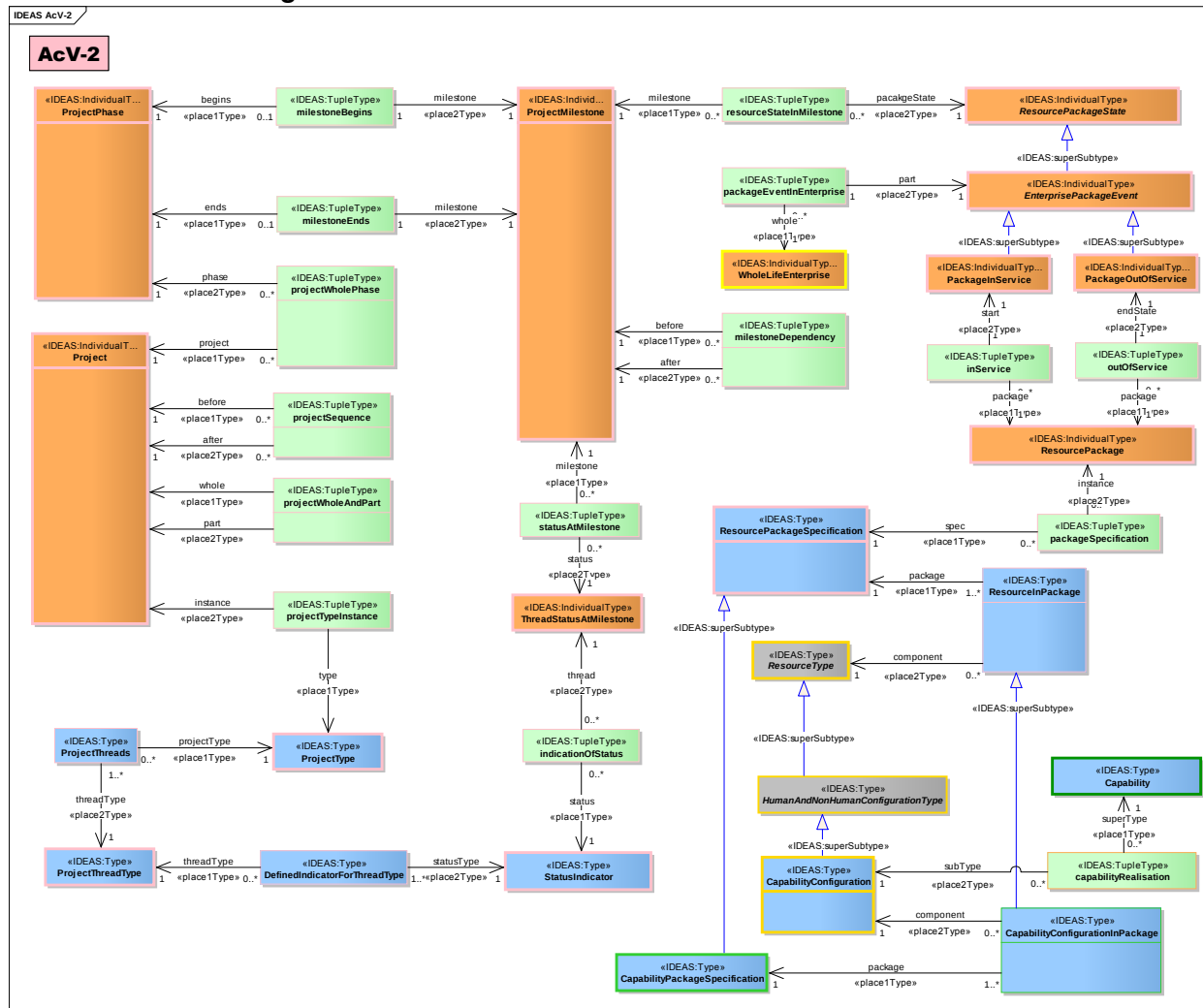


Figure 103 : AcV-2

### 2.8.3 Acquisition Views elements list

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| <p><b>DefinedIndicatorForThreadType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>DefinedIndicatorForThreadType - StatusOfThreadType</p> <p>Association (source - target): «place2Type»</p> <p>DefinedIndicatorForThreadType - StatusIndicator</p> <p>Association (source - target): «place1Type»</p> <p>DefinedIndicatorForThreadType - ProjectThreadType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StatusOfThreadType that specifies a StatusIndicator may be used to classify ProjectThreads of a particular ProjectThreadType.</p> |
| <p><b>EnterprisePackageEvent</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EnterprisePackageEvent- ResourcePackageState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EnterprisePackageEvent - EnterprisePart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourcePackageState that is an event that occurs in a WholeLifeEnterprise - e.g. the introduction of a new Capability at the point of a PackageInService.</p>                                                                      |
| <p><b>OrganisationPackageEvent</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationPackageEvent - OrganisationPart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OrganisationPackageEvent - ResourcePackageState</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourcePackageState that is an event that occurs in a WholeLifeEnterprise - e.g. the introduction of a new Capability at the point of a PackageInService.</p>                                                             |
| <p><b>PackageInService</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PackageInService - EnterprisePackageEvent</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualResourceState that marks in in-service point for a ResourcePackage.</p>                                                                                                                                                                                                                                                                                  |
| <p><b>PackageOutOfService</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PackageOutOfService - EnterprisePackageEvent</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualResourceState which marks the point at which a ResourcePackage ceases to be in service. Note: the components of the package may go on in service in some other configuration, but the package itself is retired.</p>                                                                                                                               |

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| <p><b>Portfolio</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Portfolio - Undertaking</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Portfolio - PortfolioPhase</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Undertaking comprised of the Projects and Programmes that are the totality of an Organisation's investment (or segment thereof) in the changes required to achieve its strategic objectives.</p> <p>[Based on OGC Definition]</p> <p>OGC defines a portfolio as the totality of an organisation's investment (or segment thereof) in the changes required to achieve its strategic objectives. Portfolio Management is a coordinated collection of strategic processes and decisions which enable the most effective balance of organisational change and business as usual/operations.</p>                                                 |
| <p><b>PortfolioPart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PortfolioPart - UndertakingPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>An UndertakingPart that is part of a Portfolio.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>PortfolioPhase</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PortfolioPhase - UndertakingState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PortfolioPhase - PortfolioPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PortfolioPart that is a temporal part of a Portfolio.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>Programme</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Programme - ProgrammePhase</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Programme - Organisation</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Undertaking that is a temporary, flexible organisation created to co-ordinate, direct and oversee the implementation of a set of related Projects and Tasks in order to deliver outcomes and benefits related to the organisation's strategic objectives.</p> <p>A programme is likely to have a lifespan of several years. During a programme lifecycle, projects are initiated, executed, and closed. Programmes provide an umbrella under which these projects can be co-ordinated. The programme integrates the projects so that it can deliver an outcome greater than the sum of its parts.</p> <p>[Adapted from OGC definition]</p> |
| <p><b>ProgrammePart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProgrammePart - OrganisationPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>An OrganisationPart that is a part of a Programme.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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| <p><b>ProgrammePhase</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProgrammePhase - ProgrammePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProgrammePhase - OrganisationState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProgrammePhase - PortfolioPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProgrammePart that is a temporal part of a Programme</p>                                                                                                                                                                                               |
| <p><b>Project</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Project - ProjectState</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Project - ProjectPowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Project - Organisation</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Undertaking that is a time-limited endeavour to create a specific set of products or services.</p>                                                                                                                                                                                   |
| <p><b>ProjectMilestone</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectMilestone - ProjectState</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProjectPart that marks the end of one ProjectPhase and possibly the beginning of another.</p> <p>Note: the temporal extent of a ProjectMilestone is likely to be finite - e.g. there may be milestone meetings, funding reviews, etc. before another Project or ProjectPhase can start.</p>                                                                                                                                                                                         |
| <p><b>ProjectPart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ProjectPart - ProjectPartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectPart - UndertakingPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProcessPart that is a part of a Project - i.e, an Individual whose entire spatio-temporal extent is within the extent of a Project.</p> <p>Example - a document that is created for a project and only used within that project that is destroyed before the project completes.</p> <p>Example - a milestone review meeting for a Project</p> <p>Example - a ProjectPhase</p> |

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| <p><b>ProjectPhase</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectPhase - ProjectState</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ProjectPhase - ProjectPhaseType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectPhase - ProgrammePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectPhase - PortfolioPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>An UndertakingState that is a temporal part of a Project and has been nominated as a phase of a Project.</p> |
| <p><b>ProjectState</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectState - OrganisationState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectState - ProjectPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProjectPart that is a temporal part of a Project.</p>                                                                                                                                                                                                                                                                              |
| <p><b>ProjectThread</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectThread - ProjectThreadState</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ProjectThread - ProjectThreadPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProjectPart that is an aspect of the Project used for refining the measurement of progress of the project. In UK MOD, this could be one of the defence lines of development, or DOTMLP in the US.</p> <p>Example: The Training aspect of a helicopter acquisition project.</p>                                      |
| <p><b>ProjectThreadState</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectThreadState - ProjectPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>A temporal part of a ProjectThread.</p>                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>ProjectThreadType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectThreadType - ProjectThreadPowertype</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProjectThreadType - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProjectThreadPowertype that is used to classify ProjectThreads.</p>                                                                                                                                                                                                                                              |

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| <p><b>ProjectThreads</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ProjectThreads - ThreadInProjectType</p> <p>Association (source - target):«place1Type»</p> <p>ProjectThreads - ProjectType</p> <p>Association (source - target):«place2Type»</p> <p>ProjectThreads - ProjectThreadType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ThreadInProjectType that relates a ProjectType to its ProjectThreadTypes.</p>                                                                                                                                                                                                                  |
| <p><b>ProjectType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ProjectType - ProjectPowertype</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ProjectType - ModemIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProjectType that is used to classify Projects.</p>                                                                                                                                                                                                                                                                                                                        |
| <p><b>ResourceInPackage</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResourceInPackage - ModemWholePartType</p> <p>Association (source - target):«place2Type»</p> <p>ResourceInPackage - ResourceType</p> <p>Association (source - target):«place1Type»</p> <p>ResourceInPackage - ResourcePackageSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ResourceUsage that specifies that a ResourceType is part of a DeliveryPackageSpecification.</p>                                                                                                                                                                         |
| <p><b>ResourcePackage</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResourcePackage - ModemIndividualElement</p> <p>Dependency (element - is instance of):«IDEAS:powertypeInstance»</p> <p>ResourcePackage - ResourcePackageType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A HumanAndNon-HumanConfiguration that is a collection of IndividualResources for a purpose.</p> <p>Example: All the fully configured aircraft delivered in an acquisition programme.</p> <p>Example: A force element package put together for a particular operation.</p> <p>Example: A tranche of new assets delivered into an enterprise.</p> |
| <p><b>ResourcePackageSpecification</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p> <p>ResourcePackageSpecification - ModemIndividualType</p> <p>Generalization (element - is a subtype of):«IDEAS:superSubtype»</p>                                                                                                                                                                                                                                                                                                                                                                                                                       |

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| ResourcePackageSpecification - ResourcePackageType<br><u>Attributes:</u><br>-<br>A ResourcePackageType that specifies the types of Resource (i.e. ResourceTypes) that make up a ResourcePackage.                                                                                                                                                                                                       |
| <b>ResourcePackageState</b> «IDEAS:IndividualType»<br><u>Connectors:</u><br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>ResourcePackageState - IndividualResourceState<br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>ResourcePackageState - TemporalBorder<br><u>Attributes:</u><br>-<br>A temporal part of a ResourcePackage.                          |
| <b>StatusIndicator</b> «IDEAS:Type»<br><u>Connectors:</u><br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>StatusIndicator - ModemIndividualType<br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>StatusIndicator - ThreadStatusType<br><u>Attributes:</u><br>-<br>A ThreadStatusType that classifies a ThreadStatusAtMilestone to indicate its status.      |
| <b>ThreadInProjectType</b> «IDEAS:Powertype»<br><u>Connectors:</u><br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>ThreadInProjectType - ProcessWholePartType<br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>ThreadInProjectType - ModemWholePartType<br><br><u>Attributes:</u><br>-<br>The powertype of threadInProject.                                 |
| <b>ThreadStatusAtMilestone</b> «IDEAS:IndividualType»<br><u>Connectors:</u><br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>ThreadStatusAtMilestone - ProjectThreadState<br>Dependency (element - is instance of):«IDEAS:powertypeInstance»<br>ThreadStatusAtMilestone - ThreadStatusType<br><u>Attributes:</u><br>-<br>A ProjectThreadState that is part of a ProjectMilestone. |
| <b>capabilityPackageDeliversCapability</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Generalization (element - is a subtype of):«IDEAS:superSubtype»<br>capabilityPackageDeliversCapability - modemIndividualTypeSpecialisation<br>Association (source - target):«place1Type»<br>capabilityPackageDeliversCapability - Capability<br>Association (source - target):«place2Type»                       |

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| <p>capabilityPackageDeliversCapability - CapabilityPackageSpecification</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeSpecialisation where a CapabilityPackageSpecification provides a Capability.</p>                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b>inService</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>inService - individualResourceState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>inService - startBorder</p> <p>Association (source - target): «place1Type»</p> <p>inService - ResourcePackage</p> <p>Association (source - target): «place2Type»</p> <p>inService - PackageInService</p> <p><u>Attributes:</u></p> <p>-</p> <p>A startBorder that indicates that an PackageInService marks the introduction into service of a ResourcePackage.</p>           |
| <p><b>indicationOfStatus</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>indicationOfStatus - modemIndividualTypeInstance</p> <p>Association (source - target): «place1Type»</p> <p>indicationOfStatus - StatusIndicator</p> <p>Association (source - target): «place2Type»</p> <p>indicationOfStatus - ThreadStatusAtMilestone</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modemIndividualTypeInstance where a ThreadStatusAtMilestone is classified by a StatusIndicator.</p>                                                                                 |
| <p><b>milestoneBegins</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>milestoneBegins - startBoundary</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>milestoneBegins - milestoneInProject</p> <p>Association (source - target): «place1Type»</p> <p>milestoneBegins - ProjectPhase</p> <p>Association (source - target): «place2Type»</p> <p>milestoneBegins - ProjectMilestone</p> <p><u>Attributes:</u></p> <p>-</p> <p>A startBoundary that asserts a ProjectMilestone marks the beginning of a Project or ProjectPhase.</p> |
| <p><b>milestoneDependency</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>milestoneDependency - ModemThing</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>milestoneDependency - beforeAfter</p> <p>Association (source - target): «place2Type»</p>                                                                                                                                                                                                                                                                              |

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| <p>milestoneDependency - ProjectMilestone<br/> <i>Association (source - target):</i>«place1Type»<br/> milestoneDependency - ProjectMilestone<br/> <u>Attributes:</u><br/> -<br/> A beforeAfter that asserts one ProjectMilestone shall occur before the other. Note: This is intended to related milestones from different projects where progress in one project depends on the other.</p>                                                                                                                                                                                                                                                         |
| <p><b>milestoneEnds</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> milestoneEnds - endBoundary<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> milestoneEnds - milestoneInProject<br/> <i>Association (source - target):</i> «place1Type»<br/> milestoneEnds - ProjectPhase<br/> <i>Association (source - target):</i> «place2Type»<br/> milestoneEnds - ProjectMilestone<br/> <u>Attributes:</u><br/> -<br/> An endBoundary that asserts a ProjectMilestone marks the end of a Project or ProjectPhase.</p>                     |
| <p><b>milestoneInProject</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> milestoneInProject - projectTemporalPart<br/> <i>Association (source - target):</i>«place2Type»<br/> milestoneInProject - ProjectMilestone<br/> <i>Association (source - target):</i>«place1Type»<br/> milestoneInProject - ProjectPhase<br/> <u>Attributes:</u><br/> -<br/> A projectWholePart that asserts that a ProjectMilestone is part of a Project or ProjectPhase.</p>                                                                                                              |
| <p><b>outOfService</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> outOfService - endBorder<br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> outOfService - individualResourceState<br/> <i>Association (source - target):</i>«place2Type»<br/> outOfService - PackageOutOfService<br/> <i>Association (source - target):</i>«place1Type»<br/> outOfService - ResourcePackage<br/> <u>Attributes:</u><br/> -<br/> An endBorder that indicates that an PackageOutOfService marks the termination of service of a ResourcePackage.</p> |
| <p><b>packageEventInEnterprise</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»<br/> packageEventInEnterprise - enterpriseWholePart<br/> <i>Association (source - target):</i>«place2Type»</p>                                                                                                                                                                                                                                                                                                                                                                             |

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| <p>packageEventInEnterprise - EnterprisePackageEvent<br/> <i>Association (source - target):</i> «place1Type»<br/> packageEventInEnterprise - WholeLifeEnterprise<br/> <u>Attributes:</u><br/> -<br/> An enterpriseWholePart where a EnterprisePackageEvent is part of a WholeLifeEnterprise - e.g. the package is rolled-out into the enterprise.</p>                                                                                                                                                                                                                                                                                                                         |
| <p><b>packageSpecification</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> packageSpecification - modemIndividualTypeInstance<br/> <i>Association (source - target):</i> «place2Type»<br/> packageSpecification - ResourcePackage<br/> <i>Association (source - target):</i> «place1Type»<br/> packageSpecification - ResourcePackageSpecification<br/> <u>Attributes:</u><br/> -<br/> A modemIndividualTypeInstance that relates a ResourcePackage to the ResourcePackageSpecification that specifies the types of Resource it consists of.</p>                                              |
| <p><b>portfolioWholeAndPart</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> portfolioWholeAndPart - undertakingWholeAndPart<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> portfolioWholeAndPart - portfolioWholePhase<br/> <i>Association (source - target):</i> «place2Type»<br/> portfolioWholeAndPart - Portfolio<br/> <i>Association (source - target):</i> «place1Type»<br/> portfolioWholeAndPart - Portfolio<br/> <u>Attributes:</u><br/> -<br/> An undertakingWholeAndPart/ portfolioWholePhase where both the whole and part are Portfolios.</p> |
| <p><b>portfolioWholePart</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> portfolioWholePart - undertakingWholePart<br/> <i>Association (source - target):</i> «place2Type»<br/> portfolioWholePart - PortfolioPart<br/> <i>Association (source - target):</i> «place1Type»<br/> portfolioWholePart - Portfolio<br/> <u>Attributes:</u><br/> -<br/> An undertakingWholePart where the whole is a Portfolio and the part is a PortfolioPart.</p>                                                                                                                                                |
| <p><b>portfolioWholePhase</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> portfolioWholePhase - undertakingWholeState<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> portfolioWholePhase - portfolioWholePart<br/> <i>Association (source - target):</i> «place2Type»</p>                                                                                                                                                                                                                                                                                  |

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| <p>portfolioWholePhase - PortfolioPhase<br/> <i>Association (source - target):</i> «place1Type»<br/> portfolioWholePhase - Portfolio<br/> <u>Attributes:</u><br/> -<br/> A portfolioWholePart where the part is a temporal part and is a PortfolioPhase.</p>                                                                                                                                                                                                                                                                   |
| <p><b>programmeInPortfolio</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> programmeInPortfolio - portfolioWholePart<br/> <i>Association (source - target):</i> «place1Type»<br/> programmeInPortfolio - Portfolio<br/> <i>Association (source - target):</i> «place2Type»<br/> programmeInPortfolio - ProgrammePhase<br/> <u>Attributes:</u><br/> -<br/> A portfolioWholePart where the part is a ProgrammePhase.</p>                         |
| <p><b>programmeWholeAndPart</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> programmeWholeAndPart - programmeWholePhase<br/> <i>Association (source - target):</i> «place2Type»<br/> programmeWholeAndPart - Programme<br/> <i>Association (source - target):</i> «place1Type»<br/> programmeWholeAndPart - Programme<br/> <u>Attributes:</u><br/> -<br/> A programmeWholePhase where both the whole and part are Programmes.</p>              |
| <p><b>programmeWholePart</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> programmeWholePart - undertakingWholePart<br/> <i>Association (source - target):</i> «place2Type»<br/> programmeWholePart - ProgrammePart<br/> <i>Association (source - target):</i> «place1Type»<br/> programmeWholePart - Programme<br/> <u>Attributes:</u><br/> -<br/> An undertakingWholePart where the whole is a Programme and the part is a ProgrammePart.</p> |
| <p><b>programmeWholePhase</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> programmeWholePhase programmeWholePart<br/> <i>Association (source - target):</i> «place2Type»<br/> programmeWholePhase - ProgrammePhase<br/> <i>Association (source - target):</i> «place1Type»<br/> programmeWholePhase - Programme<br/> <u>Attributes:</u></p>                                                                                                    |

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| <p>-</p> <p>A programmeWholePart where the part is temporal part and is a ProgrammePhase.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>projectInPortfolio</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>projectInPortfolio - portfolioWholePart</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>projectInPortfolio - Portfolio</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>projectInPortfolio - ProjectPhase</p> <p><u>Attributes:</u></p> <p>-</p> <p>A portfolioWholePart where the part is a ProjectPhase.</p>                                                                                                                                                                                                                                                                                                      |
| <p><b>projectInProgramme</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>projectInProgramme - programmeWholePart</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>projectInProgramme - Programme</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>projectInProgramme - ProjectPhase</p> <p><u>Attributes:</u></p> <p>-</p> <p>A programmeWholePart where the part is a ProjectPhase.</p> <p>Note that because projects may move from one programme to another (e.g. in a re-organisation), it is a ProjectPhase that is part of the Programme. ProjectPhase is a supertype of Project, so this still allows for the limit case where a Project is part of a Programme for its whole life.</p> |
| <p><b>projectSequence</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>projectSequence - beforeAfter</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>projectSequence - ModemThing</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>projectSequence - Project</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>projectSequence - Project</p> <p><u>Attributes:</u></p> <p>-</p> <p>A beforeAfter that asserts one Project cannot start until another has finished.</p>                                                                                                                                                                                    |
| <p><b>projectTemporalPart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>projectTemporalPart - undertakingWholeState</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>projectTemporalPart - projectWholePart</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>projectTemporalPart - ProjectState</p> <p><i>Association (source - target):</i> «place1Type»</p>                                                                                                                                                                                                                                                                                                          |

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| <p>projectTemporalPart - Project</p> <p><u>Attributes:</u></p> <p>-</p> <p>An undertakingWholeState that relates a Project to another ProjectState that is a temporal part of it.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <p><b>projectTypeInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>projectTypeInstance - modemIndividualTypeInstance</p> <p>Association (source - target): «place2Type»</p> <p>projectTypeInstance - Project</p> <p>Association (source - target): «place1Type»</p> <p>projectTypeInstance - ProjectType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modaIndividualTypeInstance that asserts a Project is an instance of a ProjectType.</p>                                                                                                                    |
| <p><b>projectWholeAndPart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>projectWholeAndPart - projectWholePart</p> <p>Association (source - target): «place2Type»</p> <p>projectWholeAndPart - Project</p> <p>Association (source - target): «place1Type»</p> <p>projectWholeAndPart - Project</p> <p><u>Attributes:</u></p> <p>-</p> <p>A projectWholePart where both the whole and part are Projects.</p>                                                                                                                                                         |
| <p><b>projectWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>projectWholePart - processWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>projectWholePart - modemWholePart</p> <p>Association (source - target): «place2Type»</p> <p>projectWholePart - ProjectPart</p> <p>Association (source - target): «place1Type»</p> <p>projectWholePart - Project</p> <p><u>Attributes:</u></p> <p>-</p> <p>A processWholePart that relates a Project to a ProjectPart that is entirely within the extent of the Project.</p> |
| <p><b>projectWholePhase</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>projectWholePhase - projectTemporalPart</p> <p>Association (source - target): «place2Type»</p> <p>projectWholePhase - ProjectPhase</p> <p>Association (source - target): «place1Type»</p> <p>projectWholePhase - Project</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                                                        |

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| <p>-</p> <p>A projectPhaseTemporalPart where the whole is a Project.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>resourceStateInMilestone</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>resourceStateInMilestone - modermWholePart</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>resourceStateInMilestone - ProjectMilestone</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>resourceStateInMilestone - ResourcePackageState</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modermWholePart that asserts a ResourcePackageState occurs within a ProjectMilestone.</p>                                                                                                                 |
| <p><b>statusAtMilestone</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>statusAtMilestone - modermWholePart</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>statusAtMilestone - ProjectMilestone</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>statusAtMilestone - ThreadStatusAtMilestone</p> <p><u>Attributes:</u></p> <p>-</p> <p>A modermWholePart which relates a ThreadStatusAtMilestone to the ProjectMilestone it is part of.</p>                                                                                                                                 |
| <p><b>statusOfThread</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>statusOfThread - StatusOfThreadType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>statusOfThread - threadTemporalWholePart</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>statusOfThread - ThreadStatusAtMilestone</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>statusOfThread - ProjectThread</p> <p><u>Attributes:</u></p> <p>-</p> <p>A threadTemporalWholePart that relates a ProjectThread to a ThreadStatus that is temporal part of the thread.</p> |
| <p><b>threadInProject</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>threadInProject - ThreadInProjectType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>threadInProject - projectWholePart</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>threadInProject - Project</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>threadInProject - ProjectThread</p> <p><u>Attributes:</u></p>                                                                                                                                                |

-  
A projectWholePart that relates a Project to a ProjectThread that is part of it.

**threadTemporalWholePart** «IDEAS:TupleType»

Connectors:

*Generalization (element - is a subtype of):*«IDEAS:superSubtype»

threadTemporalWholePart - modemTemporalWholePart

*Association (source - target):*«place2Type»

threadTemporalWholePart - ProjectThreadState

*Association (source - target):*«place1Type»

threadTemporalWholePart - ProjectThread

Attributes:

-  
A modemTemporalWholePart that relates a ProjectThread to one of its states.

## 2.8.4 Acquisition Views additional diagrams.

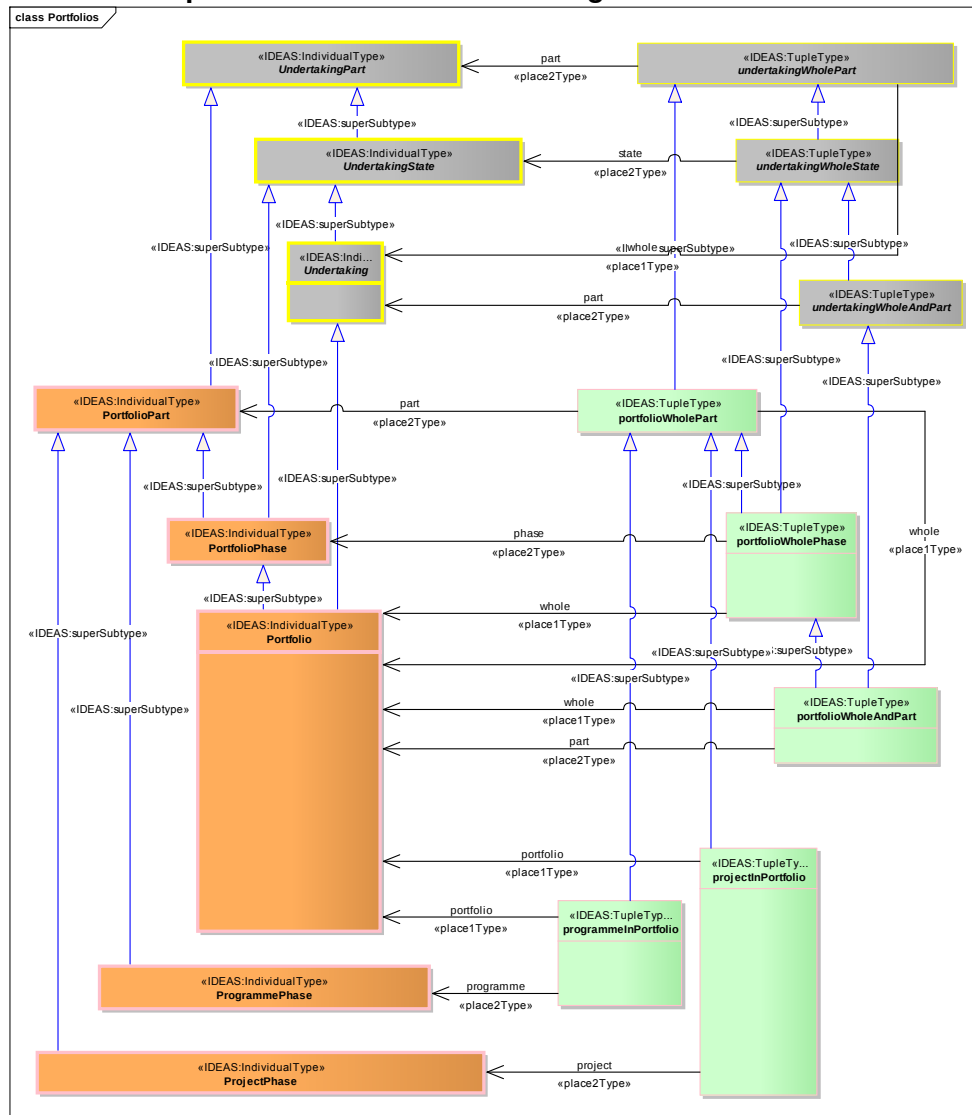


Figure 104 : Portfolios

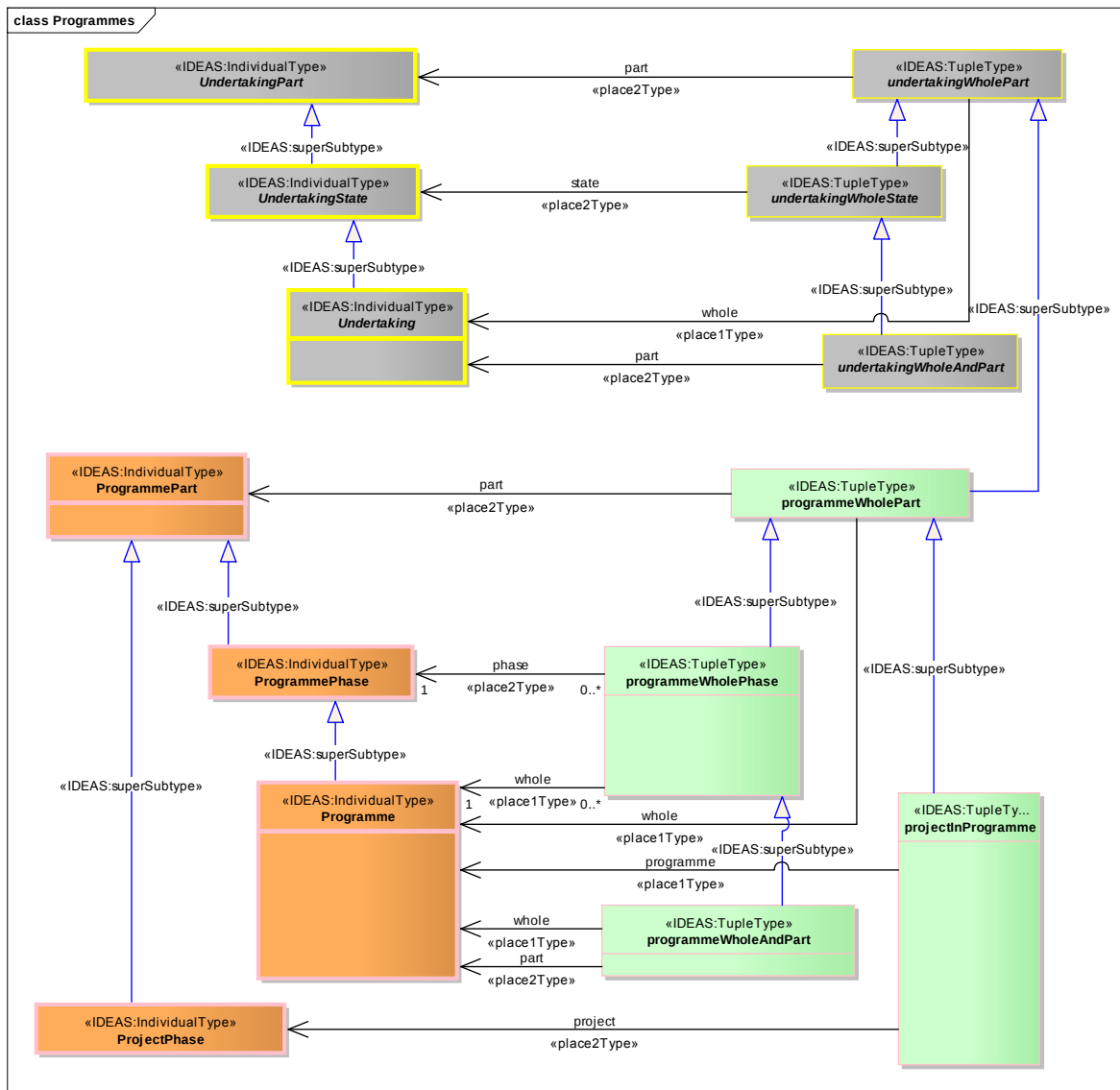


Figure 105 : Programmes

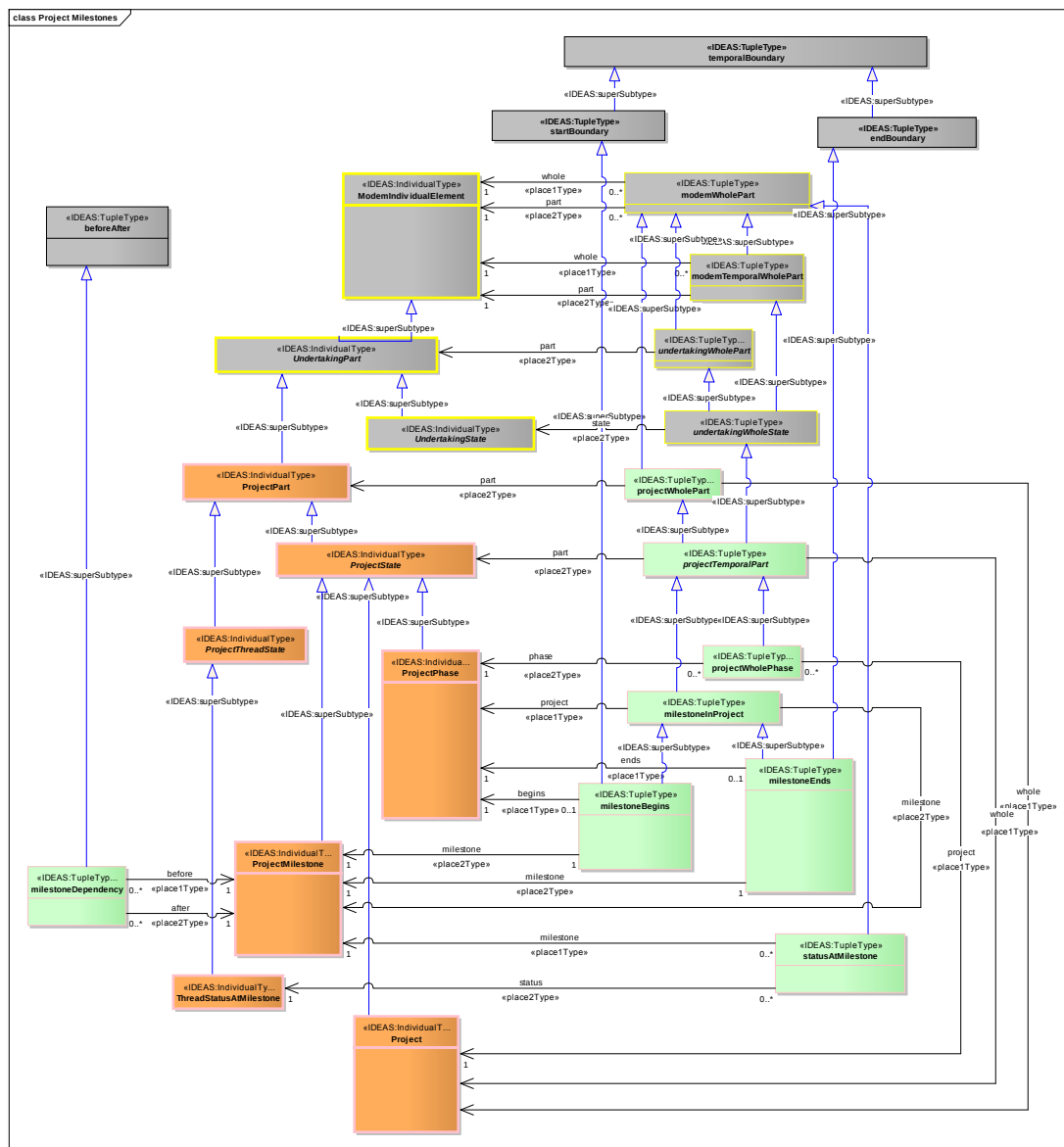


Figure 106 : Project Milestones



### 3. Additional information

#### 3.1 Introduction

This section contains the following:

- The IDEAS foundation
- Additions made to the IDEAS foundation in order to deal with MODAF
- IDEAS patterns used to bridge the gap between the IDEAS foundation and MODAF

#### 3.2 The IDEAS foundation

##### 3.2.1 IDEAS Foundation elements list

| IDEAS Foundation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <p><b>couple</b> «IDEAS:TupleType»<br/><u>Connectors:</u><br/><i>Association (source - target):</i>«place2Type»<br/>couple - Thing<br/><i>Dependency (element - is an instance of):</i>«IDEAS:powertypeInstance»<br/>couple - CoupleType<br/><i>Association (source - target):</i>«place1Type»<br/>couple - Thing<br/><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/>couple - tuple<br/><u>Attributes:</u><br/>-<br/>A tuple with two places.</p>                                                                                                                                                                                                                        |
| <p><b>Individual</b> «IDEAS:IndividualType»<br/><u>Connectors:</u><br/><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/>Individual - Thing<br/><i>Dependency (element - is an instance of):</i>«IDEAS:powertypeInstance»<br/>Individual - IndividualType<br/><u>Attributes:</u><br/>-<br/>A Thing that has spatio-temporal extent.<br/>Note1 - this may be some that existed in the past, exists now, or may exist in some future possible world.<br/>Note2 - the Individual may be scattered - i.e. it is the fusion of several disconnect parts.<br/>Examples:<br/>* Earth<br/>* The Eiffel Tower<br/>* Me, You<br/>* Me and You<br/>* France<br/>* Sir Isaac Newton</p> |

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| <p><b>IndividualType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>IndividualType - Type</p> <p>Dependency (element - is an instance of):«IDEAS:powertypeInstance»</p> <p>IndividualType - IndividualTypeType</p> <p>Dependency (element - is an instance of):«IDEAS:typeInstance»</p> <p>IndividualType - Powertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>The Powertype of Individual.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>* Cars</li> <li>* Boats</li> <li>* Mountains</li> <li>* Planets</li> <li>* Deliveries</li> <li>* Organisations</li> </ul> |
| <p><b>Powertype</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>Powertype - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Powertype is a set of all the subsets of a given Type.</p>                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>powertypeInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>powertypeInstance - typeInstance</p> <p>Association (source - target):«place1Type»</p> <p>powertypeInstance - Powertype</p> <p>Association (source - target):«place2Type»</p> <p>powertypeInstance - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>A typeInstance that asserts that the a Type is the <b>Powertype</b> of the type which is the instance.</p> <p>Note: A powertype is the set of all subsets of a given type.</p>                                                                          |
| <p><b>superSubtype</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place1Type»</p> <p>superSubtype - Type</p> <p>Association (source - target):«place2Type»</p> <p>superSubtype - Type</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>superSubtype - couple</p> <p>Dependency (element - is an instance of):«IDEAS:powertypeInstance»</p> <p>superSubtype - SuperSubtypeType</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                          |

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| <p>A couple relating two Types which asserts that one type is a subset of the other.</p> <p>Note - This is the standard super-sub-type relation where the sub-type can either be a proper sub-type or an improper sub-type of the super-type. (An improper sub-type of a type is the type itself. A proper sub-type of a type is not the type itself.) This relation holds between types, where every instance of the sub-type is also an instance of the super-type. Hence the type, Humans, is a sub-type of the type, Animals, because every instance of a Human is also an instance of Animal.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>* VW Golfs is a subtype of Cars</li> <li>* People over 2m tall is a subtype of People</li> <li>* Types of Pump is a subtype Types of Equipment</li> </ul> |
| <p><b>Thing</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>-</p> <p><u>Attributes:</u></p> <p>-</p> <p>The union of Individual, Type, and tuple.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>tuple</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Association (source - target):</i>«placeType»</p> <p>tuple - Thing</p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>tuple - Thing</p> <p><i>Dependency (element - is an instance of):</i>«IDEAS:powertypeInstance»</p> <p>tuple - TupleType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A relationship between two or more things.</p> <p>Note: Tuples are identified by their places (i.e. the ends of the relationship).</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>* The year 2004 is after the year 2001</li> <li>* My car is and instance of the type "VW Golfs"</li> <li>* The type "VW Golfs" is a subtype of the type "Cars"</li> </ul>                                          |
| <p><b>TupleType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>TupleType - PlaceableType</p> <p><i>Dependency (element - is an instance of):</i>«IDEAS:typeInstance»</p> <p>TupleType- Powertype</p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>TupleType - Type</p> <p><i>Dependency (element - is an instance of):</i>«IDEAS:powertypeInstance»</p> <p>TupleType - TupleTypeType</p> <p><i>Association (source - target):</i>«placeType»</p> <p>TupleType - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>The Powertype of tuple.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>* wholePart</li> <li>* beforeAfter</li> <li>* typeInstance</li> </ul>         |

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| <p>* superSubtype</p> <p><b>Type</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>Type - Thing</p> <p><u>Attributes:</u></p> <p>-</p> <p>A set (or class) of Things.</p> <p>Note1: Types are identified by their members (i.e. all the things of that type).</p> <p>Note2: The IDEAS Foundation is a higher-order ontology, so Types may have members that are also Types.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>* Cars</li> <li>* Volkswagen Beetles</li> <li>* Red Things</li> <li>* Naval Commanders</li> <li>* Ranks</li> </ul>                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>typeInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Association (source - target):</i>«place2Type»</p> <p>typeInstance - Thing</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>typeInstance - Type</p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>typeInstance - couple</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts that a Thing is a member of a Type.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>* I am a member of the type People (hard to believe, but true)</li> <li>* Field Marshal is of the type Rank</li> <li>* Viscount Bernard Montgomery is of the type Person</li> <li>* The state of Viscount Bernard Montgomery from 1945 to his death is of type Field Marshal</li> </ul>                                                                                                                                                                                               |
| <p><b>wholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Association (source - target):</i>«place1Type»</p> <p>wholePart - Individual</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>wholePart - Individual</p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>wholePart - couple</p> <p><i>Dependency (element - is an instance of):</i>«IDEAS:powertypeInstance»</p> <p>wholePart - WholePartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts one (part) Individual is part of another (whole) Individual.</p> <p>Note - This is the standard whole-part relation where the whole can either be a proper part or an improper part of the part. (An improper part of a whole is the whole itself. Whereas a chocolate chip would be a proper part of a cookie, only the entire cookie is an improper part of itself)</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>* My head is part of Me</li> </ul> |

- \* January 2004 is part of 2004
- \* The opening shot of the First World War is part of the First World War
- \* The Border of France is part of France
- \* The Border of France and Belgium is part of the Border of France
- \* The Border of France and Belgium is part of the Border of Belgium

#### IDEAS Disjoint

##### **SetOfDisjointIndividuals** «IDEAS:Type»

###### Connectors:

*Generalization (element - is a specialization of):* «IDEAS:superSubtype»

SetOfDisjointIndividuals - SetOfDisjointThings

*Generalization (element - is a specialization of):* «IDEAS:superSubtype»

SetOfDisjointIndividuals - IndividualType

###### Attributes:

-

An IndividualType and a SetOfDisjointThings whose instances are types all of whose instances are Individuals and each instance is disjoint, i.e. has no common part.

This mirrors at the mereological level the mathematical notion of disjoint sets - see a DisjointType.

##### **SetOfDisjointThings** «IDEAS:Type»

###### Connectors:

*Generalization (element - is a specialization of):* «IDEAS:superSubtype»

SetOfDisjointThings - Type

###### Attributes:

-

A Type whose instances are types, where for each of them, all their instances are pairwise disjoint.

##### **SetOfDisjointTypes** «IDEAS:Type»

###### Connectors:

*Generalization (element - is a specialization of):* «IDEAS:superSubtype»

SetOfDisjointTypes - SetOfDisjointThings

###### Attributes:

-

A SetOfDisjointThings whose instances are Types(i) all of whose instances are Types(ii) where each Type(ii) is disjoint, i.e. has no common instance, from all others.

This corresponds to the mathematical notion of disjoint sets - see a definition below:

Two or more sets which have no elements in common. For example, the sets  $A = \{a,b,c\}$  and  $B = \{d,e,f\}$  are disjoint. (from [http://www.mathwords.com/d/disjoint\\_sets.htm](http://www.mathwords.com/d/disjoint_sets.htm))

#### IDEAS Intersection

##### **IntersectionOfSetOfOverlappingIndividuals** «IDEAS:Type»

###### Connectors:

*Association (source - target):* «place1Type»

IntersectionOfSetOfOverlappingIndividuals - SetOfOverlappingIndividuals

*Generalization (element - is a specialization of):* «IDEAS:superSubtype»

IntersectionOfSetOfOverlappingIndividuals - IntersectionOfSetOfOverlappingThings

*Association (source - target):* «place2Type»

IntersectionOfSetOfOverlappingIndividuals - SingletonIndividualType

*Generalization (element - is a specialization of):* «IDEAS:superSubtype»

IntersectionOfSetOfOverlappingIndividuals - WholePartType

###### Attributes:

-

A WholePartType and an IntersectionOfSetOfOverlappingThings whose instances contain all wholePart couples that link SetOfOverlappingIndividuals with their overlapping parts.



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| <p><b>RealNumber</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>RealNumber - Number</p> <p>Dependency (element - is an instance of):«IDEAS:powertypeInstance»</p> <p>RealNumber - RealNumberType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Type that is a Dedekind cut of the set of rational numbers.</p> <p>Note: There are different definitions for Real Number in mathematics</p>                                                                                                                                   |
| <p><b>ScaleMapping</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place1Type»</p> <p>ScaleMapping - MeasureCategory</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>ScaleMapping - CoupleType</p> <p>Association (source - target):«place2Type»</p> <p>ScaleMapping - RealNumberType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CoupleType whose members are all the couples linking MeasurePoints to RealNumbers. The CoupleType (i.e. the set of couples) represents the scale.</p>                                               |
| <p><b>IDEAS Overlap</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>SetOfOverlappingIndividuals</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SetOfOverlappingIndividuals - SetOfOverlappingThings</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SetOfOverlappingIndividuals - IndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualType and a SetOfOverlappingThings whose instances are types all of whose instances are Individuals and each instance overlaps all others, i.e. there is a part common to all instances.</p> |
| <p><b>SetOfOverlappingThings</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SetOfOverlappingThings - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Type whose instances are types, where for each of them, all their instances overlap all other instances.</p>                                                                                                                                                                                                                                                         |
| <p><b>SetOfOverlappingTypes</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SetOfOverlappingTypes - SetOfOverlappingThings</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SetOfOverlappingThings whose instances are Types(i) all of whose instances are Types(ii) where each Type(ii) overlaps all others, i.e. there is at least one instance common to all Types(ii)</p>                                                                                                                                                    |

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| <p><b>SetOfProperOverlappingIndividuals</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SetOfProperOverlappingIndividuals - SetOfProperOverlappingThings</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SetOfProperOverlappingIndividuals - SetOfOverlappingIndividuals</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SetOfOverlappingIndividuals and a SetOfProperOverlappingThings whose instances are types, where for each of them, none of their instances is a strict part of any other.</p> |
| <p><b>SetOfProperOverlappingThings</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SetOfProperOverlappingThings - SetOfOverlappingThings</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SetOfOverlappingThings whose instances are types, where for each of them, none of their instances is a strict subtype or part of any other.</p>                                                                                                                                                                                                   |
| <p><b>SetOfProperOverlappingTypes</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SetOfProperOverlappingTypes - SetOfOverlappingTypes</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SetOfProperOverlappingTypes - SetOfProperOverlappingThings</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SetOfOverlappingTypes and a SetOfProperOverlappingThings whose instances are types, where for each of them, none of their instances is a strict subtype of any other.</p>                            |
| <p><b>SingletonIndividualType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SingletonIndividualType - IndividualType</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SingletonIndividualType - Singleton</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Singleton and an IndividualType - i.e. a set containing exactly one Individual.</p>                                                                                                                                                        |
| <b>IDEAS Periods of time</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>April</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>April - CalendarMonth</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CalendarMonth that is an April</p>                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>August</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>August - CalendarMonth</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                                                                                                                                                                                                                                                   |

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| <p>A CalendarMonth that is an August</p> <p><b>CalendarPeriod</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>CalendarPeriod - Period</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Period that corresponds to a recognised date or time</p> <p>Examples:</p> <p>1st June 1974</p> <p>1885</p> <p>14:44:01 on 2nd June 1974</p> <p>December 2008</p> |
| <p><b>Day</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>Day - CalendarPeriod</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CalendarPeriod that is a named day in a SevenDayWeek.</p>                                                                                                                                                               |
| <p><b>December</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>December - CalendarMonth</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CalendarMonth that is a December</p>                                                                                                                                                                           |
| <p><b>February</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>February - CalendarMonth</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CalendarMonth that is a February</p>                                                                                                                                                                           |
| <p><b>FractionOfASecond</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>FractionOfASecond - CalendarPeriod</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CalendarPeriod that is shorter than a Second</p>                                                                                                                                            |
| <p><b>Friday</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>Friday - Day</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Day that is a Friday</p>                                                                                                                                                                                                     |

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| <p><b>Hour</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> Generalization (element - is a specialization of):«IDEAS:superSubtype»<br/> Hour - CalendarPeriod<br/> <u>Attributes:</u><br/> -<br/> A CalendarPeriod that is 60 minutes. An hour roughly corresponds to 1/24th of a median earth day</p> |
| <p><b>January</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> Generalization (element - is a specialization of):«IDEAS:superSubtype»<br/> January - CalendarMonth<br/> <u>Attributes:</u><br/> -<br/> A CalendarMonth that is a January<br/> Examples:<br/> * January 2008<br/> * January 1592</p>    |
| <p><b>July</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> Generalization (element - is a specialization of):«IDEAS:superSubtype»<br/> July - CalendarMonth<br/> <u>Attributes:</u><br/> -<br/> A CalendarMonth that is a July</p>                                                                    |
| <p><b>June</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> Generalization (element - is a specialization of):«IDEAS:superSubtype»<br/> June - CalendarMonth<br/> <u>Attributes:</u><br/> -<br/> A CalendarMonth that is a June</p>                                                                    |
| <p><b>March</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> Generalization (element - is a specialization of):«IDEAS:superSubtype»<br/> March - CalendarMonth<br/> <u>Attributes:</u><br/> -<br/> A CalendarMonth that is a March</p>                                                                 |
| <p><b>May</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> Generalization (element - is a specialization of):«IDEAS:superSubtype»<br/> May - CalendarMonth<br/> <u>Attributes:</u><br/> -<br/> A CalendarMonth that is a May</p>                                                                       |

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| <p><b>Millisecond</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>Millisecond - FractionOfASecond</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CalendarPeriod that corresponds to one thousandth of a Second.</p> |
| <p><b>Minute</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>Minute - CalendarPeriod</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CalendarPeriod that corresponds to sixty seconds</p>                            |
| <p><b>Monday</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>Monday - Day</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Day that is a Monday</p>                                                                   |
| <p><b>CalendarMonth</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>CalendarMonth - CalendarPeriod</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CalendarPeriod that is a Month in the Gregorian Calendar</p>      |
| <p><b>Nanosecond</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>Nanosecond - FractionOfASecond</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CalendarPeriod that corresponds to one billionth of a Second</p>     |
| <p><b>November</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>November - CalendarMonth</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CalendarMonth that is a November</p>                                         |
| <p><b>October</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>October - CalendarMonth</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                     |

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| <p>A CalendarMonth that is an October</p> <p><b>Saturday</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> Saturday - Day<br/> <u>Attributes:</u><br/> -<br/> A Day that is a Saturday</p>                                                              |
| <p><b>Second</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> Second - CalendarPeriod<br/> <u>Attributes:</u><br/> -<br/> A CalendarPeriod that corresponds to the period of time defined as one second by the International System of Units (SI).</p> |
| <p><b>September</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> September - CalendarMonth<br/> <u>Attributes:</u><br/> -<br/> A CalendarMonth that is a September</p>                                                                                 |
| <p><b>SevenDayWeek</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> SevenDayWeek - CalendarPeriod<br/> <u>Attributes:</u><br/> -<br/> A CalendarPeriod that is a grouping of seven Days</p>                                                            |
| <p><b>Sunday</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> Sunday - Day<br/> <u>Attributes:</u><br/> -<br/> A Day that is a Sunday</p>                                                                                                              |
| <p><b>TenthOfSecond</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> TenthOfSecond - FractionOfASecond<br/> <u>Attributes:</u><br/> -<br/> A CalendarPeriod that corresponds to 0.1 Seconds</p>                                                        |
| <p><b>Thursday</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> Thursday - Day<br/> <u>Attributes:</u></p>                                                                                                                                             |

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| <p>-</p> <p>A Day that is a Thursday</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>Tuesday</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i> «IDEAS:superSubtype»</p> <p>Tuesday - Day</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Day that is a Tuesday</p>                                                                                                                                                                                                                                                                                               |
| <p><b>Wednesday</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i> «IDEAS:superSubtype»</p> <p>Wednesday - Day</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Day that is a Wednesday</p>                                                                                                                                                                                                                                                                                         |
| <p><b>Year</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i> «IDEAS:superSubtype»</p> <p>Year - CalendarPeriod</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CalendarPeriod that corresponds to the time between two recurrences of an event related to the orbit of the Earth around the Sun</p>                                                                                                                                                                               |
| <p><b>YearQuarter</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i> «IDEAS:superSubtype»</p> <p>YearQuarter - CalendarPeriod</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CalendarPeriod that corresponds to three Months</p>                                                                                                                                                                                                                                                  |
| <p><b>timeSuperTypeDurationSubtype</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Association (source - target):</i> «place1Type»</p> <p>timeSuperTypeDurationSubtype - Duration</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>timeSuperTypeDurationSubtype - Time</p> <p><i>Generalization (element - is a specialization of):</i> «IDEAS:superSubtype»</p> <p>timeSuperTypeDurationSubtype - superSubtype</p> <p><u>Attributes:</u></p> <p>-</p> <p>Asserts that a given Time is the supertype of a Duration.</p> |
| <p><b>Duration</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i> «IDEAS:superSubtype»</p> <p>Duration - PeriodType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PeriodType that is an arbitrary period of time</p>                                                                                                                                                                                                                                                                       |

Examples:  
20 Minutes - the set of all 20 minute periods  
3.345 Nanoseconds- the set of all 3.345 Nanosecond periods  
7000 Years- the set of all 7000 Year periods

#### IDEAS Namespace

**DateTimeName** «IDEAS:Type»

Connectors:

*Generalization (element - is a specialization of):*«IDEAS:superSubtype»

DateTimeName - Name

Attributes:

-

A Name that represents a CalendarPeriod

**ISO8601-YYYY** «IDEAS:NamingScheme»

Connectors:

*Generalization (element - is a specialization of):*«IDEAS:superSubtype»

ISO8601-YYYY - ISO8601DateTime

*Dependency (element - is an instance of):*«IDEAS:typeInstance»

ISO8601-YYYY - NamingScheme

Attributes:

-

An ISO8601DateTime that is a a Representation of a Year

Example:

1994

**ISO8601-YYYY-MM** «IDEAS:NamingScheme»

Connectors:

*Dependency (element - is an instance of):*«IDEAS:typeInstance»

ISO8601-YYYY-MM - NamingScheme

*Generalization (element - is a specialization of):*«IDEAS:superSubtype»

ISO8601-YYYY-MM - ISO8601DateTime

Attributes:

-

An ISO8601DateTime that is a a Representation of a Month.

Example:

1994-05

**ISO8601-YYYY-MM-DD** «IDEAS:NamingScheme»

Connectors:

*Dependency (element - is an instance of):*«IDEAS:typeInstance»

ISO8601-YYYY-MM-DD - NamingScheme

*Generalization (element - is a specialization of):*«IDEAS:superSubtype»

ISO8601-YYYY-MM-DD - ISO8601DateTime

Attributes:

-

An ISO8601DateTime that is a a Representation of a SevenDayWeek.

Example:

1994-W20

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>ISO8601-YYYY-MM-DDThh</b> «IDEAS:NamingScheme»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>ISO8601-YYYY-MM-DDThh - ISO8601DateTime</p> <p><i>Dependency (element - is an instance of):</i>«IDEAS:typeInstance»</p> <p>ISO8601-YYYY-MM-DDThh - NamingScheme</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ISO8601DateTime that is a a Representation of a SevenDayWeek.</p> <p>Example:</p> <p>1994-W20</p>                   |
| <p><b>ISO8601-YYYY-MM-DDThh:mm</b> «IDEAS:NamingScheme»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>ISO8601-YYYY-MM-DDThh:mm - ISO8601DateTime</p> <p><i>Dependency (element - is an instance of):</i>«IDEAS:typeInstance»</p> <p>ISO8601-YYYY-MM-DDThh:mm - NamingScheme</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ISO8601DateTime that is a a Representation of a SevenDayWeek.</p> <p>Example:</p> <p>1994-W20</p>          |
| <p><b>ISO8601-YYYY-MM-DDThh:mm:ss</b> «IDEAS:NamingScheme»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>ISO8601-YYYY-MM-DDThh:mm:ss - ISO8601DateTime</p> <p><i>Dependency (element - is an instance of):</i>«IDEAS:typeInstance»</p> <p>ISO8601-YYYY-MM-DDThh:mm:ss - NamingScheme</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ISO8601DateTime that is a a Representation of a SevenDayWeek.</p> <p>Example:</p> <p>1994-W20</p> |
| <p><b>ISO8601-YYYY-MM-DDThh:mm:ss.</b> «IDEAS:NamingScheme»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>ISO8601-YYYY-MM-DDThh:mm:ss. - ISO8601DateTime</p> <p><i>Dependency (element - is an instance of):</i>«IDEAS:typeInstance»</p> <p>ISO8601-YYYY-MM-DDThh:mm:ss. - NamingScheme</p> <p><u>Attributes:</u></p> <p>An ISO8601DateTime that is a a Representation of a SevenDayWeek.</p> <p>Example:</p> <p>1994-W20</p>       |
| <p><b>ISO8601-YYYY-Qq</b> «IDEAS:NamingScheme»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>ISO8601-YYYY-Qq - ISO8601DateTime</p> <p><i>Dependency (element - is an instance of):</i>«IDEAS:typeInstance»</p>                                                                                                                                                                                                                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <p>ISO8601-YYYY-Qq - NamingScheme</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ISO8601DateTime that is a Representation of a Quarter.</p> <p>Note: this is a non-standard extension of the ISO8601 format</p> <p>Example:</p> <p>1994-Q2</p>                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>ISO8601-YYYY-Www</b> «IDEAS:NamingScheme»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>ISO8601-YYYY-Www - ISO8601DateTime</p> <p>Dependency (element - is an instance of):«IDEAS:typeInstance»</p> <p>ISO8601-YYYY-Www - NamingScheme</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ISO8601DateTime that is a Representation of a SevenDayWeek.</p> <p>Example:</p> <p>1994-W20</p>                                                                                                                                                |
| <p><b>ISO8601DateTime</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>ISO8601DateTime - DateTimeName</p> <p><u>Attributes:</u></p> <p>-</p> <p>A DateTimeName that represents a CalendarPeriod in the extended format recommended by ISO8601</p>                                                                                                                                                                                                                                                                          |
| <p><b>dayNamedByISO8601</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>dayNamedByISO8601 - namedByDateTimeName</p> <p>Association (source - target):«place2Type»</p> <p>dayNamedByISO8601 - ISO8601-YYYY-MM-DD</p> <p>Association (source - target):«place1Type»</p> <p>dayNamedByISO8601 - Day</p> <p><u>Attributes:</u></p> <p>-</p> <p>A namedBy that asserts that an ISO8601-YYYY-MM-DD names a Day</p>                                                                                                         |
| <p><b>fractionOfASecondNamedByISO8601</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>fractionOfASecondNamedByISO8601 - namedByDateTimeName</p> <p>Association (source - target):«place2Type»</p> <p>fractionOfASecondNamedByISO8601 - ISO8601-YYYY-MM-DDThh:mm:ss.</p> <p>Association (source - target):«place1Type»</p> <p>fractionOfASecondNamedByISO8601 - FractionOfASecond</p> <p><u>Attributes:</u></p> <p>-</p> <p>A namedBy that asserts that an ISO8601-YYYY-MM-DDThh:mm:ss. names a FractionOfASecond</p> |

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| <p><b>hourNamedByISO8601</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>hourNamedByISO8601 - namedByDateTimeName</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>hourNamedByISO8601 - ISO8601-YYYY-MM-DDThh</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>hourNamedByISO8601 - Hour</p> <p><u>Attributes:</u></p> <p>-</p> <p>A namedBy that asserts that an ISO8601-YYYY-MM-DDThh names an hour</p>                  |
| <p><b>minuteNamedByISO8601</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>minuteNamedByISO8601 - namedByDateTimeName</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>minuteNamedByISO8601 - ISO8601-YYYY-MM-DDThh:mm</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>minuteNamedByISO8601 - Minute</p> <p><u>Attributes:</u></p> <p>-</p> <p>A namedBy that asserts that an ISO8601-YYYY-MM-DDThh:mm names a Minute</p> |
| <p><b>monthNamedByISO8601</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>monthNamedByISO8601 - namedByDateTimeName</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>monthNamedByISO8601 - ISO8601-YYYY-MM</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>monthNamedByISO8601 - CalendarMonth</p> <p><u>Attributes:</u></p> <p>-</p> <p>A namedBy that asserts that an ISO8601-YYYY-MM names a Month</p>                 |
| <p><b>namedByDateTimeName</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>namedByDateTimeName - namedBy</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>namedByDateTimeName - CalendarPeriod</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>namedByDateTimeName - DateTimeName</p> <p><u>Attributes:</u></p> <p>-</p> <p>A namedBy that asserts a CalendarPeriod is represented by a DateTimeName</p>                   |

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| <p><b>quarterNamedByISO8601</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>quarterNamedByISO8601 - namedByDateTimeName</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>quarterNamedByISO8601 - ISO8601-YYYY-Qq</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>quarterNamedByISO8601 - YearQuarter</p> <p><u>Attributes:</u></p> <p>-</p> <p>A namedBy that asserts that an ISO8601-YYYY-Qq names a YearQuarter</p>           |
| <p><b>secondNamedByISO8601</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>secondNamedByISO8601 - namedByDateTimeName</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>secondNamedByISO8601 - ISO8601-YYYY-MM-DDThh:mm:ss</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>secondNamedByISO8601 - Second</p> <p><u>Attributes:</u></p> <p>-</p> <p>A namedBy that asserts that a nISO8601-YYYY-MM-DDThh:mm:ss names a Second</p> |
| <p><b>weekNamedByISO8601</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Association (source - target):</i>«place2Type»</p> <p>weekNamedByISO8601 - ISO8601-YYYY-Www</p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>weekNamedByISO8601 - namedByDateTimeName</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>weekNamedByISO8601 - SevenDayWeek</p> <p><u>Attributes:</u></p> <p>-</p> <p>A namedBy that asserts that an ISO8601-YYYY-Www names a SevenDayWeek</p>                   |
| <p><b>yearNamedByISO8601</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»</p> <p>yearNamedByISO8601 - namedByDateTimeName</p> <p><i>Association (source - target):</i>«place1Type»</p> <p>yearNamedByISO8601 - Year</p> <p><i>Association (source - target):</i>«place2Type»</p> <p>yearNamedByISO8601 - ISO8601-YYYY</p> <p><u>Attributes:</u></p> <p>-</p> <p>A namedBy that asserts that an ISO8601-YYYY names a Year</p>                                           |

| IDEAS Powertypes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <p><b>BeforeAfterType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place1Type»</p> <p>BeforeAfterType - IndividualType</p> <p>Association (source - target):«place2Type»</p> <p>BeforeAfterType - IndividualType</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>BeforeAfterType - CoupleType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TupleType that is Powertype of beforeAfter</p>                                                                |
| <p><b>CoupleType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is an instance of):«IDEAS:typeInstance»</p> <p>CoupleType - Powertype</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>CoupleType - TupleType</p> <p>Association (source - target):«place2Type»</p> <p>CoupleType - Type</p> <p>Association (source - target):«place1Type»</p> <p>CoupleType - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>The TupleType that is the Powertype of couple</p>     |
| <p><b>DescriptionType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>DescriptionType - RepresentationType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RepresentationType that is the Powertype of Description</p>                                                                                                                                                                                                                               |
| <p><b>IndividualTypeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is an instance of):«IDEAS:powertypeInstance»</p> <p>IndividualTypeType - IndividualTypeTypeType</p> <p>Dependency (element - is an instance of):«IDEAS:typeInstance»</p> <p>IndividualTypeType - Powertype</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>IndividualTypeType - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PlaceableType that is the Powertype of IndividualType</p> |
| <p><b>IndividualTypeTypeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is an instance of):«IDEAS:typeInstance»</p> <p>IndividualTypeTypeType - Powertype</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p>                                                                                                                                                                                                                                                         |

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| <p>IndividualTypeTypeType - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PlaceableType that is the Powertype of IndividualTypeType</p>                                                                                                                                                                                                                                                                          |
| <p><b>InstantType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>InstantType - IndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualType that is the Powertype of Instant</p>                                                                                                                                |
| <p><b>NameType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>NameType - RepresentationType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RepresentationType that is the Powertype of Name</p>                                                                                                                                  |
| <p><b>PeriodType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>PeriodType - IndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualType that is the Powertype of Period</p>                                                                                                                                   |
| <p><b>PlaceableType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>PlaceableType - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Type which has placeTypes defined for it - e.g. TupleType and its powertype levels.</p>                                                                                                        |
| <p><b>RepresentationType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>RepresentationType - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Type that is the Powertype of Representation</p>                                                                                                                                |
| <p><b>SuperSubtypeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is an instance of):«IDEAS:powertypeInstance»</p> <p>SuperSubtypeType - SuperSubtypeTypeType</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SuperSubtypeType - CoupleType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CoupleType that is the Powertype of superSubtype</p> |

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| <p><b>SuperSubtypeTypeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SuperSubtypeTypeType - TupleTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TupleTypeType that is the Powertype of SuperSubtypeType</p>                                                                                                                                                                                                                                                                                                 |
| <p><b>TemporalWholePartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>TemporalWholePartType - WholePartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A WholePartType that is the Powertype of temporalWholePart</p>                                                                                                                                                                                                                                                                                              |
| <p><b>TupleTypeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«placeType»</p> <p>TupleTypeType - Type</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>TupleTypeType - PlaceableType</p> <p>Dependency (element - is an instance of):«IDEAS:powertypeInstance»</p> <p>TupleTypeType - TupleTypeTypeType</p> <p>Dependency (element - is an instance of):«IDEAS:typeInstance»</p> <p>TupleTypeType - Powertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PlaceableType that is the Powertype of TupleType</p>                |
| <p><b>TupleTypeTypeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«placeType»</p> <p>TupleTypeTypeType - Type</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>TupleTypeTypeType - PlaceableType</p> <p>Dependency (element - is an instance of):«IDEAS:typeInstance»</p> <p>TupleTypeTypeType - Powertype</p> <p>Dependency (element - is an instance of):«IDEAS:typeInstance»</p> <p>TupleTypeTypeType - PlaceableType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PlaceableType that is the Powertype of TupleTypeType</p> |
| <p><b>WholePartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place1Type»</p> <p>WholePartType - IndividualType</p> <p>Association (source - target):«place2Type»</p> <p>WholePartType - IndividualType</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>WholePartType - CoupleType</p>                                                                                                                                                                                                                                      |

| <u>Attributes:</u><br>-<br>A CoupleType that is the Powertype of wholePart                                                                                                                                                                                                                                                                                                                 |
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| IDEAS Singletons, Doubletons etc                                                                                                                                                                                                                                                                                                                                                           |
| <b>doubletonTypeInstance</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Association (source - target):«place1Type»<br>doubletonTypeInstance - Doubleton<br>Generalization (element - is a specialization of):«IDEAS:superSubtype»<br>doubletonTypeInstance - typeInstance<br><u>Attributes:</u><br>-<br>A typeInstance that asserts a Thing is an instance of a Doubleton                  |
| <b>quadrupletonTypeInstance</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Association (source - target):«place1Type»<br>quadrupletonTypeInstance - Quadrupleton<br>Generalization (element - is a specialization of):«IDEAS:superSubtype»<br>quadrupletonTypeInstance - typeInstance<br><u>Attributes:</u><br>-<br>A typeInstance that asserts a Thing is an instance of a Quadrupleton   |
| <b>quintupletonTypeInstance</b> - «IDEAS:TupleType»<br><u>Connectors:</u><br>Association (source - target):«place1Type»<br>quintupletonTypeInstance - Quintupleton<br>Generalization (element - is a specialization of):«IDEAS:superSubtype»<br>quintupletonTypeInstance - typeInstance<br><u>Attributes:</u><br>-<br>A typeInstance that asserts a Thing is an instance of a Quintupleton |
| <b>singletonTypeInstance</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Association (source - target):«place1Type»<br>singletonTypeInstance - Singleton<br>Generalization (element - is a specialization of):«IDEAS:superSubtype»<br>singletonTypeInstance - typeInstance<br><u>Attributes:</u><br>-<br>A typeInstance that asserts a Thing is an instance of a Singleton                  |
| <b>tripletonTypeInstance</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Generalization (element - is a specialization of):«IDEAS:superSubtype»<br>tripletonTypeInstance - typeInstance<br>Association (source - target):«place1Type»<br>tripletonTypeInstance - Tripleton<br><u>Attributes:</u><br>-                                                                                       |

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| <p>A typeInstance that asserts a Thing is an instance of a Tripleton</p> <p><b>Doubleton</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> Doubleton - Type<br/> <u>Attributes:</u><br/> -<br/> A Type that has exactly two instances</p>                                                                                                                                                                                                                                                                      |
| <p><b>Quadrupleton</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> Quadrupleton - Type<br/> <u>Attributes:</u><br/> -<br/> A Type that has exactly four instances</p>                                                                                                                                                                                                                                                                                                                                        |
| <p><b>Quintupleton</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> Quintupleton - Type<br/> <u>Attributes:</u><br/> -<br/> A Type that has exactly five instances</p>                                                                                                                                                                                                                                                                                                                                        |
| <p><b>Singleton</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> Singleton - Type<br/> <u>Attributes:</u><br/> -<br/> A Type with only one instance</p>                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>Tripleton</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> Tripleton - Type<br/> <u>Attributes:</u><br/> -<br/> A Type that has exactly three instances</p>                                                                                                                                                                                                                                                                                                                                             |
| <b>IDEAS Sum, fusion and union</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>FusionOfSetOfIndividuals</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Association (source - target):</i>«place2Type»<br/> FusionOfSetOfIndividuals - IndividualType<br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> FusionOfSetOfIndividuals - WholePartType<br/> <i>Generalization (element - is a specialization of):</i>«IDEAS:superSubtype»<br/> FusionOfSetOfIndividuals - SumOfSetOfThings<br/> <i>Association (source - target):</i>«place1Type»<br/> FusionOfSetOfIndividuals - SingletonIndividualType<br/> <u>Attributes:</u></p> |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <p>-</p> <p>A SumOfSetOfThings and a WholePartType whose instances link the fusion of a set of Individuals with its fused whole.<br/>In other words, this relates an IndividualType (a collection of Individuals) to its mereological sum.<br/>See <a href="http://plato.stanford.edu/entries/mereology/#Sum">http://plato.stanford.edu/entries/mereology/#Sum</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>PartitionOfSetOfDisjointIndividuals</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place2Type»</p> <p>PartitionOfSetOfDisjointIndividuals - SetOfDisjointIndividuals</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>PartitionOfSetOfDisjointIndividuals - PartitionOfSetOfDisjointThings</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>PartitionOfSetOfDisjointIndividuals - FusionOfSetOfIndividuals</p> <p><u>Attributes:</u></p> <p>-</p> <p>A FusionOfSetOfIndividuals whose fused Type is a SetOfDisjointIndividuals.<br/>This is a division of a Individual into disjoint parts.</p>                                                                                                                                                                                      |
| <p><b>PartitionOfSetOfDisjointThings</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place2Type»</p> <p>PartitionOfSetOfDisjointThings - SetOfDisjointThings</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>PartitionOfSetOfDisjointThings - SumOfSetOfThings</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SumOfSetOfThings whose summed Type is a SetOfDisjointThings.<br/>This is a division of a Thing into disjoint parts/sub-types.</p>                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>PartitionOfSetOfDisjointTypes</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place2Type»</p> <p>PartitionOfSetOfDisjointTypes - SetOfDisjointTypes</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>PartitionOfSetOfDisjointTypes - UnionOfSetOfTypes</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>PartitionOfSetOfDisjointTypes - PartitionOfSetOfDisjointThings</p> <p><u>Attributes:</u></p> <p>-</p> <p>A UnionOfSetOfTypes whose unioned Type is a SetOfDisjointTypes<br/>This is a division of a Type into disjoint subTypes.<br/>See <a href="http://en.wikipedia.org/wiki/Partition_of_a_set">http://en.wikipedia.org/wiki/Partition_of_a_set</a> and <a href="http://en.wikipedia.org/wiki/Partition_of_a_set">http://en.wikipedia.org/wiki/Partition_of_a_set</a>.</p> |
| <p><b>SumOfSetOfThings</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place2Type»</p> <p>SumOfSetOfThings - Type</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>SumOfSetOfThings - CoupleType</p> <p>Association (source - target):«place1Type»</p> <p>SumOfSetOfThings - Singleton</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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| <p>-</p> <p>A CoupleType whose instances are couples that link the sum of a set of Things with its sum.<br/>For more detail, see its subTypes - UnionOfSetOfTypes and FusionOfSetOfIndividuals.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b>UnionOfSetOfTypes</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>UnionOfSetOfTypes - SuperSubtypeType</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>UnionOfSetOfTypes - SumOfSetOfThings</p> <p>Association (source - target):«place2Type»</p> <p>UnionOfSetOfTypes - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SumOfSetOfThings and a SuperSubtypeType whose instances are couples that link the union of a set of Types with these Types.<br/>In other words, this relates a Type (a collection of Types) to its set-theoretic sum (aka union).</p> |
| <p style="text-align: center;"><b>IDEAS Tuples</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>quadruple</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place2Type»</p> <p>quadruple - Thing</p> <p>Association (source - target):«place1Type»</p> <p>quadruple - Thing</p> <p>Association (source - target):«place4Type»</p> <p>quadruple - Thing</p> <p>Association (source - target):«place3Type»</p> <p>quadruple - Thing</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>quadruple - tuple</p> <p><u>Attributes:</u></p> <p>-</p> <p>A tuple which has four places</p>                                                                                                                             |
| <p><b>quintuple</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>quintuple - tuple</p> <p>Association (source - target):«place2Type»</p> <p>quintuple - Thing</p> <p>Association (source - target):«place3Type»</p> <p>quintuple - Thing</p> <p>Association (source - target):«place5Type»</p> <p>quintuple - Thing</p> <p>Association (source - target):«place1Type»</p> <p>quintuple - Thing</p> <p>Association (source - target):«place4Type»</p> <p>quintuple - Thing</p> <p><u>Attributes:</u></p> <p>-</p> <p>A tuple which has five places</p>                                                  |

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| <p><b>triple</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target):«place3Type»</p> <p>triple - Thing</p> <p>Association (source - target):«place2Type»</p> <p>triple - Thing</p> <p>Association (source - target):«place1Type»</p> <p>triple - Thing</p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>triple - tuple</p> <p><u>Attributes:</u></p> <p>-</p> <p>A tuple which has three places</p>                                                                       |
| <b>IDEAS Temporal whole part</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>endBoundary</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>endBoundary - temporalBoundary</p> <p><u>Attributes:</u></p> <p>-</p> <p>A temporalBoundary where the boundary is a end boundary of the whole.</p>                                                                                                                                                                                                                                   |
| <p><b>startBoundary</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>startBoundary - temporalBoundary</p> <p><u>Attributes:</u></p> <p>-</p> <p>A temporalBoundary where the boundary is a start boundary of the whole.</p>                                                                                                                                                                                                                             |
| <p><b>temporalBoundary</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>temporalBoundary - temporalWholePart</p> <p>Association (source - target):«place2Type»</p> <p>temporalBoundary - Individual</p> <p><u>Attributes:</u></p> <p>-</p> <p>A temporalWholePart where the part is a temporal boundary of the whole.</p>                                                                                                                               |
| <p><b>temporalWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialization of):«IDEAS:superSubtype»</p> <p>temporalWholePart - wholePart</p> <p>Dependency (element - is an instance of):«IDEAS:powertypeInstance»</p> <p>temporalWholePart - TemporalWholePartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A wholePart that asserts the spatial extent of the (whole) individual is co-extensive with the spatial extent of the (part) individual for a particular period of time.</p> |

| IDEAS BeforeAfter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <p><b>beforeAfter</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>beforeAfter - Individual</p> <p>Association (source - target): «place2Type»</p> <p>beforeAfter - Individual</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>beforeAfter - couple</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>beforeAfter - BeforeAfterType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts one Individual's temporal extent is completely before the temporal extent of another.</p> |
| IDEAS Intentional construction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>IntentionallyConstructedIndividual</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>IntentionallyConstructedIndividual - Individual</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>IntentionallyConstructedIndividual - IntentionallyConstructedThing</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Individual that is an IntentionallyConstructedThing</p>                                                                                                                         |
| <p><b>intentionallyConstructedTuple</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>intentionallyConstructedTuple - IntentionallyConstructedThing</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>intentionallyConstructedTuple - tuple</p> <p><u>Attributes:</u></p> <p>-</p> <p>A tuple that is an IntentionallyConstructedThing</p>                                                                                                                                                        |
| <p><b>IntentionallyConstructedThing</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>IntentionallyConstructedThing - Thing</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Thing that is intentionally constructed.</p> <p>These are Things that society has come to identify as significant - e.g. money, marriage</p> <p>For more information on this refer to "The Construction of Social Reality" by John Searle ISBN 01402.35906</p>                                                                                                     |
| <p><b>IntentionallyConstructedType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>IntentionallyConstructedType - Type</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>IntentionallyConstructedType - IntentionallyConstructedThing</p>                                                                                                                                                                                                                                                            |

| <u>Attributes:</u><br>-<br>A Type that is an IntentionallyConstructedThing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| IDEAS Properties & Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>propertyOfIndividual</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Generalization (element - is a specialisation of): «IDEAS:superSubtype»<br>propertyOfIndividual - typeInstance<br>Association (source - target): «place1Type»<br>propertyOfIndividual - Property<br>Association (source - target): «place2Type»<br>propertyOfIndividual - Individual<br><u>Attributes:</u><br>-<br>A typeInstance that asserts an Individual is an instance of a Property - i.e. the Individual "has" a property<br>Examples:<br>A product being "expensive"<br>A laptop weighing 2.2kg<br>A car travelling between 40 and 50 km/h                                                                            |
| <b>propertyOfType</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Association (source - target): «place1Type»<br>propertyOfType - Property<br>Association (source - target): «place2Type»<br>propertyOfType - IndividualType<br>Generalization (element - is a specialisation of): «IDEAS:superSubtype»<br>propertyOfType - superSubtype<br><u>Attributes:</u><br>-<br>A superSubtype that asserts an IndividualType is a subtype of a Property - i.e. it asserts all members of the Individual type "have" a property<br>Examples:<br>All London Buses are red<br>All Porsche 911 2.2S have a mass between 900 and 960 kg<br>All atoms of mercury have an atomic weight of 200.59 ·mol <sup>-1</sup> |
| <b>MeasureType</b> «IDEAS:Powertype»<br><u>Connectors:</u><br>Generalization (element - is a specialisation of): «IDEAS:superSubtype»<br>MeasureType - IndividualTypeType<br><u>Attributes:</u><br>-<br>The IndividualTypeType that is the powertype of Measure                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>dispositionManifestation</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Association (source - target): «place2Type»<br>dispositionManifestation - CategoricalProperty<br>Association (source - target): «place1Type»<br>dispositionManifestation - DispositionalProperty<br>Generalization (element - is a specialisation of): «IDEAS:superSubtype»                                                                                                                                                                                                                                                                                                                                               |

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| <p>dispositionManifestation - couple</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts a CategoricalProperty has members that manifest a DispositionalProperty</p>                                                                                                                                                                                                                                                                                                                                                                                                |
| <p><b>electricCurrentInAmperes</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>electricCurrentInAmperes - ElectricCurrent</p> <p>Association (source - target): «place2Type»</p> <p>electricCurrentInAmperes - ValueInAmperes</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>electricCurrentInAmperes - measureNamedNumericallyBy</p> <p><u>Attributes:</u></p> <p>-</p> <p>A measureNamedNumericallyBy that names an ElectricCurrent with its ValueInAmperes</p>              |
| <p><b>frequencyInHertz</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>frequencyInHertz - measureNamedNumericallyBy</p> <p>Association (source - target): «place1Type»</p> <p>frequencyInHertz - Frequency</p> <p>Association (source - target): «place2Type»</p> <p>frequencyInHertz - ValueInHertz</p> <p><u>Attributes:</u></p> <p>-</p> <p>A measureNamedNumericallyBy that names a Frequency with its ValueInHertz</p>                                                               |
| <p><b>lengthInMetres</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>lengthInMetres - Length</p> <p>Association (source - target): «place2Type»</p> <p>lengthInMetres - ValueInMetres</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>lengthInMetres - measureNamedNumericallyBy</p> <p><u>Attributes:</u></p> <p>-</p> <p>A measureNamedNumericallyBy that names a Length with its ValueInMetres</p>                                                                           |
| <p><b>lowerBoundOfMeasureRange</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»</p> <p>lowerBoundOfMeasureRange - MeasurePoint</p> <p>Association (source - target): «place1Type»</p> <p>lowerBoundOfMeasureRange - MeasureRange</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>lowerBoundOfMeasureRange - superSubtype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubtype that asserts the MeasureInstance that is the lower bound (i.e. minimum measure) of a MeasureRange</p> |

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| <p><b>luminousIntensityInCandela</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»<br/>luminousIntensityInCandela - ValueInCandela</p> <p>Association (source - target): «place1Type»<br/>luminousIntensityInCandela - LuminousIntensity</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»<br/>luminousIntensityInCandela - measureNamedNumericallyBy</p> <p><u>Attributes:</u></p> <p>-</p> <p>A measureNamedNumericallyBy that names a LuminousIntensity with its ValueInCandela</p>                         |
| <p><b>massInKilograms</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»<br/>massInKilograms - Mass</p> <p>Association (source - target): «place2Type»<br/>massInKilograms - ValueInKilograms</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»<br/>massInKilograms - measureNamedNumericallyBy</p> <p><u>Attributes:</u></p> <p>-</p> <p>A measureNamedNumericallyBy that names a Mass with its ValueInKilograms</p>                                                                                           |
| <p><b>measureNamedNumericallyBy</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»<br/>measureNamedNumericallyBy - MeasurePoint</p> <p>Association (source - target): «place2Type»<br/>measureNamedNumericallyBy - NumericMeasureRepresentation</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»<br/>measureNamedNumericallyBy - namedBy</p> <p><u>Attributes:</u></p> <p>-</p> <p>A namedBy that asserts that a MeasureInstance has a NumericMeasureRepresentation</p>                                        |
| <p><b>measureOfIndividual</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»<br/>measureOfIndividual - Measure</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»<br/>measureOfIndividual - propertyOfIndividual</p> <p><u>Attributes:</u></p> <p>-</p> <p>A propertyOfIndividual that asserts an Individual is an instance of a Measure - i.e. the Individual "has" a property corresponding to the Measure.</p> <p>Examples:</p> <p>A laptop weighing 2.2kg</p> <p>A car travelling between 40 and 50 km/h</p> |

**measureOfType** «IDEAS:TupleType»

Connectors:

*Generalization (element - is a specialisation of):* «IDEAS:superSubtype»

measureOfType - propertyOfType

*Association (source - target):* «place1Type»

measureOfType - Measure

Attributes:

-

A propertyOfType that asserts an IndividualType is a subtype of a Measure - i.e. it asserts all members of the Individual type have a property corresponding to the Measure

Examples:

All Porsche 911 2.2S have a mass between 900 and 960 kg

All atoms of mercury have an atomic weight of 200.59 ·mol-

**measureTypeInstance** «IDEAS:TupleType»

Connectors:

*Association (source - target):* «place2Type»

measureTypeInstance - Measure

*Association (source - target):* «place1Type»

measureTypeInstance - MeasureCategory

*Generalization (element - is a specialisation of):* «IDEAS:superSubtype»

measureTypeInstance - typeInstance

Attributes:

-

A typeInstance that asserts a Measure is an instance of a MeasureCategory.

Examples:

2kg is a mass

40m/s is a velocity

**temperatureInKelvin** «IDEAS:TupleType»

Connectors:

*Association (source - target):* «place1Type»

temperatureInKelvin - ThermodynamicTemperature

*Association (source - target):* «place2Type»

temperatureInKelvin - ValueInKelvin

*Generalization (element - is a specialisation of):* «IDEAS:superSubtype»

temperatureInKelvin - measureNamedNumericallyBy

Attributes:

-

A measureNamedNumericallyBy that names a ThermodynamicTemperature with its ValueInKelvin

**timeInSeconds** «IDEAS:TupleType»

Connectors:

*Association (source - target):* «place2Type»

timeInSeconds - ValueInSeconds

*Association (source - target):* «place1Type»

timeInSeconds - Time

*Generalization (element - is a specialisation of):* «IDEAS:superSubtype»

timeInSeconds - measureNamedNumericallyBy

Attributes:

-

A measureNamedNumericallyBy that names a Time with its ValueInSeconds

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| <p><b>upperBoundOfMeasureRange</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>upperBoundOfMeasureRange - superSubtype</p> <p>Association (source - target): «place2Type»</p> <p>upperBoundOfMeasureRange - MeasurePoint</p> <p>Association (source - target): «place1Type»</p> <p>upperBoundOfMeasureRange - MeasureRange</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubtype that asserts the MeasureInstance that is the upper bound (i.e. maximum measure) of a MeasureRange</p>                                                                                                                                                       |
| <p><b>CategoricalMeasure</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>CategoricalMeasure - CategoricalProperty</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>CategoricalMeasure - Measure</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CategoricalProperty and a Measure - i.e. a CategoricalProperty that is measureable</p>                                                                                                                                                                                                                                                                              |
| <p><b>CategoricalProperty</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>CategoricalProperty - Property</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Property that is always exhibited by its instances (Individuals). Formally, a CategoricalProperty is the set of things that have a property simpliciter without reference to the capability to manifest another property (as is the case with DispositionalProperties (qv.)). So, for example, the property of 'flying at Mach 2' is a CategoricalProperty, whereas 'being capable of flying at Mach 2' is not.</p> <p>Examples:</p> <p>10kg</p> <p>40cm</p> <p>Fitting in an ISO container</p> |
| <p><b>DispositionalMeasure</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>DispositionalMeasure - DispositionalProperty</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>DispositionalMeasure - Measure</p> <p><u>Attributes:</u></p> <p>-</p> <p>A MeasureableProperty and a DispositionalProperty whose members share a common property that is measurable.</p>                                                                                                                                                                                                                                               |
| <p><b>DispositionalProperty</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>DispositionalProperty - Property</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Property whose members are Individuals that have a property of being capable to manifest a CategoricalProperty under certain conditions other things being equal. It is critical when describing the disposition to</p>                                                                                                                                                                                                                                                                     |

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| <p>specify the conditions both for the dispositional and the categorical property that is capable of being manifested. These can range from quite stringent conditions, the DispositionalProperty of 'being capable of flying at Mach 2, at a moment's notice' to the more lax, the property of 'being capable of flying at Mach 2, once suitably configured'. Note that these have the same manifestation - the categorical property of 'flying at Mach 2'. Similarly, it is often critical to describe in detail the conditions that apply to the CategoricalProperty that can be manifested, so, for example, 'flying at Mach 2, in good weather'.</p> <p>Example:<br/> Ability to fly at Mach 2<br/> Ability to strike a target 10km away<br/> Ability to dissolve in water</p> |
| <p><b>ElectricCurrent</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»<br/> ElectricCurrent - MeasurePoint<br/> <i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»<br/> ElectricCurrent - MeasureCategory<br/> <u>Attributes:</u><br/> -<br/> A MeasureInstance whose members are Individuals that all have the same electric current flowing through them<br/> Examples:<br/> 5 Amps<br/> 13 Amps</p>                                                                                                                                                                                                                                                                                  |
| <p><b>Frequency</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»<br/> Frequency - MeasureCategory<br/> <i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»<br/> Frequency - MeasurePoint<br/> <u>Attributes:</u><br/> -<br/> A MeasureInstance whose instances are Individuals that all oscillate at the same frequency<br/> Examples:<br/> 100Hz<br/> 60GHz</p>                                                                                                                                                                                                                                                                                                                         |
| <p><b>Length</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»<br/> Length - MeasureCategory<br/> <i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»<br/> Length - MeasurePoint<br/> <u>Attributes:</u><br/> -<br/> A MeasureInstance whose instances are Individuals that all have the same length<br/> Examples:<br/> 2mm<br/> 8 miles</p>                                                                                                                                                                                                                                                                                                                                             |
| <p><b>LuminousIntensity</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> <i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»<br/> LuminousIntensity - MeasureCategory<br/> <i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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| <p>LuminousIntensity - MeasurePoint</p> <p><u>Attributes:</u></p> <p>-</p> <p>A MeasureInstance whose members are Individuals that all have the same luminous intensity</p> <p>Examples:</p> <p>5 Candela</p> <p>20 Candle Power</p> <p>4 hefnerkerze</p>                                                                                                                                                                            |
| <p><b>Mass</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>Mass - MeasurePoint</p> <p>Dependency (element - is instance of): «IDEAS:typeInstance»</p> <p>Mass - MeasureCategory</p> <p><u>Attributes:</u></p> <p>-</p> <p>A MeasureInstance whose members are Individuals that all have the same mass</p> <p>Examples:</p> <p>2kg</p> <p>2.8lbs</p> |
| <p><b>MeasureCategory</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>MeasureCategory - MeasureType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A MeasureType whose members are recognised types of MeasureInstance.</p> <p>Examples:</p> <p>Mass (included in IDEAS)</p> <p>Length (included in IDEAS)</p> <p>Velocity</p> <p>Hardness</p>           |
| <p><b>MeasurePoint</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>MeasurePoint - Measure</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Measure whose members are Individuals that all share a common property that can be measured.</p> <p>Examples:</p> <p>2kg</p> <p>4 weeks</p> <p>2km</p>                                                        |
| <p><b>MeasureNamingScheme</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>MeasureNamingScheme - NamingScheme</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                          |

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| <p>-</p> <p>A NamingScheme used for numerically representing MeasureInstances</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>MeasureRange</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>MeasureRange - Measure</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Measure that is characterised by two MeasurePoints that define its upper and lower bounds.</p>                                                                                                                                                                                                                               |
| <p><b>Measure</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>Measure - MeasureType</p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>Measure - Property</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Property whose members are Individuals that all share a common, measurable property, or whose properties lie within a MeasureRange.</p> <p>Examples:</p> <p>2kg</p> <p>4 weeks</p> <p>2km</p>                            |
| <p><b>NumericMeasureRepresentation</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>NumericMeasureRepresentation - FloatingPointRepresentation</p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>NumericMeasureRepresentation - Name</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Name and a FloatingPointRepresentation that identifies a MeasureInstance using a numeric representation</p>                             |
| <p><b>Property</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>Property - IndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualType whose members all exhibit a common trait or feature. Often the Individuals are states having a property (the state of being 18 degrees centigrade), where this property can be a CategoricalProperty (qv.) or a DispositionalProperty (qv.).</p> <p>Examples:</p> <p>Ability to fly at Mach 2</p> <p>10kg</p> |
| <p><b>SiUnitRepresentationScheme</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>SiUnitRepresentationScheme - MeasureNamingScheme</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                                                                                                                                           |

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| <p>A MeasureNamingScheme whose members are representations of SI Units.</p> <p><b>ThermodynamicTemperature</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>ThermodynamicTemperature - MeasurePoint</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»</p> <p>ThermodynamicTemperature - MeasureCategory</p> <p><u>Attributes:</u></p> <p>-</p> <p>A MeasureInstance whose members are Individuals that all have the same thermodynamic temperature</p> <p>Examples:</p> <p>4 deg K</p> <p>12 deg F</p> <p>22 deg C</p> |
| <p><b>Time</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»</p> <p>Time - MeasureCategory</p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>Time - MeasurePoint</p> <p><u>Attributes:</u></p> <p>-</p> <p>A MeasureInstance whose members are Individuals that have a particular temporal dimension of the same length.</p> <p>Examples:</p> <p>22 seconds</p> <p>14 weeks</p> <p>The time taken for light to travel 2km in a vacuum</p>                                                                               |
| <p><b>ValueInAmperes</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»</p> <p>ValueInAmperes - SiUnitRepresentationScheme</p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>ValueInAmperes - NumericMeasureRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NumericMeasureRepresentation that represents an ElectricCurrent in amperes</p>                                                                                                                                                                    |
| <p><b>ValueInCandela</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»</p> <p>ValueInCandela - SiUnitRepresentationScheme</p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>ValueInCandela - NumericMeasureRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NumericMeasureRepresentation that represents a LuminousIntensity in candela</p>                                                                                                                                                                   |

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| <p><b>ValueInHertz</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»</p> <p>ValueInHertz - SiUnitRepresentationScheme</p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>ValueInHertz - NumericMeasureRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NumericMeasureRepresentation that represents a Frequency in hertz</p>                            |
| <p><b>ValueInKelvin</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>ValueInKelvin - NumericMeasureRepresentation</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»</p> <p>ValueInKelvin - SiUnitRepresentationScheme</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NumericMeasureRepresentation that represents a ThermodynamicTemperature in degrees kelvin</p> |
| <p><b>ValueInKilograms</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»</p> <p>ValueInKilograms - SiUnitRepresentationScheme</p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>ValueInKilograms - NumericMeasureRepresentation</p> <p><u>Attributes:</u></p> <p>A NumericMeasureRepresentation that represents a Mass in kilograms</p>                          |
| <p><b>ValueInMetres</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»</p> <p>ValueInMetres - SiUnitRepresentationScheme</p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>ValueInMetres - NumericMeasureRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NumericMeasureRepresentation that represents a Length in metres</p>                           |
| <p><b>ValueInSeconds</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»</p> <p>ValueInSeconds - SiUnitRepresentationScheme</p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>ValueInSeconds - NumericMeasureRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NumericMeasureRepresentation that represents a Time in seconds</p>                         |

| IDEAS Period or Instant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <p><b>Instant</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>Instant - PeriodOrInstant</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Instant - InstantType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PeriodOrInstant whose temporal extent tends towards zero.</p>                                                                                                                   |
| <p><b>Period</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>Period - PeriodOrInstant</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Period - PeriodType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PeriodOrInstant whose temporal extent is greater than zero</p>                                                                                                                      |
| <p><b>PeriodOrInstant</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>PeriodOrInstant - Individual</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Individual whose spatial extent is infinite, but whose temporal extent is finite or zero.</p>                                                                                                                                                                            |
| <p><b>happensIn</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>happensIn - wholePart</p> <p>Association (source - target): «place1Type»</p> <p>happensIn - PeriodOrInstant</p> <p><u>Attributes:</u></p> <p>-</p> <p>A wholePart that asserts that an Individual is a part of a PeriodOrInstant.</p> <p>Note: IDEAS is 4D, so this means the individual [part] is entirely within the extent of the PeriodOrInstant [in]</p> |
| IDEAS Representation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <p><b>NumericSign</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>NumericSign - Sign</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>NumericSign - NumericSignType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Sign that signifies a number.</p> <p>Also known as a numeral.</p>                                                                                                          |

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| <p><b>Sign</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>Sign - Individual</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>Sign - SignType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Individual that signifies a Thing.</p> <p>Example: 'BOSTON' signifies BOSTON</p>                                                                                                                     |
| <p><b>IDEASName</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>IDEASName - StringRepresentation</p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>IDEASName - Name</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:typeInstance»</p> <p>IDEASName - UniqueNamingScheme</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Name used by the IDEAS model to uniquely identify a Thing.</p> |
| <p><b>NumericSignType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>NumericSignType - SignType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SignType that is the Powertype of NumericSign</p>                                                                                                                                                                                                                                            |
| <p><b>SignType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>SignType - IndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualType that is the Powertype of Sign.</p>                                                                                                                                                                                                                                                   |
| <p><b>describedBy</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>describedBy - representedBy</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>describedBy - Description</p> <p><u>Attributes:</u></p> <p>-</p> <p>A representedBy that asserts that a Description describes a Thing.</p>                                                                                                                                 |

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| <p><b>descriptionSchemeInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»<br/>descriptionSchemeInstance - Description</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»<br/>descriptionSchemeInstance - representationSchemeInstance</p> <p>Association (source - target): «place1Type»<br/>descriptionSchemeInstance - DescriptionScheme</p> <p><u>Attributes:</u></p> <p>-</p> <p>A representationSchemeInstance that asserts a Description is a member of a DescriptionScheme.</p> |
| <p><b>namedBy</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»<br/>namedBy - Name</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»<br/>namedBy - representedBy</p> <p>Association (source - target): «place1Type»<br/>namedBy - Thing</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts that a Name describes a Thing.</p>                                                                                                                                                    |
| <p><b>namingSchemeInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»<br/>namingSchemeInstance - Name</p> <p>Association (source - target): «place1Type»<br/>namingSchemeInstance - NamingScheme</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»<br/>namingSchemeInstance - representationSchemeInstance</p> <p><u>Attributes:</u></p> <p>-</p> <p>A representationSchemeInstance that asserts a Name is a member of a NamingScheme.</p>                                             |
| <p><b>representationSchemeInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»<br/>representationSchemeInstance - typeInstance</p> <p>Association (source - target): «place1Type»<br/>representationSchemeInstance - RepresentationScheme</p> <p>Association (source - target): «place2Type»<br/>representationSchemeInstance - Representation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A typeInstance that asserts a Representation is a member of a RepresentationScheme.</p>         |

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| <p><b>representedBy</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>representedBy - couple</p> <p>Association (source - target): «place2Type»</p> <p>representedBy - Representation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts that a Representation represents a Thing.</p>                                                                                                                                                                                                                                            |
| <p><b>Description</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>Description - Representation</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Description - DescriptionType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Representation that describes a Thing</p>                                                                                                                                                                                                                                                 |
| <p><b>DescriptionScheme</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>DescriptionScheme - DescriptionType</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>DescriptionScheme - RepresentationScheme</p> <p><u>Attributes:</u></p> <p>A RepresentationScheme and DescriptionType whose members are intentionally descriptions</p>                                                                                                                                                                           |
| <p><b>FloatingPointRepresentation</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>FloatingPointRepresentation - NumericSignType</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>FloatingPointRepresentation - Representation</p> <p><u>Attributes:</u></p> <p>exemplar</p> <p>A NumericSignType and Representation in which a string of digits (or bits) represents a rational number.</p> <p>See <a href="http://en.wikipedia.org/wiki/Floating_point">http://en.wikipedia.org/wiki/Floating_point</a></p> |
| <p><b>IntegerRepresentation</b> «IDEAS:Type»</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>IntegerRepresentation - NumericSignType</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>IntegerRepresentation - Representation</p> <p><u>Attributes:</u></p> <p>exemplar</p> <p>A NumericSignType and Representation in which a string of digits (or bits) represents an integer.</p>                                                                                                                                                                     |

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| <p><b>Name</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>Name - Representation</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>Name - NameType</p> <p><i>Generalization (element - is a specialisation of):</i> «superSubtype»</p> <p>Name - IndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Representation that identifies a Thing.</p> <p>Implementation note: The inherited exemplarString provides a written example of the uttered name.</p> <p>Example:</p> <p>'USA' names the United States of America</p>                                                                                                     |
| <p><b>NamingScheme</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>NamingScheme - Type</p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>NamingScheme - RepresentationScheme</p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>NamingScheme - NameType</p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>NamingScheme - IndividualTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An NameType and a RepresentationScheme whose members are intentionally Names.</p> <p>Examples:</p> <p>ISO 3166 Country Codes</p> <p>IdeasNames</p> |
| <p><b>Representation</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>Representation - SignType</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>Representation - RepresentationType</p> <p><u>Attributes:</u></p> <p>exemplar</p> <p>A SignType where all the individual Signs are intended to signify the same Thing.</p>                                                                                                                                                                                                                                                                                                          |
| <p><b>RepresentationScheme</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a specialisation of):</i> «IDEAS:superSubtype»</p> <p>RepresentationScheme - RepresentationType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RepresentationType that is a collection of Representations that are intended to be the preferred Representations in certain contexts.</p>                                                                                                                                                                                                                                                                                                                                                               |

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| <p><b>StringDescription</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>StringDescription - StringRepresentation</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>StringDescription - Description</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Description and a StringRepresentations that is a description expressed as text</p>                                                                                                                                                                                                                                                |
| <p><b>StringName</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>StringName - StringRepresentation</p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>StringName - Name</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Name and a StringRepresentations that is a name expressed as text</p>                                                                                                                                                                                                                                                                                          |
| <p><b>StringRepresentation</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>StringRepresentation - Representation</p> <p><u>Attributes:</u></p> <p>exemplar</p> <p>A Representation whose all members are all strings.</p>                                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>UniqueNamingScheme</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a specialisation of): «IDEAS:superSubtype»</p> <p>UniqueNamingScheme - NamingScheme</p> <p><u>Attributes:</u></p> <p>-</p> <p>A NamingScheme where different Names will not contain tokens of the same Representation Type.</p> <p>Example:</p> <p>A UniqueNamingScheme would not have two names that used tokens of the character string 'USA' to name two different things. This does not exclude the possibility that the same thing may have two names within the scheme. For example, a scheme could contain the Names 'US' and 'USA', which both name the United States of America."</p> |

### 3.3

## IDEAS Foundation additions

### 3.3.1

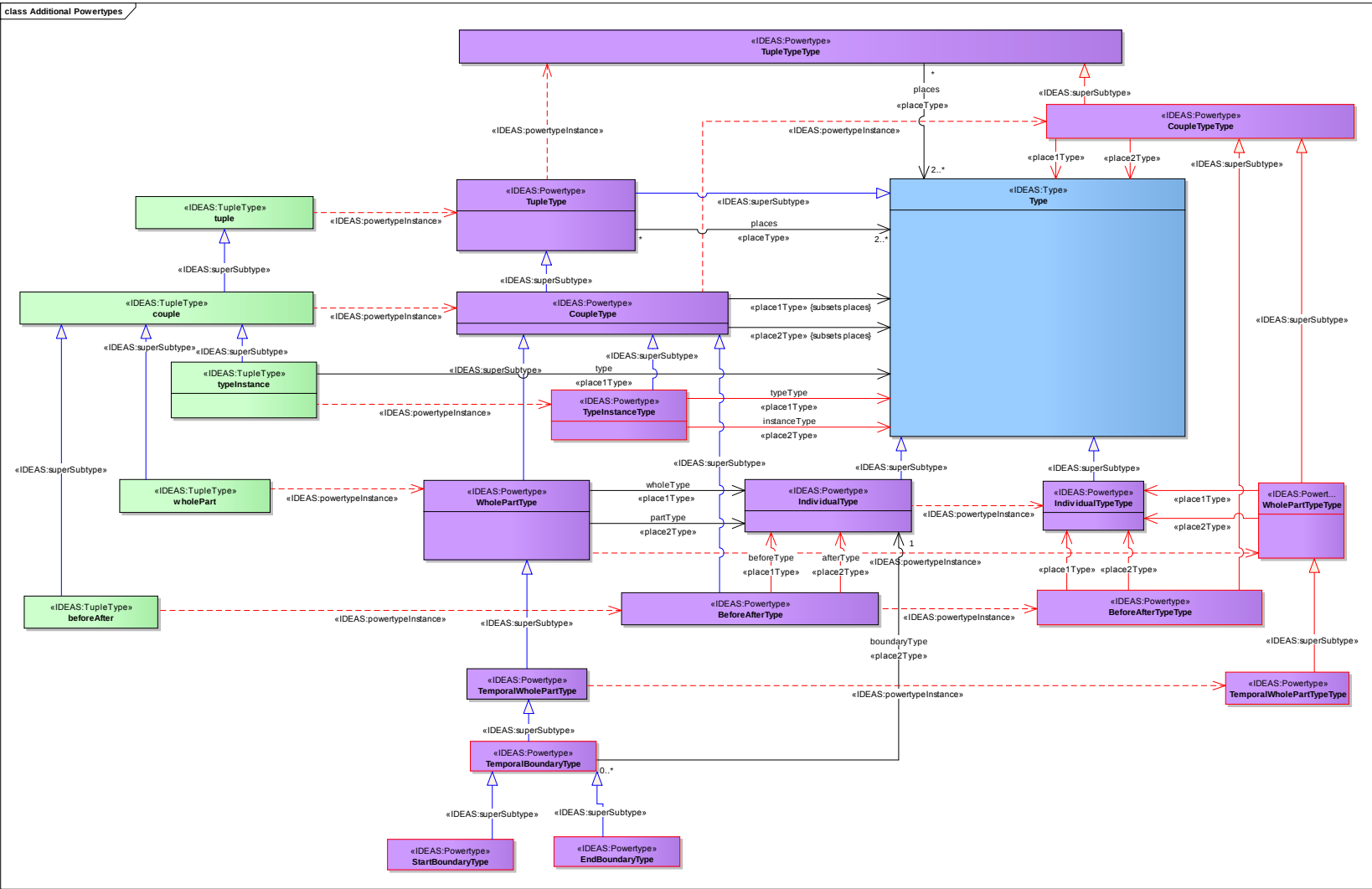


Figure 108 : Additional Powertypes



Figure 109 : Before - After

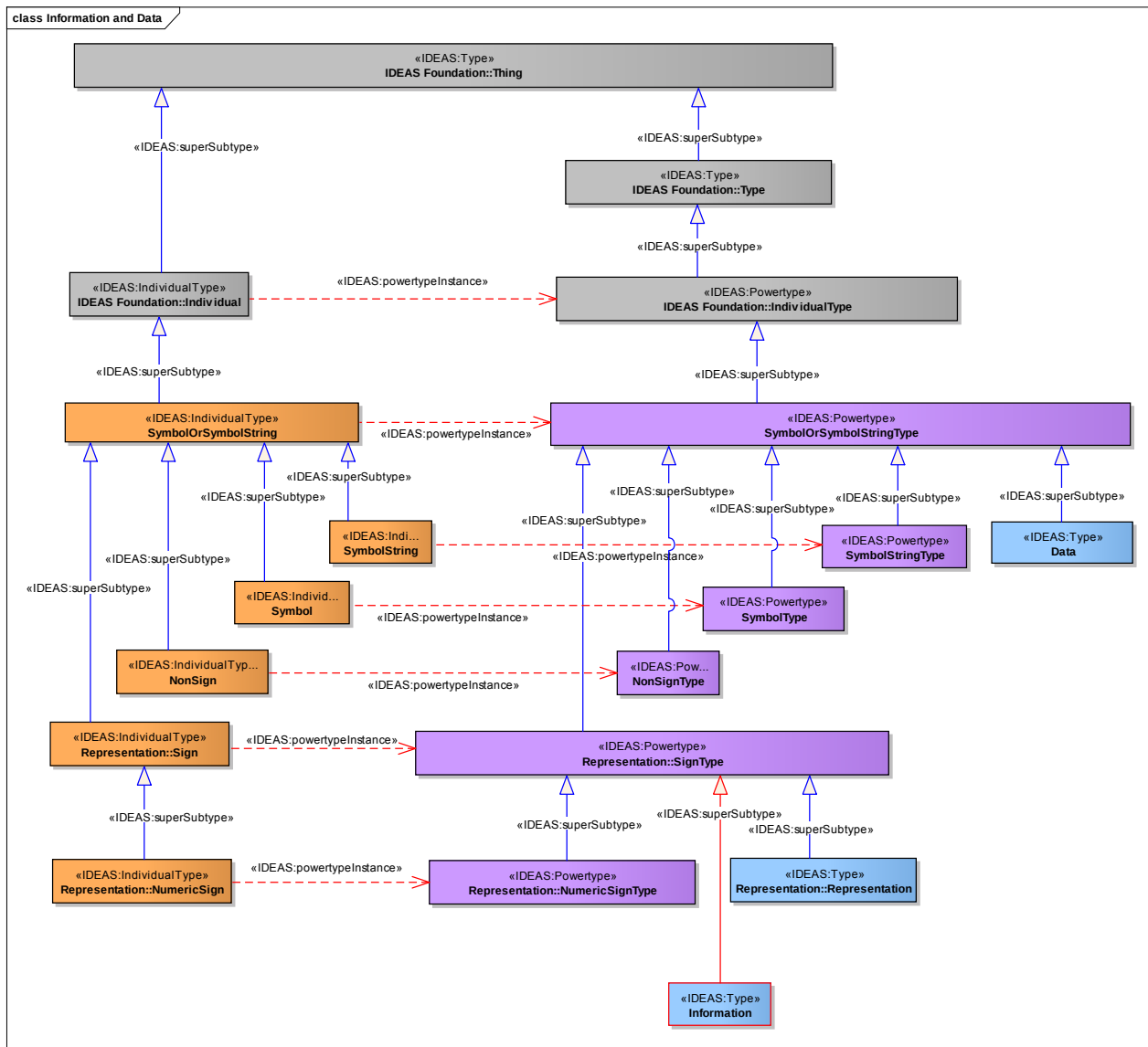


Figure 110 : Information and Data

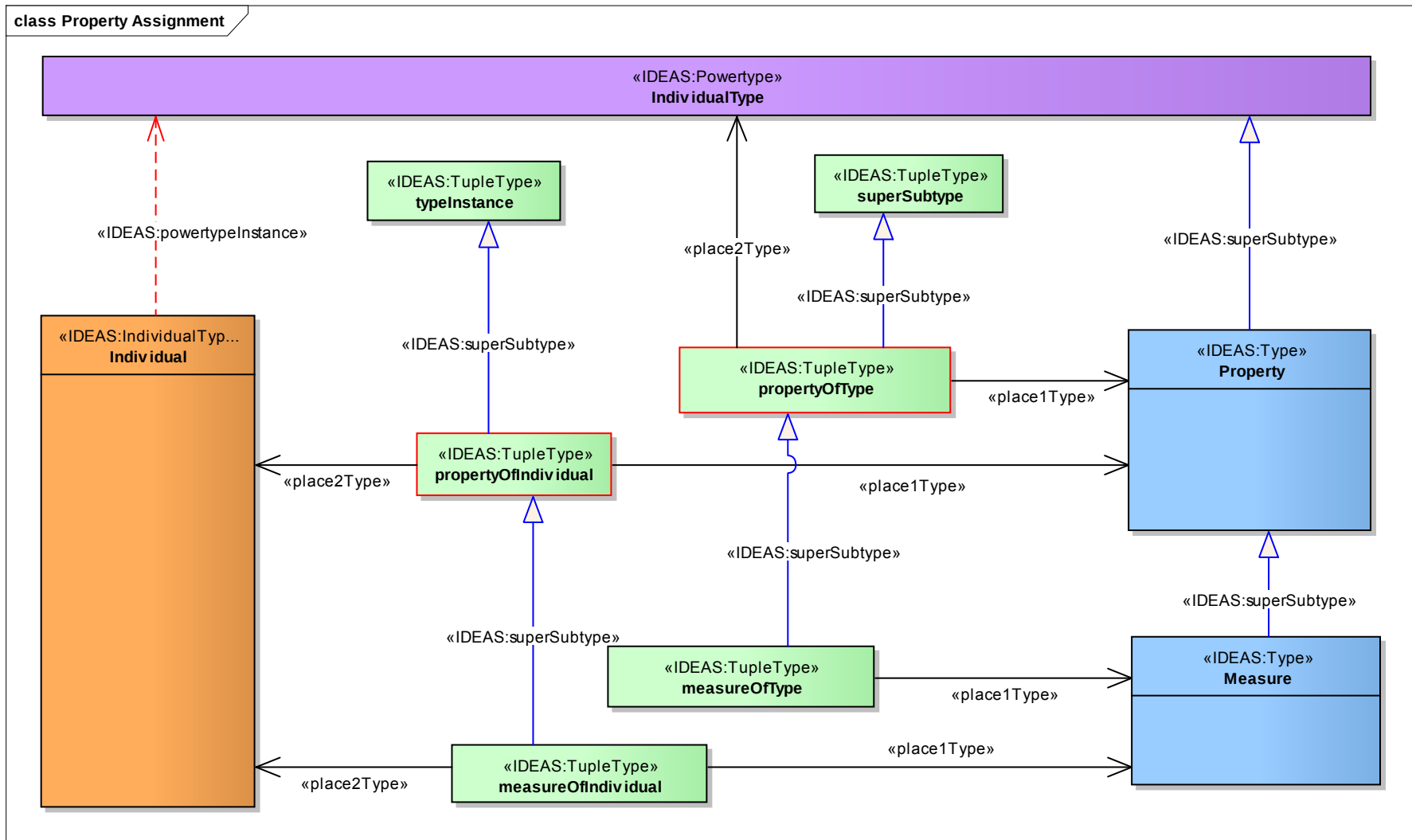


Figure 111 : Property Assignment

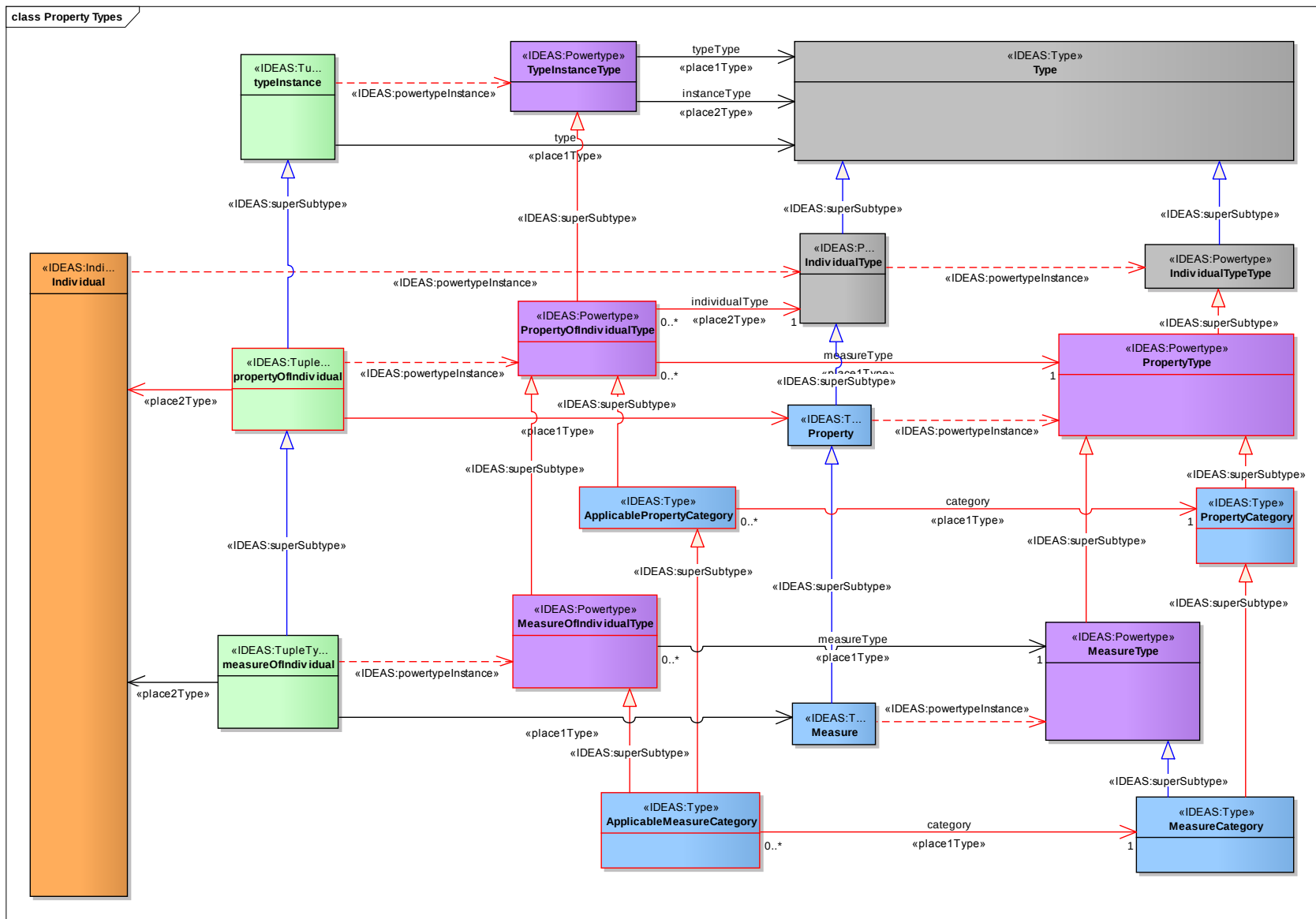


Figure 112 : Property types

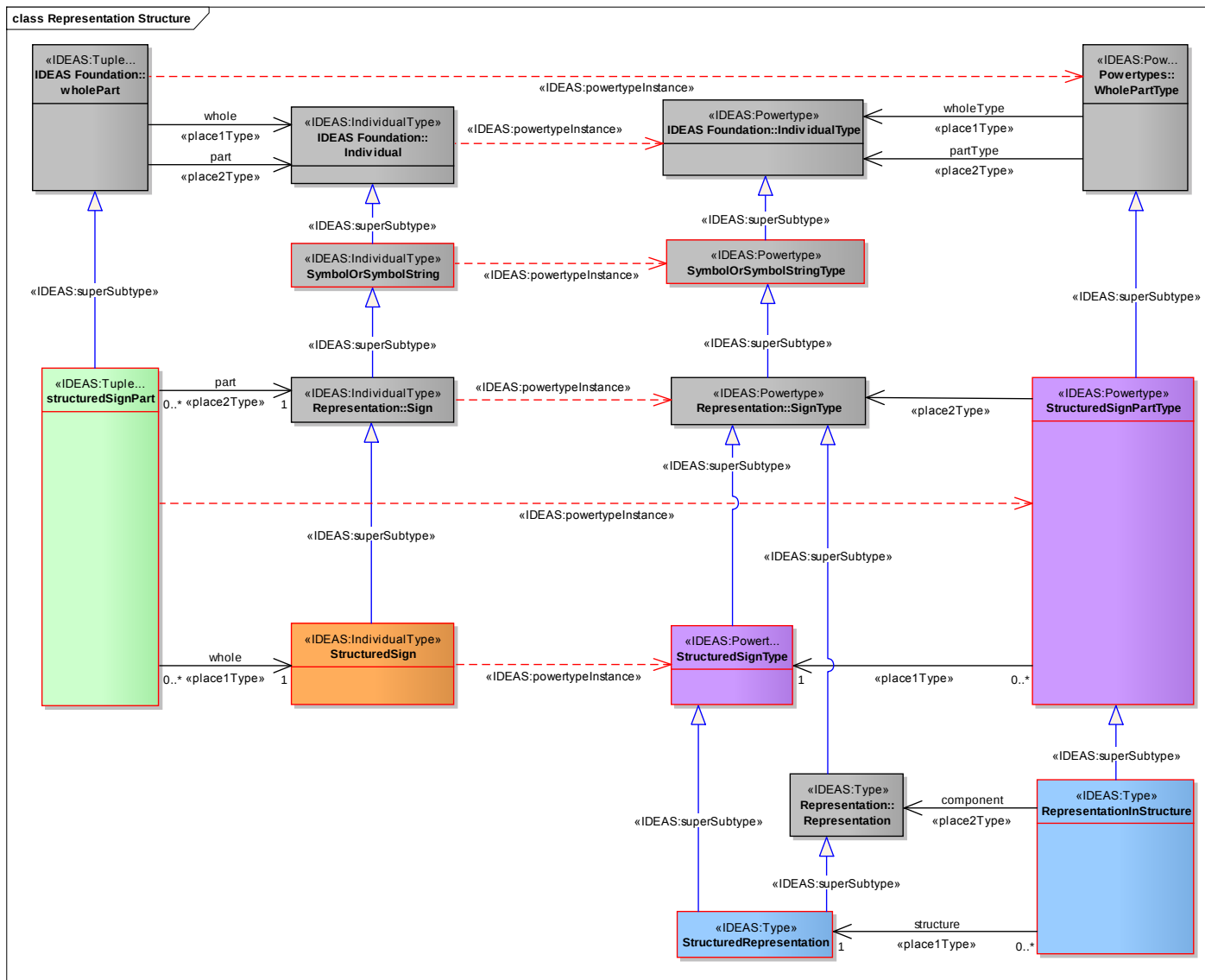


Figure 113 : Representation Structure

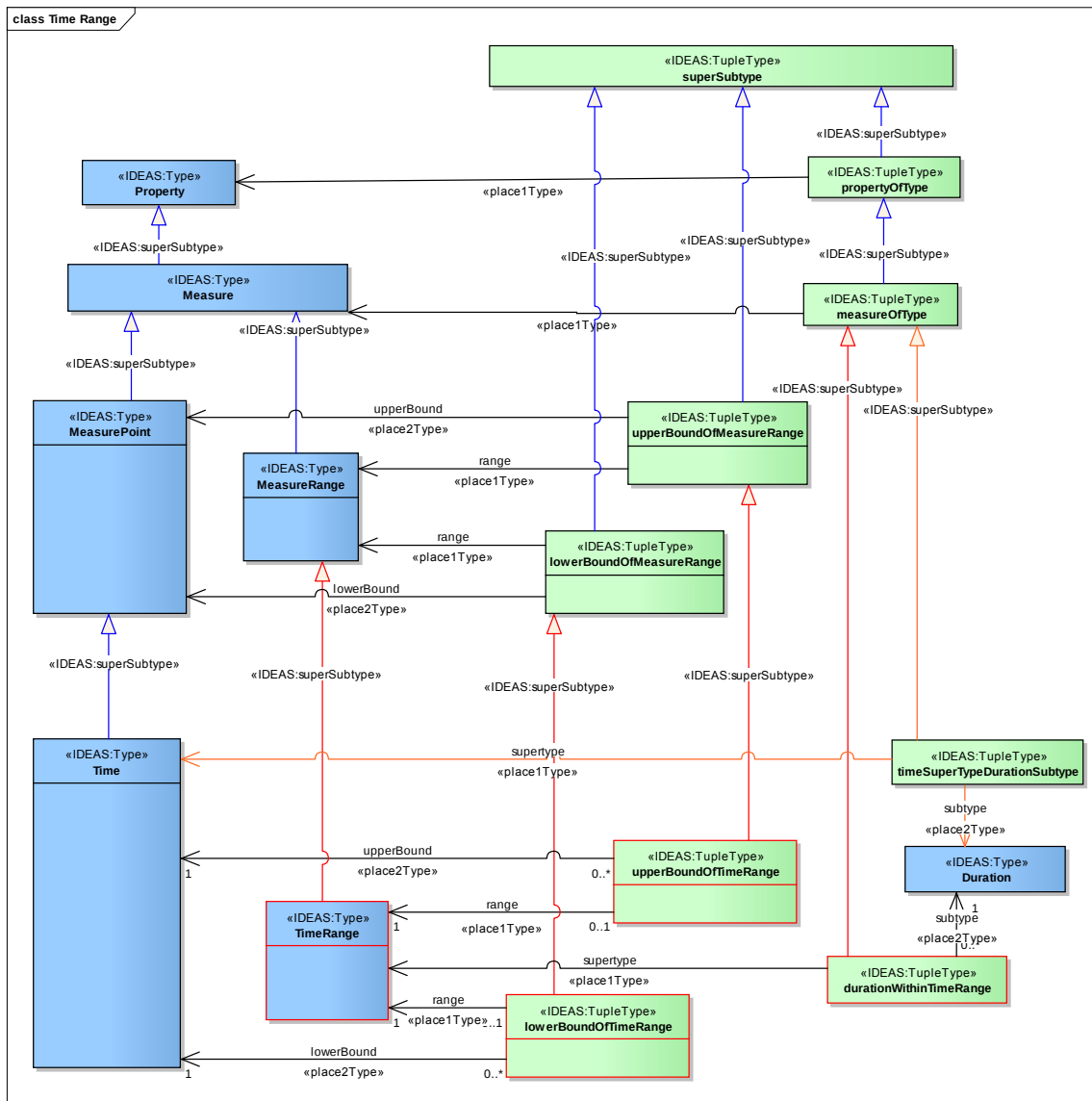


Figure 114 : Time Range

### 3.3.2 IDEAS Foundation addition elements list

| Naming schemes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <p><b>ModemName</b> «IDEAS:UniqueNamingScheme»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ModemName - StringRepresentation</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ModemName - Name</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Name that originates in the MODEM Architecture Framework (MODEM).</p>                                                                                                                                                                                                                                             |
| IDEAS Foundation additions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>ApplicableMeasureCategory</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ApplicableMeasureCategory - MeasureOfIndividualType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ApplicableMeasureCategory - ApplicablePropertyCategory</p> <p>Association (source - target): «place1Type»</p> <p>ApplicableMeasureCategory - MeasureCategory</p> <p><u>Attributes:</u></p> <p>-</p> <p>A MeasureOfIndividualType that asserts a given IndividualType has instances which may have properties that are instances of a MeasureCategory.</p> |
| <p><b>ApplicablePropertyCategory</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ApplicablePropertyCategory - PropertyOfIndividualType</p> <p>Association (source - target): «place1Type»</p> <p>ApplicablePropertyCategory - PropertyCategory</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PropertyOfIndividualType that asserts a given IndividualType has instances which may have properties that are instances of a PropertyCategory.</p>                                                                                                                                |
| <p><b>BeforeAfterTypeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>BeforeAfterTypeType - IndividualTypeType</p> <p>Association (source - target): «place2Type»</p> <p>BeforeAfterTypeType - IndividualTypeType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>BeforeAfterTypeType - CoupleTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of BeforeAfterType</p>                                                                                                                                                                     |
| <p><b>CoupleTypeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>CoupleTypeType - TupleTypeType</p> <p>Association (source - target): «place1Type»</p>                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <p>CoupleTypeType - Type</p> <p>Association (source - target): «place2Type»</p> <p>CoupleTypeType - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of CoupleType</p>                                                                                                                                                                                                                  |
| <p><b>Data</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Data - SymbolOrSymbolStringType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SymbolOrSymbolStringType that is a non arbitrary set of Symbols which may or may not convey meaning.</p>                                                                           |
| <p><b>EndBoundaryType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EndBoundaryType - TemporalBoundaryType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of endBoundary.</p>                                                                                                                             |
| <p><b>ImmediateBeforeAfterType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ImmediateBeforeAfterType - BeforeAfterType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of immediateBeforeAfter.</p>                                                                                                       |
| <p><b>Information</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Information - SignType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SignType that is a non-arbitrary set of Signs which together convey meaning.</p>                                                                                                     |
| <p><b>MeasureOfIndividualType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>MeasureOfIndividualType - PropertyOfIndividualType</p> <p>Association (source - target): «place1Type»</p> <p>MeasureOfIndividualType - MeasureType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of measureOfIndividual.</p> |
| <p><b>NonSign</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NonSign - SymbolOrSymbolString</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p>                                                                                                                                        |

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| <p>NonSign - NonSignType</p> <p><u>Attributes:</u></p> <p>A SymbolOrSymbolString does not refer to anything. An example of this would be the symbol string that makes up an encryption key.</p>                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>NonSignType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>NonSignType - SymbolOrSymbolStringType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of NonSign.</p>                                                                                                                                                                                                                                                                                                              |
| <p><b>PropertyCategory</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PropertyCategory - PropertyType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A PropertyType that specifies a recognised type of Property.</p>                                                                                                                                                                                                                                                                                  |
| <p><b>PropertyOfIndividualType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PropertyOfIndividualType - TypeInstanceType</p> <p>Association (source - target): «place2Type»</p> <p>PropertyOfIndividualType - IndividualType</p> <p>Association (source - target): «place1Type»</p> <p>PropertyOfIndividualType - PropertyType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of propertyOfIndividual.</p>                                                                         |
| <p><b>PropertyType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>PropertyType - IndividualTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of Property.</p>                                                                                                                                                                                                                                                                                                                 |
| <p><b>RepresentationInStructure</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RepresentationInStructure - StructuredSignPartType</p> <p>Association (source - target): «place2Type»</p> <p>RepresentationInStructure - Representation</p> <p>Association (source - target): «place1Type»</p> <p>RepresentationInStructure - StructuredRepresentation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StructuredSignPartType that asserts a Representation is part of a StructuredRepresentation.</p> |

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| <p><b>StartBoundaryType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StartBoundaryType - TemporalBoundaryType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of startBoundary.</p>                                                                                                                                                                                                           |
| <p><b>StructuredRepresentation</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StructuredRepresentation - StructuredSignType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StructuredRepresentation - Representation</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Representation that has parts that are also Representations.</p>                                            |
| <p><b>StructuredSign</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StructuredSign - Sign</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>StructuredSign - StructuredSignType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Sign that has parts that are also Signs.</p>                                                                                              |
| <p><b>StructuredSignPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»</p> <p>StructuredSignPartType - SignType</p> <p>Association (source - target): «place1Type»</p> <p>StructuredSignPartType - StructuredSignType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StructuredSignPartType - WholePartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of structuredSignPart.</p> |
| <p><b>StructuredSignType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StructuredSignType - SignType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of StructuredSign.</p>                                                                                                                                                                                                                    |
| <p><b>Symbol</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Symbol - SymbolOrSymbolString</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p>                                                                                                                                                                                                                              |

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| <p>Symbol - SymbolType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SymbolOrSymbolType that is a single Symbol.</p>                                                                                                                                                                                                                                                                                                                   |
| <p><b>SymbolOrSymbolString</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SymbolOrSymbolString - Individual</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>SymbolOrSymbolString - SymbolOrSymbolStringType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Individual that collects either symbols or strings.</p> |
| <p><b>SymbolOrSymbolStringType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SymbolOrSymbolStringType - IndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of SymbolOrSymbolString.</p>                                                                                                                                         |
| <p><b>SymbolString</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SymbolString - SymbolOrSymbolString</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>SymbolString - SymbolStringType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SymbolOrSymbolString whose extent is the fusion of two or more Symbols.</p>    |
| <p><b>SymbolStringType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SymbolStringType - SymbolOrSymbolStringType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of SymbolString.</p>                                                                                                                                                       |
| <p><b>SymbolType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SymbolType - SymbolOrSymbolStringType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of Symbol.</p>                                                                                                                                                                         |
| <p><b>TemporalBoundaryType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>TemporalBoundaryType - TemporalWholePartType</p> <p>Association (source - target): «place2Type»</p>                                                                                                                                                                        |

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| TemporalBoundaryType - IndividualType<br><u>Attributes:</u><br>-<br>The powertype of temporalBoundary.                                                                                                                                                                                                                                                                                                                                            |
| <b>TemporalWholePartTypeType</b> «IDEAS:Powertype»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>TemporalWholePartTypeType - WholePartTypeType<br><u>Attributes:</u><br>-<br>The powertype of TemporalWholePartType.                                                                                                                                                                               |
| <b>TimeRange</b> «IDEAS:Type»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>TimeRange - MeasureRange<br><u>Attributes:</u><br>-<br>A MeasureRange where the bounds are Times.                                                                                                                                                                                                                      |
| <b>TypeInstanceType</b> «IDEAS:Powertype»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>TypeInstanceType - CoupleType<br>Association (source - target): «place2Type»<br>TypeInstanceType - Type<br>Association (source - target): «place1Type»<br>TypeInstanceType - Type<br><u>Attributes:</u><br>-<br>The powertype of typeInstance.                                                             |
| <b>WeakTemporalOrderingType</b> «IDEAS:Powertype»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>WeakTemporalOrderingType - CoupleType<br>Association (source - target): «place2Type»<br>WeakTemporalOrderingType - IndividualType<br>Association (source - target): «place1Type»<br>WeakTemporalOrderingType - IndividualType<br><u>Attributes:</u><br>-<br>The powertype of weakTemporalOrdering. |
| <b>WholePartTypeType</b> «IDEAS:Powertype»<br><u>Connectors:</u><br>Association (source - target): «place1Type»<br>WholePartTypeType - IndividualTypeType<br>Association (source - target): «place2Type»<br>WholePartTypeType - IndividualTypeType<br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>WholePartTypeType - CoupleTypeType                                                                                      |

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| <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>The powertype of WholePartType.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>ZeroDurationIndividual</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ZeroDurationIndividual - ZeroDurationIndividualType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ZeroDurationIndividual - Individual</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>An Individual whose temporal extent is zero, but whose spatial extent is not zero (i.e. finite or infinite).</p>                                                                                            |
| <p><b>ZeroDurationIndividualType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ZeroDurationIndividualType - IndividualType</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>The powertype of ZeroDurationIndividual.</p>                                                                                                                                                                                                                                                                                            |
| <p><b>durationWithinTimeRange</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>durationWithinTimeRange - measureOfType</p> <p>Association (source - target): «place2Type»</p> <p>durationWithinTimeRange - Duration</p> <p>Association (source - target): «place1Type»</p> <p>durationWithinTimeRange - TimeRange</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>A superSubtype where the subtype is the set of all periods that fall within the lower and upper bounds of the TimeRange which is the supertype.</p> |
| <p><b>immediateBeforeAfter</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>immediateBeforeAfter - ImmediateBeforeAfterType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>immediateBeforeAfter - beforeAfter</p> <p><u>Attributes:</u></p> <ul style="list-style-type: none"> <li>-</li> </ul> <p>A beforeAfter where the preceding Individual's temporal end adjoins the temporal start of the following Individual - i.e. one individual immediate follows the other.</p>                                               |
| <p><b>lowerBoundOfTimeRange</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>lowerBoundOfTimeRange - lowerBoundOfMeasureRange</p> <p>Association (source - target): «place2Type»</p> <p>lowerBoundOfTimeRange - Time</p> <p>Association (source - target): «place1Type»</p> <p>lowerBoundOfTimeRange - TimeRange</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                             |

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| <p>-</p> <p>A lowerBoundOfMeasureRange where the lower bound is a Time and the range is s TimeRange.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>propertyOfIndividual</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>propertyOfIndividual - PropertyOfIndividualType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>propertyOfIndividual - typeInstance</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>propertyOfIndividual - Individual</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>propertyOfIndividual - Property</p> <p><u>Attributes:</u></p> <p>-</p> <p>A typeInstance where the type is a Property and the instance is an Individual that asserts the Individual "has" the property.</p> |
| <p><b>propertyOfType</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>propertyOfType - superSubtype</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>propertyOfType - IndividualType</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>propertyOfType - Property</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubtype where the subtype is an IndividualType and the supertype is a Property that asserts all members of the IndividualType "have" the Property.</p>                                                                                                                               |
| <p><b>structuredSignPart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>structuredSignPart - wholePart</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>structuredSignPart - StructuredSignPartType</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>structuredSignPart - Sign</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>structuredSignPart - StructuredSign</p> <p><u>Attributes:</u></p> <p>-</p> <p>A wholePart where a StructuredSign has a part that is a Sign.</p>                                                                                |
| <p><b>upperBoundOfTimeRange</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>upperBoundOfTimeRange - upperBoundOfMeasureRange</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>upperBoundOfTimeRange - TimeRange</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>upperBoundOfTimeRange - Time</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                                                                                          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>-</p> <p>An upperBoundOfMeasureRange where the upper bound is a Time and the range is s TimeRange.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p><b>weakTemporalOrdering</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>weakTemporalOrdering - WeakTemporalOrderingType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>weakTemporalOrdering - couple</p> <p>Association (source - target): «place2Type»</p> <p>weakTemporalOrdering - Individual</p> <p>Association (source - target): «place1Type»</p> <p>weakTemporalOrdering - Individual</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts one Individual starts before another - i.e. the start temporal boundary of one occurs before the start temporal boundary of the other. Note: this includes cases where one Individual starts *and* ends before the other (see beforeAfter).</p> |
| <p><b>SingletonIndividualTypeType</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SingletonIndividualTypeType - Singleton</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SingletonIndividualTypeType - IndividualTypeType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SingletonIndividualTypeType - SetOfOwnedStateSets</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualTypeType that has only one member.</p>                                                                                                                                                                                                                                                             |
| <p><b>singletonIndividualTypeTypeInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>singletonIndividualTypeTypeInstance - singletonTypeInstance</p> <p>Association (source - target): «place2Type»</p> <p>singletonIndividualTypeTypeInstance - IndividualType</p> <p>Association (source - target): «place1Type»</p> <p>singletonIndividualTypeTypeInstance - SingletonIndividualTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A singletonTypeInstance where the type is a SingletonIndividualTypeType and the instance is an IndividualType.</p>                                                                                                                                                                                   |
| <p><b>incompletePartitionOfSetsOfIndividuals</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>incompletePartitionOfSetsOfIndividuals - WholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>incompletePartitionOfSetsOfIndividuals - incompletePartitionOfSetsOfThings</p> <p>Association (source - target): «place2Type»</p> <p>incompletePartitionOfSetsOfIndividuals - SetOfDisjointIndividuals</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                                                                                                                     |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>An instance of this type contains all wholes-parts couples that link an element with each type in a set of disjoint elements that incompletely partition it. The ontic cardinalities are different from the epistemic ones.</p> <p><b>incompletePartitionOfSetsOfThings</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>incompletePartitionOfSetsOfThings - CoupleType</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>incompletePartitionOfSetsOfThings - Singleton</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>incompletePartitionOfSetsOfThings - SetOfDisjointThings</p> <p><u>Attributes:</u></p> <p>-</p> <p>An instance of this type contains all couples that link the incomplete partition of a set of objects with the object being partitioned. In this framework, an complete partition (AKA a partition) is the limiting case of a partition. For more detail, see its sub-types.</p> |
| <p><b>incompletePartitionOfSetsOfTypes</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>incompletePartitionOfSetsOfTypes - SuperSubtypeType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>incompletePartitionOfSetsOfTypes - incompletePartitionOfSetsOfThings</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>incompletePartitionOfSetsOfTypes - SetOfDisjointTypes</p> <p><u>Attributes:</u></p> <p>-</p> <p>An instance of this type contains all super-sub-types couples that link a type with each type in a set of disjoint types that incompletely partition it. The ontic cardinalities are different from the epistemic ones.</p>                                                                                                                                                                                                                                          |

## 3.4 Patterns

### 3.4.1 Body capable of process diagrams

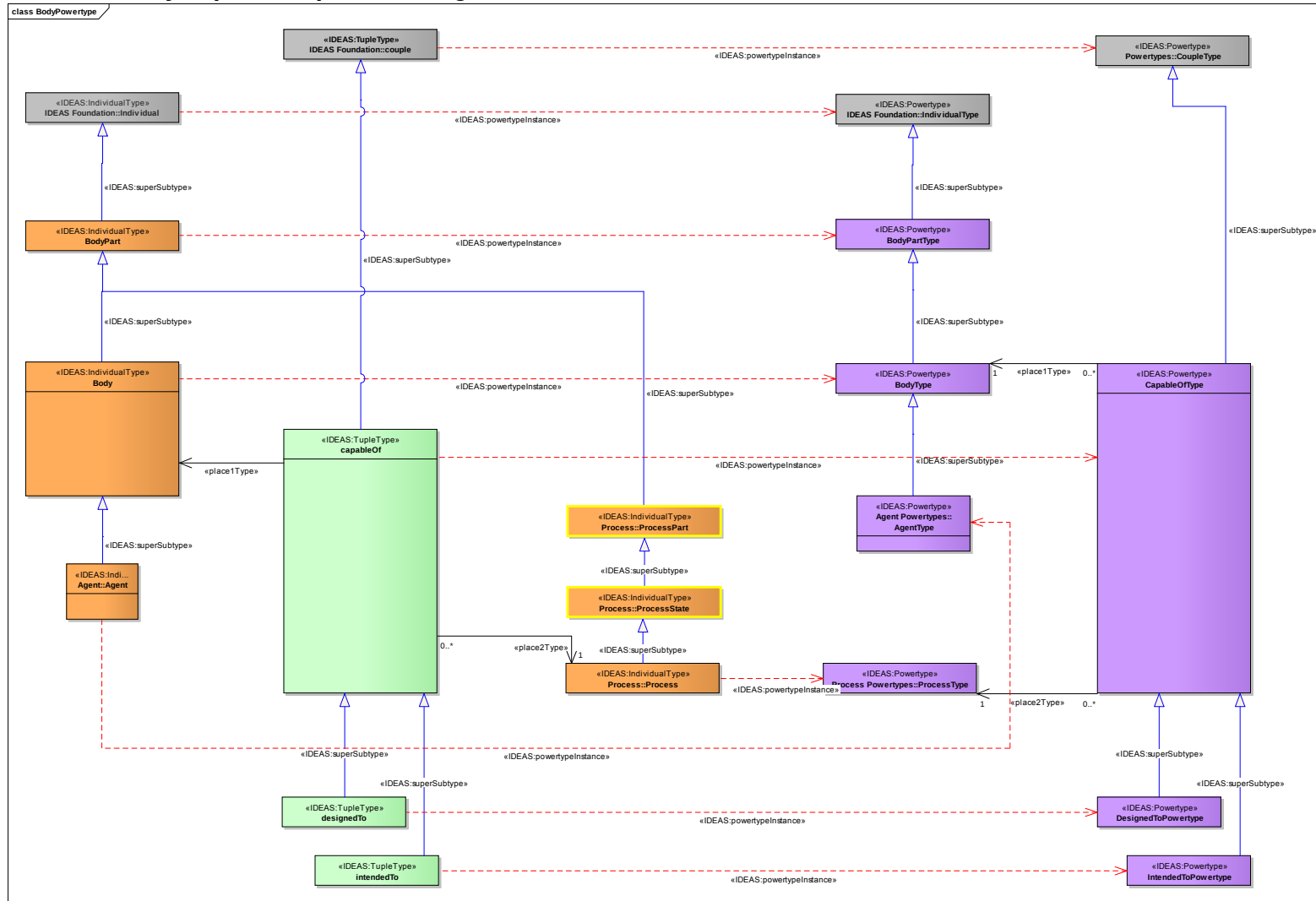


Figure 115 : BodyPowerType

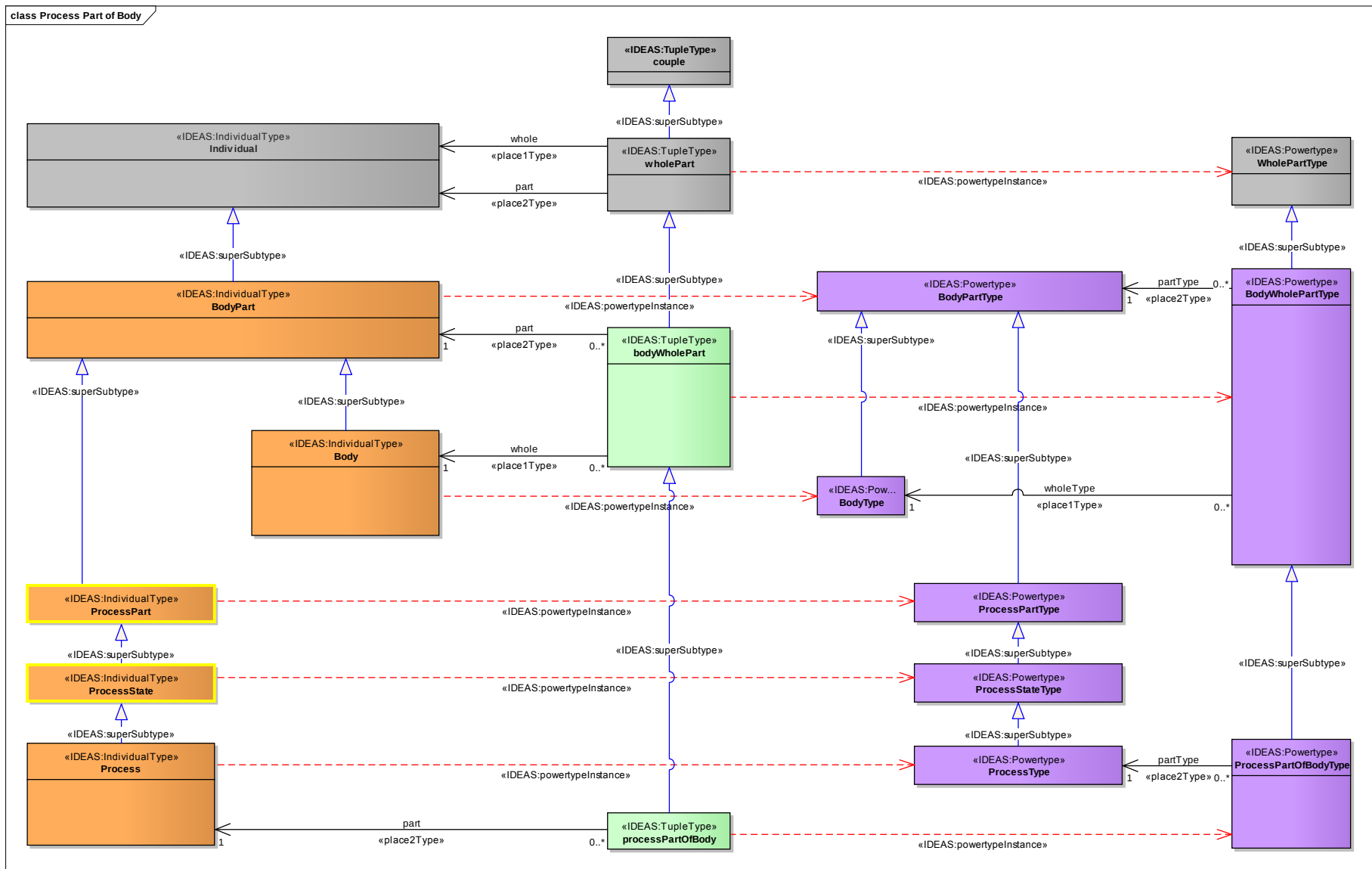


Figure 116 : Process Part of Body

### 3.4.2 Body capable of process elements list

| Foundation additions Body capable of process                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Body</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>Body - BodyType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>Body - BodyPart</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Individual that is capable of performing a Process.</p>                                                                                              |
| <p><b>BodyPart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>BodyPart - Individual</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>BodyPart - BodyPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Individual that is a part of a Body.</p>                                                                                           |
| <p><b>BodyPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>BodyPartType - IndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of BodyPart.</p>                                                                                                                                                                                                               |
| <p><b>BodyType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>BodyType - BodyPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of Body.</p>                                                                                                                                                                                                                             |
| <p><b>BodyWholePartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>BodyWholePartType - WholePartType</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>BodyWholePartType - BodyPartType</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>BodyWholePartType - BodyType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of bodyWholePart.</p> |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>CapableOfType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»</p> <p>CapableOfType - ProcessType</p> <p>Association (source - target): «place1Type»</p> <p>CapableOfType - BodyType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>CapableOfType - CoupleType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A powertype of capableOf.</p>                                                            |
| <p><b>DesignedToPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>DesignedToPowertype - CapableOfType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A powertype of designedTo.</p>                                                                                                                                                                                                                     |
| <p><b>IntendedToPowertype</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>IntendedToPowertype - CapableOfType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A powertype of intendedTo.</p>                                                                                                                                                                                                                     |
| <p><b>ProcessPartOfBodyType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProcessPartOfBodyType - BodyWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>ProcessPartOfBodyType - ProcessType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of processPartOfBody.</p>                                                                                                      |
| <p><b>bodyTypeSuperSubType</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>bodyTypeSuperSubType - superSubtype</p> <p>Association (source - target): «place2Type»</p> <p>bodyTypeSuperSubType - BodyType</p> <p>Association (source - target): «place1Type»</p> <p>bodyTypeSuperSubType - BodyType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubtype whose superType and subType are BodyTypes.</p> |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>bodyWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>bodyWholePart - BodyWholePartType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>bodyWholePart - wholePart</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>bodyWholePart - BodyPart</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>bodyWholePart - Body</p> <p><u>Attributes:</u></p> <p>-</p> <p>A wholePart that asserts an Individual is part of a Body.</p> |
| <p><b>capableOf</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>capableOf - couple</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>capableOf - CapableOfType</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>capableOf - Body</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>capableOf - Process</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts that a Body is capable of having a Process as part of it.</p>       |
| <p><b>designedTo</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Dependency (element - is instance of):</i>«IDEAS:powertypeInstance»</p> <p>designedTo - DesignedToPowertype</p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>designedTo - capableOf</p> <p><u>Attributes:</u></p> <p>-</p> <p>A capableOf that asserts that a Body is designed to have a Process as part of it.</p>                                                                                                                                                                  |
| <p><b>intendedTo</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i>«IDEAS:superSubtype»</p> <p>intendedTo - capableOf</p> <p><i>Dependency (element - is instance of):</i>«IDEAS:powertypeInstance»</p> <p>intendedTo - IntendedToPowertype</p> <p><u>Attributes:</u></p> <p>-</p> <p>A capableOf that asserts that a Body is intended to have a Process as part of it.</p>                                                                                                                                                                  |

**processPartOfBody** «IDEAS:TupleType»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

processPartOfBody - bodyWholePart

*Dependency (element - is instance of):* «IDEAS:powertypeInstance»

processPartOfBody - ProcessPartOfBodyType

*Association (source - target):* «place2Type»

processPartOfBody - Process

Attributes:

-

A bodyWholePart where the part is an entire Process - i.e. the process is entirely within the extent of the Body.

### 3.4.3 Temporal border diagrams

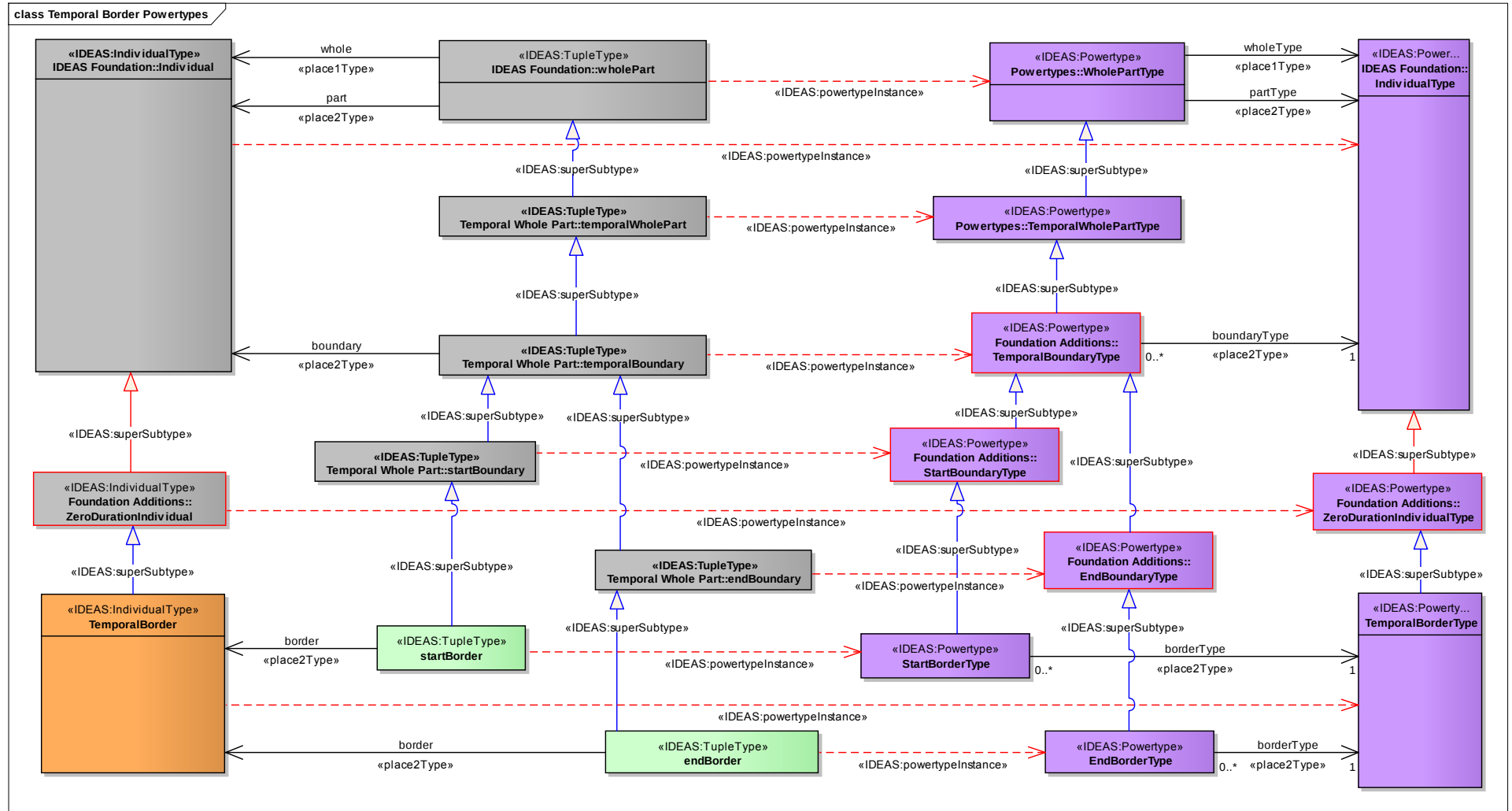


Figure 117: Temporal Border Powertypes

### 3.4.4 Temporal border elements list

| Temporal border                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>EndBorderType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EndBorderType - EndBoundaryType</p> <p>Association (source - target): «place2Type»</p> <p>EndBorderType - TemporalBorderType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of endBorder.</p>                                                                                                                                                                                  |
| <p><b>StartBorderType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StartBorderType - StartBoundaryType</p> <p>Association (source - target): «place2Type»</p> <p>StartBorderType - TemporalBorderType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of startBorder.</p>                                                                                                                                                                        |
| <p><b>TemporalBorder</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>TemporalBorder - ZeroDurationIndividual</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>TemporalBorder - TemporalBorderType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Individual whose temporal extent is instantaneous, and whose spatial extent corresponds with the start or end of the Individuals for which it is the temporal border.</p> |
| <p><b>TemporalBorderType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>TemporalBorderType - ZeroDurationIndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of TemporalBorder.</p>                                                                                                                                                                                                                                                     |
| <p><b>endBorder</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>endBorder - EndBorderType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>endBorder - endBoundary</p> <p>Association (source - target): «place2Type»</p> <p>endBorder - TemporalBorder</p> <p><u>Attributes:</u></p> <p>-</p> <p>An endBoundary where the boundary is a TemporalBorder.</p>                                                                  |

**startBorder** «IDEAS:TupleType»

Connectors:

*Dependency (element - is instance of):* «IDEAS:powertypeInstance»

startBorder - StartBorderType

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

startBorder - startBoundary

*Association (source - target):* «place2Type»

startBorder - TemporalBorder

Attributes:

-

A startBoundary where the boundary is a TemporalBorder.

### 3.4.5 State and interaction diagrams

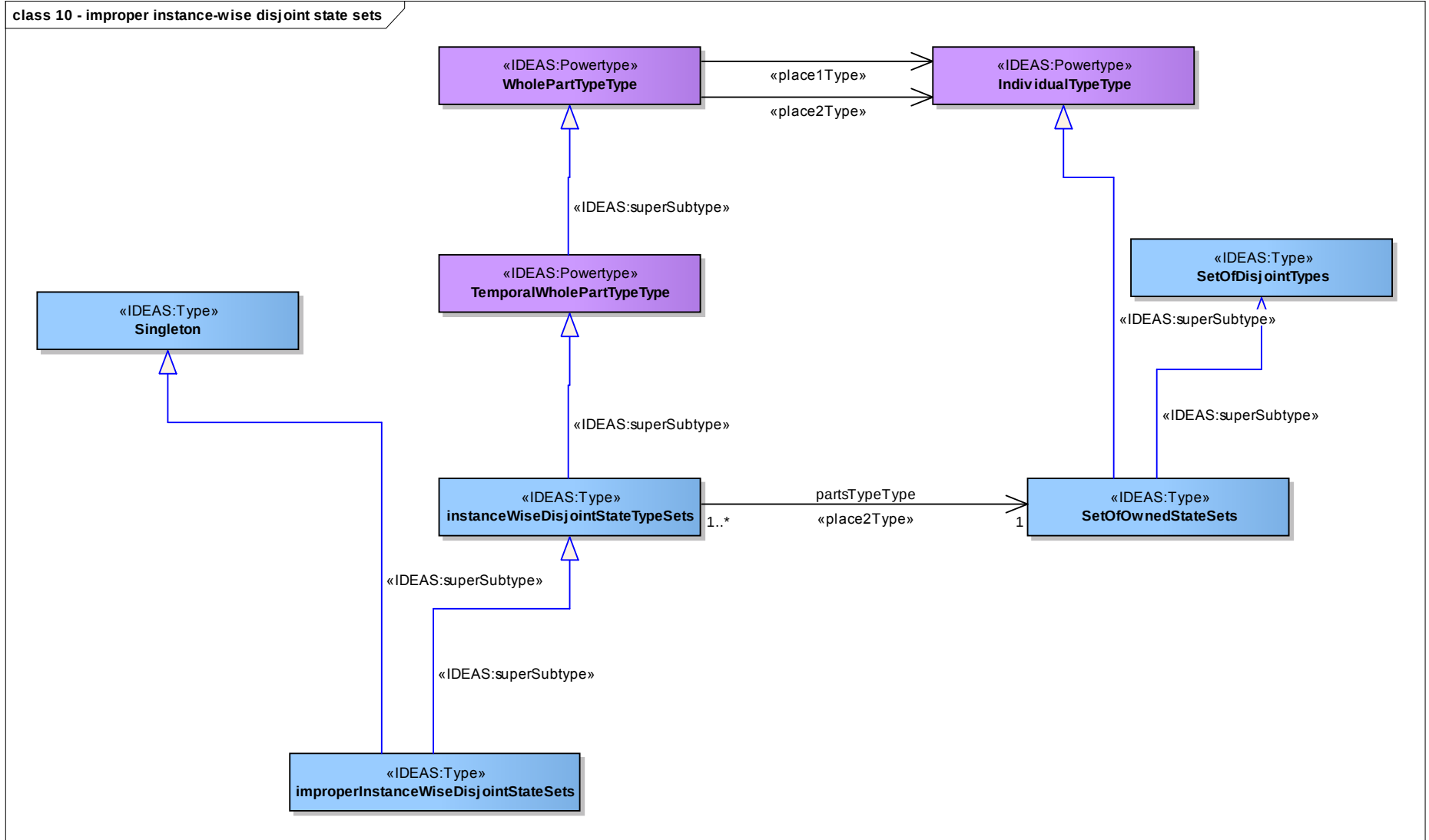


Figure 118 : improper instance-wise disjoint state sets

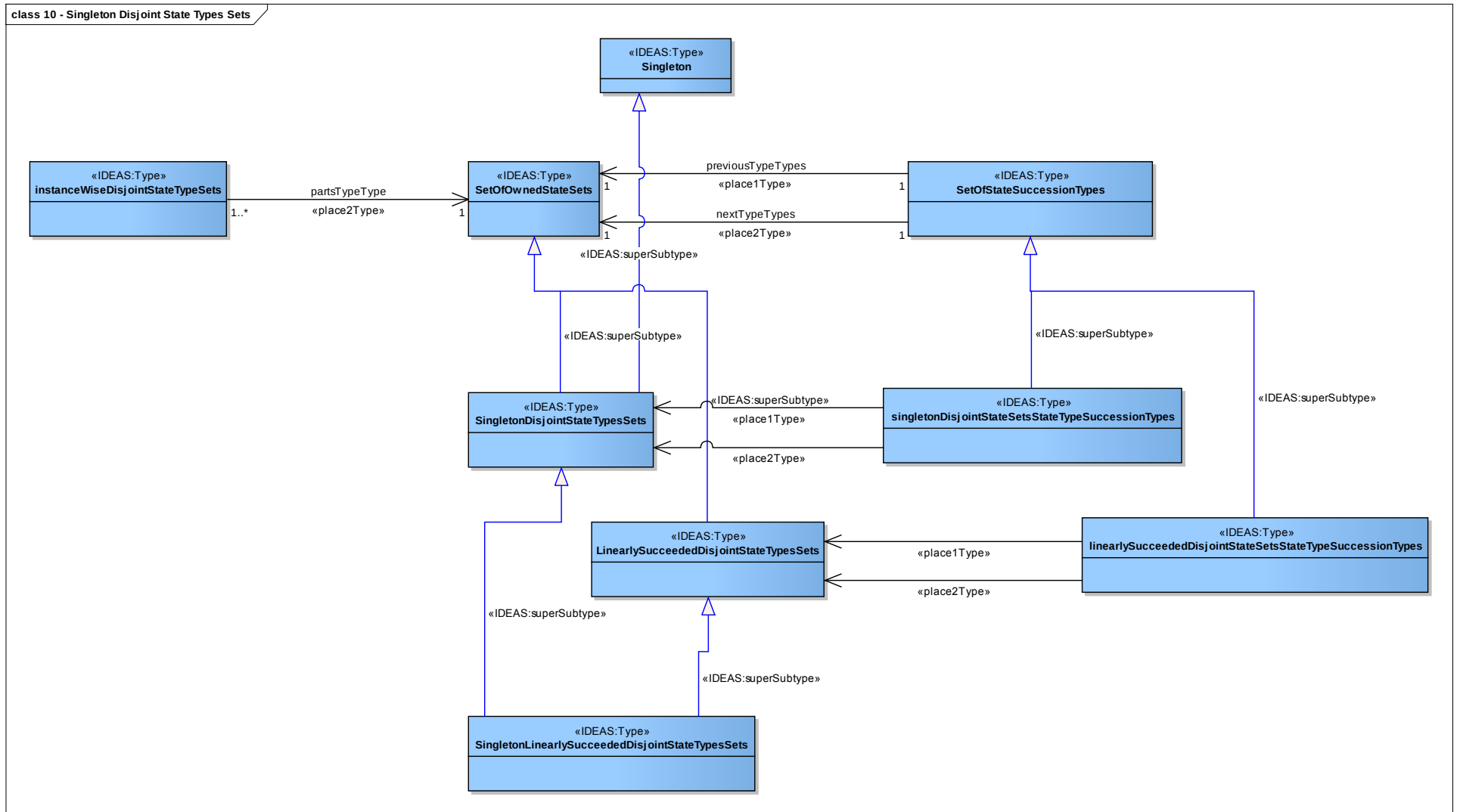


Figure 119 : Singleton Disjoint State Types Sets

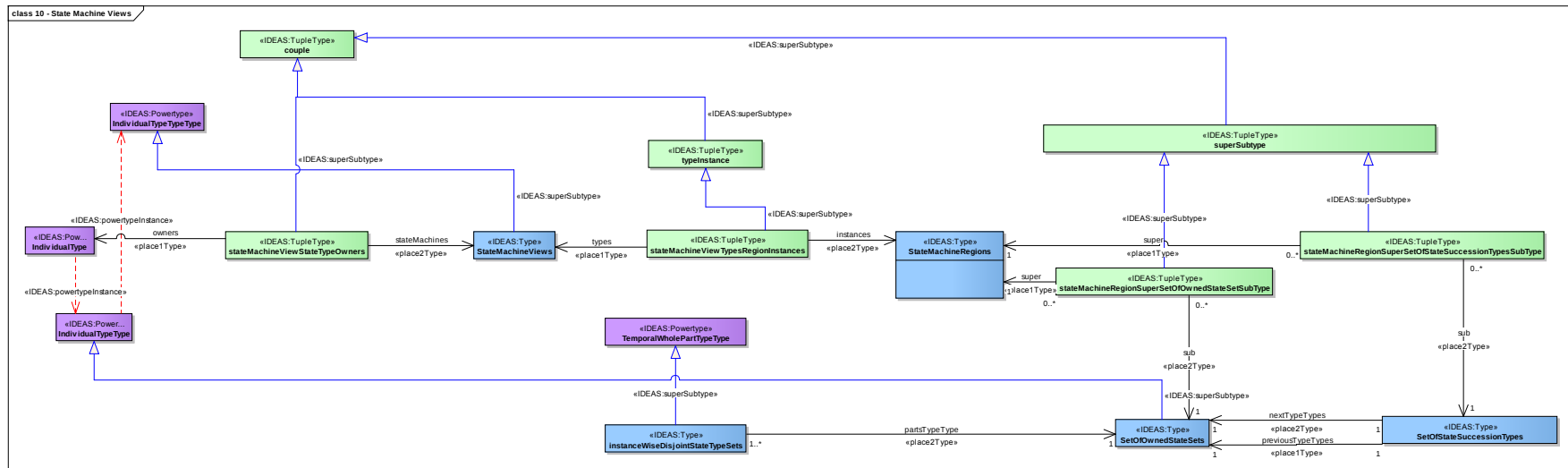


Figure 120 : State Machine Views

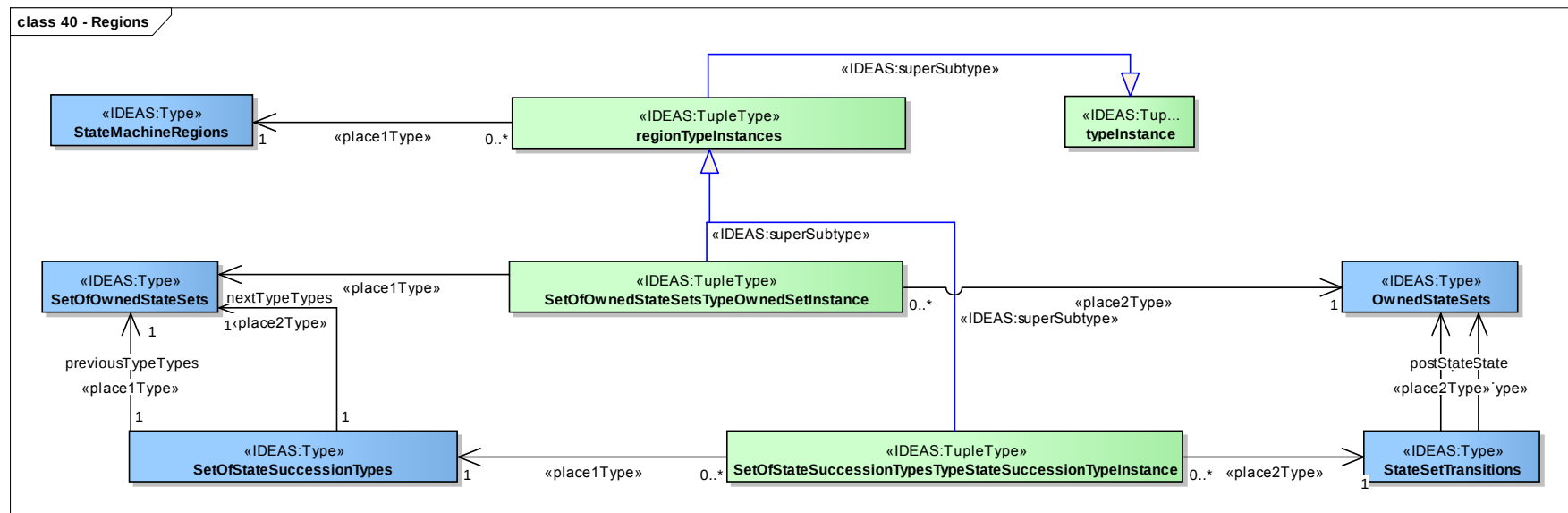


Figure 121 : Regions

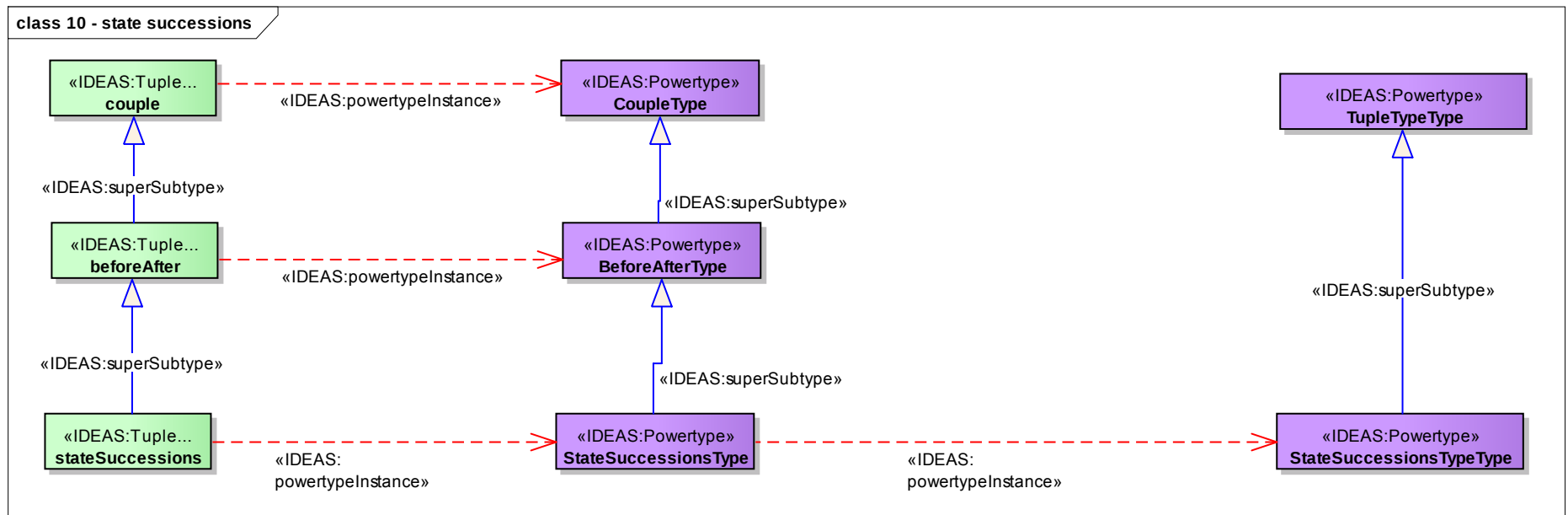


Figure 122 : state successions

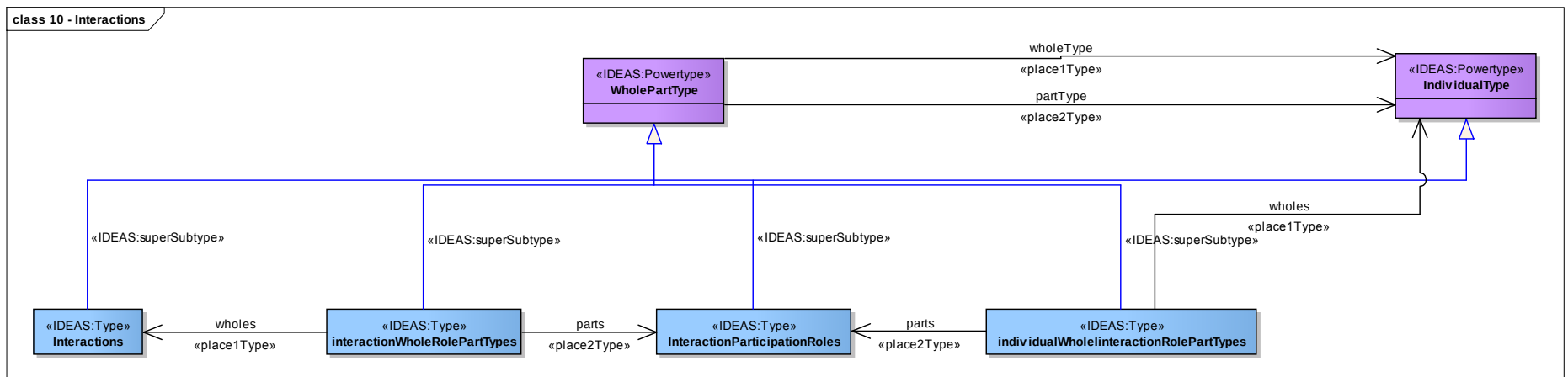
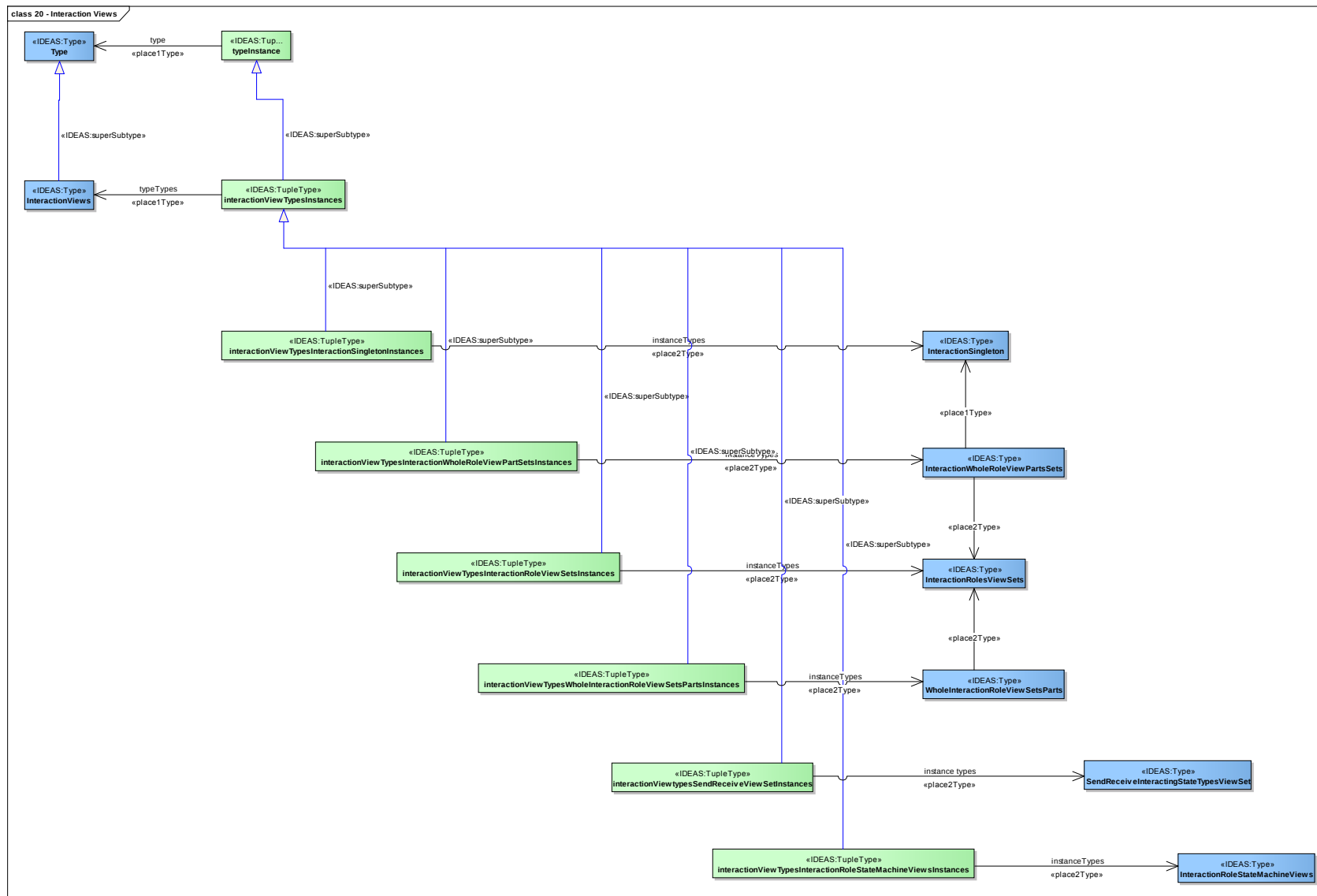


Figure 123 : Interactions



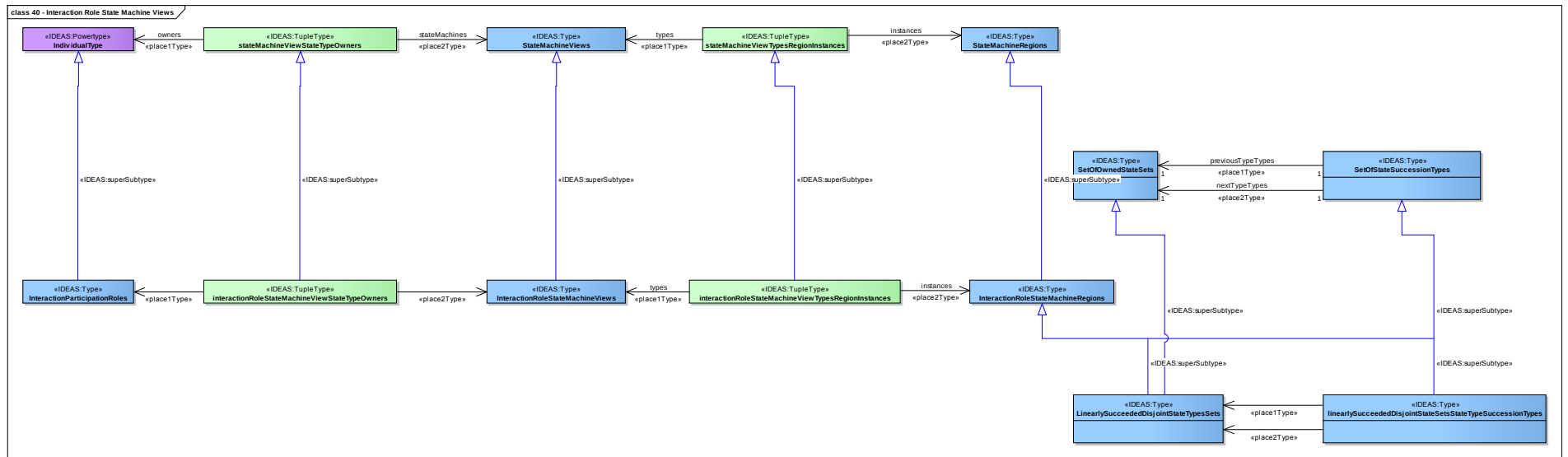


Figure 125 : Interaction Role State Machine Views

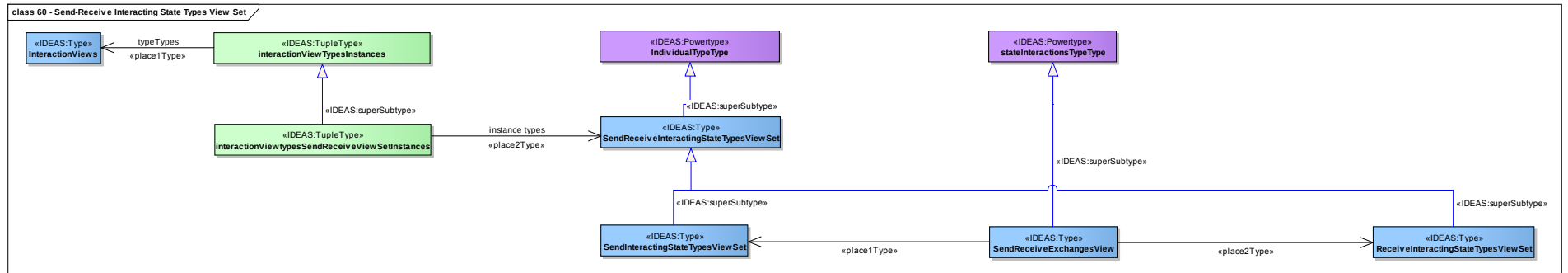


Figure 126 : Send-Receive Interacting State Types View Set

class 10 - state interactions

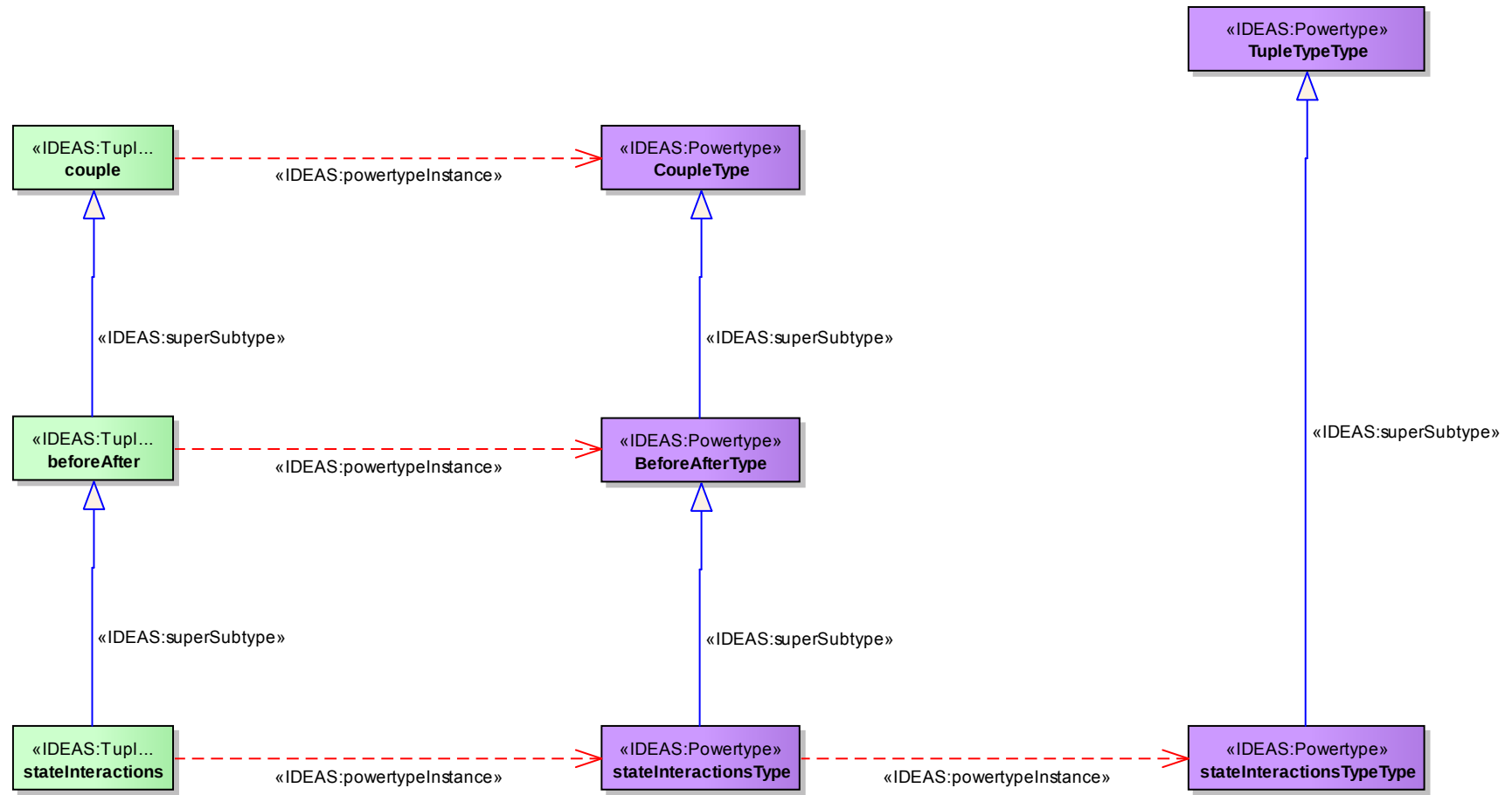
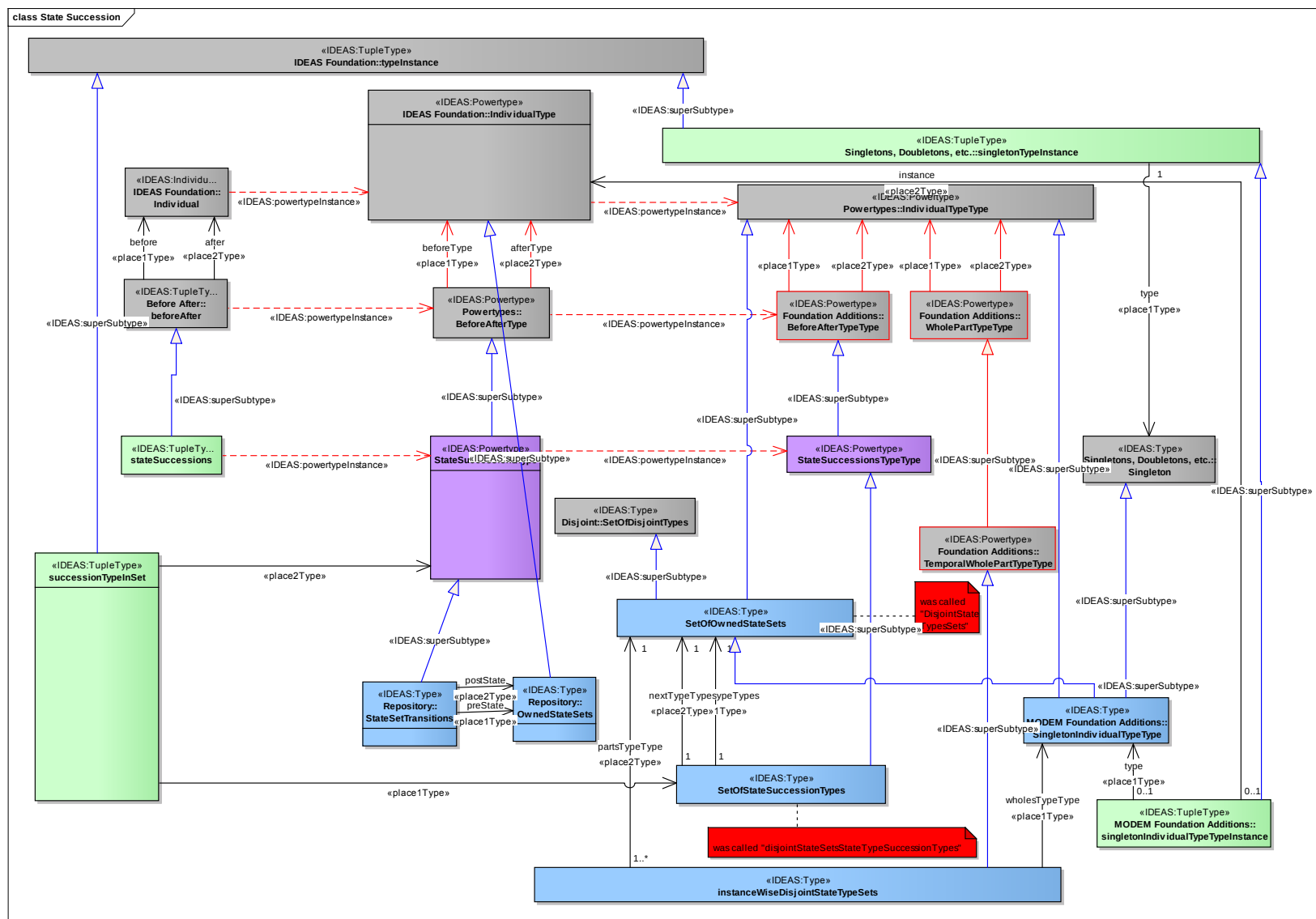


Figure 127 : state interactions



### 3.4.6 State and interactions elements list

| State machine views                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>OwnedStateSets</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OwnedStateSets - IndividualType</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>OwnedStateSets - OwnedStateSetsType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualType that contains all the state for an owning IndividualType.</p>                                                                                                                                                                                                                                                                                                |
| <p><b>OwnedStateSetsType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>OwnedStateSetsType - IndividualTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A powertype of OwnedStateSetsType.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>SetOfOwnedStateSetsTypeOwnedSetInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>SetOfOwnedStateSetsTypeOwnedSetInstance - SetOfOwnedStateSets</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SetOfOwnedStateSetsTypeOwnedSetInstance - RegionTypeInstances</p> <p>Association (source - target): «place2Type»</p> <p>SetOfOwnedStateSetsTypeOwnedSetInstance - OwnedStateSets</p> <p><u>Attributes:</u></p> <p>-</p> <p>A regionTypeInstance that asserts an OwnedStateSet is an instance of a SetOfOwnedStateSets.</p>                                                                                            |
| <p><b>SetOfStateSuccessionTypesTypeStateSuccessionTypeInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»</p> <p>SetOfStateSuccessionTypesTypeStateSuccessionTypeInstance - StateSetTransitions</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SetOfStateSuccessionTypesTypeStateSuccessionTypeInstance - RegionTypeInstances</p> <p>Association (source - target): «place1Type»</p> <p>SetOfStateSuccessionTypesTypeStateSuccessionTypeInstance - SetOfStateSuccessionTypes</p> <p><u>Attributes:</u></p> <p>-</p> <p>A regionTypeInstance that asserts an StateSetTransitions is an instance of a SetOfStateSuccessionTypes.</p> |
| <p><b>StateMachineRegions</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StateMachineRegions - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Type that has a subTypes one SetOfOwnedStateSets and its associated SetOfStateSuccessionTypes.</p>                                                                                                                                                                                                                                                                                                                                                                                              |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <p><b>StateMachineViews</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StateMachineViews - IndividualTypeTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualTypeTypeType that contains one or more StateMachineViews as instances.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>StateSetTransitions</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StateSetTransitions - transitions</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>StateSetTransitions - stateSetTransitionsType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StateSetTransitions - stateSuccessionsType</p> <p>Association (source - target): «place2Type»</p> <p>StateSetTransitions - OwnedStateSets</p> <p>Association (source - target): «place1Type»</p> <p>StateSetTransitions - OwnedStateSets</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Transitions and a stateSuccessionType that asserts transitions for an OwnedStateSets.</p> |
| <p><b>regionTypeInstances</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place1Type»</p> <p>regionTypeInstances - StateMachineRegions</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>regionTypeInstances - typeInstance</p> <p><u>Attributes:</u></p> <p>-</p> <p>A typeInstance that asserts a StateMachineRegion is a type of some instance.</p>                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>stateMachineRegionSuperSetOfOwnedStateSetSubType</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateMachineRegionSuperSetOfOwnedStateSetSubType - superSubtype</p> <p>Association (source - target): «place2Type»</p> <p>stateMachineRegionSuperSetOfOwnedStateSetSubType - SetOfOwnedStateSets</p> <p>Association (source - target): «place1Type»</p> <p>stateMachineRegionSuperSetOfOwnedStateSetSubType - StateMachineRegions</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubType that asserts a SetOfOwnedStateSets is a subType of a StateMachineRegion.</p>                                                                                                                    |
| <p><b>stateMachineRegionSuperSetOfStateSuccessionTypesSubType</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateMachineRegionSuperSetOfStateSuccessionTypesSubType - superSubtype</p> <p>Association (source - target): «place2Type»</p> <p>stateMachineRegionSuperSetOfStateSuccessionTypesSubType - SetOfStateSuccessionTypes</p>                                                                                                                                                                                                                                                                                                                                                            |

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| <p><i>Association (source - target):</i> «place1Type»<br/>stateMachineRegionSuperSetOfStateSuccessionTypesSubType - StateMachineRegions</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubType that asserts a SetOfStateSuccessionTypes is a subType of a StateMachineRegion.</p>                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>stateMachineViewStateTypeOwners</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>stateMachineViewStateTypeOwners - couple</p> <p><i>Association (source - target):</i> «place1Type»<br/>stateMachineViewStateTypeOwners - IndividualType</p> <p><i>Association (source - target):</i> «place2Type»<br/>stateMachineViewStateTypeOwners - StateMachineViews</p> <p><u>Attributes:</u></p> <p>-</p> <p>A couple that asserts that an IndividualType is a type of owner of a StateMachine View.</p>                                                                                  |
| <p><b>stateMachineViewTypesRegionInstances</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>stateMachineViewTypesRegionInstances - typeInstance</p> <p><i>Association (source - target):</i> «place2Type»<br/>stateMachineViewTypesRegionInstances - StateMachineRegions</p> <p><i>Association (source - target):</i> «place1Type»<br/>stateMachineViewTypesRegionInstances - StateMachineViews</p> <p><u>Attributes:</u></p> <p>-</p> <p>A typeInstance that asserts a StateMachineRegion is an instance of a StateMachineViews.</p>                                                   |
| <p><b>stateSetOwners</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>stateSetOwners - TemporalWholePartType</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/>stateSetOwners - stateSetOwnersType</p> <p><i>Association (source - target):</i> «place2Type»<br/>stateSetOwners - OwnedStateSets</p> <p><i>Association (source - target):</i> «place1Type»<br/>stateSetOwners - IndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TemporalWholeParttype that asserts an OwnedStateSet is a type of temporal part of the owning IndividualType.</p> |
| <p><b>stateSetOwnersType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/>stateSetOwnersType - TemporalWholePartTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A powertype of StateSetOwners.</p>                                                                                                                                                                                                                                                                                                                                                                                   |

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| <p><b>stateSetTransitionsType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateSetTransitionsType - StateSuccessionsTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A powertype of StateSetTransitions.</p>                                                                                                                                                                                                                                                      |
| <p><b>transitions</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>transitions - CoupleType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A CoupleType.</p>                                                                                                                                                                                                                                                                                                                       |
| Interaction view patterns                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>InteractionParticipationRoles</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InteractionParticipationRoles - IndividualType</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>InteractionParticipationRoles - InteractionParticipationRolesType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualType that is the type of participation of an Individual in an Interaction. For example, 'Waiter role in Eat Restaurant Meal'.</p> |
| <p><b>InteractionParticipationRolesType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InteractionParticipationRolesType - IndividualTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of InteractionParticipationRoles.</p>                                                                                                                                                                                                                            |
| <p><b>InteractionRoleStateMachineRegions</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InteractionRoleStateMachineRegions - StateMachineRegions</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StateMachineRegions for a InteractionRoleStateMachineView.</p>                                                                                                                                                                                                                 |
| <p><b>InteractionRoleStateMachineViews</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InteractionRoleStateMachineViews - StateMachineViews</p> <p><u>Attributes:</u></p> <p>-</p> <p>A StateMachineView for a InteractionParticipationRole.</p>                                                                                                                                                                                                                             |

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| <p><b>InteractionRolesViewSets</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InteractionRolesViewSets - InteractionParticipationRolesType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A InteractionParticipationRolesType that is a set of the InteractionParticipationRoles in the InteractionView.</p>                                                                                                                                                                                                                                                    |
| <p><b>InteractionSingleton</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InteractionSingleton - InteractionsType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InteractionSingleton - Singleton</p> <p><u>Attributes:</u></p> <p>-</p> <p>An InteractionType and a Singleton.</p>                                                                                                                                                                                                                                        |
| <p><b>InteractionViews</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InteractionViews - Type</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Type that contains as instances all the elements of the view.</p>                                                                                                                                                                                                                                                                                                                                                |
| <p><b>InteractionWholeRoleViewPartsSets</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InteractionWholeRoleViewPartsSets - WholePartTypeType</p> <p>Association (source - target): «place1Type»</p> <p>InteractionWholeRoleViewPartsSets - InteractionSingleton</p> <p>Association (source - target): «place2Type»</p> <p>InteractionWholeRoleViewPartsSets - InteractionRolesViewSets</p> <p><u>Attributes:</u></p> <p>-</p> <p>A WholePartTypeType that asserts the InteractionParticipationRolesType is a type of part of the InteractionSingleton.</p> |
| <p><b>Interactions</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Interactions - IndividualType</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Interactions - InteractionsType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An IndividualType that is composed of types of participating Individuals. For example, 'Eat Restaurant Meal'.</p>                                                                                                                                                                                 |
| <p><b>InteractionsType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>InteractionsType - IndividualTypeType</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                                                                                                                                                                                                                             |

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| <p>-<br/>The powertype of Interactions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>ReceiveInteractingStateTypesViewSet</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> ReceiveInteractingStateTypesViewSet - SendReceiveInteractingStateTypesViewSet<br/> <u>Attributes:</u><br/> -<br/> A SendReceiveInteractingStateTypesViewSet that contains a type of receiving state in the view.</p>                                                                                                                                                                                                                     |
| <p><b>SendInteractingStateTypesViewSet</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> SendInteractingStateTypesViewSet - SendReceiveInteractingStateTypesViewSet<br/> <u>Attributes:</u><br/> -<br/> A SendReceiveInteractingStateTypesViewSet that contains a type of sending state in the view.</p>                                                                                                                                                                                                                             |
| <p><b>SendReceiveExchangesView</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> SendReceiveExchangesView - stateInteractionsTypeType<br/> Association (source - target): «place2Type»<br/> SendReceiveExchangesView - ReceiveInteractingStateTypesViewSet<br/> Association (source - target): «place1Type»<br/> SendReceiveExchangesView - SendInteractingStateTypesViewSet<br/> <u>Attributes:</u><br/> -<br/> A stateInteractionsTypeType that asserts one type of state sends an exchange and another receives the exchange.</p> |
| <p><b>SendReceiveInteractingStateTypesViewSet</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> SendReceiveInteractingStateTypesViewSet - IndividualTypeType<br/> <u>Attributes:</u><br/> -<br/> An IndividualTypeType that contains a type of sending or receiving state in the view.</p>                                                                                                                                                                                                                                           |
| <p><b>WholeInteractionRoleViewSetsParts</b> «IDEAS:Type»<br/> <u>Connectors:</u><br/> Generalization (element - is a subtype of): «IDEAS:superSubtype»<br/> WholeInteractionRoleViewSetsParts - WholePartTypeType<br/> Association (source - target): «place2Type»<br/> WholeInteractionRoleViewSetsParts - InteractionRolesViewSets<br/> <u>Attributes:</u><br/> -<br/> A WholePartTypeType that asserts the InteractionParticipationRolesType is a type of part of the type Individual participating in the Interaction.</p>                                                                         |

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| <p><b>individualWholeInteractionRolePartTypes</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>individualWholeInteractionRolePartTypes - WholePartType</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>individualWholeInteractionRolePartTypes - InteractionParticipationRoles</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>individualWholeInteractionRolePartTypes - IndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A WholePartType that asserts an InteractionParticipationRole is a type of part of an IndividualType.</p>                                                                                                                                            |
| <p><b>interactionRoleStateMachineViewStateTypeOwners</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Association (source - target):</i> «place1Type»</p> <p>interactionRoleStateMachineViewStateTypeOwners - InteractionParticipationRoles</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>interactionRoleStateMachineViewStateTypeOwners - InteractionRoleStateMachineViews</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>interactionRoleStateMachineViewStateTypeOwners - stateMachineViewStateTypeOwners</p> <p><u>Attributes:</u></p> <p>-</p> <p>A stateMachineViewStateTypeOwner that asserts a InteractionRoleStateMachineView is owned by a InteractionParticipationRole.</p>                                                |
| <p><b>interactionRoleStateMachineViewTypesRegionInstances</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>interactionRoleStateMachineViewTypesRegionInstances - stateMachineViewTypesRegionInstances</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>interactionRoleStateMachineViewTypesRegionInstances - InteractionRoleStateMachineRegions</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>interactionRoleStateMachineViewTypesRegionInstances - InteractionRoleStateMachineViews</p> <p><u>Attributes:</u></p> <p>-</p> <p>A stateMachineViewTypesRegionInstances that asserts a InteractionRoleStateMachineRegion is an instance of a InteractionRoleStateMachineView.</p> |
| <p><b>interactionViewTypesInstances</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>interactionViewTypesInstances - typeInstance</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>interactionViewTypesInstances - InteractionViews</p> <p><u>Attributes:</u></p> <p>-</p> <p>A typeInstance that asserts something is an instance of an InteractionView.</p>                                                                                                                                                                                                                                                                                                                                      |
| <p><b>interactionViewTypesInteractionRoleStateMachineViewsInstances</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>interactionViewTypesInteractionRoleStateMachineViewsInstances - interactionViewTypesInstances</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>interactionViewTypesInteractionRoleStateMachineViewsInstances - InteractionRoleStateMachineViews</p>                                                                                                                                                                                                                                                                                                                           |

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| <u>Attributes:</u><br>-<br>A interactionViewTypesInstances that asserts a InteractionRoleStateMachineViews is an instance of an InteractionView.                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>interactionViewTypesInteractionRoleViewSetsInstances</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>interactionViewTypesInteractionRoleViewSetsInstances - interactionViewTypesInstances<br>Association (source - target): «place2Type»<br>interactionViewTypesInteractionRoleViewSetsInstances - InteractionRolesViewSets<br><u>Attributes:</u><br>-<br>A interactionViewTypesInstances that asserts an InteractionRolesViewSets is an instance of an InteractionView.                                                |
| <b>interactionViewTypesInteractionSingletonInstances</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>interactionViewTypesInteractionSingletonInstances - interactionViewTypesInstances<br>Association (source - target): «place2Type»<br>interactionViewTypesInteractionSingletonInstances - InteractionSingleton<br><u>Attributes:</u><br>-<br>A interactionViewTypesInstances that asserts a InteractionSingleton is an instance of an InteractionView.                                                                  |
| <b>interactionViewTypesInteractionWholeRoleViewPartSetsInstances</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>interactionViewTypesInteractionWholeRoleViewPartSetsInstances - interactionViewTypesInstances<br>Association (source - target): «place2Type»<br>interactionViewTypesInteractionWholeRoleViewPartSetsInstances - InteractionWholeRoleViewPartsSets<br><u>Attributes:</u><br>-<br>A interactionViewTypesInstances that asserts an InteractionWholeRoleViewPartsSets is an instance of an InteractionView.   |
| <b>interactionViewTypesWholeInteractionRoleViewSetsPartsInstances</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>interactionViewTypesWholeInteractionRoleViewSetsPartsInstances - interactionViewTypesInstances<br>Association (source - target): «place2Type»<br>interactionViewTypesWholeInteractionRoleViewSetsPartsInstances - WholeInteractionRoleViewSetsParts<br><u>Attributes:</u><br>-<br>A interactionViewTypesInstances that asserts an WholeInteractionRoleViewSetsPart is an instance of an InteractionView. |
| <b>interactionViewtypesSendReceiveViewSetInstances</b> «IDEAS:TupleType»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>interactionViewtypesSendReceiveViewSetInstances - interactionViewTypesInstances<br>Association (source - target): «place2Type»<br>interactionViewtypesSendReceiveViewSetInstances - SendReceiveInteractingStateTypesViewSet<br><u>Attributes:</u><br>-<br>A interactionViewTypesInstances that asserts a SendReceiveInteractingStateTypesViewSet is an instance of an InteractionView.                                  |

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| <p><b>interactionWholeRolePartTypes</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>interactionWholeRolePartTypes - WholePartType</p> <p>Association (source - target): «place2Type»</p> <p>interactionWholeRolePartTypes - InteractionParticipationRoles</p> <p>Association (source - target): «place1Type»</p> <p>interactionWholeRolePartTypes - Interactions</p> <p><u>Attributes:</u></p> <p>-</p> <p>A WholePartType that asserts an InteractionParticipationRole is a type of part of an Interaction.</p> |
| <b>State interactions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>stateInteractions</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateInteractions - beforeAfter</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>stateInteractions - stateInteractionsType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A beforeAfter that asserts that one state is before another.</p>                                                                                                                                                                 |
| <p><b>stateInteractionsType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>stateInteractionsType - stateInteractionsTypeType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateInteractionsType - BeforeAfterType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of stateInteractions.</p>                                                                                                                                                                      |
| <p><b>stateInteractionsTypeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateInteractionsTypeType - TupleTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of stateInteractionsType.</p>                                                                                                                                                                                                                                                                                             |
| <p><b>LinearlySucceededDisjointStateTypesSets</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LinearlySucceededDisjointStateTypesSets - SetOfOwnedStateSets</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>LinearlySucceededDisjointStateTypesSets - InteractionRoleStateMachineRegions</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SetOfOwnedStateSets where each state type is succeeded by no more than one other state type.</p>                                             |

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| <p><b>SingletonDisjointStateTypesSets</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>SingletonDisjointStateTypesSets - SetOfOwnedStateSets</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>SingletonDisjointStateTypesSets - Singleton</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SetOfOwnedStateSets and a Singleton.</p>                                                                                                                                                                                                                                                                                           |
| <p><b>SingletonLinearlySucceededDisjointStateTypesSets</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>SingletonLinearlySucceededDisjointStateTypesSets - SingletonDisjointStateTypesSets</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>SingletonLinearlySucceededDisjointStateTypesSets - LinearlySucceededDisjointStateTypesSets</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SingletonDisjointStateTypesSets and a LinearlySucceededDisjointStateTypesSets. Note: 'Singleton Linearly Succeeded Disjoint State Types Sets' cannot have any succession, as any such successions would not be linear.</p>            |
| <p><b>disjointStateTypesSetsSuperSubTypeHierarchy</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>disjointStateTypesSetsSuperSubTypeHierarchy - superSubtype</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>disjointStateTypesSetsSuperSubTypeHierarchy - SetOfOwnedStateSets</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>disjointStateTypesSetsSuperSubTypeHierarchy - SetOfOwnedStateSets</p> <p><u>Attributes:</u></p> <p>-</p> <p>A superSubType that asserts one SetofOwnedStateSets is a subType of another.</p>                                                                                           |
| <p><b>improperInstanceWiseDisjointStateSets</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>improperInstanceWiseDisjointStateSets - Singleton</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>improperInstanceWiseDisjointStateSets - instanceWiseDisjointStateTypeSets</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Singleton and an InstanceWiseDisjointStateTypeSets that asserts a SetOfOwnedStateSets is an improper part of an IndividualTypeType. At the limit, each instance of an Element Powertype has itself as an improper temporal stage. The union of these is the instance of the Element Powertype.</p> |
| <p><b>instanceWiseCompletePartitionStateTypeSets</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>instanceWiseCompletePartitionStateTypeSets - instanceWiseDisjointStateTypeSets</p> <p><u>Attributes:</u></p> <p>-</p> <p>A instanceWiseDisjointStateTypeSets where the state types completely partition the whole.</p>                                                                                                                                                                                                                                                                                                                                      |

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| <p><b>linearlySucceededDisjointStateSetsStateTypeSuccessionTypes</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>linearlySucceededDisjointStateSetsStateTypeSuccessionTypes - InteractionRoleStateMachineRegions</p> <p>Association (source - target): «place1Type»</p> <p>linearlySucceededDisjointStateSetsStateTypeSuccessionTypes - LinearlySucceededDisjointStateTypesSets</p> <p>Association (source - target): «place2Type»</p> <p>linearlySucceededDisjointStateSetsStateTypeSuccessionTypes - LinearlySucceededDisjointStateTypesSets</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>linearlySucceededDisjointStateSetsStateTypeSuccessionTypes - SetOfStateSuccessionTypes</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SetOfStateSuccessionTypes that asserts that a one LinearlySucceededDisjointStateTypesSets is succeed by only one other.</p> |
| <p><b>singletonDisjointStateSetsStateTypeSuccessionTypes</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»</p> <p>singletonDisjointStateSetsStateTypeSuccessionTypes - SingletonDisjointStateTypesSets</p> <p>Association (source - target): «place1Type»</p> <p>singletonDisjointStateSetsStateTypeSuccessionTypes - SingletonDisjointStateTypesSets</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>singletonDisjointStateSetsStateTypeSuccessionTypes - SetOfStateSuccessionTypes</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SetOfStateSuccessionTypes where the successions are between SingletonDisjointStateTypesSets.</p>                                                                                                                                                                                                                                                           |
| <b>State successions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>SetOfOwnedStateSets</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SetOfOwnedStateSets - IndividualTypeType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SetOfOwnedStateSets - OwnedStateSetsType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SetOfOwnedStateSets - SetOfDisjointTypes</p> <p><u>Attributes:</u></p> <p>-</p> <p>A SetOfDisjointTypes and IndividualTypeType where each instance is a disjoint set of state types, whose union is instance-wise disjoint relative to the related instance of Element Powertype.</p>                                                                                                                                                                                                                                                                              |
| <p><b>SetOfStateSuccessionTypes</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SetOfStateSuccessionTypes - StateSuccessionsTypeType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SetOfStateSuccessionTypes - stateSetTransitionsType</p> <p>Association (source - target): «place2Type»</p> <p>SetOfStateSuccessionTypes - SetOfOwnedStateSets</p> <p>Association (source - target): «place1Type»</p> <p>SetOfStateSuccessionTypes - SetOfOwnedStateSets</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                                                                                                                                                                                                           |

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| <p>A StateSuccessionsTypeType that asserts a type of succession between instances of SetOfOwnedStateSets.</p> <p><b>instanceWiseDisjointStateTypeSets</b> «IDEAS:Type»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>instanceWiseDisjointStateTypeSets - stateSetOwnersType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>instanceWiseDisjointStateTypeSets - TemporalWholePartTypeType</p> <p>Association (source - target): «place2Type»</p> <p>instanceWiseDisjointStateTypeSets - SetOfOwnedStateSets</p> <p>Association (source - target): «place1Type»</p> <p>instanceWiseDisjointStateTypeSets - SingletonIndividualTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A TemporalWholePartTypeType that asserts a SetOfOwnedStateSets is a type of type of part of an IndividualTypeType.</p> |
| <p><b>stateSuccessions</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateSuccessions - beforeAfter</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>stateSuccessions - stateSuccessionsType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A beforeAfter that asserts a succession between states.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <p><b>StateSuccessionsType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>stateSuccessionsType - BeforeAfterType</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>stateSuccessionsType - StateSuccessionsTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A powertype of stateSuccessions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>StateSuccessionsTypeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StateSuccessionsTypeType - TupleTypeType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>StateSuccessionsTypeType - BeforeAfterTypeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A powertype of stateSuccessionType.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

**successionTypeInSet** «IDEAS:TupleType»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

successionTypeInSet - typeInstance

*Association (source - target):* «place2Type»

successionTypeInSet - stateSuccessionsType

*Association (source - target):* «place1Type»

successionTypeInSet - SetOfStateSuccessionTypes

Attributes:

-

A typeInstance that asserts a StateSuccessionType is a member of a SetOfStateSuccessionTypes.

### 3.4.7 Exchange diagrams

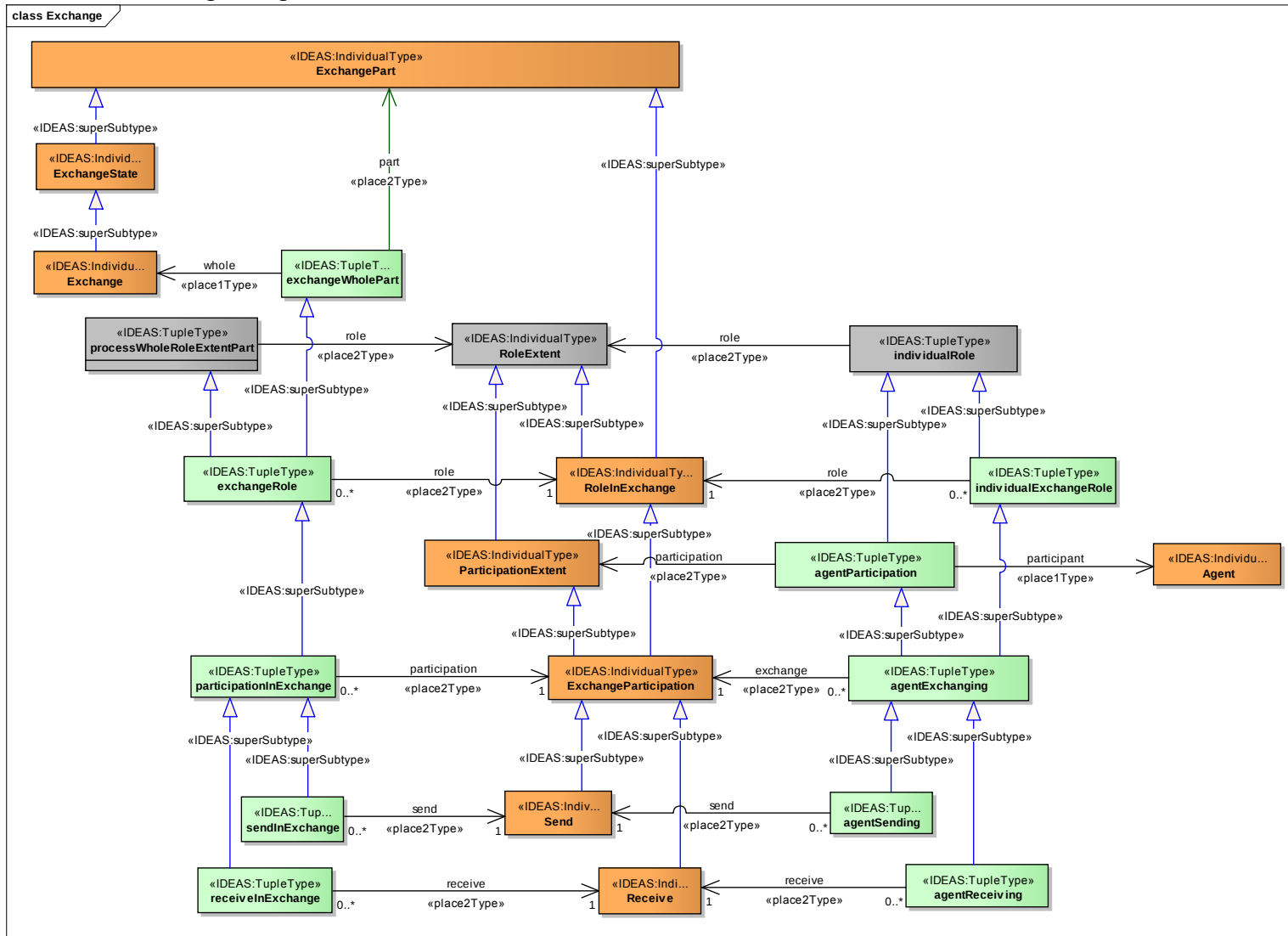


Figure 129 : Exchange

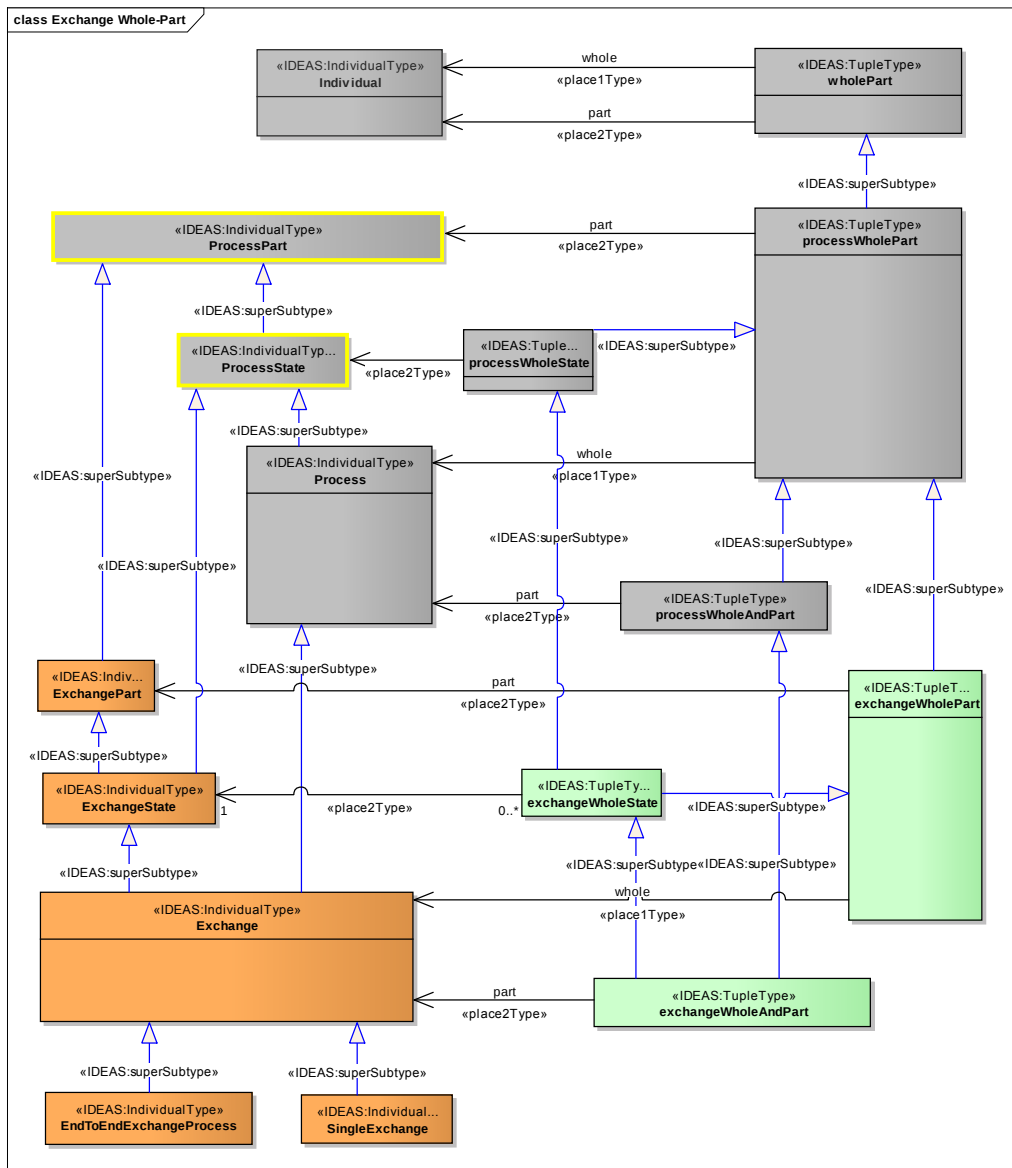


Figure 130 : Exchange Whole-Part

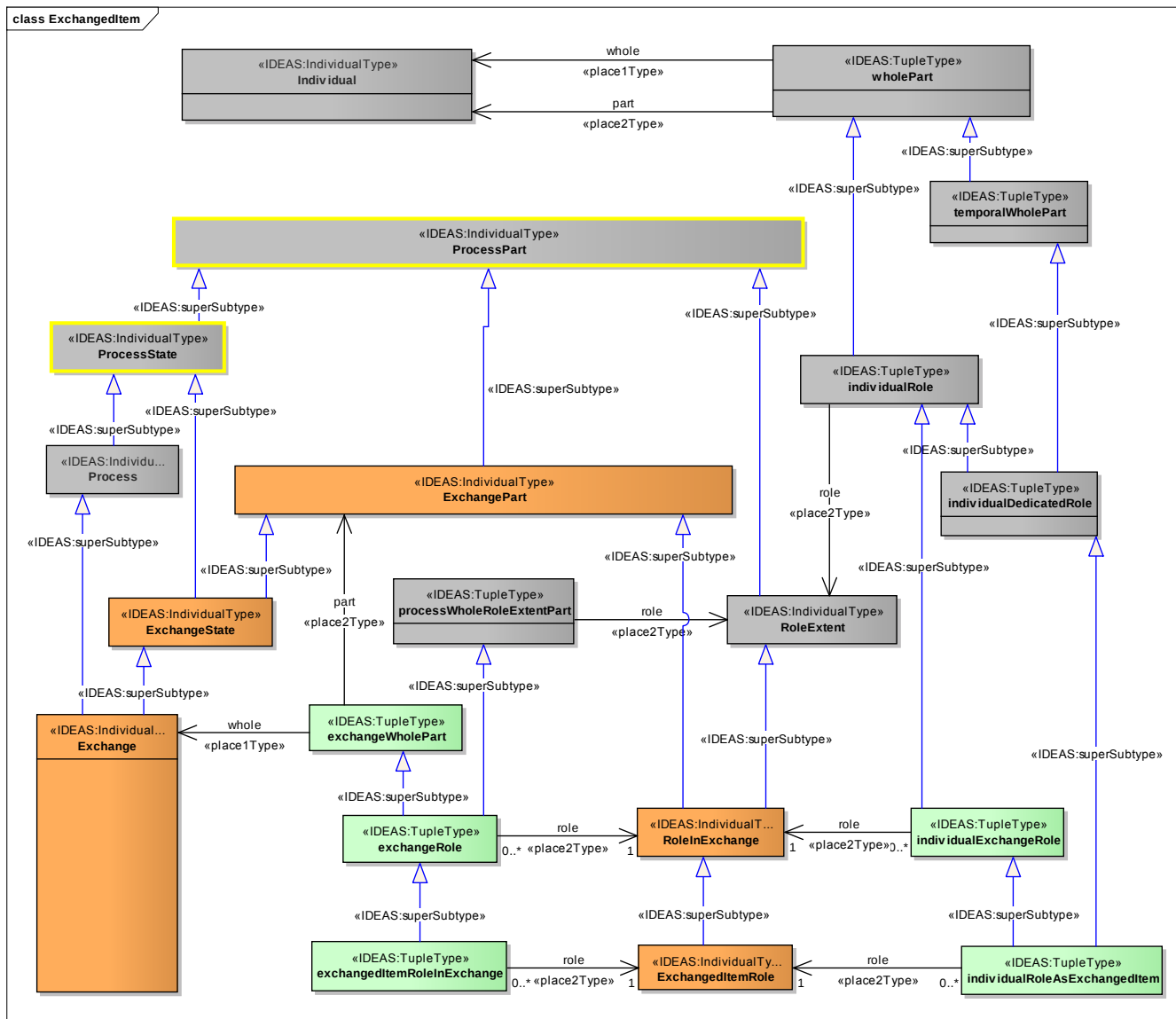


Figure 131 : ExchangedItem

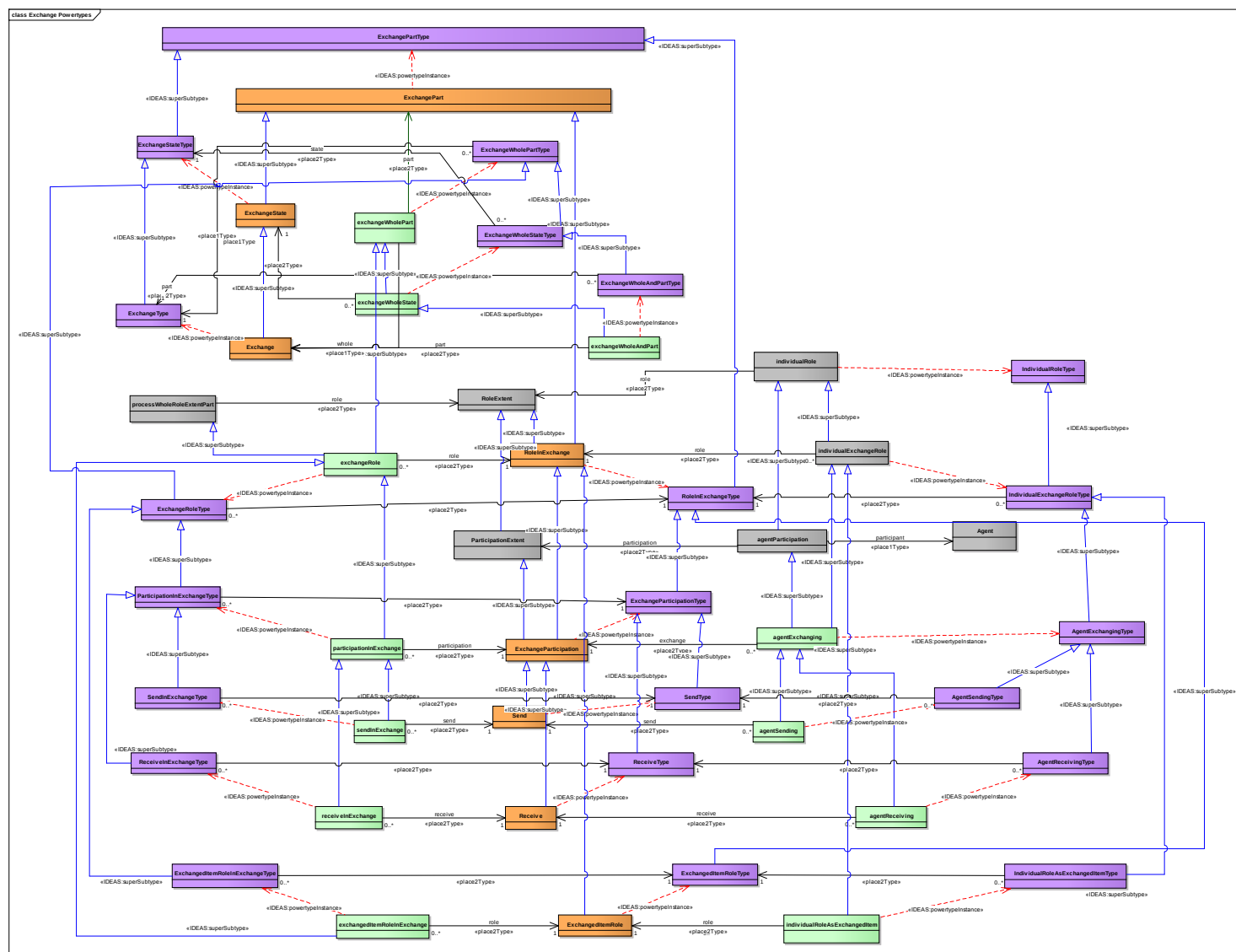


Figure 132 : Exchange Powertypes

### 3.4.8 Exchange elements list

| Exchange                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <p><b>DirectedExchange</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>DirectedExchange - Exchange</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Exchange where the exchanged Individuals all flow in one direction.</p>                                                                                                                                                                                                                                                                                                  |
| <p><b>EndToEndExchangeProcess</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>EndToEndExchangeProcess - Exchange</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Exchange which consists of other Exchanges. Note: the Exchanges which are part of the EndToEndExchangeProcess need not be a sequence - some may run in parallel.</p>                                                                                                                                                                                       |
| <p><b>Exchange</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Exchange - Process</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Exchange - ExchangeState</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Exchange - ExchangeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A Process where one Agent exchanges one or more Individuals with another Agent.</p>                                                                                           |
| <p><b>ExchangePart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangePart - ProcessPart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ExchangePart - ExchangePartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProcessPart that is part of an Exchange.</p>                                                                                                                                                                                                                    |
| <p><b>ExchangeParticipation</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeParticipation - ParticipationExtent</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeParticipation - RoleInExchange</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ExchangeParticipation - ExchangeParticipationType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RoleInExchange and a ParticipationExtent that is an Agent's participation in an Exchange.</p> |

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| <p><b>ExchangeState</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeState - ExchangePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeState - ProcessState</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ExchangeState - ExchangeStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ExchangePart that is a temporal part of an Exchange.</p>          |
| <p><b>ExchangedItemRole</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangedItemRole - RoleInExchange</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ExchangedItemRole - ExchangedItemRoleType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A RoleInExchange where the Process is an Exchange and the Individual's role is as the thing being exchanged.</p>                                               |
| <p><b>Receive</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Receive - ExchangeParticipation</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Receive - ReceiveType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ExchangeParticipation that is the receiving Agent's participation in an Exchange.</p>                                                                                                        |
| <p><b>RoleInExchange</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleInExchange - ExchangePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleInExchange - RoleExtent</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>RoleInExchange - RoleInExchangeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An ExchangePart that is an Individual's role in the Exchange.</p> |
| <p><b>Send</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Send - ExchangeParticipation</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Send - SendType</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                                                                |

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| <p>An ExchangePart and a ParticipationExtent that is the sending Agent's participation in an Exchange.</p> <p><b>SingleExchange</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SingleExchange - Exchange</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Exchange that has no parts that are also Exchanges. Example: One person handing another a document.</p>                                                                                                                                                                                                      |
| <p><b>agentExchanging</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>agentExchanging - agentParticipation</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>agentExchanging - individualExchangeRole</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>agentExchanging - AgentExchangingType</p> <p>Association (source - target): «place2Type»</p> <p>agentExchanging - ExchangeParticipation</p> <p><u>Attributes:</u></p> <p>-</p> <p>An agentParticipation where the participation is in an Exchange.</p> |
| <p><b>agentReceiving</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>agentReceiving - agentExchanging</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>agentReceiving - AgentReceivingType</p> <p>Association (source - target): «place2Type»</p> <p>agentReceiving - Receive</p> <p><u>Attributes:</u></p> <p>-</p> <p>An agentExchanging where the Agent's participation is as the receiver.</p>                                                                                                                                         |
| <p><b>agentSending</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>agentSending - agentExchanging</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>agentSending - AgentSendingType</p> <p>Association (source - target): «place2Type»</p> <p>agentSending - Send</p> <p><u>Attributes:</u></p> <p>-</p> <p>An agentExchanging where the Agent's participation is as the sender.</p>                                                                                                                                                        |
| <p><b>exchangeRole</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>exchangeRole - exchangeWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p>                                                                                                                                                                                                                                                                                                                                                                                          |

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| <p>exchangeRole - processWholeRoleExtentPart<br/> <i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/> exchangeRole - ExchangeRoleType<br/> <i>Association (source - target):</i> «place2Type»<br/> exchangeRole - RoleInExchange<br/> <u>Attributes:</u><br/> -<br/> An exchangeWholePart where the part is a RoleInExchange.</p>                                                                                                                                                                                                                                                                                                           |
| <p><b>exchangeWholeAndPart</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> exchangeWholeAndPart - exchangeWholeState<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> exchangeWholeAndPart - processWholeAndPart<br/> <i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/> exchangeWholeAndPart - ExchangeWholeAndPartType<br/> <i>Association (source - target):</i> «place2Type»<br/> exchangeWholeAndPart - Exchange<br/> <u>Attributes:</u><br/> -<br/> An exchangeWholePart where the part is an exchange.</p>         |
| <p><b>exchangeWholePart</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> exchangeWholePart - processWholePart<br/> <i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/> exchangeWholePart - ExchangeWholePartType<br/> <i>Association (source - target):</i> «place2Type»<br/> exchangeWholePart - ExchangePart<br/> <i>Association (source - target):</i> «place1Type»<br/> exchangeWholePart - Exchange<br/> <u>Attributes:</u><br/> -<br/> A processWholePart where the whole is an Exchange and the part is an ExchangePart.</p>                          |
| <p><b>exchangeWholeState</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> exchangeWholeState - exchangeWholePart<br/> <i>Association (source - target):</i> «place2Type»<br/> exchangeWholeState - ExchangeState<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> exchangeWholeState - processWholeState<br/> <i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/> exchangeWholeState - ExchangeWholeStateType<br/> <u>Attributes:</u><br/> -<br/> An exchangeWholePart where the part is a temporal state of the whole.</p> |

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| <p><b>exchangedItemRoleInExchange</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> exchangedItemRoleInExchange - exchangeRole</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/> exchangedItemRoleInExchange - ExchangedItemRoleInExchangeType</p> <p><i>Association (source - target):</i> «place2Type»<br/> exchangedItemRoleInExchange - ExchangedItemRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>An exchangeRole where the role is that of the Individual being exchanged.</p>                                                                                                                                                              |
| <p><b>individualExchangeRole</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> individualExchangeRole - individualRole</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/> individualExchangeRole - IndividualExchangeRoleType</p> <p><i>Association (source - target):</i> «place2Type»<br/> individualExchangeRole - RoleInExchange</p> <p><u>Attributes:</u></p> <p>-</p> <p>An individualRole where the process is an Exchange.</p>                                                                                                                                                                                                              |
| <p><b>individualRoleAsExchangedItem</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> individualRoleAsExchangedItem - individualExchangeRole</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> individualRoleAsExchangedItem - individualDedicatedRole</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/> individualRoleAsExchangedItem - IndividualRoleAsExchangedItemType</p> <p><i>Association (source - target):</i> «place2Type»<br/> individualRoleAsExchangedItem - ExchangedItemRole</p> <p><u>Attributes:</u></p> <p>-</p> <p>An individualExchangeRole the Individual is the thing being exchanged.</p> |
| <p><b>participationInExchange</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> participationInExchange - exchangeRole</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/> participationInExchange - ParticipationInExchangeType</p> <p><i>Association (source - target):</i> «place2Type»<br/> participationInExchange - ExchangeParticipation</p> <p><u>Attributes:</u></p> <p>-</p> <p>An exchangeWholePart where the part is an ExchangeParticipation.</p>                                                                                                                                                                                       |

| <p><b>receiveInExchange</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>receiveInExchange - participationInExchange</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>receiveInExchange - ReceiveInExchangeType</p> <p>Association (source - target): «place2Type»</p> <p>receiveInExchange - Receive</p> <p><u>Attributes:</u></p> <p>-</p> <p>A participationInExchange where the participation is a Receive.</p> |
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| <p><b>sendInExchange</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>sendInExchange - participationInExchange</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>sendInExchange - SendInExchangeType</p> <p>Association (source - target): «place2Type»</p> <p>sendInExchange - Send</p> <p><u>Attributes:</u></p> <p>-</p> <p>A participationInExchange where participation is a Send.</p>                          |
| Exchange Powertypes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>AgentExchangingType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentExchangingType - AgentParticipationType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentExchangingType - IndividualExchangeRoleType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of agentExchanging.</p>                                                                                                           |
| <p><b>AgentReceivingType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentReceivingType - AgentExchangingType</p> <p>Association (source - target): «place2Type»</p> <p>AgentReceivingType - ReceiveType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of agentReceiving.</p>                                                                                                                                                      |
| <p><b>AgentSendingType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentSendingType - AgentExchangingType</p> <p>Association (source - target): «place2Type»</p> <p>AgentSendingType - SendType</p> <p><u>Attributes:</u></p>                                                                                                                                                                                                                |

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| <p>-</p> <p>The powertype of agentSending.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>ExchangePartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangePartType - ProcessPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ExchangePart.</p>                                                                                                                                                                                                                                        |
| <p><b>ExchangeParticipationType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeParticipationType - RoleInExchangeType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeParticipationType - ParticipationExtentType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ExchangeParticipation.</p>                                                                       |
| <p><b>ExchangeRoleType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeRoleType - ProcessWholeRoleExtentPartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeRoleType - ExchangeWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>ExchangeRoleType - RoleInExchangeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of exchangeRole.</p> |
| <p><b>ExchangeStateType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeStateType - ExchangePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeStateType - ProcessStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ExchangeState.</p>                                                                                                                |
| <p><b>ExchangeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeType - ExchangeStateType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeType - ProcessType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of Exchange.</p>                                                                                                                                        |

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| <p><b>ExchangeWholeAndPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeWholeAndPartType - ExchangeWholeStateType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeWholeAndPartType - ProcessWholeAndPartType</p> <p>Association (source - target): «place2Type»</p> <p>ExchangeWholeAndPartType - ExchangeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of exchangeWholeAndPart.</p> |
| <p><b>ExchangeWholePartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeWholePartType - ProcessWholePartType</p> <p>Association (source - target): «place1Type»</p> <p>ExchangeWholePartType - ExchangeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of exchangeWholePart.</p>                                                                                                                                                 |
| <p><b>ExchangeWholeStateType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeWholeStateType - ExchangeWholePartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangeWholeStateType - ProcessWholeStateType</p> <p>Association (source - target): «place2Type»</p> <p>ExchangeWholeStateType - ExchangeStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of exchangeWholeState.</p>         |
| <p><b>ExchangedItemRoleInExchangeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»</p> <p>ExchangedItemRoleInExchangeType - ExchangedItemRoleType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangedItemRoleInExchangeType - ExchangeRoleType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of exchangedItemRoleInExchange.</p>                                                                                                    |
| <p><b>ExchangedItemRoleType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ExchangedItemRoleType - RoleInExchangeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ExchangedItemRole.</p>                                                                                                                                                                                                                                                  |

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| <p><b>IndividualExchangeRoleType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>IndividualExchangeRoleType - IndividualRoleType</p> <p>Association (source - target): «place2Type»</p> <p>IndividualExchangeRoleType - RoleInExchangeType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of individualExchangeRole.</p>                                                                                                                                                                                       |
| <p><b>IndividualRoleAsExchangedItemType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Association (source - target): «place2Type»</p> <p>IndividualRoleAsExchangedItemType - ExchangedItemRoleType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>IndividualRoleAsExchangedItemType - IndividualExchangeRoleType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>IndividualRoleAsExchangedItemType - IndividualDedicatedRoleType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of individualRoleAsExchangedItem.</p> |
| <p><b>ParticipationInExchangeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ParticipationInExchangeType - ExchangeRoleType</p> <p>Association (source - target): «place2Type»</p> <p>ParticipationInExchangeType - ExchangeParticipationType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of participationInExchange.</p>                                                                                                                                                                              |
| <p><b>ReceiveInExchangeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ReceiveInExchangeType - ParticipationInExchangeType</p> <p>Association (source - target): «place2Type»</p> <p>ReceiveInExchangeType - ReceiveType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of receiveInExchange.</p>                                                                                                                                                                                                         |
| <p><b>ReceiveType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ReceiveType - ExchangeParticipationType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of Receive.</p>                                                                                                                                                                                                                                                                                                                                       |

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| <p><b>RoleInExchangeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleInExchangeType - RoleExtentType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleInExchangeType - ExchangePartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of RoleInExchange.</p> |
| <p><b>SendInExchangeType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SendInExchangeType - ParticipationInExchangeType</p> <p>Association (source - target): «place2Type»</p> <p>SendInExchangeType - SendType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of sendInExchange.</p>                 |
| <p><b>SendType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>SendType - ExchangeParticipationType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of Send.</p>                                                                                                                                         |

### 3.4.9 Agent diagrams

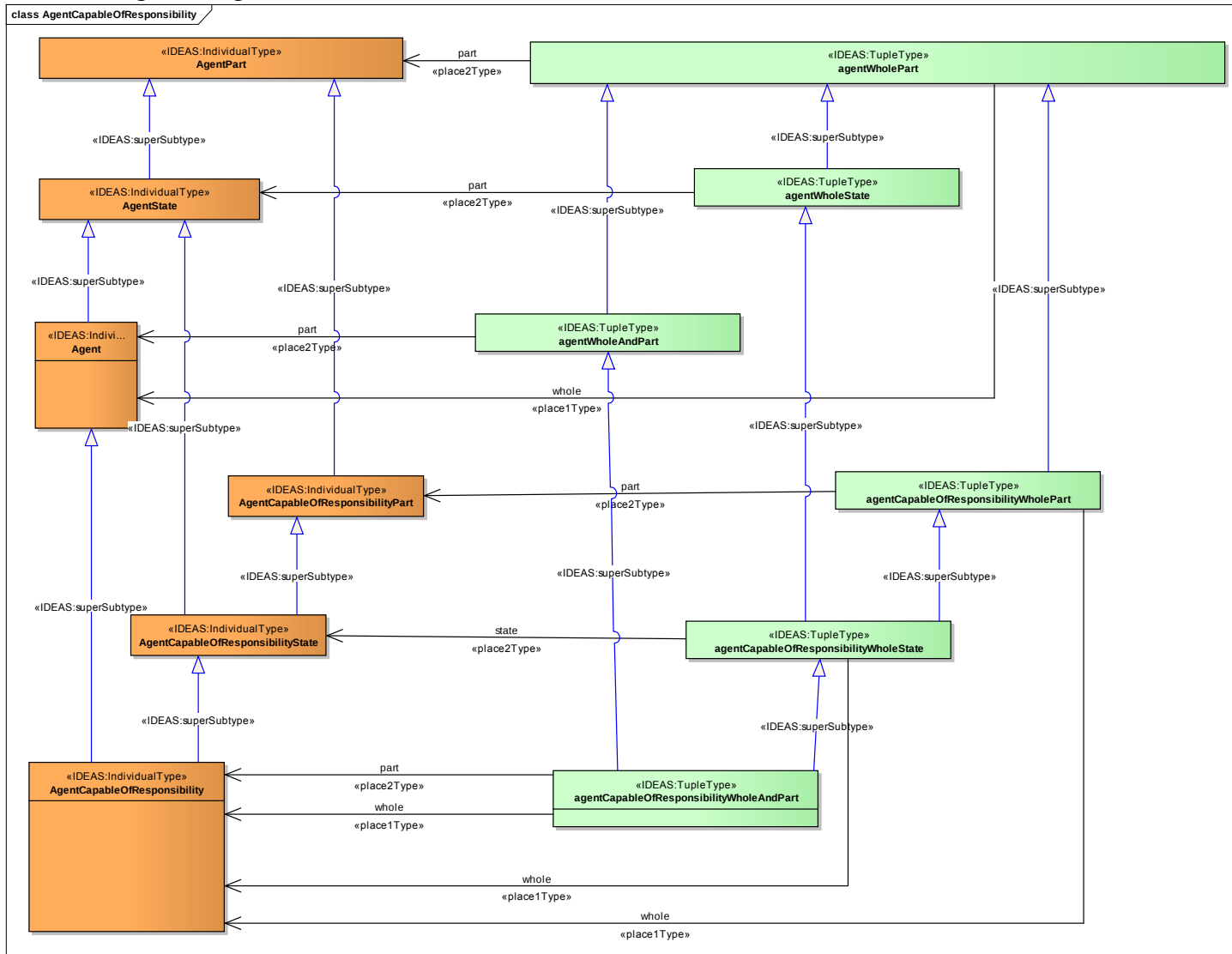


Figure 133 : AgentCapableOfResponsibility

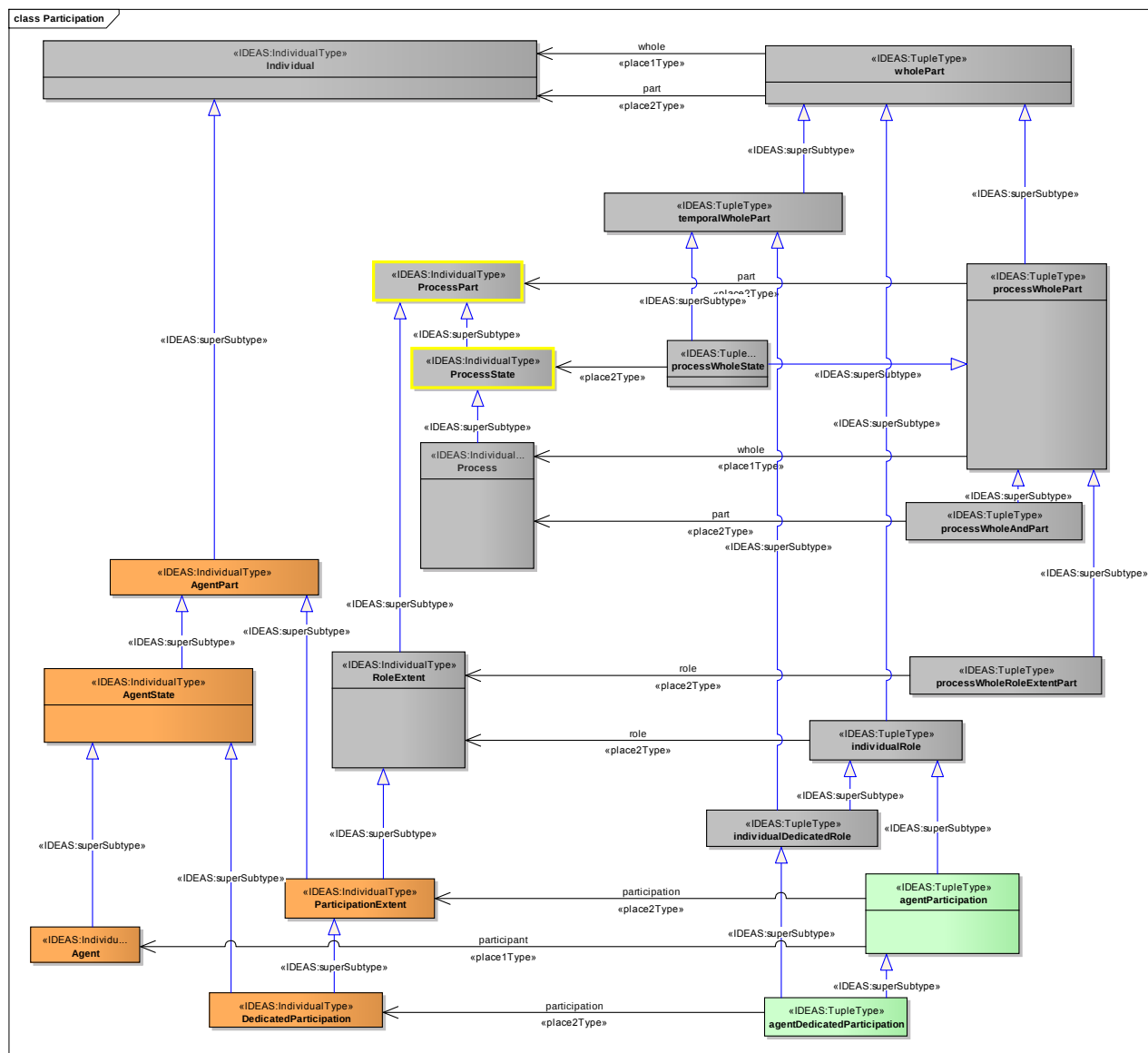


Figure 134 : Participation

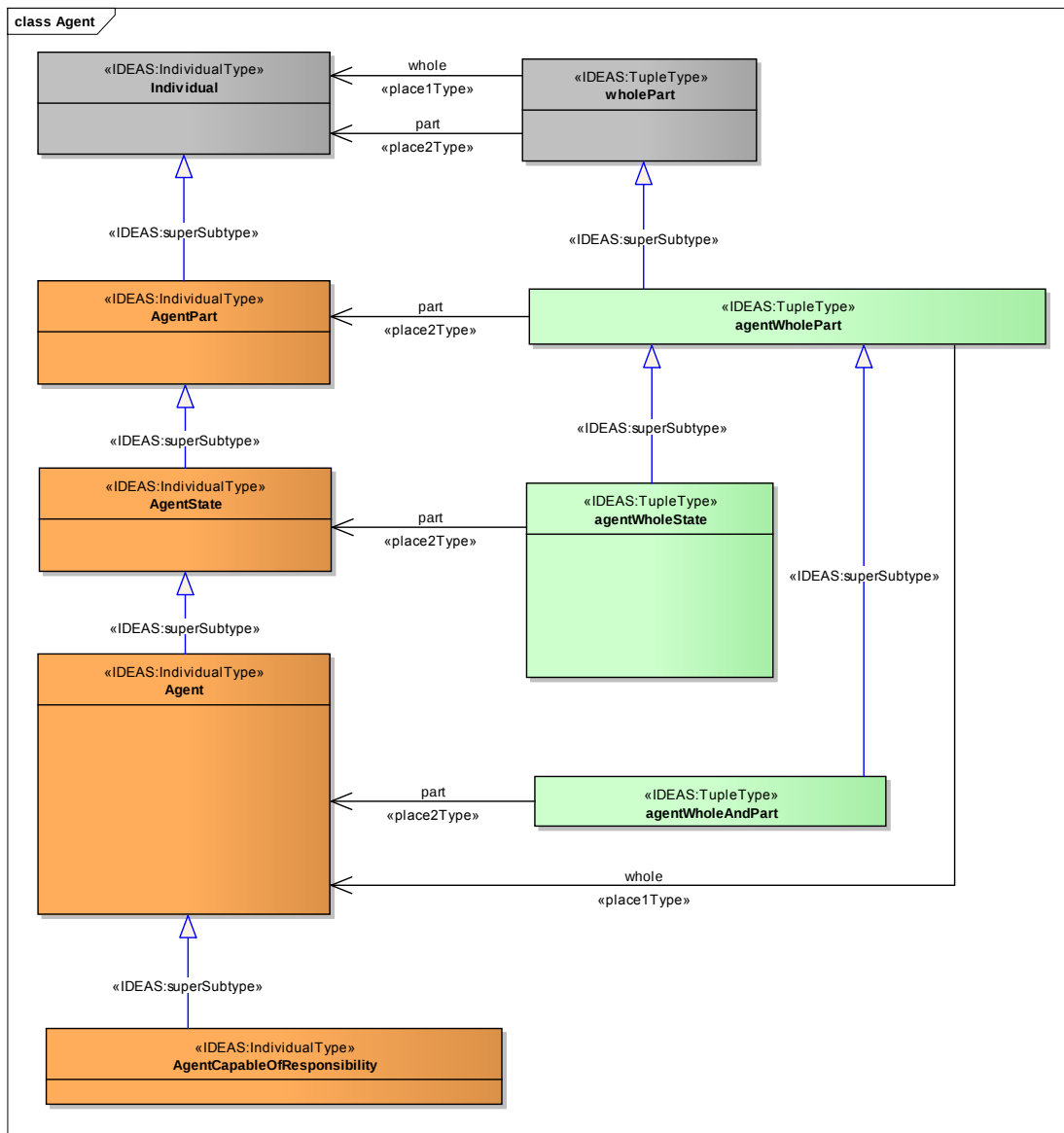


Figure 135 : Agent

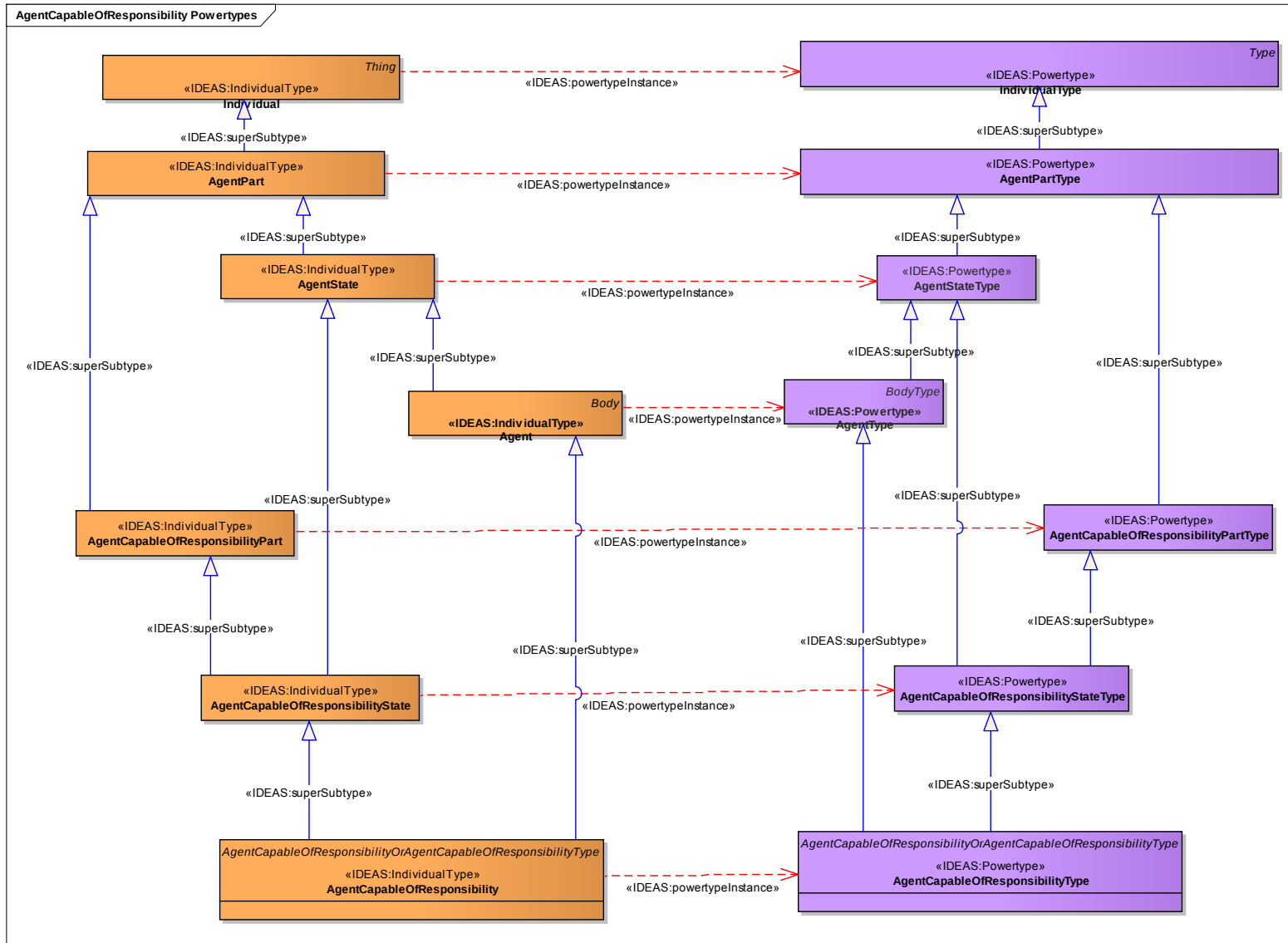
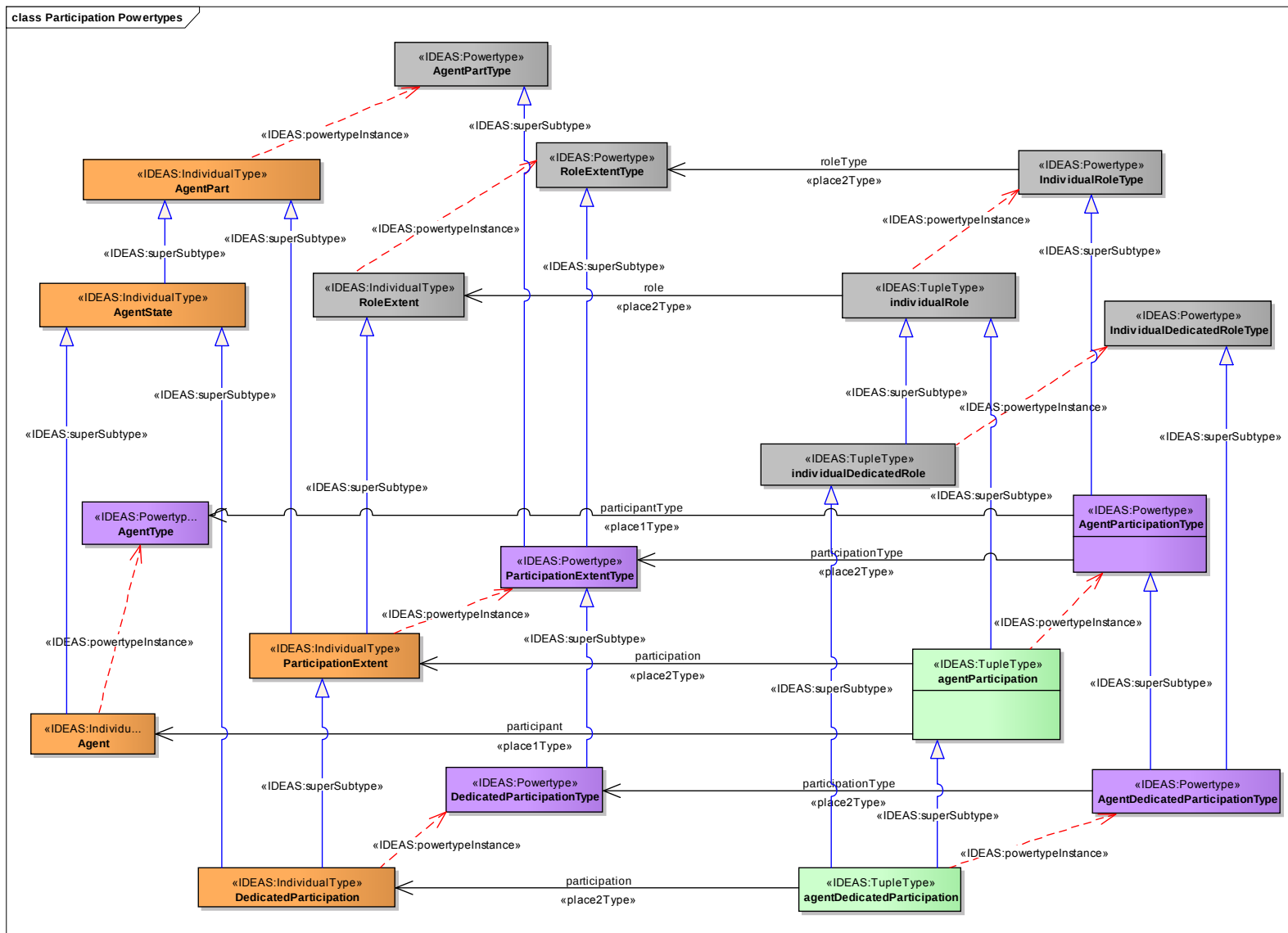


Figure 136 : AgentCapableOfResponsibility Powertypes



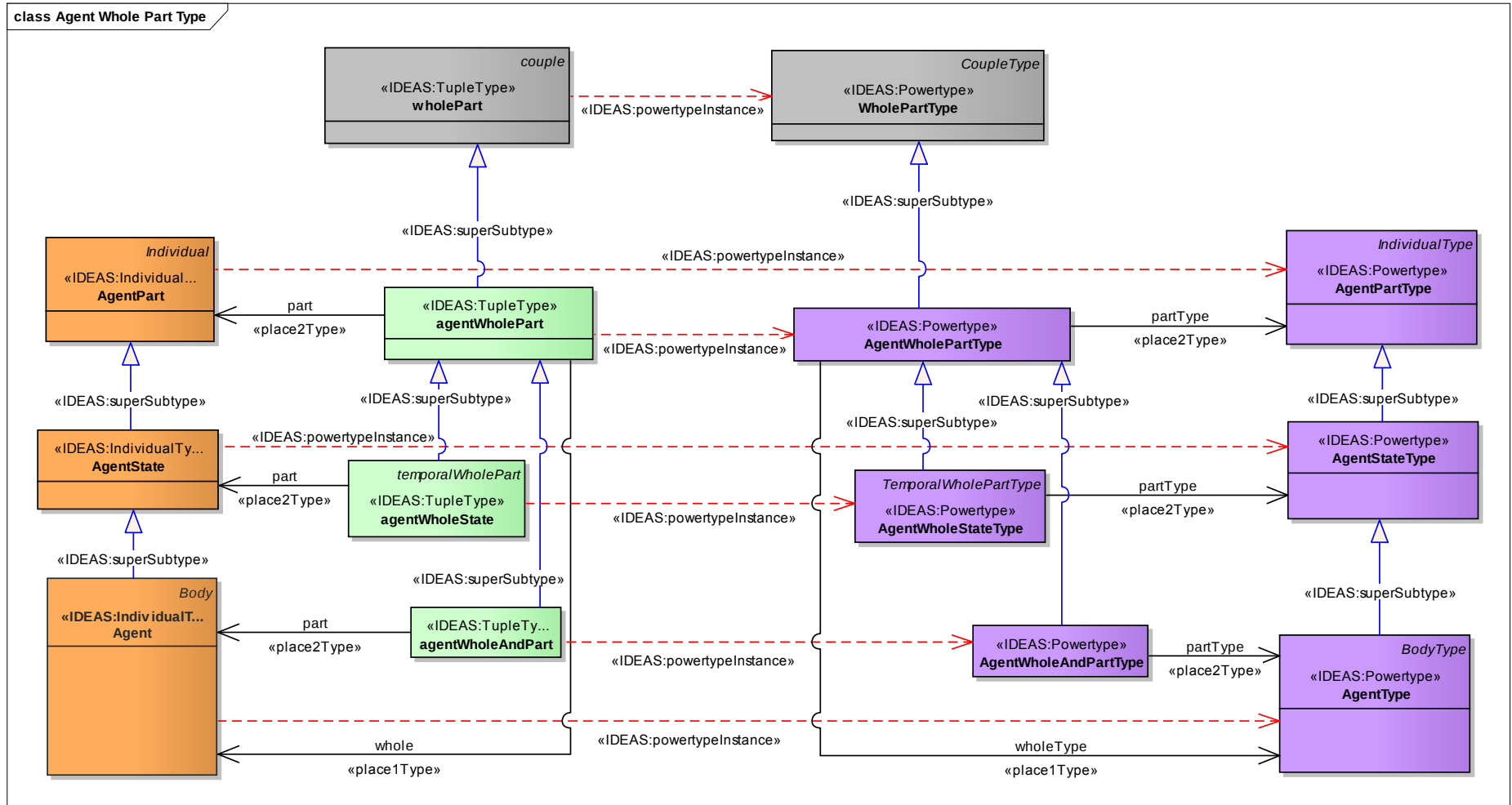


Figure 138 : Agent Whole Part Type

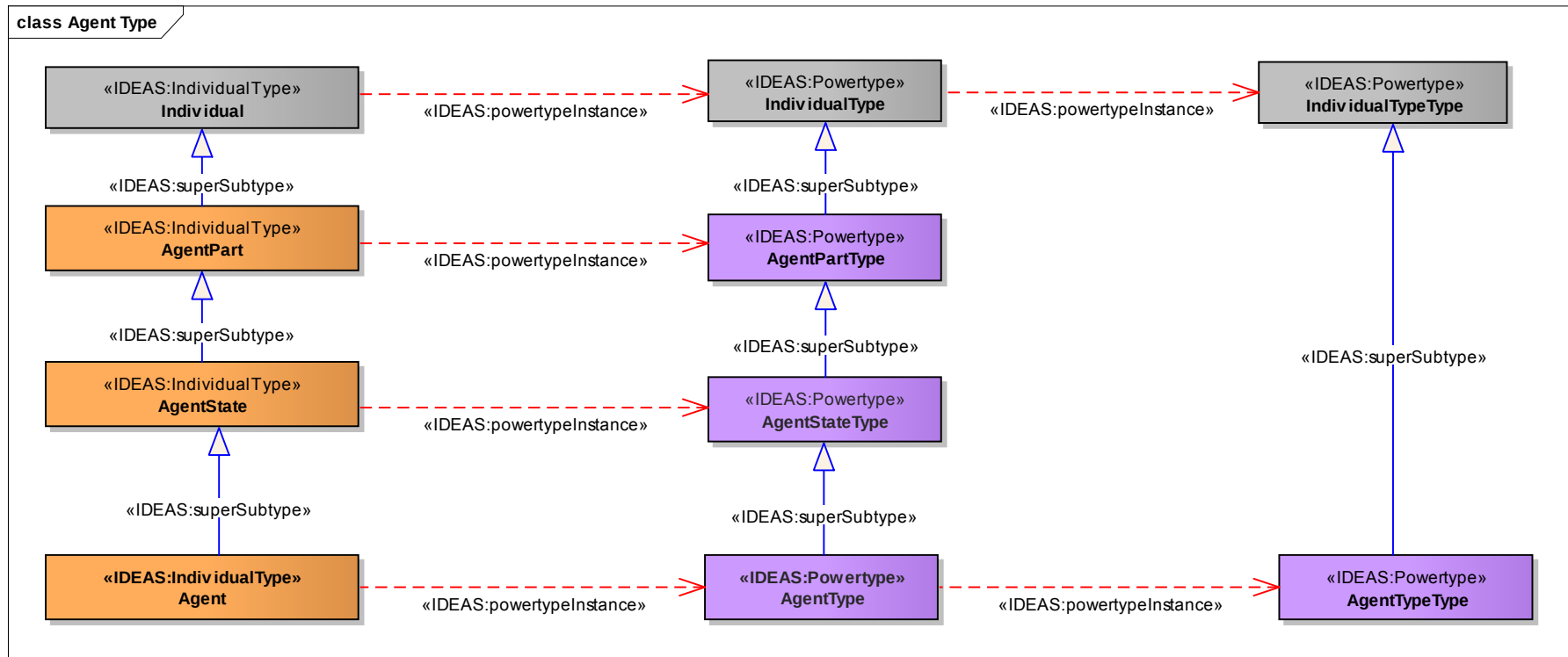


Figure 139 : Agent Type

### 3.4.10 Agent elements list

| Agent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <p><b>AgentCapableOfResponsibility</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentCapableOfResponsibility - AgentCapableOfResponsibilityOrAgentCapableOfResponsibilityType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentCapableOfResponsibility - Agent</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentCapableOfResponsibility - AgentCapableOfResponsibilityState</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>AgentCapableOfResponsibility - AgentCapableOfResponsibilityType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Agent that, from a legal perspective, has responsibility for its actions.</p> |
| <p><b>AgentCapableOfResponsibilityPart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentCapableOfResponsibilityPart - AgentPart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>AgentCapableOfResponsibilityPart - AgentCapableOfResponsibilityPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An AgentPart that is part of an AgentCapableOfResponsibility.</p>                                                                                                                                                                                                                                                                                                                         |
| <p><b>AgentCapableOfResponsibilityState</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentCapableOfResponsibilityState - AgentState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentCapableOfResponsibilityState - AgentCapableOfResponsibilityPart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>AgentCapableOfResponsibilityState - AgentCapableOfResponsibilityStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An AgentState that is a temporal part of an AgentCapableOfResponsibility.</p>                                                                                                                                                    |
| <p><b>AgentPart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentPart - Individual</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>AgentPart - AgentPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Individual that is part of an Agent.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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| <p><b>AgentState</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> <i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/> AgentState - AgentStateType<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> AgentState - AgentPart<br/> <u>Attributes:</u><br/> -<br/> An AgentPart that is a temporal part of an Agent.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>DedicatedParticipation</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> DedicatedParticipation - AgentState<br/> <i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/> DedicatedParticipation - DedicatedParticipationType<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> DedicatedParticipation - ParticipationExtent<br/> <u>Attributes:</u><br/> -<br/> A ParticipationExtent which is also an AgentState - i.e. a temporal part of an Agent. Note: A DedicatedParticipation may be temporally scattered - i.e. the fusion of the all the participations of an Agent.</p>                                                                                                   |
| <p><b>ParticipationExtent</b> «IDEAS:IndividualType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> ParticipationExtent - RoleExtent<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> ParticipationExtent - AgentPart<br/> <i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»<br/> ParticipationExtent - ParticipationExtentType<br/> <u>Attributes:</u><br/> -<br/> A RoleExtent where the involved Individual is an Agent that participates actively in the Process.</p>                                                                                                                                                                                                                                        |
| <p><b>agentCapableOfResponsibilityWholeAndPart</b> «IDEAS:TupleType»<br/> <u>Connectors:</u><br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> agentCapableOfResponsibilityWholeAndPart - agentWholeAndPart<br/> <i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»<br/> agentCapableOfResponsibilityWholeAndPart - agentCapableOfResponsibilityWholeState<br/> <i>Association (source - target):</i> «place2Type»<br/> agentCapableOfResponsibilityWholeAndPart - AgentCapableOfResponsibility<br/> <i>Association (source - target):</i> «place1Type»<br/> agentCapableOfResponsibilityWholeAndPart - AgentCapableOfResponsibility<br/> <u>Attributes:</u><br/> -<br/> An AgentCapableOfResponsibility where both the whole and part are AgentsCapableOfResponsibility.</p> |

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| <p><b>agentCapableOfResponsibilityWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>agentCapableOfResponsibilityWholePart - agentWholePart</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>agentCapableOfResponsibilityWholePart - AgentCapableOfResponsibilityPart</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>agentCapableOfResponsibilityWholePart - AgentCapableOfResponsibility</p> <p><u>Attributes:</u></p> <p>-</p> <p>An agentWholePart where the whole is an AgentCapableOfResponsibility.</p>                                                                                                                                                                                                                                                  |
| <p><b>agentCapableOfResponsibilityWholeState</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>agentCapableOfResponsibilityWholeState - agentWholeState</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>agentCapableOfResponsibilityWholeState - agentCapableOfResponsibilityWholePart</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>agentCapableOfResponsibilityWholeState - AgentCapableOfResponsibilityState</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>agentCapableOfResponsibilityWholeState - AgentCapableOfResponsibility</p> <p><u>Attributes:</u></p> <p>-</p> <p>A temporalWholePart and an agentCapableOfResponsibilityWholePart where an AgentCapableOfResponsibilityState is a temporal part of an Agent.</p> |
| <p><b>agentDedicatedParticipation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>agentDedicatedParticipation - agentParticipation</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>agentDedicatedParticipation - individualDedicatedRole</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>agentDedicatedParticipation - AgentDedicatedParticipationType</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>agentDedicatedParticipation - DedicatedParticipation</p> <p><u>Attributes:</u></p> <p>-</p> <p>An agentParticipation which is also an individualDedicatedRole and the participation is a DedicatedParticipation.</p>                                                                                |
| <p><b>agentParticipation</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>agentParticipation - individualRole</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>agentParticipation - AgentParticipationType</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>agentParticipation - Agent</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>agentParticipation - ParticipationExtent</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                                                                                                                                                             |

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| <p>An individualRole where the role is a ParticipationExtent.</p> <p><b>agentWholeAndPart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>agentWholeAndPart - agentWholePart</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>agentWholeAndPart - AgentWholeAndPartType</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>agentWholeAndPart - Agent</p> <p><u>Attributes:</u></p> <p>-</p> <p>An agentWholePart where both the whole and part are Agents.</p>                                                                                      |
| <p><b>agentWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>agentWholePart - wholePart</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>agentWholePart - AgentWholePartType</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>agentWholePart - AgentPart</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>agentWholePart - Agent</p> <p><u>Attributes:</u></p> <p>-</p> <p>A wholePart where the whole is an Agent.</p>                                                                                                   |
| <p><b>agentWholeState</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>agentWholeState - temporalWholePart</p> <p><i>Dependency (element - is instance of):</i> «IDEAS:powertypeInstance»</p> <p>agentWholeState - AgentWholeStateType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>agentWholeState - agentWholePart</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>agentWholeState - AgentState</p> <p><u>Attributes:</u></p> <p>-</p> <p>A temporalWholePart and an agentWholePart where an AgentState is a temporal part of an Agent.</p> |
| <p><b>overlapTypeIndividualInstance</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>overlapTypeIndividualInstance - typeInstance</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>overlapTypeIndividualInstance - SetOfOverlappingIndividuals</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>overlapTypeIndividualInstance - Individual</p> <p><u>Attributes:</u></p> <p>-</p>                                                                                                                                                                                       |

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| <p>A typeInstance where an Individual is an instance of a SetOfOverlappingIndividuals.</p> <p><b>Agent</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Agent - AgentState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Agent - Body</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Agent - AgentType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An AgentState that is an Individual capable of actively participating in Processes.</p>                                                             |
| <b>Agent Powertypes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>AgentCapableOfResponsibilityPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentCapableOfResponsibilityPartType - AgentPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of AgentCapableOfResponsibilityPart.</p>                                                                                                                                                                                                                                                                                                                          |
| <p><b>AgentCapableOfResponsibilityStateType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentCapableOfResponsibilityStateType - AgentCapableOfResponsibilityPartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentCapableOfResponsibilityStateType - AgentStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of AgentCapableOfResponsibilityState.</p>                                                                                                                                                          |
| <p><b>AgentCapableOfResponsibilityType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentCapableOfResponsibilityType - AgentCapableOfResponsibilityStateType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentCapableOfResponsibilityType - AgentType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentCapableOfResponsibilityType - AgentCapableOfResponsibilityOrAgentCapableOfResponsibilityType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of AgentCapableOfResponsibility.</p> |
| <p><b>AgentDedicatedParticipationType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentDedicatedParticipationType - AgentParticipationType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>AgentDedicatedParticipationType - IndividualDedicatedRoleType</p> <p>Association (source - target): «place2Type»</p> <p>AgentDedicatedParticipationType - DedicatedParticipationType</p>                                                                                                                                                    |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <u>Attributes:</u><br>-<br>The powertype of agentDedicatedParticipation.                                                                                                                                                                                                                                                                                                                                                                            |
| <b>AgentPartType</b> «IDEAS:Powertype»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>AgentPartType - IndividualType<br><u>Attributes:</u><br>-<br>An IndividualType that is the Powertype of AgentPart.                                                                                                                                                                                              |
| <b>AgentParticipationType</b> «IDEAS:Powertype»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>AgentParticipationType - IndividualRoleType<br>Association (source - target): «place1Type»<br>AgentParticipationType - AgentType<br>Association (source - target): «place2Type»<br>AgentParticipationType - ParticipationExtentType<br><u>Attributes:</u><br>-<br>The powertype of agentParticipation. |
| <b>AgentStateType</b> «IDEAS:Powertype»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>AgentStateType - AgentPartType<br><u>Attributes:</u><br>-<br>The powertype of AgentState.                                                                                                                                                                                                                      |
| <b>AgentType</b> «IDEAS:Powertype»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>AgentType - AgentStateType<br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>AgentType - BodyType<br>Dependency (element - is instance of): «IDEAS:powertypeInstance»<br>AgentType - AgentTypeType<br><u>Attributes:</u><br>-<br>The powertype of Agent.                                       |
| <b>AgentTypeType</b> «IDEAS:Powertype»<br><u>Connectors:</u><br>Generalization (element - is a subtype of): «IDEAS:superSubtype»<br>AgentTypeType - IndividualTypeType<br><u>Attributes:</u><br>-<br>The powertype of AgentType.                                                                                                                                                                                                                    |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>AgentWholeAndPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>AgentWholeAndPartType - AgentWholePartType</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>AgentWholeAndPartType - AgentType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of agentWholeAndPart.</p>                                                                                                                                |
| <p><b>AgentWholePartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>AgentWholePartType - WholePartType</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>AgentWholePartType - AgentPartType</p> <p><i>Association (source - target):</i> «place1Type»</p> <p>AgentWholePartType - AgentType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of agentWholePart.</p>                                             |
| <p><b>AgentWholeStateType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>AgentWholeStateType - TemporalWholePartType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>AgentWholeStateType - AgentWholePartType</p> <p><i>Association (source - target):</i> «place2Type»</p> <p>AgentWholeStateType - AgentStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of agentWholeState.</p> |
| <p><b>DedicatedParticipationType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>DedicatedParticipationType - ParticipationExtentType</p> <p><i>Generalization (element - is a subtype of):</i> «IDEAS:superSubtype»</p> <p>DedicatedParticipationType - AgentStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of DedicatedParticipation.</p>                                                                             |

**ParticipationExtentType** «IDEAS:Powertype»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

ParticipationExtentType - RoleExtentType

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

ParticipationExtentType - AgentPartType

Attributes:

-

The powertype of ParticipationExtent.

### 3.4.11 Process diagrams

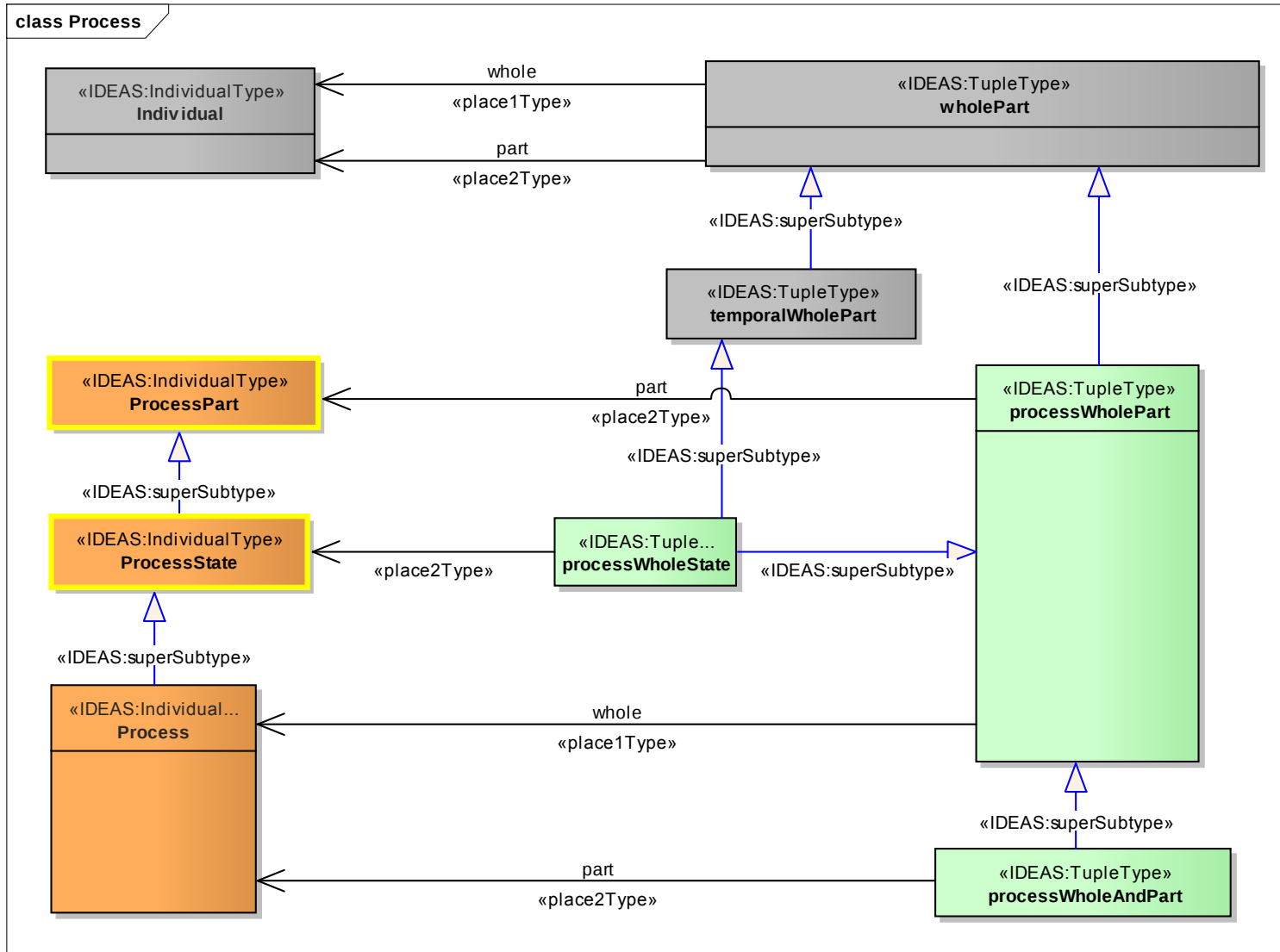


Figure 140 : Process

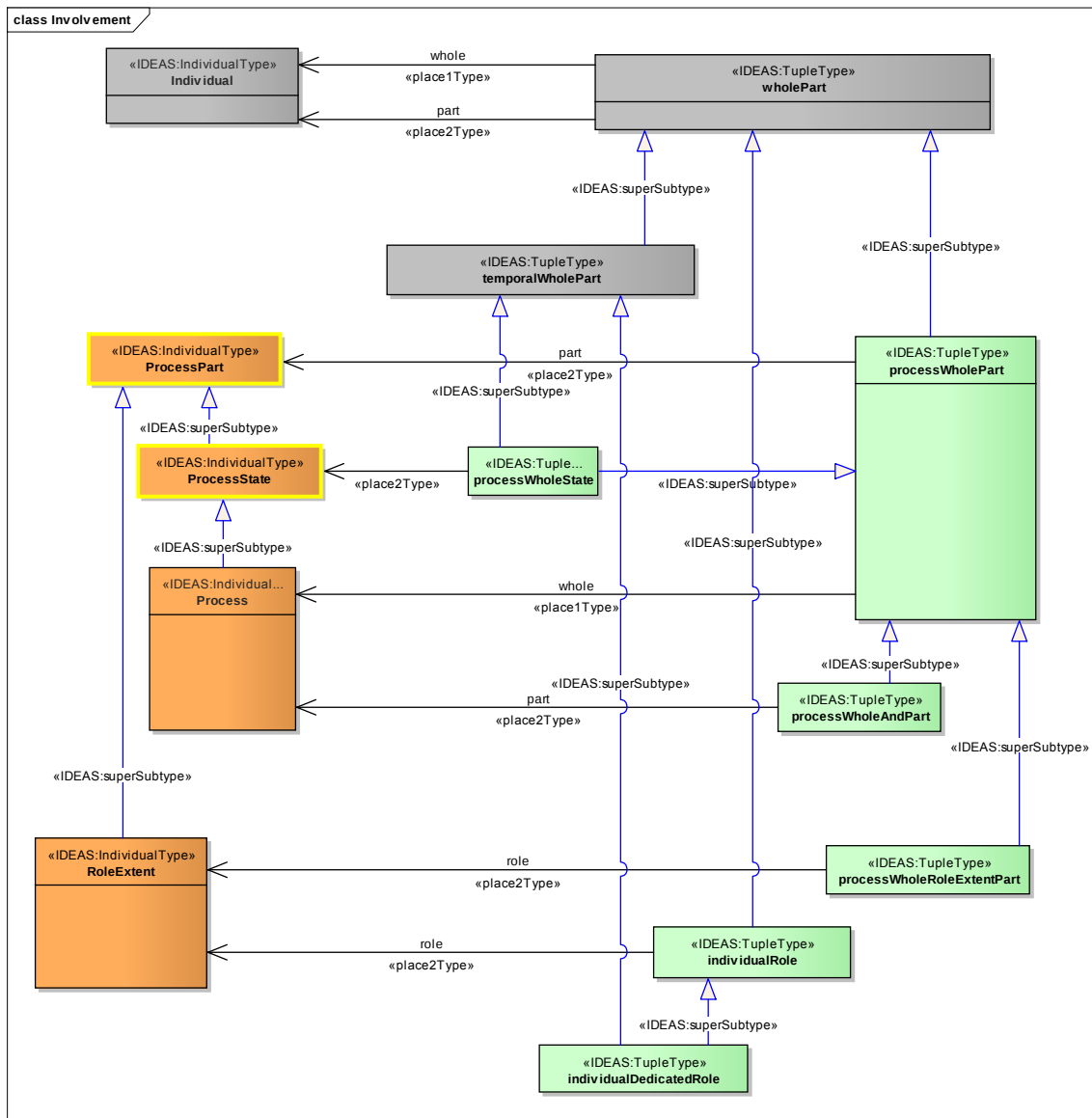


Figure 141 : Involvement

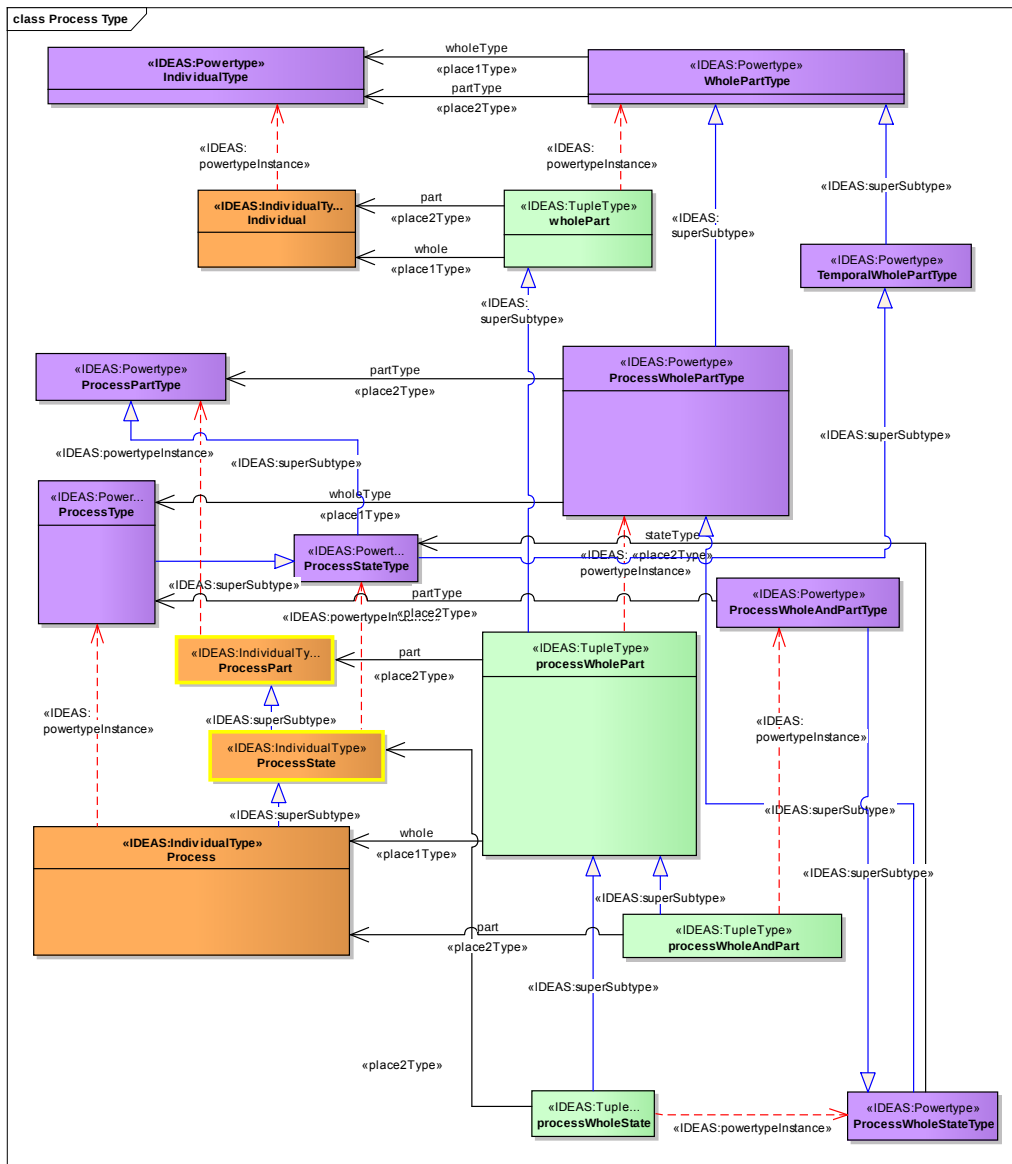


Figure 142 : ProcessType

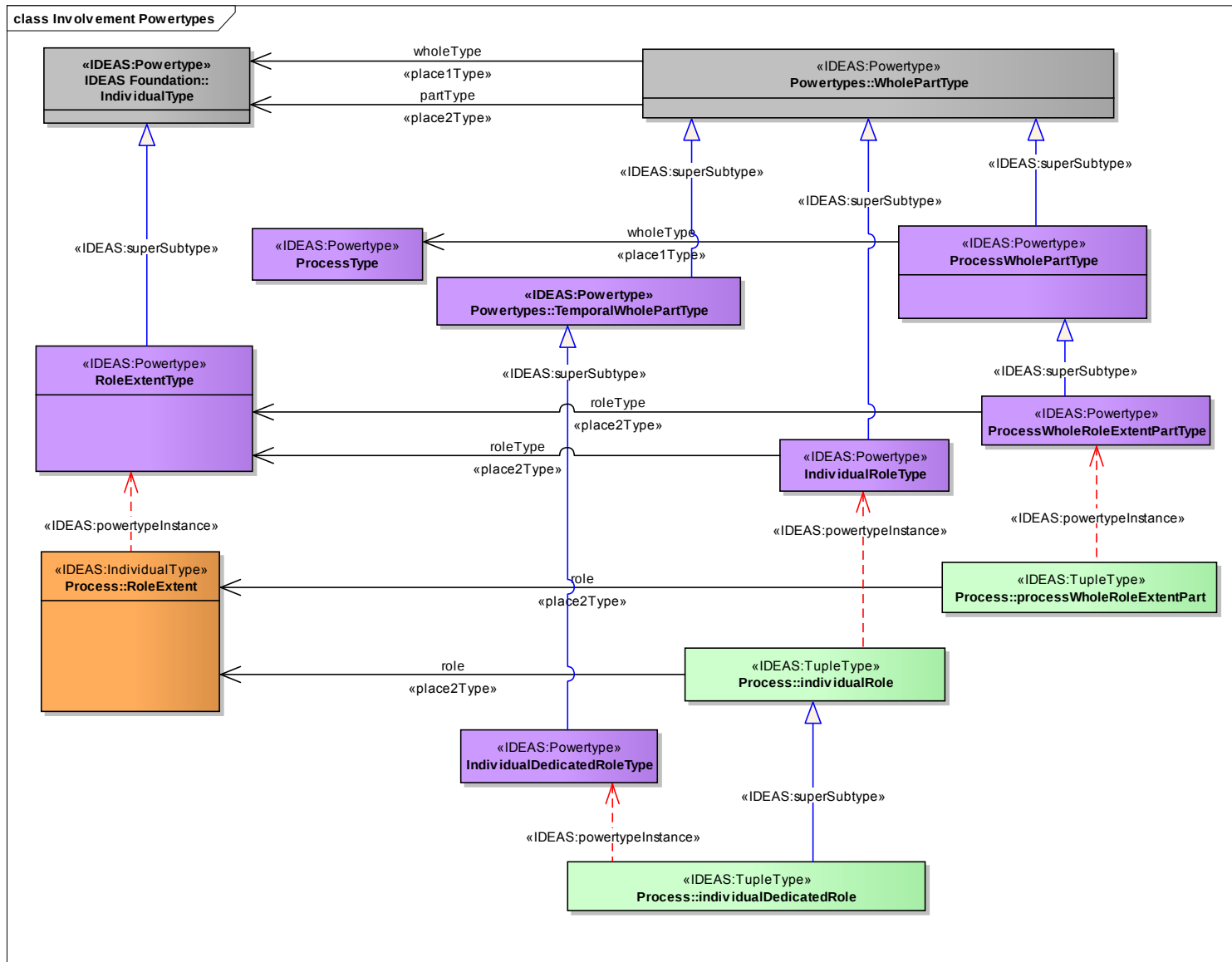


Figure 143 : Involvement Powertypes

### 3.4.12 Process elements list

| Process                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>ProcessPart</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProcessPart - BodyPart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ProcessPart - ProcessPartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An Individual that is part of a Process.</p>                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>ProcessState</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProcessState - ProcessPart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>ProcessState - ProcessStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProcessPart that is a temporal part of a Process.</p>                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>RoleExtent</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleExtent - ProcessPart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>RoleExtent - RoleExtentType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProcessPart that is the extent of an Individual's involvement in a Process.</p>                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>individualDedicatedRole</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>individualDedicatedRole - temporalWholePart</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>individualDedicatedRole - individualRole</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>individualDedicatedRole - IndividualDedicatedRoleType</p> <p><u>Attributes:</u></p> <p>-</p> <p>An individualRole where the RoleExtent is a temporal part of the Individual involved in the Process - i.e. all the Individual for a period of time. Note: The RoleExtent may be temporally scattered - i.e. the fusion of all occasions the Individual was involved.</p> |
| <p><b>individualRole</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>individualRole - wholePart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>individualRole - IndividualRoleType</p> <p>Association (source - target): «place2Type»</p>                                                                                                                                                                                                                                                                                                                                                                                                                                 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>individualRole - RoleExtent</p> <p><u>Attributes:</u></p> <p>-</p> <p>A wholePart where the part is the extent of the Role played by the Individual in a particular Process.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>processWholeRoleExtentPart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>processWholeRoleExtentPart - processWholePart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>processWholeRoleExtentPart - ProcessWholeRoleExtentPartType</p> <p>Association (source - target): «place2Type»</p> <p>processWholeRoleExtentPart - RoleExtent</p> <p><u>Attributes:</u></p> <p>-</p> <p>A processWholePart where the part is a RoleExtent - i.e. the extent of an Individual's role in the Process.</p>                                                                                          |
| <p><b>processWholeState</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>processWholeState - processWholePart</p> <p>Association (source - target): «place2Type»</p> <p>processWholeState - ProcessState</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>processWholeState - temporalWholePart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>processWholeState - ProcessWholeStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A processWholeState where the part is a ProcessState - i.e. all of the spatial extent of the process for a period of time.</p> |
| <p><b>Process</b> «IDEAS:IndividualType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>Process - ProcessState</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>Process - ProcessType</p> <p><u>Attributes:</u></p> <p>-</p> <p>A ProcessPart that is an Individual whose extent is defined by its involvements.</p>                                                                                                                                                                                                                                                                                                  |
| <p><b>processWholeAndPart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>processWholeAndPart - processWholePart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>processWholeAndPart - ProcessWholeAndPartType</p> <p>Association (source - target): «place2Type»</p> <p>processWholeAndPart - Process</p> <p><u>Attributes:</u></p> <p>-</p> <p>A processWholePart that asserts a Process is part of a Process.</p>                                                                                                                                                                            |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>processWholePart</b> «IDEAS:TupleType»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>processWholePart - wholePart</p> <p>Dependency (element - is instance of): «IDEAS:powertypeInstance»</p> <p>processWholePart - ProcessWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>processWholePart - ProcessPart</p> <p>Association (source - target): «place1Type»</p> <p>processWholePart - Process</p> <p><u>Attributes:</u></p> <p>-</p> <p>A wholePart that asserts an Individual is part of a Process.</p> |
| <b>Process Powertypes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>IndividualDedicatedRoleType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>IndividualDedicatedRoleType - TemporalWholePartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of individualDedicatedRole.</p>                                                                                                                                                                                                                                                                                       |
| <p><b>IndividualRoleType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>IndividualRoleType - WholePartType</p> <p>Association (source - target): «place1Type»</p> <p>IndividualRoleType - RoleExtentType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of individualRole.</p>                                                                                                                                                                                                                            |
| <p><b>ProcessPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProcessPartType - BodyPartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProcessPartType - ModemIndividualElementType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ProcessPart.</p>                                                                                                                                                                                                        |
| <p><b>ProcessStateType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProcessStateType - ProcessPartType</p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProcessStateType - TemporalWholePartType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of ProcessState.</p>                                                                                                                                                                                                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>ProcessWholeAndPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProcessWholeAndPartType - ProcessWholeStateType</p> <p>Association (source - target): «place2Type»</p> <p>ProcessWholeAndPartType - ProcessType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The ProcessWholePartType that is the Powertype of processWholeAndPart.</p> |
| <p><b>ProcessWholeRoleExtentPartType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProcessWholeRoleExtentPartType - ProcessWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>ProcessWholeRoleExtentPartType - RoleExtentType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of processWholeRoleExtentPart.</p>    |
| <p><b>ProcessWholeStateType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProcessWholeStateType - ProcessWholePartType</p> <p>Association (source - target): «place2Type»</p> <p>ProcessWholeStateType - ProcessStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of processWholeState.</p>                                      |
| <p><b>RoleExtentType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>RoleExtentType - IndividualType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of RoleExtent.</p>                                                                                                                                                                    |
| <p><b>ProcessType</b> «IDEAS:Powertype»</p> <p><u>Connectors:</u></p> <p>Generalization (element - is a subtype of): «IDEAS:superSubtype»</p> <p>ProcessType - ProcessStateType</p> <p><u>Attributes:</u></p> <p>-</p> <p>The powertype of Process.</p>                                                                                                                                                                           |

**ProcessWholePartType** «IDEAS:Powertype»

Connectors:

*Generalization (element - is a subtype of):* «IDEAS:superSubtype»

ProcessWholePartType - WholePartType

*Association (source - target):* «place2Type»

ProcessWholePartType - ProcessPartType

*Association (source - target):* «place1Type»

ProcessWholePartType - ProcessType

Attributes:

-

The powertype of processWholePart.

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