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Unified Architecture Framework (UAF) Domain Metamodel

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Preface

OMG

Founded in 1989, the Object Management Group, Inc. (OMG) is an open membership, not-for-profit computer industry standards consortium that produces and maintains computer industry specifications for interoperable, portable and reusable enterprise applications in distributed, heterogeneous environments. Membership includes Information Technology vendors, end users, government agencies and academia. OMG member companies write, adopt, and maintain its specifications following a mature, open process. OMG's specifications implement the Model Driven Architecture® (MDA®), maximizing ROI through a full-lifecycle approach to enterprise integration that covers multiple operating systems, programming languages, middleware and networking infrastructures, and software development environments. OMG's specifications include: UML® (Unified Modeling Language™); CORBA® (Common Object Request Broker Architecture); CWM™ (Common Warehouse Metamodel); and industry-specific standards for dozens of vertical markets. More information on the OMG is available at *http://www.omg.org/*.

OMG Specifications

As noted, OMG specifications address middleware, modeling and vertical domain frameworks. All OMG Specifications are available from this URL: *http://www.omg.org/spec*

Specifications are organized by the following categories:

Business Modeling Specifications

Middleware Specifications

- CORBA/IIOP
- Data Distribution Services
- Specialized CORBA IDL/Language Mapping Specifications

Modeling and Metadata Specifications

- UML, MOF, CWM, XMI
- UML Profile Specifications

Platform Independent Model (PIM) - Platform Specific Model (PSM) - Interface Specifications

- CORBAServices
- CORBAFacilities
- OMG Domain Specifications
- CORBA Embedded Intelligence Specifications
- CORBA Security Specifications

All of OMG's formal specifications may be downloaded without charge from our website. (Products implementing OMG specifications are available from individual suppliers.) Copies of specifications, available in PostScript and PDF format, may be obtained from the Specifications Catalog cited above or by contacting the Object Management Group, Inc. at: OMG Headquarters 109 Highland Avenue, Needham, MA 02494 USA Tel: +1- 781-444-0404 Fax: +1-781-444-0320 Email: *pubs@omg.org*

Certain OMG specifications are also available as ISO standards. Please consult *http://www.iso.org*

Typographical Conventions

The type styles shown below are used in this document to distinguish programming statements from ordinary English. However, these conventions are not used in tables or section headings where no distinction is necessary.

Times/Times New Roman - 10 pt.: Standard body text

Helvetica/Arial - 10 pt. Bold: OMG Interface Definition Language (OMG IDL) and syntax elements.

`Courier - 10 pt. Bold:` Programming language elements.

Helvetica/Arial - 10 pt: Exceptions

Note – Terms that appear in *italics* are defined in the glossary. Italic text also represents the name of a document, specification, or other publication.

Issues

All OMG specifications are subject to continuous review and improvement. As part of this process we encourage readers to report any ambiguities, inconsistencies, or inaccuracies they may find by completing the Issue Reporting Form listed on the main web page http://www.omg.org, under Documents, Report a Bug/Issue (http://issues.omg.org/issues/create-new-issue).

1. Scope

1.1 Introduction

There are four parts to this specification, two are normative and two informative. The normative parts are:

1. The UAF Domain Metamodel (DMM) (this document) that provides the definition of concepts, relationships and viewpoints for the framework. The UAF DMM is the basis for any implementation of UAF including non-UML/SysML implementations.
2. The UAF ~~Profile~~ Modeling Language (UAFML~~P~~) (see document dtc/~~19~~2021-~~11~~06-~~03~~15) is a UML/SysML implementation of the UAF DMM

The informative parts are:

3. The UAF Traceability, Annex A (see document dtc/2021~~19~~-~~11~~06-~~07~~12), which details the mappings between the UAF and the various frameworks and languages that contribute to the UAF.
4. The UAF Example Model, Annex B (see document dtc/2021~~19~~-~~11~~06-~~01~~8), which illustrates a practical usage of UAF.
5. The UAF Enterprise Architecture Guide (EAG), Annex C (see document dtc/~~19~~2021-11~~06~~-0918), which provides guidance on how to use the UAFML to model an architecture.

1.2 UAF Background

UAF evolved from the Unified Profile for DoDAF and MODAF (UPDM), version 2.1. UAF extends the scope of UPDM and generalizes it to make it applicable to commercial as well as military architectures. The intent of UAF is to provide a standard representation for describing enterprise architectures using a Model Based Systems Engineering (MBSE) approach.

The core concepts in the UAF are based upon the DoDAF 2.0.2 Domain Metamodel (DM2) and the MODAF ontological data exchange mechanism (MODEM), Security Views from Canada's Department of National Defense Architecture Framework (DNDAF) and the North Atlantic Treaty Organization (NATO) Architecture Framework (NAF) v 4.

UAF models describe a system[1] from a set of stakeholders' concerns such as security or information through a set of predefined viewpoints. Developed models can also reflect custom viewpoints or users can develop more formal extensions for new viewpoints.

The UAFML~~P~~ can be used to develop architectures compliant with:

- Department of Defense Architecture Framework (DoDAF) version 2.02
- Ministry of Defence Architecture Framework (MODAF) version 1.3
- North Atlantic Treaty Organization (NATO) Architecture Framework (NAF) version 3.1
- North Atlantic Treaty Organization (NATO) Architecture Framework (NAF) version 4

UAF v 1.2~~1~~ supports the capability to:

- model architectures for a broad range of complex systems, which may include hardware, software, data, personnel, and facility elements;
- model consistent architectures for system-of-systems (SoS) down to lower levels of design and implementation;
- support the analysis, specification, design, and verification of complex systems; and

[1] The term system is used from: "Systems and software engineering -- Architecture description," http://www.iso.org/iso/catalogue_detail.htm?csnumber=50508

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- improve the ability to exchange architecture information among related tools that are SysML based.

1.3 Intended Usage

The UAF enables the modeling of strategic capabilities, operational scenarios, services, resources, personnel, security, projects, standards, measures and requirements; which supports best practices through, separation of concerns and abstractions. In addition, the UAF enables the modeling of related architecture concepts such as:

- System of Systems (SoS),
- information exchanges consistent with the National Information Exchange Model (NIEM),
- DoD's doctrine, organization, training material, leadership & education, personnel, and facilities (DOTMLPF)
- UK Ministry of Defence Lines of Development (DLOD) elements,
- Human Computer Interfaces (HCI).

Further, The UAF conforms to terms defined in the ISO/IEC/IEEE 42010 standard for architecture description, where the terms: architecture, architecture description (AD), architecture framework, architecture view, architecture viewpoint, concern, environment, model kind, stakeholder [ISO/IEC/IEEE 42010:2011] form correspondence rules specified as constraints on UAF.

1.4 Related Documents

The specification includes a meta~~-~~model and description as separate documents. Other ~~appendicies~~appendices are also provided as separate documents. The table below provides a listing of these documents:

Table 1:1 - Table of Related Documents

dtc/2021-11-01~~dtc/19-06-16~~	The UAF Domain MetaModel (DMM)
dtc/2021-11-03~~dtc/19-06-15~~	The UAF ~~Profile~~ Modeling Language (UAFML~~P~~)
dtc/2021-11-07~~dtc/19-06-17~~	Appendix A that contains a separate traceability subsection from UAFML~~P~~ to each of the frameworks listed in Section 1.2 of this specification
dtc/2021-11-08~~dtc/19-06-18~~	Appendix B: An example of how the language can be used to represent a ~~UAFP~~ UAFML architecture
dtc/2021-11-09	Appendix C: An Enterprise Architecture Guide (EAG).
dtc/2021-11-10~~dtc/19-06-19~~	UAF XMI file
dtc/2021-11-11~~dtc/19-06-20~~	UAF XMI Measurements library
dtc/2021-11-06~~dtc/19-05-14~~	Attachments

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2. Conformance

UAF specifies four types of conformance.

Type 1 Conformance: - UAF View specification conformance. A tool demonstrating view specification conformance shall implement a version of all the view specifications defined in the UAF Grid, with the exception of the view specifications in the ~~Metadata Domain~~ Architecture Management Viewpoint~~.~~ Optionally the tool vendor can implement other donor framework viewpoints, for instance DoDAF, MODAF or NAF based upon the mapping between them and UAF provided in Appendix A (dtc/2021-11-07 ~~dtc/19-06-17~~)

Type 2 Conformance: - UAF Conceptual Syntax Conformance. A tool demonstrating conceptual syntax conformance is consistent with the concepts, relationships and constraints defined in the UAF DMM (this document). UAF Conceptual Syntax Conformance implies Type 1 Conformance.

Type 3 Conformance: - UAF Formal Syntax Conformance. A tool demonstrating formal syntax conformance:

- enables instances of concrete ~~UAFP~~ UAFML stereotypes defined in the ~~UAFP~~ UAFML (dtc/2021-11-03 ~~dtc/19-06-15~~)
- complies with the constraints defined in the ~~UAFP~~ UAFML (dtc/2021-11-03 ~~dtc/19-06-15~~)
- complies with the SysML version 1.~~5~~ 6 Concrete Syntax Conformance (formal/19-11-01 ~~formal/19-11-01 formal/17-05-01~~)
- UAF Formal Syntax Conformance implies Type 2 Conformance.

Type 4 Conformance: - UAF Model interchange conformance. A tool demonstrating model interchange conformance can import and export conformant XMI for all valid ~~UAFP~~ UAFML models. Model interchange conformance implies Type 3 Conformance.

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3. References

3.1 Normative References

The following normative documents contain provisions which, through reference in this text, constitute provisions of this specification. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply.

~~3.2~~3.1.1 OMG Documents (Normative References)

- Unified Modeling Language (UML), 2.5.1, December 2017, http://www.omg.org/spec/UML
- Object Constraint Language (OCL), 2.4, February 2014, http://www.omg.org/spec/OCL
- System Modeling Language (SysML)~~-~~, 1.6, November 2019,~~1.5, May 2017~~, http://www.omg.org/spec/SysML
- Diagram Definition (DD), 1.1, June 2015, http://www.omg.org/spec/DD
- UML Profile for the National Information Exchange Model (NIEM UML), 3.0, April 2017, http://www.omg.org/spec/NIEM-UML
- ~~Unified Profile for DoDAF and MODAF (UPDM), 2.1, August 2013, http://www.omg.org/spec/UPDM~~
- UML Profile for BPMN Processes, 1.0, July 2014, http://www.omg.org/spec/BPMNProfile
- ~~Ontology Definition Metamodel (ODM), 1.1, September 2014, http://www.omg.org/spec/ODM~~
- Information Exchange Packaging Policy Vocabulary (IEPPV) 1.0, May 2015, http://www.omg.org/spec/IEPPV
- XML Metadata Interchange, 2.5.1, June 2015, https://www.omg.org/spec/XMI/2.5.1/About-XMI/
- Business Motivation Model (BMM), Version 1.3, http://www.omg.org/spec/BMM/1.3/
-

~~3.3~~3.2 Other Normative References

- Department of Defense Architecture Framework (DoDAF), Version 2.02, August 2010, http://dodcio.defense.gov/Library/DoDArchitectureFramework.aspx
- ~~DM2 – DoDAF Meta-Model,~~
- The DM2 (DoDAF Meta-Model) Conceptual Data Model, http://dodcio.defense.gov/Library/DoDArchitectureFramework/dodaf20_conceptual.aspx
- DM2 Logical Data Model, http://dodcio.defense.gov/Library/DoDArchitectureFramework/dodaf20_logical.aspx
- DM2 Formal Ontology. http://dodcio.defense.gov/Library/DoDArchitectureFramework/dodaf20_ontology1.aspx
- Department National Defence and Canadian Forces (DND/ CF) Architecture Framework (DNDAF), Version 1.8.1, 25 January 2013
- International Defence Enterprise Architecture Specification for Exchange (IDEAS) Group, https://en.wikipedia.org/wiki/IDEAS_Group~~http://www.ideasgroup.org/~~
- ~~IDEAS Foundation, http://www.ideasgroup.org/foundation/~~
- ~~IDEAS Foundation v1.0 as XMI File (zipped), http://www.ideasgroup.org/7Documents/~~
- ISO/IEC/IEEE 42010:2011, Systems and software engineering – Architecture Description, http://www.iso.org/iso/catalogue_detail.htm?csnumber=50508
- Ministry of Defence Architecture Framework (MODAF), https://www.gov.uk/mod-architecture-framework
- MODAF Ontological Data Exchange Mechanism (MODEM)
- https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/63980/20130117_MODAF_MODEM.pdf
- NATO Architecture Framework (NAF),
- Version 3, NATO C3 BOARD (AC/322-D(2007)0048), ~~http://www.nhqc3s.nato.int/HomePage.asp~~ (no longer publicly available online as of 3 November 2015)

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- NATO Architecture Framework v4.0 Documentation, January 2021, https://www.nato.int/cps/en/natohq/topics_157575.htm .

3.43.3 Informative References

- Business Process Model & Notation (BPMN), Version 2.0.2, January 2014 http://www.omg.org/spec/BPMN
- ISO 15704:2000, Industrial Automation Systems – "Requirements for Enterprise-Reference Architectures and Methodologies," http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=28777
- ISO 8601:2004 Data elements and interchange formats – Information interchange – Representation of dates and times, http://www.iso.org/iso/home/store/catalogue_ics/catalogue_detail_ics.htm?ics1=01&ics2=140&ics3=30&csnumber=40874
- ISO/IEC 15288:2015, "Systems Engineering - Systems Life Cycle Processes," http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=63711
- Object Management Group (OMG), Metamodel Extension Facility, Initial submission, ad/12-02-01, http://www.omg.org/cgi-bin/doc?ad/12-02-01 (Requires OMG Member Access)
- OASIS SOA-RAF, Reference Architecture Foundation for Service Oriented Architecture Version 1.0, OASIS SOA Reference Model TC, 04 December 2012. http://docs.oasis-open.org/soa-rm/soa-ra/v1.0/cs01/soa-ra-v1.0-cs01.pdf (Authoritative)
- Object Management Group (OMG), Semantics of Business Vocabulary and Business Rules (SBVR), Version 1.35, May December 20195, http://www.omg.org/spec/SBVR
- Business Motivation Model (BMM), Version 1.3, http://www.omg.org/spec/BMM/1.3/
- International Council On Systems Engineering (INCOSE), Systems Engineering Handbook V4, 2015, http://www.incose.org/ProductsPublications/sehandbook
- Unified Profile for DoDAF and MODAF (UPDM), 2.1, August 2013, http://www.omg.org/spec/UPDM
- Ontology Definition Metamodel (ODM), 1.1, September 2014, http://www.omg.org/spec/ODM

4. Terms and Definitions

No new terms and definitions have been required to create this specification. All terms are available in the normative references or bibliographic citations for detailed explanation. The modeling concepts specified in this standard e.g., MetaModel Elements, Viewpoints, Aspects, View Specifications, etc. are defined in the appropriate section for that concept. Additional terms are defined in Appendix C: Enterprise Architecture Guide (EAG).

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5. ~~Symbols~~Acronyms

For the purposes of this specification, the following List of used in this specification.~~symbols/abbreviations apply.~~

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Table 5:1 - Description of acronyms used in this specification

AcV-*[2]	Acquisition View
AD	Architecture Description
AV-*	All View
BMM	Business Motivation Model
BPMN	Business Process Modeling Notation
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance
CaT	Capability Team
COI	Communities of Interest
CV-*	Capability View
DIV-*	Data and Information Views
DLOD	Defence Lines of Development
DM2	DoDAF Meta Model
DMM	Domain Meta Model
DNDAF	Department National Defence and Canadian Forces (DND/ CF) Architecture Framework
DoD	United States Department of Defense
DoDAF	Department of Defense Architecture Framework
DOTMLP	Doctrine, Organization, Training, Material, Leadership, Personnel, Facilities
EIE	Enterprise Information Environment
IDEAS	International Defense Enterprise Architecture Specification for Exchange
IDEF	Integrated DEFinition Methods
INCOSE	International Council Of Systems Engineering
JCIDS	Joint Capabilities Integration and Development System
MISIG	Model Interchange Special Interest Group
MOD	United Kingdom Ministry of Defence
MODAF	Ministry of Defence Architecture Framework
MODEM	MODAF Ontological Data Exchange Mechanism
NAF	NATO Architecture Framework
OASIS	Organization for the Advancement of Structured Information Standards
OSLC	Open Services for Lifecycle Collaboration
OV-*	Operational View
PES	DoDAF Physical Exchange Specification
POC	Proof of Concept
PV-*	Project View
RDF	Resource Description Framework
SoaML	Service orientated architecture Modeling Language
SoS	System of Systems
SOV-*	Service Oriented View

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[2] * denotes a wildcard

StdV-*	Standards View in DoDAF 2.02 compare TV-* in UAF
STV-*	Strategic View
SV-*	System View
SvcV-*	Service View
TEPID OIL	Training, Equipment, Personnel, Information, Concepts and Doctrine, Organisation, Infrastructure, Logistics
TOGAF	The Open Group Architectural Framework©
TPPU	Task, Post, Process, and Use
TV-*	Technical View
UAF	Unified Architecture Framework
UAFML~~P~~	Unified Architecture Framework ~~Profile~~Modeling Language
UPDM	Unified Profile for DoDAF/MODAF

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6. Additional Information

6.1 Changes to Adopted OMG Specifications

This specification completely replaces Unified Architecture Framework (UAF), version 1.~~0~~ 1
https://www.omg.org/spec/UAF/About-UAF/

6.2 Language Architecture

The UAF specification reuses a subset of UML 2.5.1 and SysML 1.~~5~~ 6 and provides additional extensions needed to address requirements in the UPDM 3.0 RFP Mandatory Requirements. Those requirements form the basis for this specification. This specification documents the language architecture in terms of UML 2.5.1 and SysML 1.~~5~~ 6 and specifies how to implement UAF. This clause explains design principles and how they are applied to define the UAF language architecture.

6.3 Philosophy

The UAF development uses a model-driven approach. A simple description of the work process is:

- A Domain Metamodel (DMM) uses UML Class models to represent individuals, types and tuples that maps the concepts defined in DoDAF, MODEM, NAF, and other frameworks. ~~A Domain Metamodel (DMM) uses UML Class models to represent individuals, types and tuples that aggregate the concepts defined in DoDAF, MODEM, NAF, DNDAF and other frameworks.~~
- The aligned and renamed viewpoints from the various frameworks provide a common generic name for each viewpoint. It should be noted that the term viewpoint is in the context of ISO 42010 where a viewpoint is the specification of a view. The UAF viewpoints are mapped to the corresponding viewpoint in the relevant contributing framework. It is the viewpoints described in the DMM that provides the basis for the Unified Architecture Framework (UAF).
- The UAF provides an abstraction layer that separates the underlying UAF metamodel from the presentation layer. The results of this mapping are given in Appendix A (see document dtc/2021-11-07) ~~dtc/19-06-17~~ and an overview of the viewpoints in a grid format are given in this document.
- The intent of the UAF is to provide a Domain MetaModel usable by non-UML/SysML tool vendors who may wish to implement the UAF within their own tool and metalanguage.
- The Unified Architecture Framework ~~Profile~~ Modeling Language (~~UAFP~~UAFML) is the standard implementation of the UAF DMM. It was created by mapping the UAF concepts and relationships to corresponding stereotypes in the ~~UAFP~~UAFML Profile.
- The ~~UAFP~~ UAFML analysis and refactoring reflects language architecture, tool implementation, and reuse considerations.
- The specification is generated from the UML model used to describe the UAF DMM and ~~UAFP~~UAFML. This approach allows the team to concentrate on architecture issues rather than documentation production. The UML tool automatically maintains consistency. The UML tool improves maintenance and enables traceability between the UAF and the ~~UAFP~~ UAFML where every stereotype is linkable to the UAF element using UML Abstraction relationship.

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6.4 Core Principles

The fundamental design principles for UAF DMM are:

- **Requirements-driven**: UAF is intended to satisfy the requirements of the UPDM 3.0 RFP Mandatory Requirements.
- **Influence from donor Frameworks:** The DMM was based upon an aggregation of concepts and relationships from the donor frameworks.
- **IDEAS Ontology driven:** The DMM was based upon a simplified version of the IDEAS ontology, see chapter 8.
- **DMM Notation:** The DMM was expressed using UML class diagram notation.

- **Reusability of UML Metamodel concepts:** The UAF DMM reuses a number of concepts from the UML Metamodel, such as Statemachines, Activities and Interactions. The explicit relationship to these concepts enables the UAF DMM to reuse UML semantics instead of reinventing its own semantics.
- **Reusability of BPMN concepts:** The UAF DMM reuses a number of concepts from BPMN, such as processes. The explicit relationship to these concepts enables the UAF DMM to reuse BPMN semantics instead of reinventing its own semantics.

7.UAF Grid

Due to the complexity of managing the multiple viewpoints with overlapping concerns and metamodels, the standard viewpoints are refactored as described in the donor frameworks into a more manageable format. This decision led to the development of the UAF grid which is described below.

The grid is a way of showing how the various ~~viewpoints (known as~~ *view specifications* (cells) ~~in the rest of document)~~ correspond to *viewpoints (prev. known as domains)* (horizontal rows) and the *aspects (prev. known as model kinds)* (the columns) that describe the view specification. The intent of the grid is not to be complete, but to capture the information that is present in the frameworks that contributes to the UAF, consequently, some gaps are evident.

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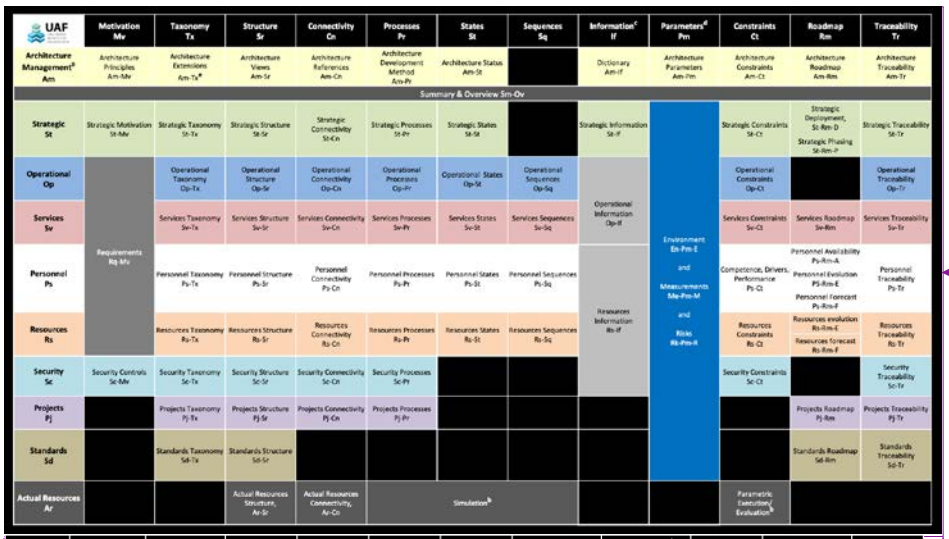

	Taxonomy Tx	Structure Sr	Connectivity Cn	Processes Pr	States St	Interaction Scenarios Is	Information If	Parameters Pm	Constraints Ct	Roadmap Rm	Traceability Tr
Metadata Md	Metadata Taxonomy Md-Tx	Metadata Structure Md-Sr	Metadata Connectivity Md-Cn	Metadata Processes Md-Pr	Metadata States Md-St	-	Conceptual Data Model, Logical Data Model, Physical schema, real world results	Environment Pm-En, Measurements Pm-Me	Metadata Constraints Md-Ct	Metadata Roadmap Md-Rm	Metadata Traceability Md-Tr
Strategic St	Strategic Taxonomy St-Tx	Strategic Structure St-Sr	Strategic Connectivity St-Cn	-	Strategic States St-St	-			Strategic Constraints St-Ct	Strategic Deployment, St-Rm Strategic Phasing St-Rm	Strategic Traceability St-Tr
Operational Op	Operational Taxonomy Op-Tx	Operational Structure Op-Sr	Operational Connectivity Op-Cn	Operational Processes Op-Pr	Operational States Op-St	Operational Interaction Scenarios Op-Is			Operational Constraints Op-Ct	-	Operational Traceability Op-Tr
Services Sv	Service Taxonomy Sv-Tx	Service Structure Sv-Sr	Service Connectivity Sv-Cn	Service Processes Sv-Pr	Service States Sv-St	Service Interaction Scenarios Sv-Is			Service Constraints Sv-Ct	Service Roadmap Sv-Rm	Service Traceability Sv-Tr
Personnel Pr	Personnel Taxonomy Pr-Tx	Personnel Structure Pr-Sr	Personnel Connectivity Pr-Cn	Personnel Processes Pr-Pr	Personnel States Pr-St	Personnel Interaction Scenarios Pr-Is			Competence, Drivers, Performance Pr-Ct	Personnel Availability, Personnel Evolution, Personnel Forecast Pr-Rm	Personnel Traceability Pr-Tr
Resources Rs	Resource Taxonomy Rs-Tx	Resource Structure Rs-Sr	Resource Connectivity Rs-Cn	Resource Processes Rs-Pr	Resource States Rs-St	Resource Interaction Scenarios Rs-Is			Resource Constraints Rs-Ct	Resource evolution, Resource forecast Rs-Rm	Resource Traceability Rs-Tr
Security Sc	Security Taxonomy Sc-Tx	Security Structure Sc-Sr	Security Connectivity Sc-Cn	Security Processes Sc-Pr	-	-			Security Constraints Sc-Ct	-	Security Traceability Sc-Tr
Projects Pj	Project Taxonomy Pj-Tx	Project Structure Pj-Sr	Project Connectivity Pj-Cn	Project Processes Pj-Pr	-	-			-	Project Roadmap Pj-Rm	Project Traceability Pj-Tr
Standards Sd	Standard Taxonomy Sd-Tx	Standards Structure Sd-Sr	-	-	-	-			-	Standards Roadmap Sd-Rm	Standards Traceability Sd-Tr
Actual Resources Ar		Actual Resources Structure Ar-Sr	Actual Resources Connectivity Ar-Cn	Simulation					Parametric Execution/ Evaluation	-	-
Dictionary Dc											
Summary & Overview Sm-Ov											
Requirements Req											

Figure 7:1- UAF Grid

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Notes related to suffixes in the grid

a. The view specifications in the ~~Metadata~~ Architecture Management ~~Domain~~ viewpoint ~~are not modeled as part of the UAF but~~ are architectural artifacts that contribute to the success in defining and developing an architecture.

b. To be able to evaluate architecture behavior and constraints (i.e., non-functional requirements) it is necessary to define actual instances of the architectural elements. The expectation is that tool vendors intending to implement the UAF have capabilities native to their tools to enable behavioral simulation and the evaluation of measures and constraints through parametric diagrams or a proprietary equivalent.

c. The information model is an ~~column~~ aspect across the domains and can be defined in any of its forms, i.e., Conceptual, Logical or Physical. The expectation is that most developers of the information model will use the Conceptual or Logical forms of the data model when using an abstract modeling tool.

d. The parameters column captures the measures ~~and~~, environments, and risks across the architecture in ~~all~~ the different ~~domains~~viewpoints.

~~e. The expectation is that the physical schema model would not be defined in the UAF. Any tool implementing the framework provides a means to import or link to representations of the physical model.~~

~~f.~~ The ~~Metadata~~ Architecture Extensions~~Taxonomy~~ view specification provides a means to extend the framework to other domains.

The detailed mapping between the view specifications of the UAF shown in the grid and the viewpoints from the donor frameworks is described in dtc/2021-11-07~~dtc\2019-06-17~~. A definition for each view specification in the grid is described in the following chapters.

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7.1 Descriptions of ~~Domains~~ Viewpoints and ~~Model Kinds~~Aspects

Table 7:1 - Definitions for the ~~Domains~~Viewpoints

~~Domain~~Viewpoint	Acronym	Description
~~Metadata~~Architecture Management	~~Md~~Am	Identifies the metadata required to develop a suitable architecture that is fit for its purpose.
Strategic	St	Capability management process. Describes the capability taxonomy, composition, dependencies and evolution.
Operational	Op	Illustrates the Logical Architecture of the enterprise. Describes the requirements, operational behavior, structure, and exchanges required to support (exhibit) capabilities. Defines all operational elements in an implementation/solution independent manner.
Services	Sv	The Service-Orientated View (SOV) is a description of services needed to directly support the operational domain as described in the Operational View. A service within MODAF is understood in its broadest sense, as a unit of work through which a provider provides a useful result to a consumer. DoDAF: The Service Views within the Services Viewpoint describe the design for service-based solutions to support operational development processes (JCIDS) and Defense Acquisition System or capability development within the Joint Capability Areas.
Personnel	~~Pr~~Ps	Defines and explores organizational resource types. Shows the taxonomy of types of organizational resources as well as connections, interaction and growth over time.
Resources	Rs	Captures a solution architecture consisting of resources, e.g.,organizational, software, artifacts, capability configurations, and natural resources that implement the operational requirements. Further design of a resource is typically detailed in SysML or UML.
Security	Sc	Security assets and security enclaves. Defines the hierarchy of security assets and asset owners, security constraints (policy, laws, and guidance) and details where they are located (security enclaves).

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Projects	Pj	Describes projects and project milestones, how those projects deliver capabilities, the organizations contributing to the projects and dependencies between projects.
Standards	Sd	MODAF: Technical Standards Views are extended from the core DoDAF views to include non-technical standards such as operational doctrine, industry process standards, etc. DoDAF: The Standards Views within the Standards Viewpoint are the set of rules governing the arrangement, interaction, and interdependence of solution parts or elements.
Actual Resources	Ar	The analysis, e.g., evaluation of different alternatives, what-if, trade-offs, V&V on the actual resource configurations. Illustrates the expected or achieved actual resource configurations.

Table 7:2 - Definitions of the ~~Model Kinds~~Aspects

~~UAF12-41~~

~~Model Kind~~Aspect	Acronym	Description
Motivation	Mv	Captures motivational elements e.g., drivers, challenges, opportunities and concerns that pertain to enterprise transformation efforts, and different types of requirements, e.g., operational, services, personnel, resources, and security controls.
Taxonomy	Tx	Presents all the elements as a standalone structure. Presents all the elements as a specialization hierarchy, provides a text definition for each one and references the source of the element
Structure	Sr	Describes the break down of structural elements e.g. logical performers, systems, projects, etc. into their smaller parts~~Describes the definitions of the dependencies, connections, and relationships between the different elements.~~
Connectivity	Cn	Describes the connections, relationships, and interactions between the different elements.
Processes	Pr	Captures activity based behavior and flows. It describes activities, their Inputs/Outputs, activity actions and flows between them.
States	St	Captures state-based behavior of an element. It is a graphical representation of states of a structural element and how it responds to various events and actions.
~~Interaction Scenarios~~Sequences	Sq~~Is~~	Expresses a time ordered examination of the exchanges as a result of a particular scenario. Provides a time-ordered

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~~Model Kind~~Aspect	Acronym	Description
		examination of the exchanges between participating elements as a result of a particular scenario.
Information	If	Address the information perspective on operational, service, and resource architectures. Allows analysis of an architecture's information and data definition aspect, without consideration of implementation specific issues.
Constraints	Ct	Details the measurements that set performance requirements constraining capabilities. Also defines the rules governing behavior and structure.
Roadmap	Rm	Addresses how elements in the architecture change over time. ~~Also, how at different points in time or different periods of time.~~
Traceability	Tr	Describes the mapping between elements in the architecture. This can be between different viewpoints within domains as well as between domains. It can also be between structure and behaviors.

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~~7.3~~7.2 ~~Domain~~ Viewpoint Interrelationships

Although the ~~g~~rid is the primary means of expressing the relationship between the ~~Domains~~Viewpoints, ~~Model Kinds~~Aspects and View Specifications, because of ~~it is~~ two-dimensional nature it is not adequate to explain the abstract interrelationships that exist between the ~~domains~~viewpoints. The following diagram is an indication of the how the ~~domains~~ viewpoints are interrelated.

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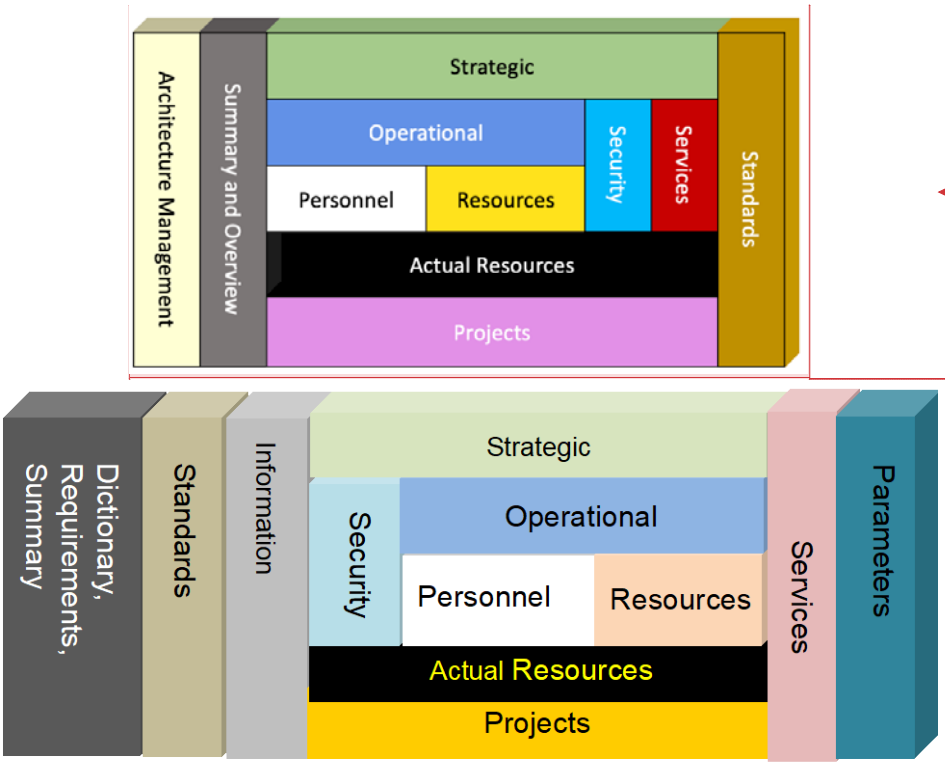

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Figure 7:2 ~~–~~ ~~Domain~~ Viewpoint Interrelationships

Where a ~~Domain~~ Viewpoint is shown vertically the intent is to show that the ~~Domain~~ Viewpoint is a cross cutting concern that goes across the levels of abstraction in the architecture.

Where a ~~Domain~~ Viewpoint is shown horizontally the intent is to show that the ~~Domain~~ Viewpoint exists in a layer of abstraction between the ~~Domains~~ Viewpoints above and below it and there is an interrelationship with the ~~Domains~~ Viewpoints either side of it.

~~7.4~~7.3 Domain Metamodel Diagram Legend

Note that the diagrams rely on color to aid the reader in understanding the model. Please refer to the legend below to understand the diagrams.

The following is the legend of element colors used in the DMM and what they denote.

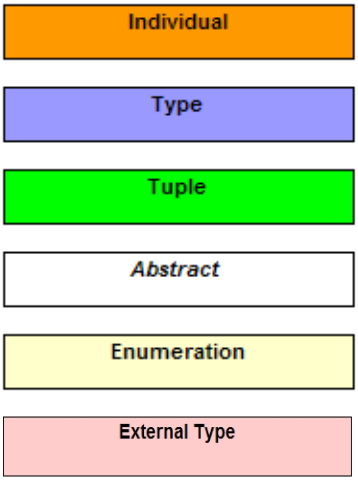

Figure 7:3 - Legend of color codes for element types defined in UAF

The meaning of the element types in the UAF are based upon concepts put forth in the International Defence Enterprise Architecture Specification (IDEAS).

- An Individual denotes a single instance of an element
- A Type denotes a set of Individuals
- A Tuple denotes a relationship that exists between elements
- An Abstract denotes that the element has no direct use but is a means of construction
- An Enumeration is a complete, ordered listing of all the items in a collection
- An External Type is an element that exists outside of the core DMM but is ~~referencable~~referenceable by elements in the DMM

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8. Domain Metamodel Diagrams

Note that the diagrams rely on color to aid the reader in understanding the model. Please refer to the legend in the various diagrams to understand the specific definitions.

8.1 View Specifications

This section documents each of the view specifications of UAF.

8.1.1 View Specifications::Architecture Management

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Stakeholders: Enterprise Architects, people who want to discover the architecture, Technical Managers.

Concerns: Captures meta-data relevant to the entire architecture

Definition: Provide information pertinent to the entire architecture. Present supporting information rather than architectural models.

View Specifications::Architecture Management::Motivation

Contains the diagrams that document the Architecture Management Motivation View Specification.

View Specifications::Architecture Management::Motivation::Architecture Principles

Stakeholders: Enterprise Architects, Enterprise Systems Engineers, Model Managers, System Architects.

Concerns: alignment of architecture with architecture heuristics, guidelines and principles.

Definition: identifies relevant architectural principles and other guidelines to be used in architecture development and evaluation.

Recommended Implementation: SysML Block Diagram, tabular format

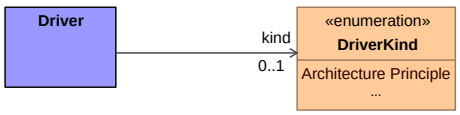

Figure 8:1 - Architecture Principles

Elements

- Driver

~~View Specifications::Metadata~~

~~Stakeholders: Enterprise Architects, Technical Managers.~~
~~Concerns: architecture development process, architecture traceability, metamodel and its extensions, architecture versioning.~~
~~Definition: Identifies the metadata required to develop a suitable architecture that is fit for its purpose.~~

~~View Specifications::Metadata::Taxonomy~~

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~~Stakeholders: Enterprise Architects, Technical Managers.~~

~~Concerns: metamodel and its extensions.~~

~~Definition: captures user defined metamodel extensions~~

~~Recommended Implementation: UML Profile Diagram, SysML Block Definition Diagram~~

View Specifications::Architecture Management::Structure

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Contains the diagrams that document the Architecture Management Structure View Specification.

View Specifications::Architecture Management::Structure::Architecture Views

Stakeholders: Enterprise Architects, Model Managers, Modelers, Technical Managers.

Concerns: domains, viewpoints, aspects, model kinds, and view specifications that are used to describe the architecture.

Definition: (i) lists predefined and custom domains, model kinds, viewpoints, aspects and view specifications (ii) and identify the key stakeholders and their perspectives and concerns.

Recommended Implementation: SysML Block Definition Diagram, SysML Package Diagram.

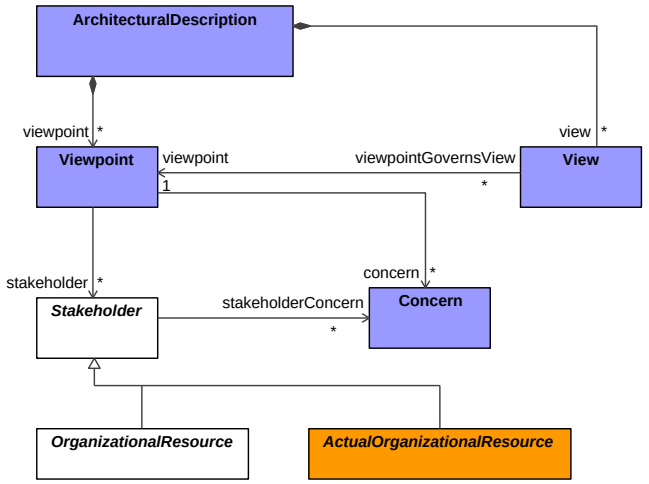

Figure 8:2 - Architecture Views

Elements

- ActualOrganizationalResource
- ArchitecturalDescription
- Concern
- OrganizationalResource
- Stakeholder
- View
- Viewpoint

~~View Specifications::Metadata::Structure~~

~~Stakeholders: Enterprise Architects, Technical Managers.~~

~~Concerns: domains, model kinds, and view specifications that are used to describe the architecture.~~

~~Definition: (i) lists predefined and custom domains, model kinds, and view specifications (ii) and identify the key stakeholders and their concerns.~~

~~Recommended Implementation: SysML Block Definition Diagram, SysML Package Diagram.~~

View Specifications::Architecture Management::Connectivity

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Contains the diagrams that document the Architecture Management Connectivity View Specification.

View Specifications::Architecture Management::Connectivity::Architecture References

Stakeholders: Enterprise Architects, people who want to understand relationships to related architectural descriptions, Technical Managers.

Concerns: high-level dependencies between architectural descriptions.

Definition: depicts and analyzes all relevant dependencies between architectural descriptions, e.g., reference architectures, as-is to to-be architectures, enterprise architecture to system architectures.

Recommended Implementation: SysML Block Definition Diagram, SysML Package Diagram, matrix format.

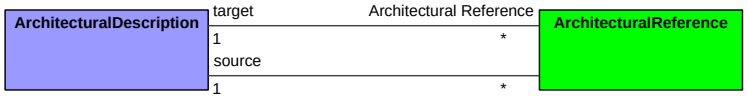

Figure 8:3 - Architecture References

Elements

- ArchitecturalDescription
- ArchitecturalReference

~~View Specifications::Metadata::Connectivity~~

~~Stakeholders: Enterprise Architects, people who want to understand relationships to related architectural descriptions, Technical Managers.~~

~~Concerns: high-level dependencies between architectural descriptions.~~

~~Definition: depicts and analyzes all relevant dependencies between architectural descriptions, e.g. reference architectures, as-is to to-be architectures.~~

~~Recommended Implementation: SysML Block Definition Diagram, SysML Package Diagram, matrix format.~~

View Specifications::Architecture Management::Processes

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Contains the diagrams that document the Architecture Management Processes View Specification.

View Specifications::Architecture Management::Processes::Architecture Development Method

Stakeholders: Enterprise Architects, Model Managers, Modelers, Enterprise Systems Engineers.

Concerns: development sequence of models and views and how they are related to each other.

Definition: defines workflow or process steps used in managing the architecture development.

Recommended Implementation: SysML Activity Diagram, text.

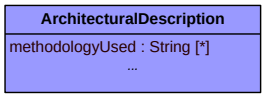

Figure 8:4 - Architecture Development Method

Elements

- ArchitecturalDescription

~~View Specifications::Metadata::Processes~~

~~Stakeholders: Enterprise Architects, people who want to understand the architecture development process, Technical Managers.~~

~~Concerns: methodology used.~~

~~Definition: methodology used in developing the architecture.~~

~~Recommended Implementation: SysML Activity Diagram, text.~~

View Specifications::Architecture Management::States

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Contains the diagrams that document the Architecture Management States View Specification.

View Specifications::Architecture Management::States::Architecture Status

Stakeholders: Enterprise Architects, people who want to understand the architecture governance, Technical Managers.

Concerns: architecture status.

Definition: captures version number and approval workflow of the architecture. Recommended Implementation: SysML State Machine Diagram, state table, text.

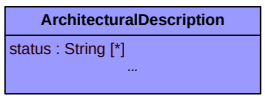

Figure 8:5 - Architecture Status

Elements

- ArchitecturalDescription

~~View Specifications::Metadata::States~~

~~Stakeholders: Enterprise Architects, people who want to understand the architecture governance, Technical Managers.~~

~~Concerns: architecture status.~~

~~Definition: captures version number and approval workflow of the architecture.~~

~~Recommended Implementation: SysML State Machine Diagram, state table, text.~~

View Specifications::Architecture Management::Information

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Contains the diagrams that document the Architecture Management Information View Specification.

View Specifications::Architecture Management::Information::Dictionary

Stakeholders: Solution Providers, Systems Engineers, Software Architects, Business Architects.

Concerns: provides a central reference for a given architecture's data and metadata. It enables the set of architecture description to stand alone, with minimal reference to outside resources.

Definition: contains definitions of terms used in the given architecture. It consists of textual definitions in the form of a glossary, their taxonomies, and their metadata (i.e., data about architecture data), including metadata for any custom-tailored views. Architects should use standard terms where possible (i.e., terms from existing, approved dictionaries, glossaries, and lexicons).

Recommended Implementation: text, table format.

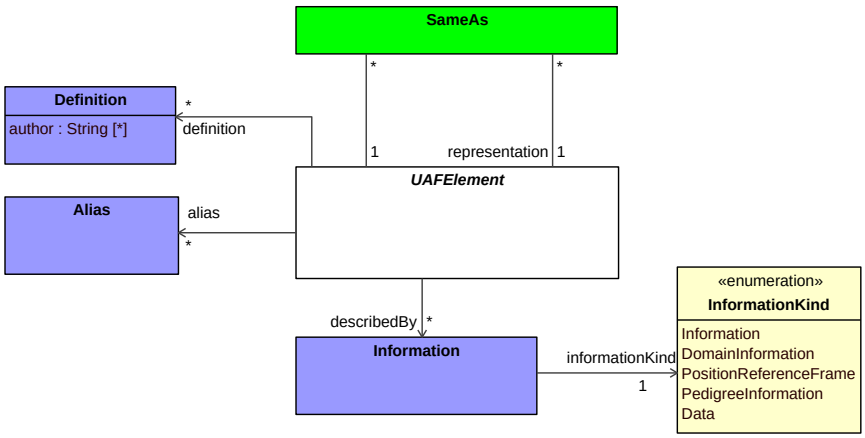

Figure 8:6 - Dictionary

Elements

- Alias
- Definition
- Information
- SameAs
- UAFElement

View Specifications::Architecture Management::Parameters

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Contains the diagrams that document the Architecture Management Parameters View Specification.

View Specifications::Architecture Management::Parameters::Architecture Parameters

Stakeholders: Enterprise Architects, Enterprise Systems Engineers, Model Managers, System Architects.

Concerns: architecture parameters.

Definition: depicts and analyzes measures and measurements that are applicable to management of the architecture.

Recommended Implementation: SysML Block Definiton Diagram, tabular format.

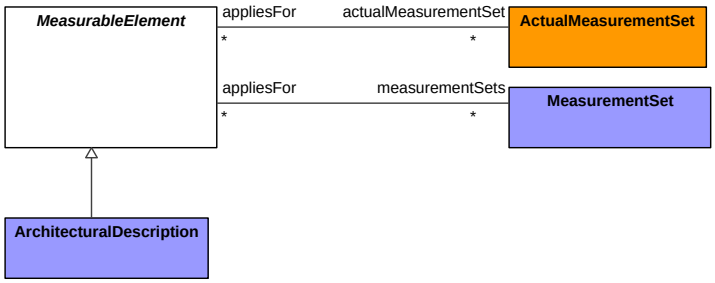

Figure 8:7 - Architecture Parameters

Elements

- ActualMeasurementSet
- ArchitecturalDescription
- MeasurableElement
- MeasurementSet

View Specifications::Architecture Management::Constraints

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Contains the diagrams that document the Architecture Management Constraints View Specification.

View Specifications::Architecture Management::Constraints::Architecture Constraints

Stakeholders: Enterprise Architects, people who want to understand the architecture constraints, Technical Managers.

Concerns: architecture assumptions and constraints.

Definition: depicts and analyzes assumptions, constraints, rules, policy and guidance that are applicable to aspects of the architecture.

Recommended Implementation: SysML Package Diagram, tabular format.

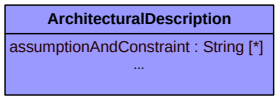

Figure 8:8 - Architecture Constraints

Elements

- ArchitecturalDescription

~~View Specifications::Metadata::Constraints~~

~~Stakeholders: Enterprise Architects, people who want to understand constraints for the architecture, Technical Managers.~~

~~Concerns: architectural constraints.~~

~~Definition: captures assumptions and constraints on the architecture.~~

~~Recommended Implementation: tabular format, text.~~

View Specifications::Architecture Management::Roadmap

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Contains the diagrams that document the Architecture Management Roadmap View Specification.

View Specifications::Architecture Management::Roadmap::Architecture Roadmap

Stakeholders: Enterprise Architects, people who want to understand the architecture development plan, Technical Managers.

Concerns: architecture release schedule.

Definition: captures project timeline for the architecture. Recommended Implementation: timeline, text.

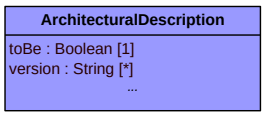

Figure 8:9 - Architecture Roadmap

Elements

- ArchitecturalDescription

~~**View Specifications::Metadata::Roadmap**~~

~~Stakeholders: Enterprise Architects, people who want to understand the architecture development plan, Technical Managers.~~

~~Concerns: architecture release schedule.~~

~~Definition: captures project timeline for the architecture.~~

~~Recommended Implementation: timeline, text.~~

View Specifications::Architecture Management::Traceability

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Contains the diagrams that document the Architecture Management Traceability View Specification.

View Specifications::Architecture Management::Traceability::Architecture Traceability

Stakeholders: Enterprise Architects, people who want to understand impact of change across the architecture supporting assets, Technical Managers.

Concerns: reuse of architectures.

Definition: shows references to operational, services, and resource architectures, asset libraries, legacy architectures, and external sources, e.g., documents. Recommended Implementation: SysML Block Definition Diagram, SysML Package Diagram, tabular format

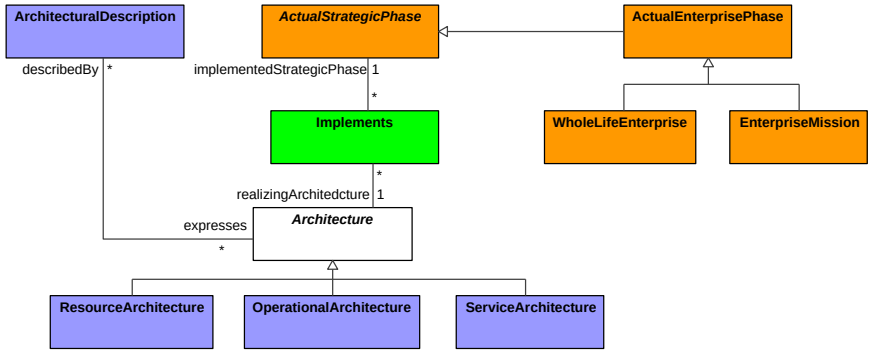

Figure 8:10 - Architecture Traceability

Elements

- ActualEnterprisePhase
- ActualStrategicPhase
- ArchitecturalDescription
- Architecture
- EnterpriseMission
- Implements
- OperationalArchitecture
- ResourceArchitecture
- ServiceArchitecture
- WholeLifeEnterprise

~~**View Specifications::Metadata::Traceability**~~

~~Stakeholders: Enterprise Architects, people who want to understand impact of change across the architecture supporting assets, Technical Managers.~~

~~Concerns: reuse of architectures.~~

~~Definition: shows references to asset libraries, legacy architectures, and external sources, e.g. documents.~~
~~Recommended Implementation: SysML Block Definition Diagram, SysML Package Diagram, tabular format.~~

~~8.1.7~~8.1.2 View Specifications::Summary & Overview

Stakeholders: Executives, PMs, Enterprise Architects.
Concerns: executive-level summary information in a consistent form.
Definition: provides executive-level summary information in a consistent form that allows quick reference and comparison between architectural descriptions. Includes assumptions, constraints, and limitations that may affect high-level decisions relating to an architecture-based work programme.

View Specifications::Summary & Overview::Summary & Overview

Stakeholders: Decision makers, Solution Providers, Systems Engineers, Software Architects, Business Architects.
Concerns: quick overview of an architecture description and summary of analysis. In the initial phases of architecture development, it serves as a planning guide. Upon completion of an architecture, it provides a summary of findings, and any conducted analysis.
Definition: provides executive-level summary information in a consistent form that allows quick reference and comparison among architectures. The Summary and Overview includes assumptions, constraints, and limitations that may affect high-level decision processes involving the architecture.
Recommended Implementation: text, free form diagram, table format.

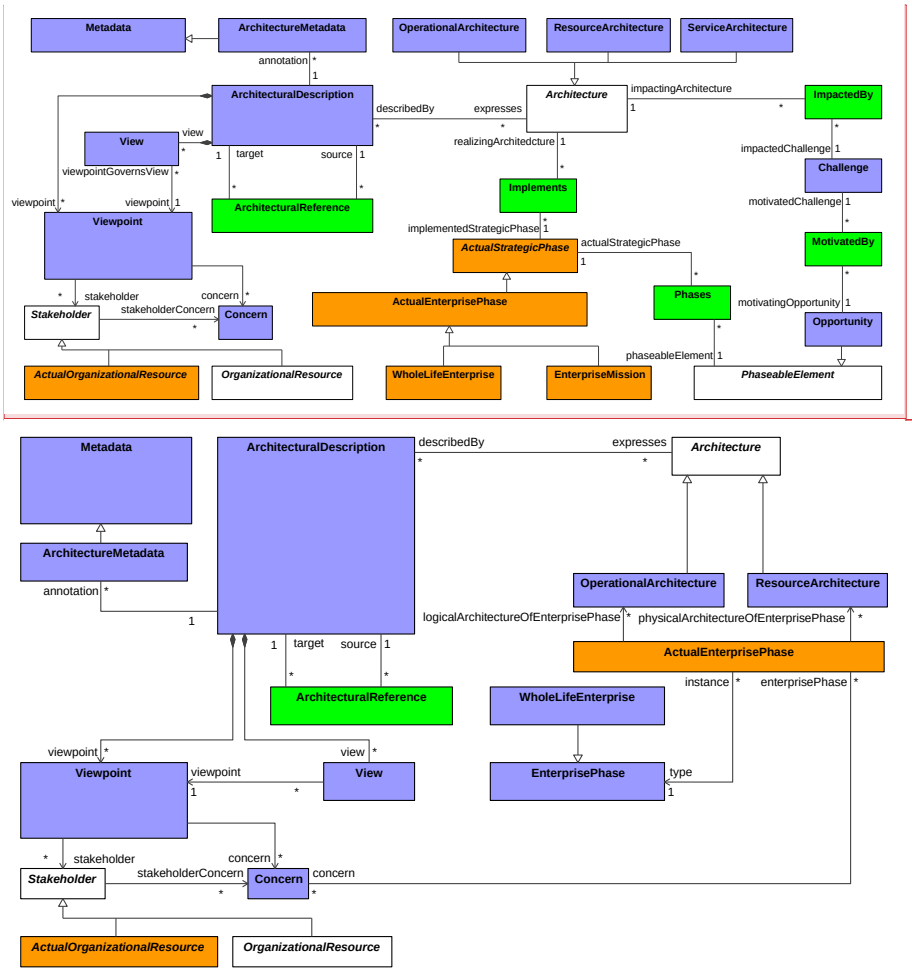

Figure 8:72 - Summary & Overview

Elements

- ActualEnterprisePhase
- ActualOrganizationalResource
- ActualStrategicPhase
- ArchitecturalDescription
- ArchitecturalReference
- Architecture
- ArchitectureMetadata
- Challenge
- Concern

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UAF12-49
UAF12-33
UAF12-15
UAF12-48

- EnterpriseMission
- ImpactedBy
- Implements
- Metadata
- MotivatedBy
- OperationalArchitecture
- Opportunity
- OrganizationalResource
- PhaseableElement
- Phases
- ResourceArchitecture
- ServiceArchitecture
- Stakeholder
- View
- Viewpoint
- WholeLifeEnterprise
- ~~ActualEnterprisePhase~~
- ~~ActualOrganizationalResource~~
- ~~ArchitecturalDescription~~
- ~~ArchitecturalReference~~
- ~~Architecture~~
- ~~ArchitectureMetadata~~
- ~~Concern~~
- ~~EnterprisePhase~~
- ~~Metadata~~
- ~~OperationalArchitecture~~
- ~~OrganizationalResource~~
- ~~ResourceArchitecture~~
- ~~Stakeholder~~
- ~~View~~
- ~~Viewpoint~~
- ~~WholeLifeEnterprise~~

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~~8.1.8~~8.1.3 View Specifications::Strategic

Stakeholders: Capability Portfolio Managers.
Concerns: capability management process.
Definition: describe capability taxonomy, composition, dependencies and evolution.

View Specifications::Strategic::Motivation

Contains the diagrams that document the Strategic Motivation View Specification.

View Specifications::Strategic::Motivation::Strategic Motivation

Stakeholders: Enterprise Architects, Portfolio Managers, Enterprise Systems Engineers, Program Managers.

Concerns: architecture drivers, challenges, opportunities, capabilities that address opportunities, phases and architectures that address challenges.

Definition: identifies and defines the drivers, challenges, and opportunities that are applicable to the architecture. defines the desired outcomes, goals and objectives that are motivated by the drivers, and the opportunities that enable the goals and objectives.

Recommended Implementation: SysML Block Definition Diagram, SysML Package Diagram, tabular format.

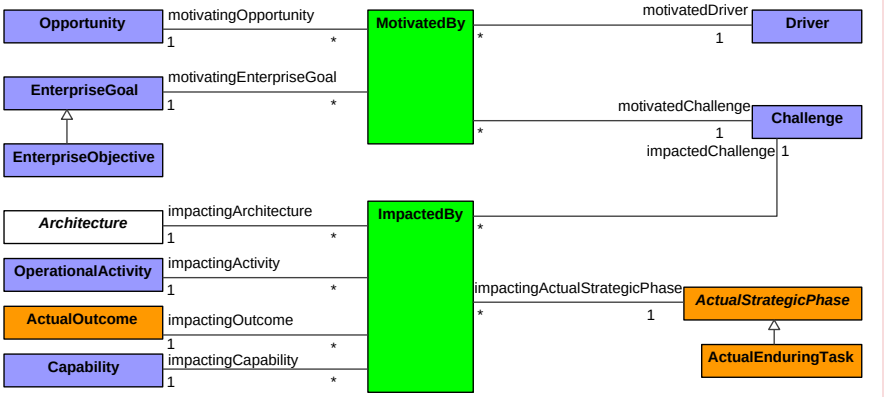

Figure 8:12 - Strategic Motivation

Elements

- ActualEnduringTask
- ActualOutcome
- ActualStrategicPhase
- Architecture
- Capability
- Challenge
- Driver
- EnterpriseGoal
- EnterpriseObjective
- ImpactedBy
- MotivatedBy
- OperationalActivity
- Opportunity

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View Specifications::Strategic::Taxonomy

Contains the diagrams that document the Strategic Taxonomy View Specification~~Viewpoint~~.

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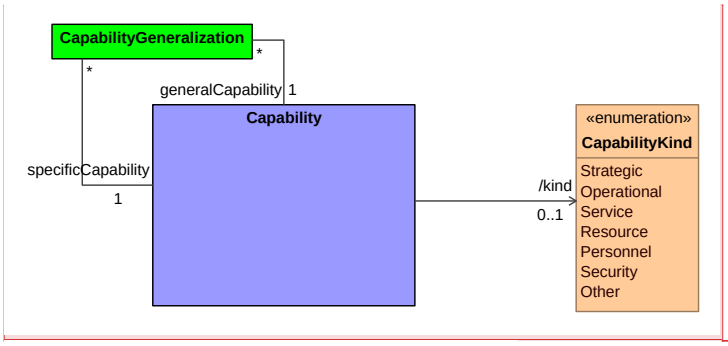
View Specifications::Strategic::Taxonomy::Strategic Taxonomy

Stakeholders: PMs, Enterprise Architects, Executives.
Concerns: capability needs.
Definition: shows the taxonomy of capabilities.
Recommended Implementation: SysML Block Definition Diagram.



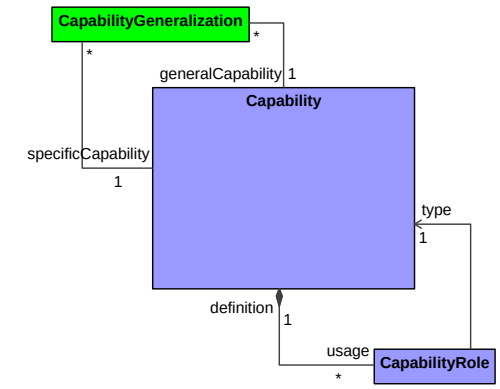


Figure 8:1 - Strategic Taxonomy

Elements

- Capability
- CapabilityGeneralization
- ~~Capability~~
- ~~CapabilityGeneralization~~
- ~~CapabilityRole~~

View Specifications::Strategic::Structure

Contains the diagrams that document the Strategic Structure View Specification.

~~Contains the diagrams that document the Strategic Structure Viewpoint.~~

View Specifications::Strategic::Structure::Strategic Structure

Stakeholders: PMs, Enterprise Architects, Executives.

Concerns: capability needs.

Definition: sshows the relationship between StrategicPhases and the Capabilities that are intended to be developed during the enterprise phases, and the organizations involved in the enterprise.~~hows the relationship between EnterprisePhases and the Capabilities that are intended to be developed during the enterprise phases, and the organizations involved in the enterprise.~~

Recommended Implementation: SysML Block Definition Diagram.

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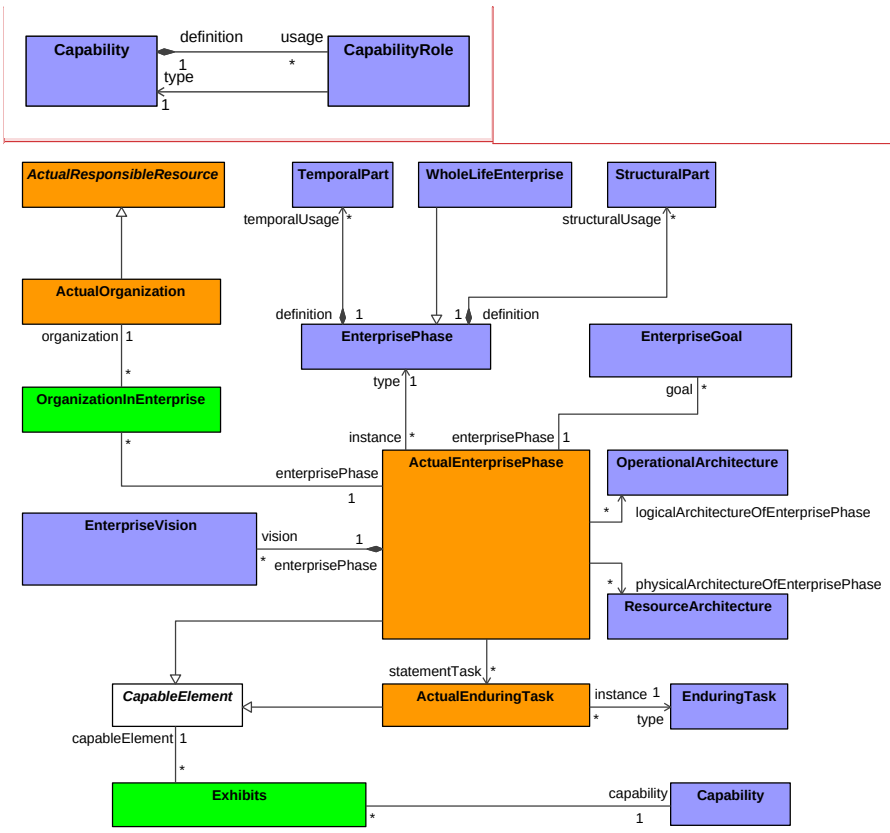

Figure 8:2 - Strategic Structure

Elements

- Capability
- CapabilityRole
- ~~ActualEnduringTask~~
- ~~ActualEnterprisePhase~~
- ~~ActualOrganization~~
- ~~ActualResponsibleResource~~
- ~~Capability~~
- ~~CapableElement~~
- ~~EnduringTask~~
- ~~EnterpriseGoal~~
- ~~EnterprisePhase~~
- ~~EnterpriseVision~~
- ~~Exhibits~~
- ~~OperationalArchitecture~~
- ~~OrganizationInEnterprise~~

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- ~~ResourceArchitecture~~
- ~~StructuralPart~~
- ~~TemporalPart~~
- ~~WholeLifeEnterprise~~

View Specifications::Strategic::Connectivity

Contains the diagrams that document the Strategic Connectivity View Specification~~Viewpoint~~.

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View Specifications::Strategic::Connectivity::Strategic Connectivity

Stakeholders: PMs, Executives, Enterprise Architects.
Concerns: capability dependencies.
Definition: describes the dependencies between planned capabilities.
Recommended Implementation: SysML Block Definition Diagram. SysML Internal Block Diagram.

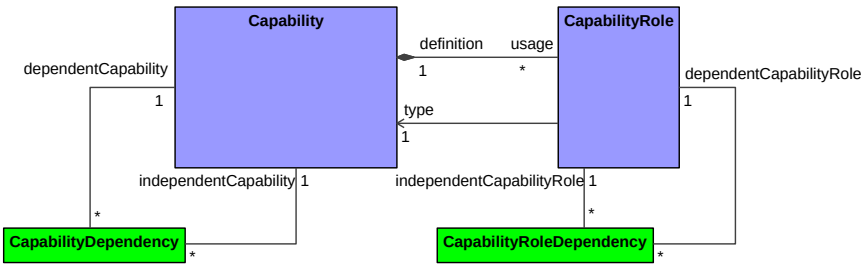

Figure 8:3 - Strategic Connectivity
Elements

- Capability
- CapabilityDependency
- CapabilityRole
- CapabilityRoleDependency

View Specifications::Strategic::Processes

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Contains the diagrams that document the Strategic Processes View Specification.

View Specifications::Strategic::Processes::Strategic Processes

Stakeholders: Program/Project Managers, Portfolio Managers, Enterprise Architects, Executives.

Concerns: capability phasing.

Definition: shows the relationship between strategic phases and the Capabilities that are intended to be developed during the strategic phases, and the actual organizations involved.

Recommended Implementation: SysML Block Definition Diagram.

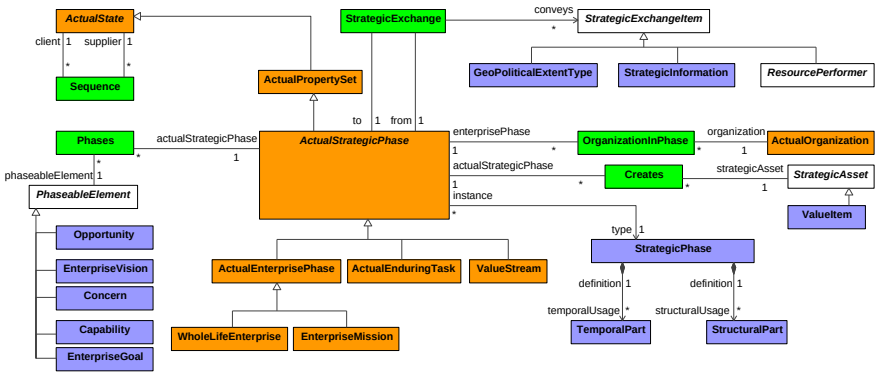

Figure 8:16 - Strategic Processes

Elements

- ActualEnduringTask
- ActualEnterprisePhase
- ActualOrganization
- ActualPropertySet
- ActualState
- ActualStrategicPhase
- Capability
- Concern
- Creates
- EnterpriseGoal
- EnterpriseMission
- EnterpriseVision
- GeoPoliticalExtentType
- Opportunity
- OrganizationInPhase
- PhaseableElement
- Phases
- ResourcePerformer
- Sequence
- StrategicAsset
- StrategicExchange
- StrategicExchangeItem
- StrategicInformation
- StrategicPhase
- StructuralPart
- TemporalPart
- ValueItem
- ValueStream
- WholeLifeEnterprise

View Specifications::Strategic::States

Contains the diagrams that document the Strategic States Viewpoint.

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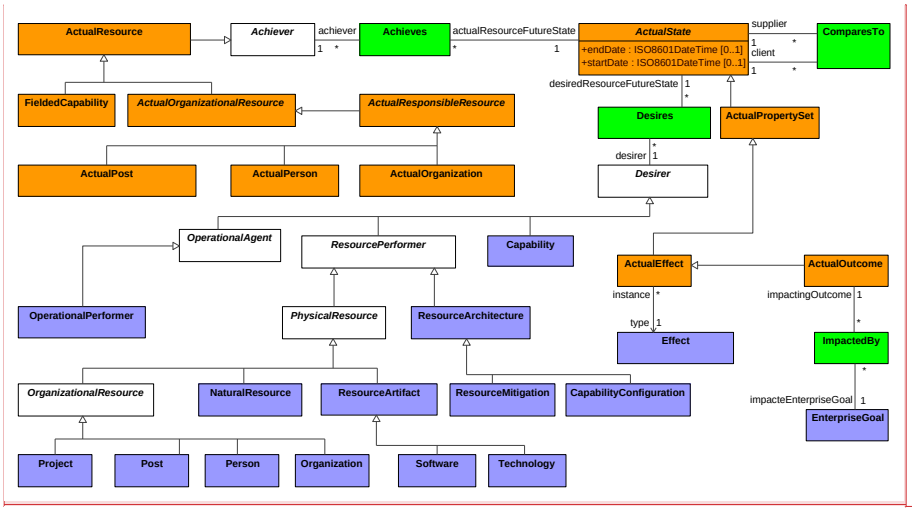
View Specifications::Strategic::States::Strategic States

Stakeholders: PMs, Enterprise Architects.
Concerns: effects that the implementation(s) of capabilities are expected to deliver.
Definition: captures the relationships between capability(ies) and desired effect(s) that implementation(s) of capability(ies) should achieve.
Recommended Implementation: SysML Block Definition Diagram.



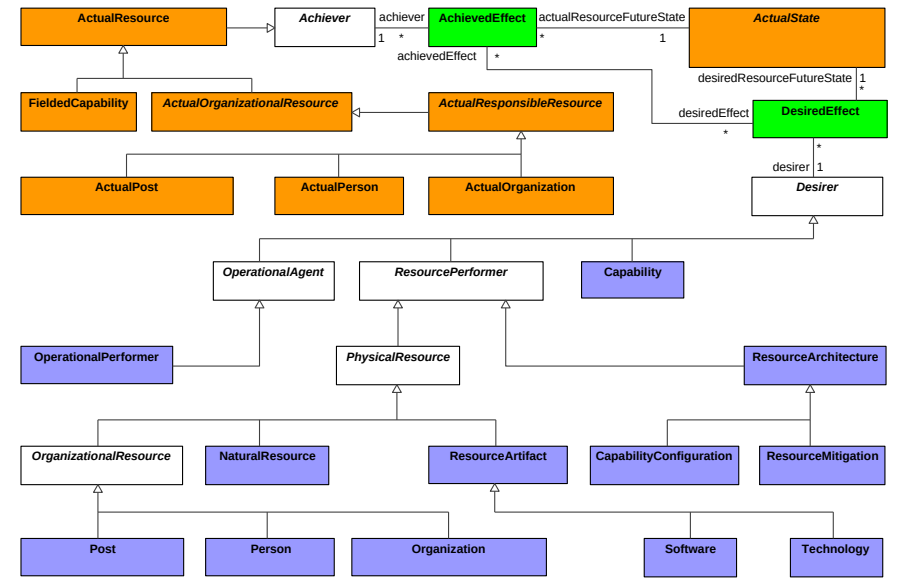


Figure 8:4 - Strategic States

Elements

- Achiever
- Achieves
- ActualEffect
- ActualOrganization

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- ActualOrganizationalResource
- ActualOutcome
- ActualPerson
- ActualPost
- ActualPropertySet
- ActualResource
- ActualResponsibleResource
- ActualState
- Capability
- CapabilityConfiguration
- ComparesTo
- Desirer
- Desires
- Effect
- EnterpriseGoal
- FieldedCapability
- ImpactedBy
- NaturalResource
- OperationalAgent
- OperationalPerformer
- Organization
- OrganizationalResource
- Person
- PhysicalResource
- Post
- Project
- ResourceArchitecture
- ResourceArtifact
- ResourceMitigation
- ResourcePerformer
- Software
- Technology
- ~~AchievedEffect~~
- ~~Achiever~~
- ~~ActualOrganization~~
- ~~ActualOrganizationalResource~~
- ~~ActualPerson~~
- ~~ActualPost~~
- ~~ActualResource~~
- ~~ActualResponsibleResource~~
- ~~ActualState~~
- ~~Capability~~
- ~~CapabilityConfiguration~~
- ~~DesiredEffect~~
- ~~Desirer~~
- ~~FieldedCapability~~
- ~~NaturalResource~~
- ~~OperationalAgent~~
- ~~OperationalPerformer~~
- ~~Organization~~
- ~~OrganizationalResource~~
- ~~Person~~
- ~~PhysicalResource~~

- ~~Post~~
- ~~ResourceArchitecture~~
- ~~ResourceArtifact~~
- ~~ResourceMitigation~~
- ~~ResourcePerformer~~
- ~~Software~~
- ~~Technology~~

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View Specifications::Strategic::Information

Contains the diagrams that document the Strategic Information View Specification.

View Specifications::Strategic::Information::Strategic Information

Stakeholders: Enterprise Architects, Portfolio Managers, Enterprise Systems Engineers, Business Managers.

Concerns: information that can be considered to be an enterprise strategic asset that can influence achievement of enterprise goals.

Definition: identifies and defines strategic information elements and their relationships that are applicable to the architecture.

Recommended Implementation: SysML Block Definition Diagram, tabular format.

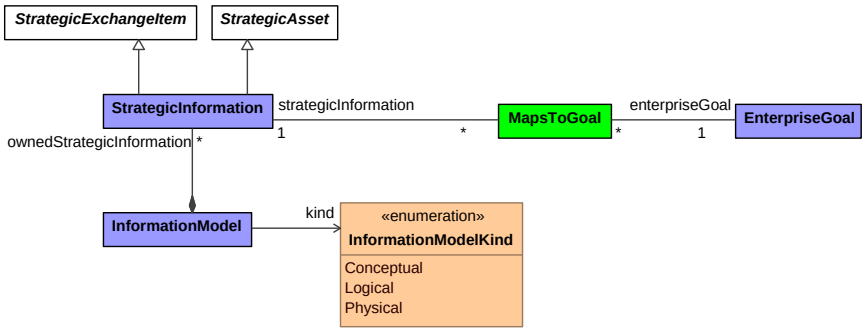

Figure 8:18 - Strategic Information

Elements

- EnterpriseGoal
- InformationModel
- MapsToGoal
- StrategicAsset
- StrategicExchangeItem
- StrategicInformation

View Specifications::Strategic::Constraints

Contains the diagrams that document the Strategic Constraints View Specification~~Viewpoint~~.

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View Specifications::Strategic::Constraints::Strategic Constraints

Stakeholders: PMs, Enterprise Architects.
Concerns: capability constraints.

Definition: details the measurements that set performance requirements constraining capabilities.
Recommended Implementation: tabular format, SysML Block Definition Diagram.

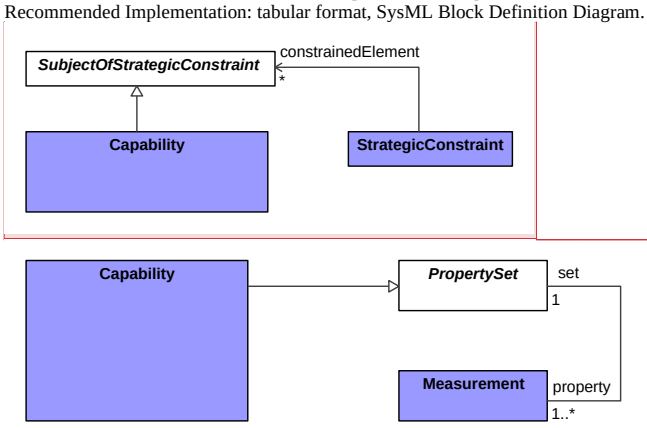

Figure 8:5 - Strategic Constraints
Elements

- Capability
- StrategicConstraint
- SubjectOfStrategicConstraint
- ~~Capability~~
- ~~Measurement~~
- ~~PropertySet~~

View Specifications::Strategic::Roadmap

Contains the diagrams that document the Strategic Roadmap View Specification~~Viewpoint~~.

View Specifications::Strategic::Roadmap::Deployment

View Specifications::Strategic::Roadmap::Deployment::Strategic Roadmap: Deployment

Stakeholders: PMs, Executives, Enterprise Architects.
Concerns: capability deployment to organizations over time.
Definition: addresses the deployment of capability(ies) to actual organizations over time.
Recommended Implementation: timeline, tabular format, SysML Block Definition Diagram.

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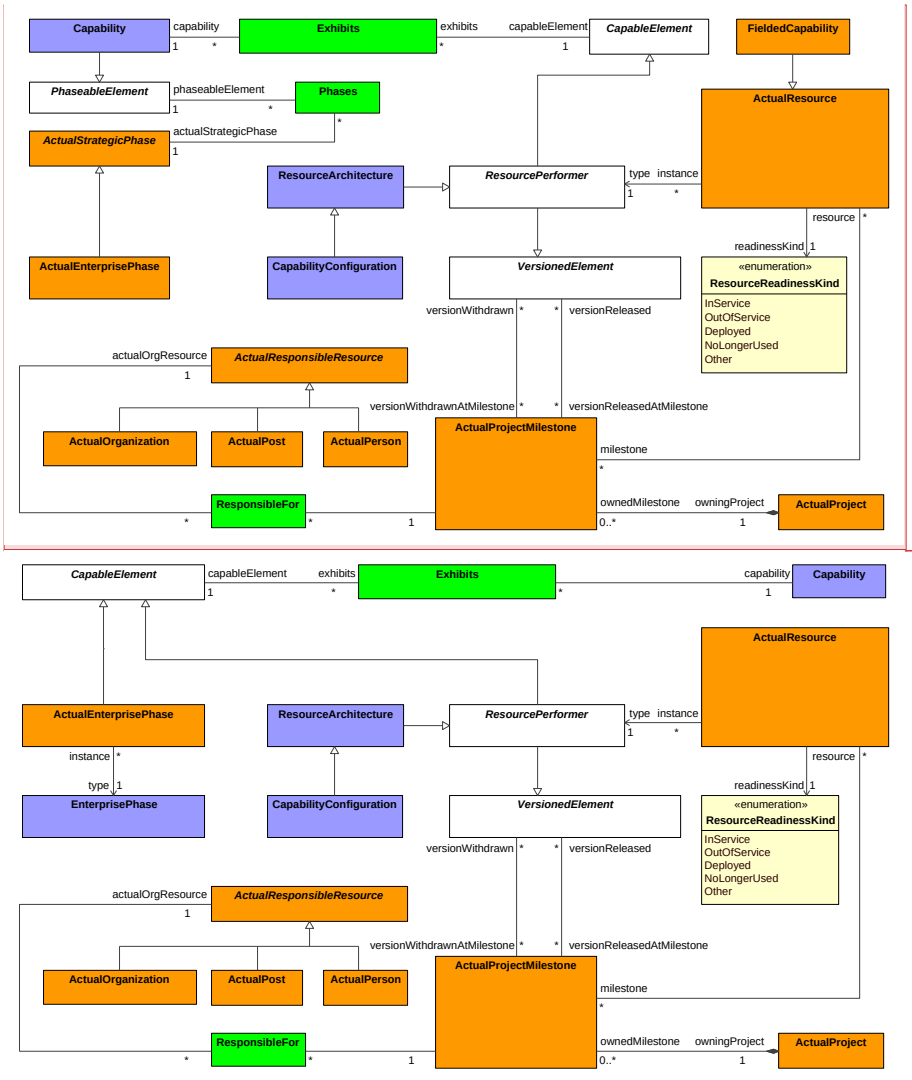

Figure 8:6 - Strategic Roadmap: Deployment

Elements

- ActualEnterprisePhase
- ActualOrganization
- ActualPerson
- ActualPost
- ActualProject

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- ActualProjectMilestone
- ActualResource
- ActualResponsibleResource
- ActualStrategicPhase
- Capability
- CapabilityConfiguration
- CapableElement
- Exhibits
- FieldedCapability
- PhaseableElement
- Phases
- ResourceArchitecture
- ResourcePerformer
- ResponsibleFor
- VersionedElement
- ~~ActualEnterprisePhase~~
- ~~ActualOrganization~~
- ~~ActualPerson~~
- ~~ActualPost~~
- ~~ActualProject~~
- ~~ActualProjectMilestone~~
- ~~ActualResource~~
- ~~ActualResponsibleResource~~
- ~~Capability~~
- ~~CapabilityConfiguration~~
- ~~CapableElement~~
- ~~EnterprisePhase~~
- ~~Exhibits~~
- ~~ResourceArchitecture~~
- ~~ResourcePerformer~~
- ~~ResponsibleFor~~
- ~~VersionedElement~~

View Specifications::Strategic::Roadmap::Phasing

View Specifications::Strategic::Roadmap::Phasing::Strategic Roadmap: Phasing

Stakeholders: PMs, Executives, Enterprise Architects.
Concerns: capability(ies) achievement over time.
Definition: the planned achievement of capability(ies) at different points in time or during specific periods of time.
Recommended Implementation: timeline, tabular format, SysML Block Definition Diagram.

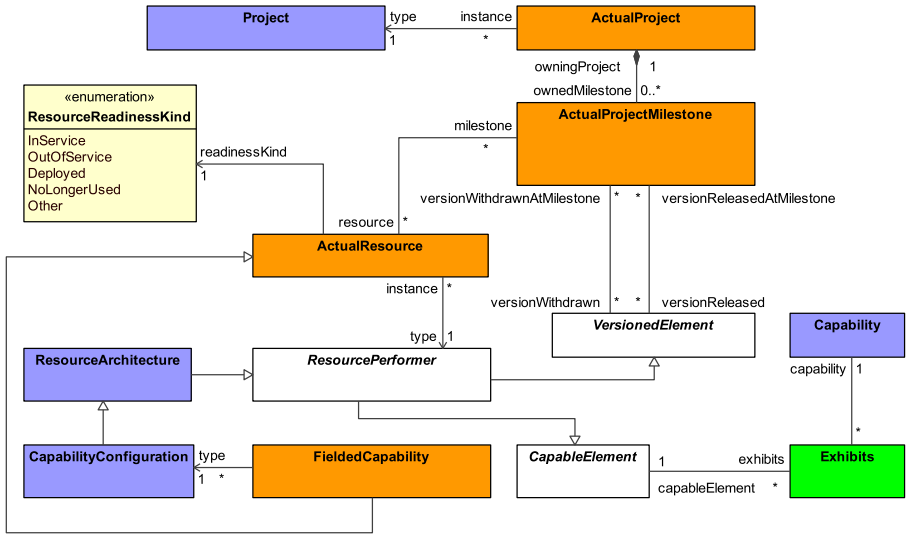

Figure 8:7 - Strategic Roadmap: Phasing

Elements

- ActualProject
- ActualProjectMilestone
- ActualResource
- Capability
- CapabilityConfiguration
- CapableElement
- Exhibits
- FieldedCapability
- Project
- ResourceArchitecture
- ResourcePerformer
- VersionedElement

View Specifications::Strategic::Traceability

Contains the diagrams that document the Strategic Traceability View Specification.~~Viewpoint~~.

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View Specifications::Strategic::Traceability::Strategic Traceability

Stakeholders: PMs, Enterprise Architects, Business Architects.
Concerns: traceability between capabilities and operational activities.
Definition: describes the mapping between the capabilities required by an Enterprise and the supporting operational activities.
Recommended Implementation: matrix format, SysML Block Definition Diagram.

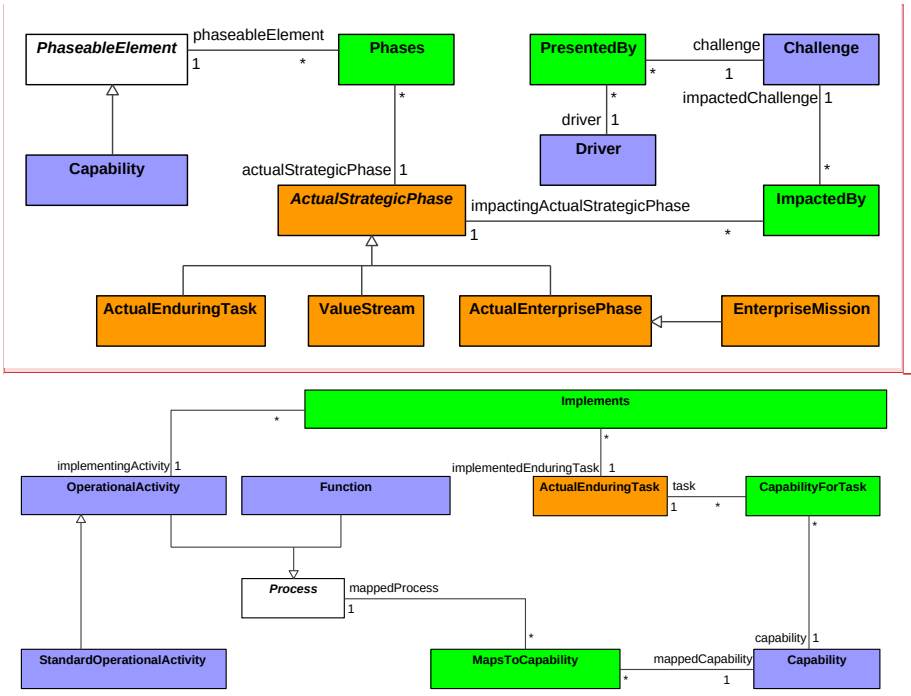

Figure 8:8 - Strategic Traceability

Elements

- ActualEnduringTask
- ActualEnterprisePhase
- ActualStrategicPhase
- Capability
- Challenge
- Driver
- EnterpriseMission
- ImpactedBy
- PhaseableElement
- Phases
- PresentedBy
- ValueStream
- ~~ActualEnduringTask~~
- ~~Capability~~
- ~~CapabilityForTask~~
- ~~Function~~
- ~~Implements~~
- ~~MapsToCapability~~
- ~~OperationalActivity~~
- ~~Process~~
- ~~StandardOperationalActivity~~

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~~8.1.18~~8.1.4 View Specifications::Operational

Stakeholders: Business Architects, Executives.
Concerns: illustrate the Logical Architecture of the enterprise.
Definition: describe the requirements, operational behavior, structure, and exchanges required to support (exhibit) capabilities. Defines all operational elements in an implementation/solution independent manner.

View Specifications::Operational::Taxonomy

Contains the diagrams that document the Operational Taxonomy View Specification~~Viewpoint~~.

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View Specifications::Operational::Taxonomy::Operational Taxonomy

Stakeholders: Business Architects, Systems Engineers, Enterprise Architects, Owners responsible for Operational Agents.
Concerns: OperationalAgent types.
Definition: shows the taxonomy of types of OperationalAgents.
Recommended Implementation: SysML Block Definition Diagram, SysML Internal Block Diagram.

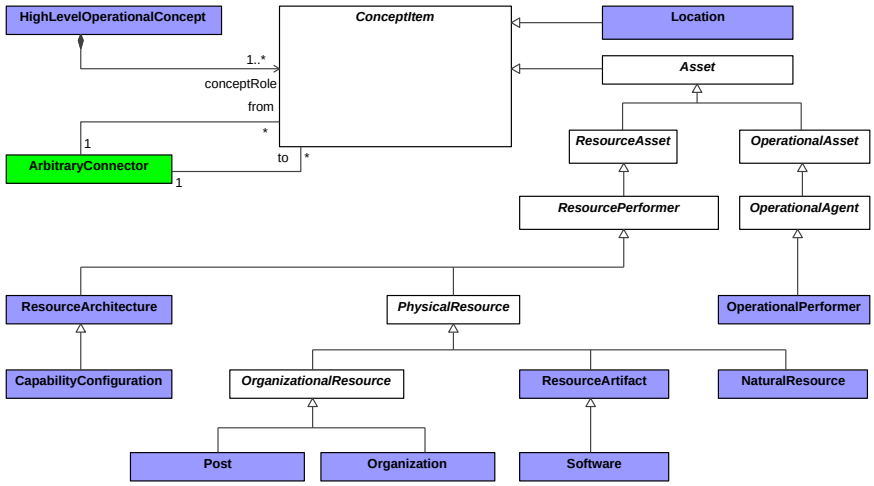


Figure 8:9 - Operational Taxonomy
Elements

- ArbitraryConnector
- Asset
- CapabilityConfiguration
- ConceptItem
- HighLevelOperationalConcept
- Location
- NaturalResource
- OperationalAgent
- OperationalAsset
- OperationalPerformer
- Organization
- OrganizationalResource
- PhysicalResource

- Post
- ResourceArchitecture
- ResourceArtifact
- ResourceAsset
- ResourcePerformer
- Software

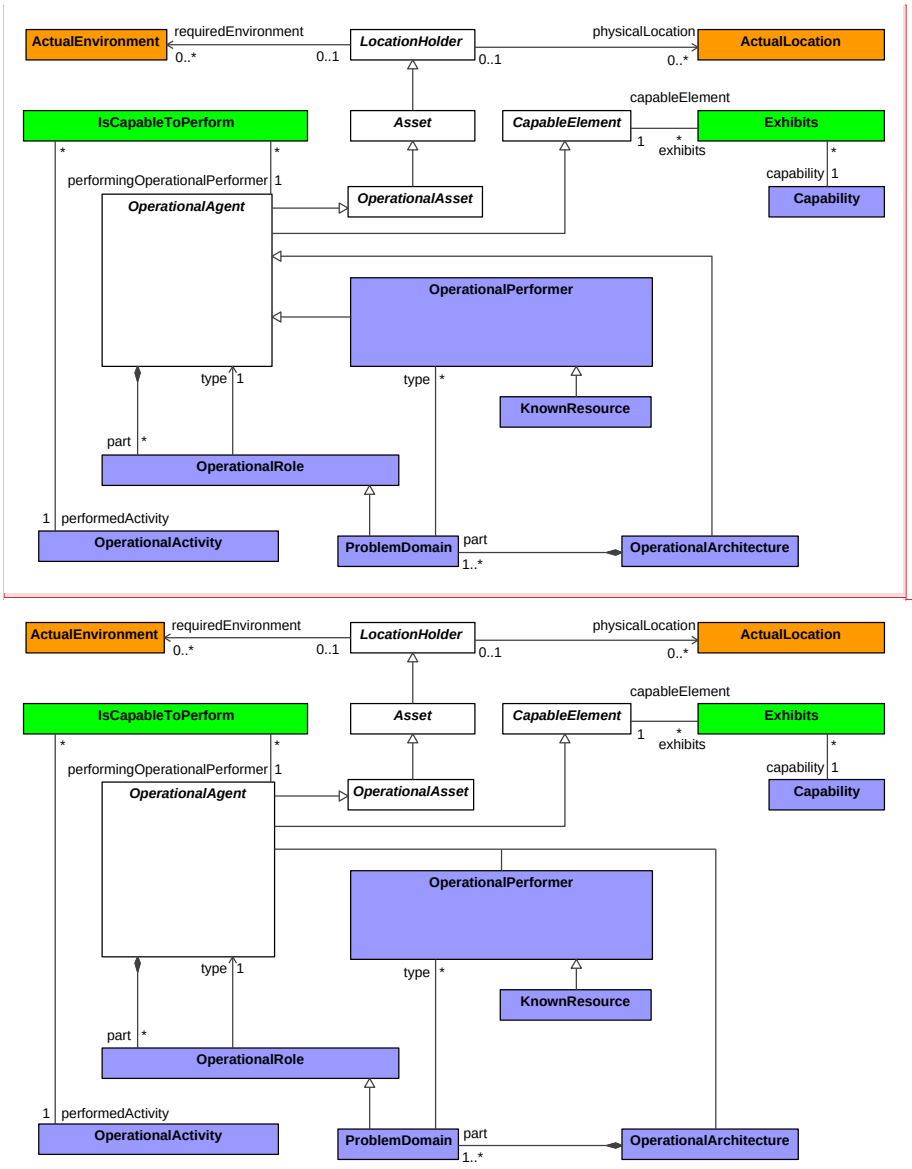
View Specifications::Operational::Structure

Contains the diagrams that document the Operational Structure View Specification~~Viewpoint~~.

Commented [KG83]: UAF12-41

View Specifications::Operational::Structure::Operational Structure

Stakeholders: Business Architects, Systems Engineers, Enterprise Architects, Owners responsible for Operational Agents.
Concerns: identifies the operational exchange requirements between nodes.
Definition: defines operational architecture and exchange requirements necessary to support a specific set of Capability(ies).
Recommended Implementation: SysML Block Definition Diagram, SysML Internal Block Diagram.



ActualEnvironment
requiredEnvironment
0..*
0..1
LocationHolder
physicalLocation
0..1
0..*
ActualLocation
capableElement
IsCapableToPerform
Asset
CapableElement
Exhibits
1
*
exhibits
performingOperationalPerformer
1
OperationalAgent
OperationalAsset
capability
1
Capability
OperationalPerformer
type
1
type
*
KnownResource
part
*
OperationalRole
1
performedActivity
OperationalActivity
ProblemDomain
part
1..*
OperationalArchitecture

Figure 8:10 - Operational Structure Elements

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- ActualEnvironment
- ActualLocation
- Asset
- Capability
- CapableElement
- Exhibits
- IsCapableToPerform
- KnownResource
- LocationHolder
- OperationalActivity
- OperationalAgent
- OperationalArchitecture
- OperationalAsset
- OperationalPerformer
- OperationalRole
- ProblemDomain

View Specifications::Operational::Connectivity

Contains the diagrams that document the Operational Connectivity View Specification~~Viewpoint~~.

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View Specifications::Operational::Connectivity::Operational Connectivity

Stakeholders: Systems Engineers, Architects, Solution Providers.
Concerns: capture the interfaces between OperationalPerformers.
Definition: summarizes logical exchanges between OperationalPerformers of information, systems, personnel, energy etc. and the logical activities that produce and consume them. Measurements can optionally be included.
Recommended Implementation: SysML Internal Block Diagram, tabular format.

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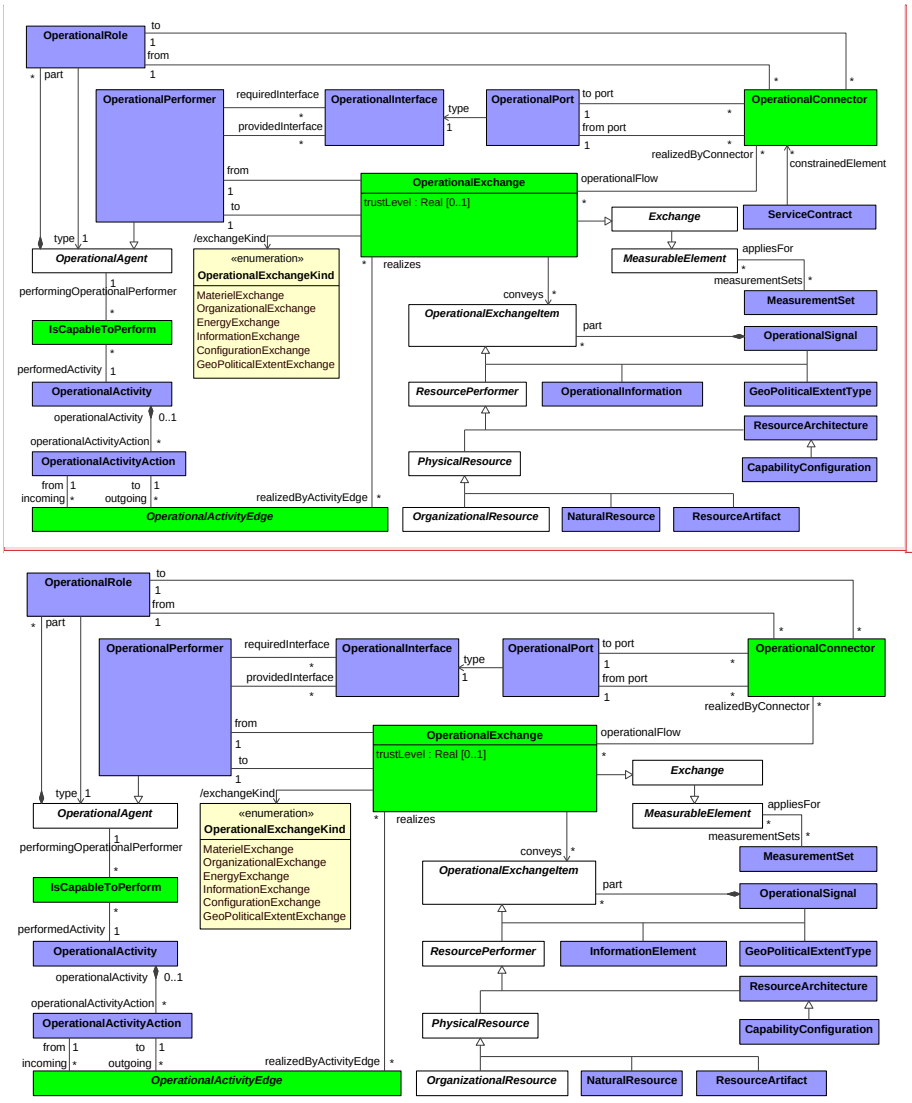

Figure 8:11 - Operational Connectivity

Elements

- CapabilityConfiguration
- Exchange
- GeoPoliticalExtentType
- IsCapableToPerform

- MeasurableElement
- MeasurementSet
- NaturalResource
- OperationalActivity
- OperationalActivityAction
- OperationalActivityEdge
- OperationalAgent
- OperationalConnector
- OperationalExchange
- OperationalExchangeItem
- OperationalInformation
- OperationalInterface
- OperationalPerformer
- OperationalPort
- OperationalRole
- OperationalSignal
- OrganizationalResource
- PhysicalResource
- ResourceArchitecture
- ResourceArtifact
- ResourcePerformer
- ServiceContract
- ~~CapabilityConfiguration~~
- ~~Exchange~~
- ~~GeoPoliticalExtentType~~
- ~~InformationElement~~
- ~~IsCapableToPerform~~
- ~~MeasurableElement~~
- ~~MeasurementSet~~
- ~~NaturalResource~~
- ~~OperationalActivity~~
- ~~OperationalActivityAction~~
- ~~OperationalActivityEdge~~
- ~~OperationalAgent~~
- ~~OperationalConnector~~
- ~~OperationalExchange~~
- ~~OperationalExchangeItem~~
- ~~OperationalInterface~~
- ~~OperationalPerformer~~
- ~~OperationalPort~~
- ~~OperationalRole~~
- ~~OperationalSignal~~
- ~~OrganizationalResource~~
- ~~PhysicalResource~~
- ~~ResourceArchitecture~~
- ~~ResourceArtifact~~
- ~~ResourcePerformer~~

View Specifications::Operational::Processes

Contains the diagrams that document the Operational Processes View Specification~~Viewpoint~~.

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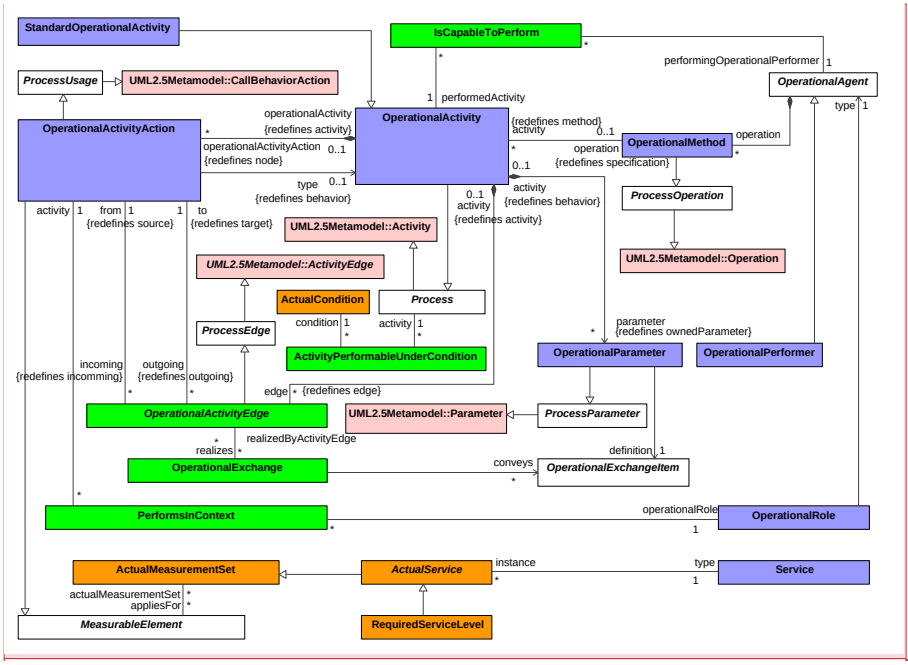
View Specifications::Operational::Processes::Operational Processes

Stakeholders: Business Architect, Systems Engineers, Enterprise Architects
Concerns: captures activity based behavior and flows.
Definition: describes the activities that are normally conducted in the course of achieving business goals that support a capability. It describes operational activities, their Inputs/Outputs, operational activity actions and flows between them.
Recommended Implementation: SysML Activity Diagram, SysML Block Definition Diagram.



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UAF12-15

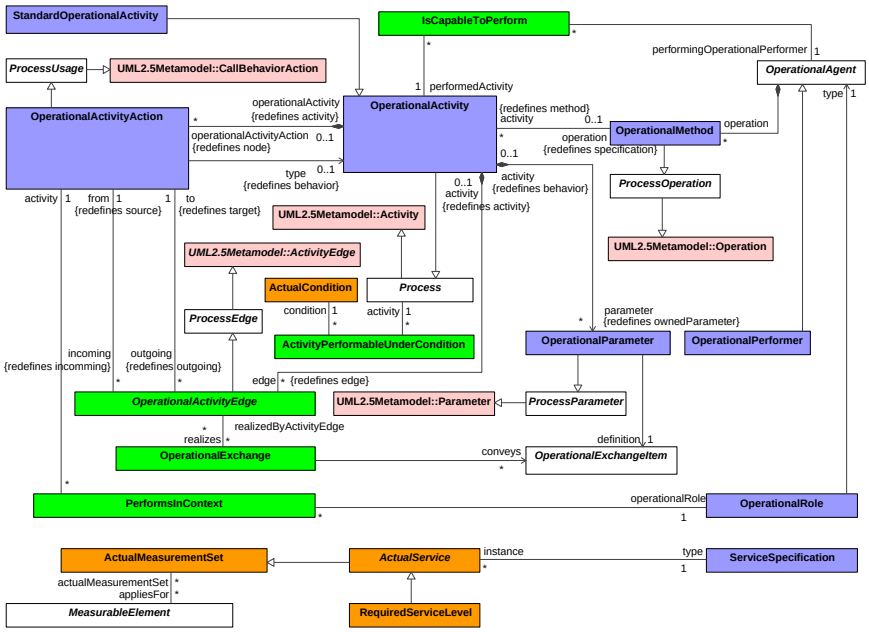


Figure 8:12 - Operational Processes

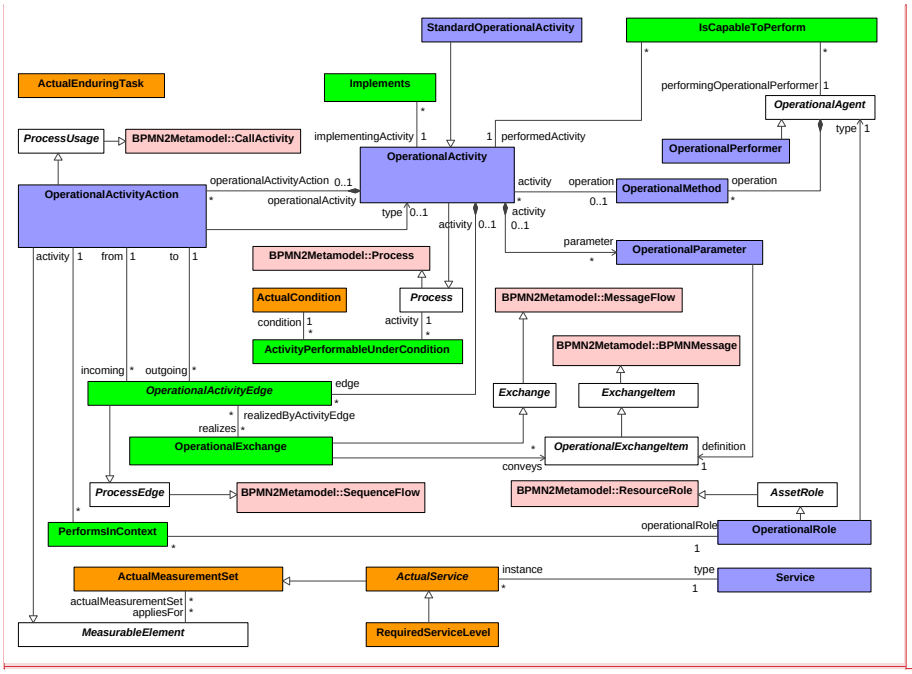
Elements

- ActivityPerformableUnderCondition
- ActualCondition
- ActualMeasurementSet
- ActualService
- IsCapableToPerform
- MeasurableElement
- OperationalActivity
- OperationalActivityAction
- OperationalActivityEdge
- OperationalAgent
- OperationalExchange
- OperationalExchangeItem
- OperationalMethod
- OperationalParameter
- OperationalPerformer
- OperationalRole
- PerformsInContext
- Process
- ProcessEdge
- ProcessOperation
- ProcessParameter
- ProcessUsage
- RequiredServiceLevel

- ServiceSpecification
- StandardOperationalActivity
- UML2.5Metamodel::Activity
- UML2.5Metamodel::ActivityEdge
- UML2.5Metamodel::CallBehaviorAction
- UML2.5Metamodel::Operation
- UML2.5Metamodel::Parameter

View Specifications::Operational::Processes::Operational Processes BPMN Semantics

Stakeholders: Business Architect, Enterprise Architects.
Concerns: captures activity based behavior and flows using BPMN notation.
Definition: describes the BPMN processes that are normally conducted in the course of achieving business goals that support a capability. It describes operational activities, their Inputs/Outputs, operational activity actions and flows between them using BPMN notation.
Recommended Implementation: BPMN Process Diagram.



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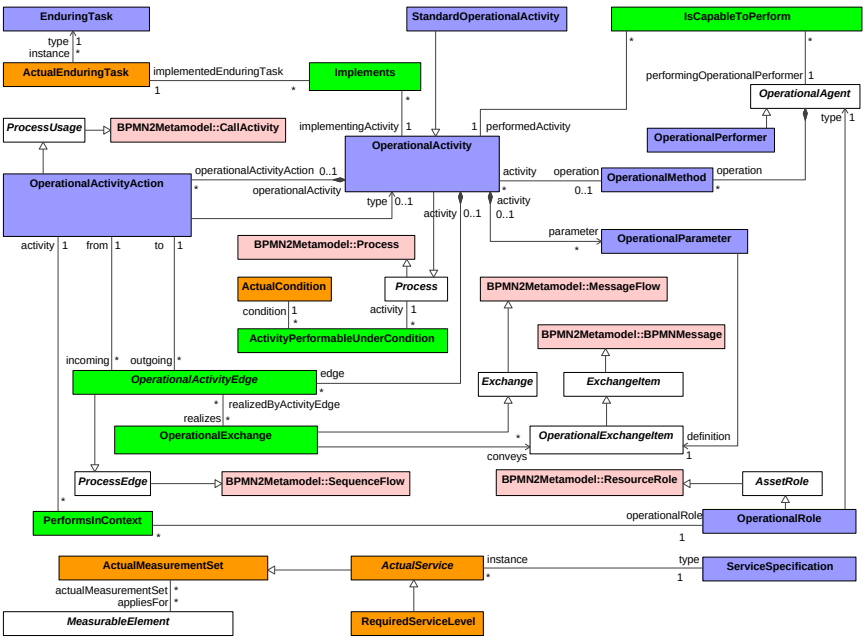

Figure 8:13 - Operational Processes BPMN Semantics

Elements

- ActivityPerformableUnderCondition
- ActualCondition
- ActualEnduringTask
- ActualMeasurementSet
- ActualService
- AssetRole
- BPMN2Metamodel::BPMNMessage
- BPMN2Metamodel::CallActivity
- BPMN2Metamodel::MessageFlow
- BPMN2Metamodel::Process
- BPMN2Metamodel::ResourceRole
- BPMN2Metamodel::SequenceFlow
- Exchange
- ExchangeItem
- Implements
- IsCapableToPerform
- MeasurableElement
- OperationalActivity
- OperationalActivityAction
- OperationalActivityEdge
- OperationalAgent
- OperationalExchange
- OperationalExchangeItem

- OperationalMethod
- OperationalParameter
- OperationalPerformer
- OperationalRole
- PerformsInContext
- Process
- ProcessEdge
- ProcessUsage
- RequiredServiceLevel
- Service
- StandardOperationalActivity
- ~~ActivityPerformableUnderCondition~~
- ~~ActualCondition~~
- ~~ActualEnduringTask~~
- ~~ActualMeasurementSet~~
- ~~ActualService~~
- ~~AssetRole~~
- ~~BPMN2Metamodel::BPMNMessage~~
- ~~BPMN2Metamodel::CallActivity~~
- ~~BPMN2Metamodel::MessageFlow~~
- ~~BPMN2Metamodel::Process~~
- ~~BPMN2Metamodel::ResourceRole~~
- ~~BPMN2Metamodel::SequenceFlow~~
- ~~EnduringTask~~
- ~~Exchange~~
- ~~ExchangeItem~~
- ~~Implements~~
- ~~IsCapableToPerform~~
- ~~MeasurableElement~~
- ~~OperationalActivity~~
- ~~OperationalActivityAction~~
- ~~OperationalActivityEdge~~
- ~~OperationalAgent~~

OperationalExchange

- OperationalExchangeItem
- OperationalMethod
- OperationalParameter
- OperationalPerformer
- OperationalRole
- PerformsInContext
- Process
- ProcessEdge
- ProcessUsage
- RequiredServiceLevel
- ServiceSpecification
- StandardOperationalActivity

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View Specifications::Operational::States

Contains the diagrams that document the Operational States View Specification~~Viewpoint~~.

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View Specifications::Operational::States::Operational States

Stakeholders: Systems Engineers, Software Engineers.
Concerns: capture state-based behavior of an operational OperationalPerformer.

Definition: it is a graphical representation of states of an operational OperationalPerformer and how that operational OperationalPerformer responds to various events and actions.
Recommended Implementation: SysML State Machine Diagram.

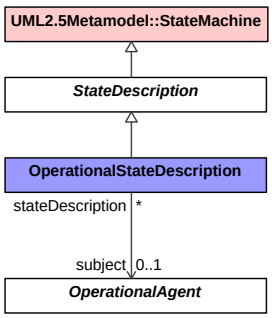

Figure 8:14 - Operational States
Elements

- OperationalAgent
- OperationalStateDescription
- StateDescription
- UML2.5Metamodel::StateMachine

View Specifications::Operational::~~Interaction~~ Sequences~~Scenarios~~

Contains the diagrams that document the Operational Sequences ~~Interaction Scenarios~~ View Specification~~Viewpoint~~.

View Specifications::Operational:: Sequences::Operational Sequences~~Interaction Scenarios::Operational Interaction Scenarios~~

Stakeholders: Systems Engineers, Business Architects.
Concerns: express a time ordered examination of the operational exchanges as a result of a particular operational scenario.
Definition: provides a time-ordered examination of the operational exchanges between participating nodes (OperationalPerformer roles) as a result of a particular operational scenario.
Recommended Implementation: SysML Sequence Diagram, BPMN Collaboration Diagram.

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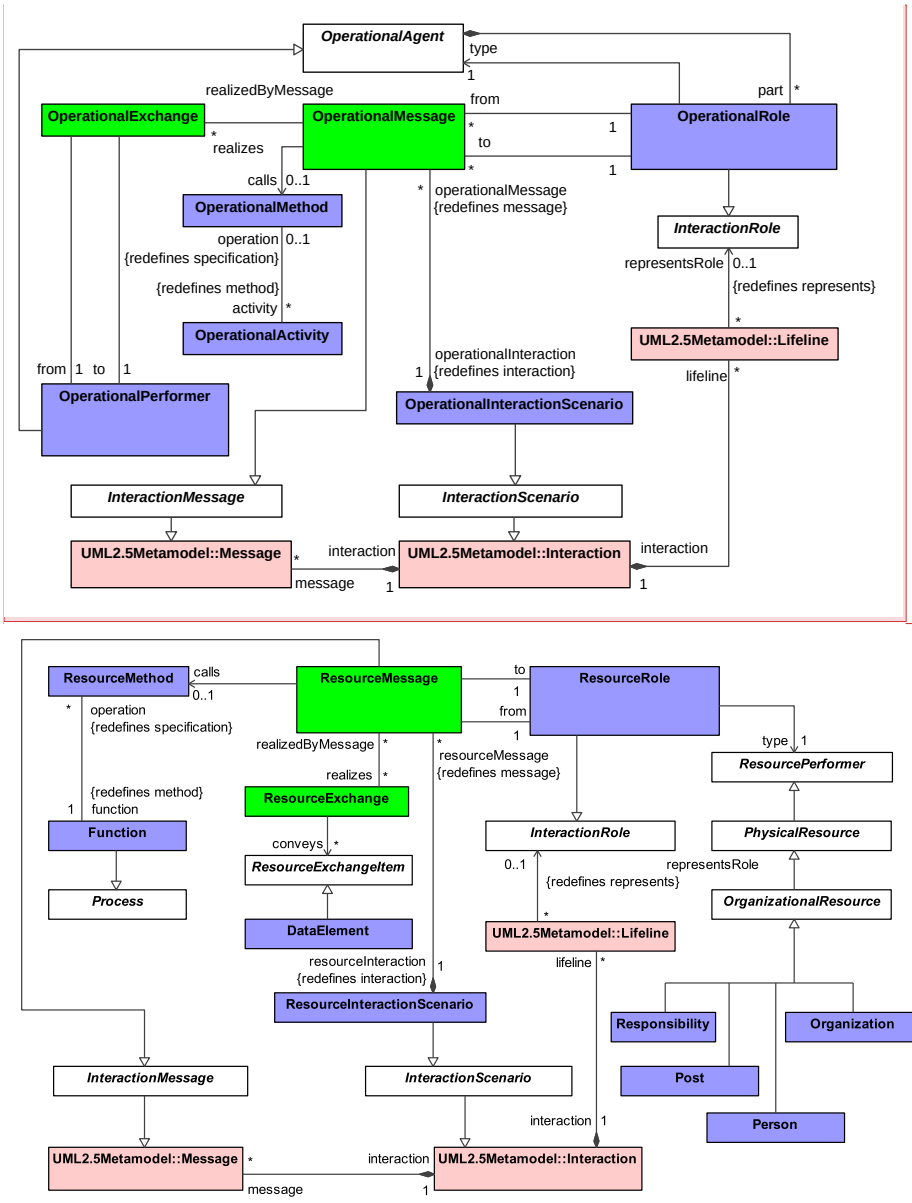

Figure 8:15 - Operational Sequences~~Interaction Scenarios~~

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Elements

- InteractionMessage
- InteractionRole
- InteractionScenario
- OperationalActivity
- OperationalAgent
- OperationalExchange
- OperationalInteractionScenario
- OperationalMessage
- OperationalMethod
- OperationalPerformer
- OperationalRole
- UML2.5Metamodel::Interaction
- UML2.5Metamodel::Lifeline
- UML2.5Metamodel::Message

View Specifications::Operational::Constraints

Contains the diagrams that document the Operational Constraints View Specification~~Viewpoint~~.

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View Specifications::Operational::Constraints::Operational Constraints

Stakeholders: Systems Engineers, Architects, Program Sponsors
Concerns: define operational limitations, constraints and performance parameters for the enterprise.
Definition: specifies traditional textual operational or business rules that are constraints on the way that business is done in the enterprise. The addition of SysML parametrics provides a computational means of defining operational constraints across the enterprise or within a specific operational context.
Recommended Implementation: tabular format, SysML Block Definition Diagram, SysML Parametric Diagram.

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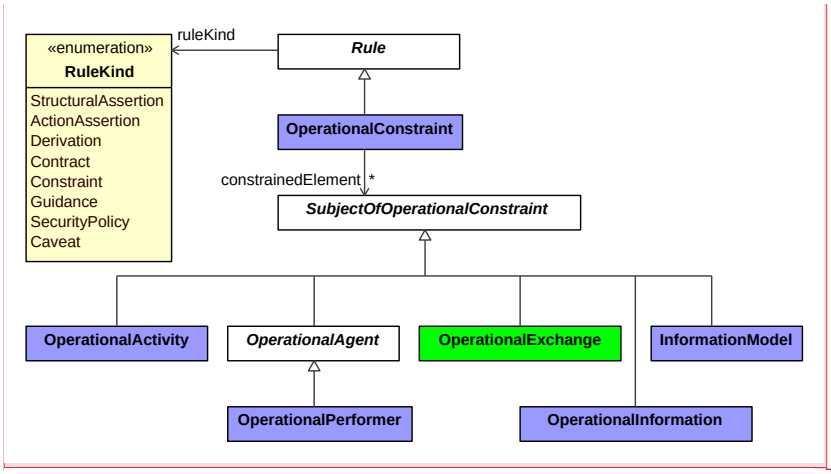

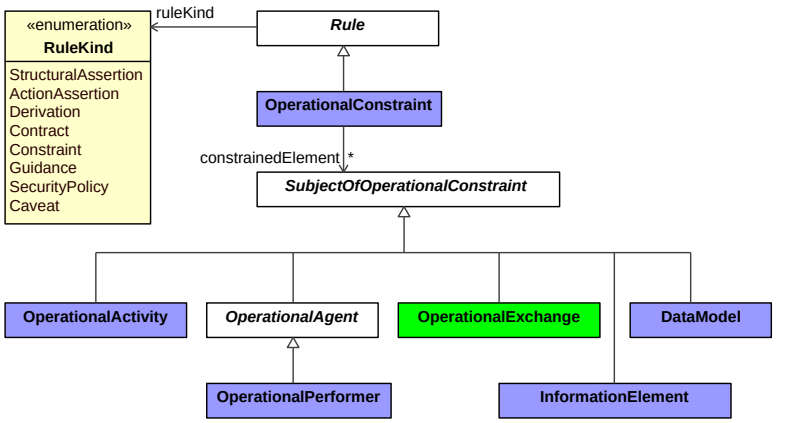

Figure 8:16 - Operational Constraints

Elements

- InformationModel
- OperationalActivity
- OperationalAgent
- OperationalConstraint
- OperationalExchange
- OperationalInformation
- OperationalPerformer
- Rule
- SubjectOfOperationalConstraint
- ~~DataModel~~
- ~~InformationElement~~

- ~~OperationalActivity~~
- ~~OperationalAgent~~
- ~~OperationalConstraint~~
- ~~OperationalExchange~~
- ~~OperationalPerformer~~
- ~~Rule~~
- ~~SubjectOfOperationalConstraint~~

View Specifications::Operational::Traceability

Contains the diagrams that document the Operational Traceability View Specification~~Viewpoint~~.

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View Specifications::Operational::Traceability::Operational Traceability

Stakeholders: PMs, Enterprise Architects, Business Architects.
Concerns: traceability between capabilities and operational activities and capabilities and operational agents.
Definition: describes the mapping between the capabilities required by an Enterprise and the supporting operational activities and operational agents.
Recommended Implementation: matrix format, SysML Block Definition Diagram.

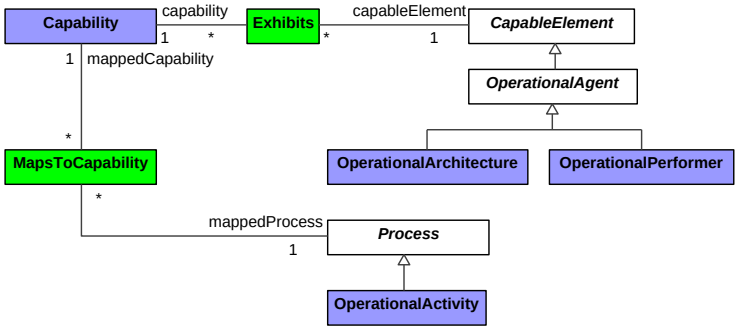

Figure 8:17 - Operational Traceability

Elements

- Capability
- CapableElement
- Exhibits
- MapsToCapability
- OperationalActivity
- OperationalAgent
- OperationalArchitecture
- OperationalPerformer
- Process

~~8.1.19~~8.1.5 View Specifications::Services

Stakeholders: Enterprise Architects, Solution Providers, Systems Engineers, Software Architects, Business Architects..
Concerns: specifications of services required to exhibit a Capability.
Definition: shows Service Specifications and required and provided service levels of these specifications required to exhibit a Capability or to support an Operational Activity.

View Specifications::Services::Taxonomy

Contains the diagrams that document the Services Taxonomy View Specification~~Viewpoint~~.

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View Specifications::Services::Taxonomy::Services Taxonomy

Stakeholders: Enterprise Architects, Solution Providers, Systems Engineers, Software Architects, Business Architects.
Concerns: service specification types and required and provided service levels of these types.
Definition: shows the taxonomy of types of services and the level of service that they are expected to provide or are required to meet through the display of ActualMeasurements associated with the Provided and Required Service Level.
Recommended Implementation: SysML Block Definition Diagram.

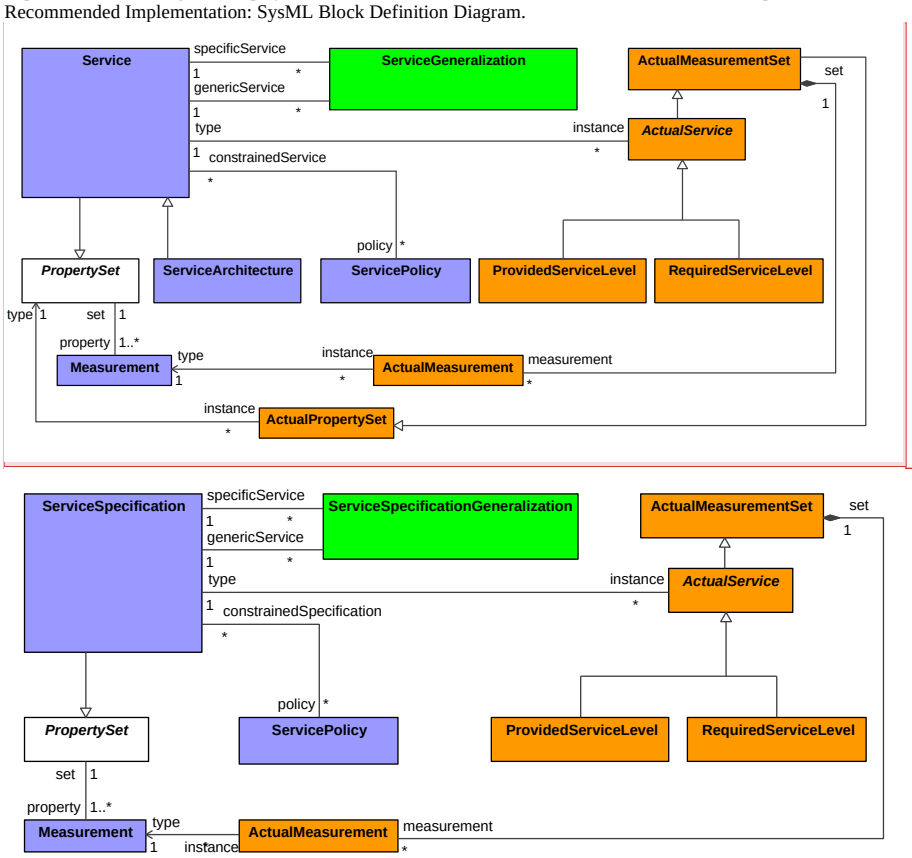

Figure 8:18 - Services Taxonomy

Elements

- ActualMeasurement
- ActualMeasurementSet
- ActualPropertySet
- ActualService
- Measurement
- PropertySet
- ProvidedServiceLevel
- RequiredServiceLevel

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- Service
- ServiceArchitecture
- ServiceGeneralization
- ServicePolicy
- ~~ActualMeasurement~~
- ~~ActualMeasurementSet~~
- ~~ActualService~~
- ~~Measurement~~
- ~~PropertySet~~
- ~~ProvidedServiceLevel~~
- ~~RequiredServiceLevel~~
- ~~ServicePolicy~~
- ~~ServiceSpecification~~
- ~~ServiceSpecificationGeneralization~~

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View Specifications::Services::Structure

Contains the diagrams that document the Services Structure View Specification~~Viewpoint~~.

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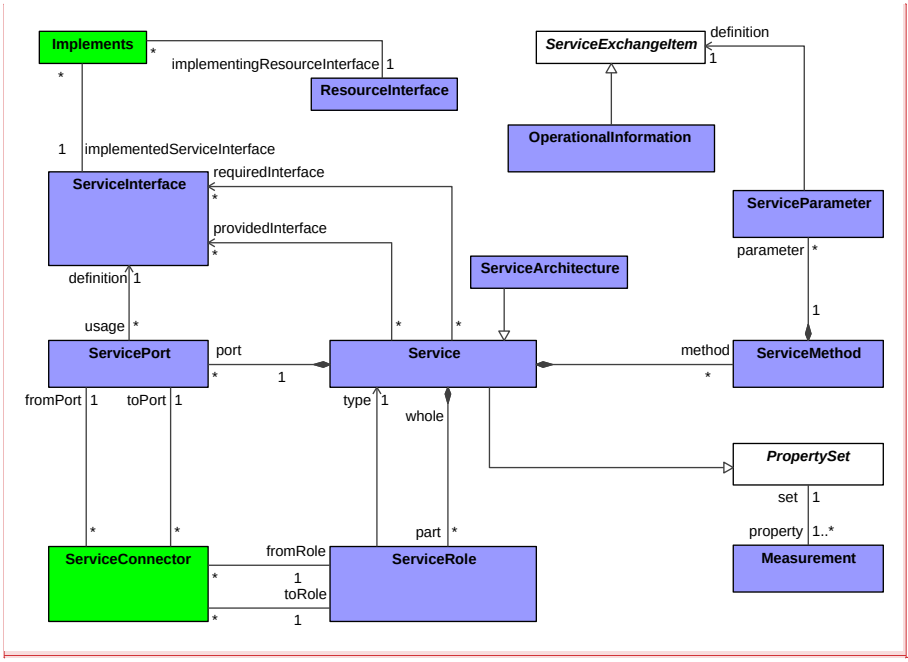
View Specifications::Services::Structure::Services Structure

Stakeholders: Solution Providers, Systems Engineers, Software Architects, Business Architects.
Concerns: combination of services required to exhibit a capability.
Definition: shows the composition of services and how services are combined into a higher level service required to exhibit a capability or support an operational activity.
Recommended Implementation: SysML Block Definition Diagram, SysML Internal Block Diagram.



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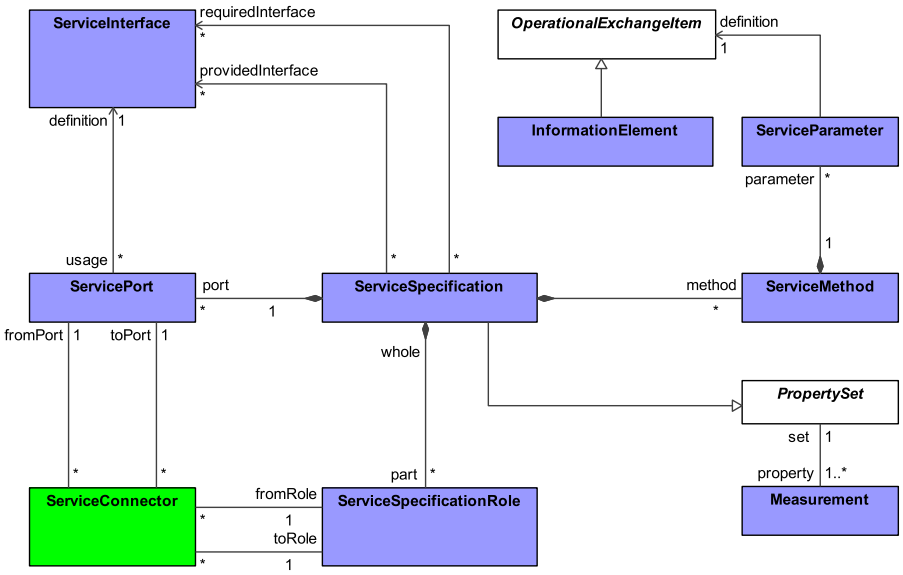

Figure 8:19 - Services Structure

Elements

- Implements
- Measurement
- OperationalInformation
- PropertySet
- ResourceInterface
- Service
- ServiceArchitecture
- ServiceConnector
- ServiceExchangeItem
- ServiceInterface
- ServiceMethod
- ServiceParameter
- ServicePort
- ServiceRole
- ~~InformationElement~~
- ~~Measurement~~
- ~~OperationalExchangeItem~~
- ~~PropertySet~~
- ~~ServiceConnector~~
- ~~ServiceInterface~~
- ~~ServiceMethod~~
- ~~ServiceParameter~~
- ~~ServicePort~~
- ~~ServiceSpecification~~
- ~~ServiceSpecificationRole~~

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View Specifications::Services::Connectivity

Contains the diagrams that document the Services Connectivity View Specification~~Viewpoint~~.

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View Specifications::Services::Connectivity::Services Connectivity

Stakeholders: Solution Providers, Systems Engineers, Software Architects, Business Architects.
Concerns: interoperability among services
Definition: specifies service interfaces, e.g. provided and required service operations, to ensure compatibility and reusability of services.
Recommended Implementation: SysML Block Definition Diagram, SysML Internal Block Diagram, tabular format.

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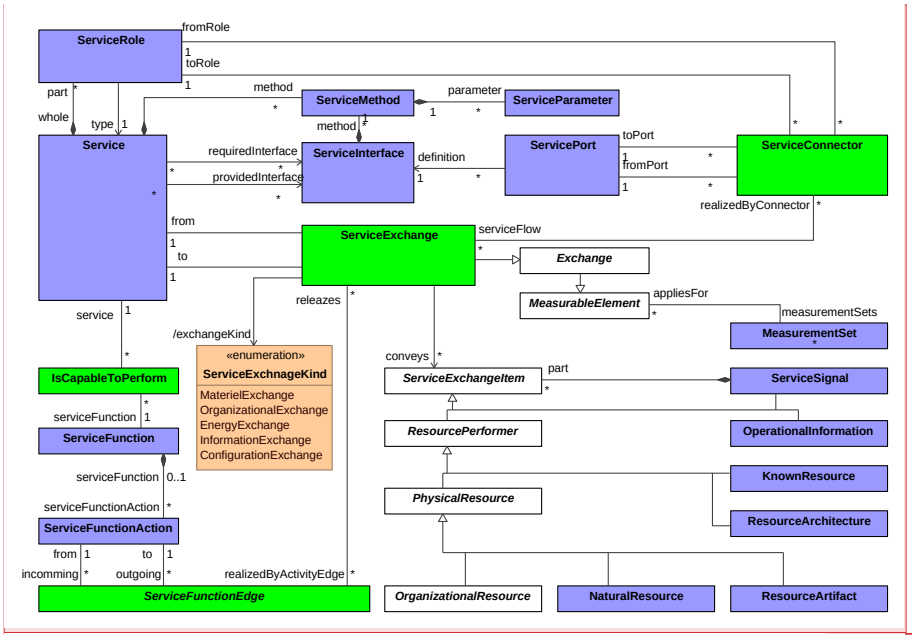

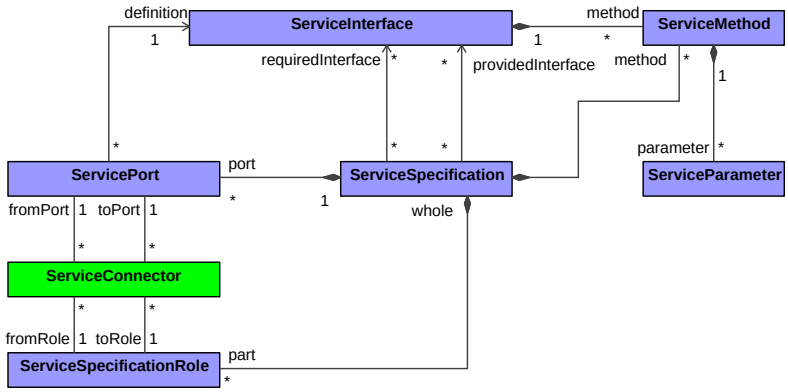

Figure 8:20 - Services Connectivity

Elements

- Exchange
- IsCapableToPerform
- KnownResource
- MeasurableElement
- MeasurementSet
- NaturalResource

- OperationalInformation
- OrganizationalResource
- PhysicalResource
- ResourceArchitecture
- ResourceArtifact
- ResourcePerformer
- Service
- ServiceConnector
- ServiceExchange
- ServiceExchangeItem
- ServiceFunction
- ServiceFunctionAction
- ServiceFunctionEdge
- ServiceInterface
- ServiceMethod
- ServiceParameter
- ServicePort
- ServiceRole
- ServiceSignal
- ~~ServiceConnector~~
- ~~ServiceInterface~~
- ~~ServiceMethod~~
- ~~ServiceParameter~~
- ~~ServicePort~~
- ~~ServiceSpecification~~
- ~~ServiceSpecificationRole~~

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View Specifications::Services::Processes

Contains the diagrams that document the Services Processes View Specification~~Viewpoint~~.

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View Specifications::Services::Processes::Services Processes

Stakeholders: Solution Providers, Systems Engineers, Software Architects, Business Architects.
Concerns: the behavior of a service in terms of the operational activities it is expected to support.
Definition: provides detailed information regarding the allocation of service functions to service~~s specifications~~, and data flows between service functions.
Recommended Implementation: SysML Activity Diagram, SysML Block Definition Diagram.

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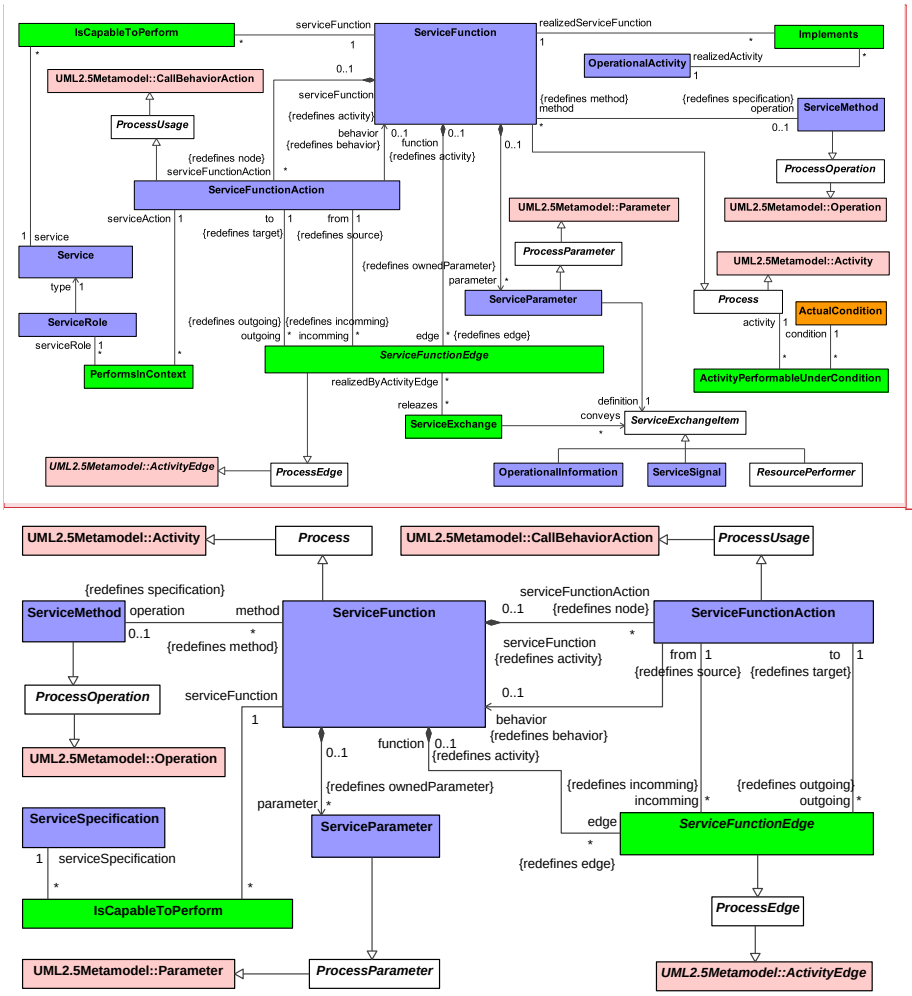

Figure 8:21 - Services Processes

Elements

- ActivityPerformableUnderCondition
- ActualCondition
- Implements
- IsCapableToPerform
- OperationalActivity
- OperationalInformation
- PerformsInContext
- Process

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UAF12-10

- ProcessEdge
- ProcessOperation
- ProcessParameter
- ProcessUsage
- ResourcePerformer
- Service
- ServiceExchange
- ServiceExchangeItem
- ServiceFunction
- ServiceFunctionAction
- ServiceFunctionEdge
- ServiceMethod
- ServiceParameter
- ServiceRole
- ServiceSignal
- UML2.5Metamodel::Activity
- UML2.5Metamodel::ActivityEdge
- UML2.5Metamodel::CallBehaviorAction
- UML2.5Metamodel::Operation
- UML2.5Metamodel::Parameter
- ~~IsCapableToPerform~~
- ~~Process~~
- ~~ProcessEdge~~
- ~~ProcessOperation~~
- ~~ProcessParameter~~
- ~~ProcessUsage~~
- ~~ServiceFunction~~
- ~~ServiceFunctionAction~~
- ~~ServiceFunctionEdge~~
- ~~ServiceMethod~~
- ~~ServiceParameter~~
- ~~ServiceSpecification~~
- ~~UML2.5Metamodel::Activity~~
- ~~UML2.5Metamodel::ActivityEdge~~
- ~~UML2.5Metamodel::CallBehaviorAction~~
- ~~UML2.5Metamodel::Operation~~
- ~~UML2.5Metamodel::Parameter~~

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UAF12-10

View Specifications::Services::Processes::Services Processes BPMN Semantics

Stakeholders: Solution Providers, Software Architects, Business Architects.
Concerns: the behavior of a service in terms of the operational activities it is expected to support.
Definition: provides detailed information regarding the allocation of service functions to service~~s specifications~~, and data flows between service functions using BPMN.
Recommended Implementation: BPMN Process Diagram, SysML Block Definition Diagram.

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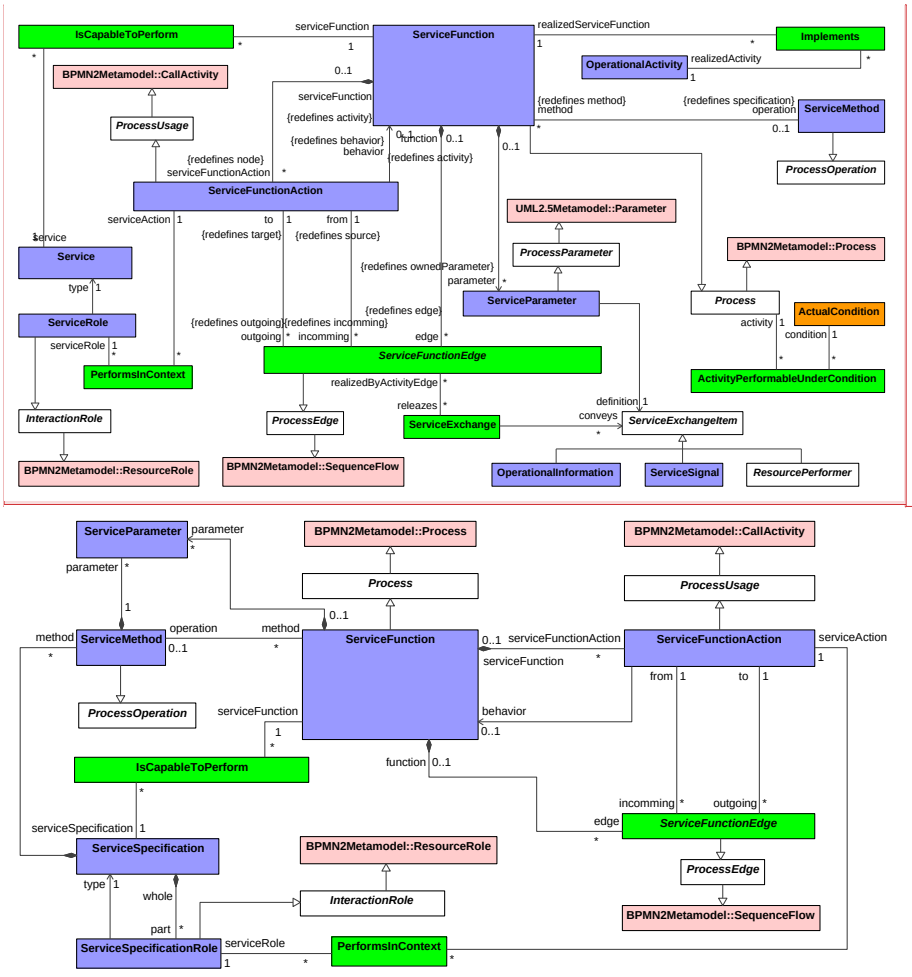

Figure 8:22 - Services Processes BPMN Semantics

Elements

- ActivityPerformableUnderCondition
- ActualCondition
- BPMN2Metamodel::CallActivity
- BPMN2Metamodel::Process
- BPMN2Metamodel::ResourceRole
- BPMN2Metamodel::SequenceFlow
- Implements
- InteractionRole
- IsCapableToPerform

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- OperationalActivity
- OperationalInformation
- PerformsInContext
- Process
- ProcessEdge
- ProcessOperation
- ProcessParameter
- ProcessUsage
- ResourcePerformer
- Service
- ServiceExchange
- ServiceExchangeItem
- ServiceFunction
- ServiceFunctionAction
- ServiceFunctionEdge
- ServiceMethod
- ServiceParameter
- ServiceRole
- ServiceSignal
- UML2.5Metamodel::Parameter
- ~~BPMN2Metamodel::CallActivity~~
- ~~BPMN2Metamodel::Process~~
- ~~BPMN2Metamodel::ResourceRole~~
- ~~BPMN2Metamodel::SequenceFlow~~
- ~~InteractionRole~~
- ~~IsCapableToPerform~~
- ~~PerformsInContext~~
- ~~Process~~
- ~~ProcessEdge~~
- ~~ProcessOperation~~
- ~~ProcessUsage~~
- ~~ServiceFunction~~
- ~~ServiceFunctionAction~~
- ~~ServiceFunctionEdge~~
- ~~ServiceMethod~~
- ~~ServiceParameter~~
- ~~ServiceSpecification~~
- ~~ServiceSpecificationRole~~

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View Specifications::Services::States

Contains the diagrams that document the Services States View Specification~~Viewpoint~~.

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View Specifications::Services::States::Services States

Stakeholders: Solution Providers, Systems Engineers, Software Architects, Business Architects.
Concerns: the behavior of a service specification in terms of states and events causing transitions between states.
Definition: specifies the possible states a service specification may have, and the possible transitions between those states.
Recommended Implementation: SysML State Machine Diagram.

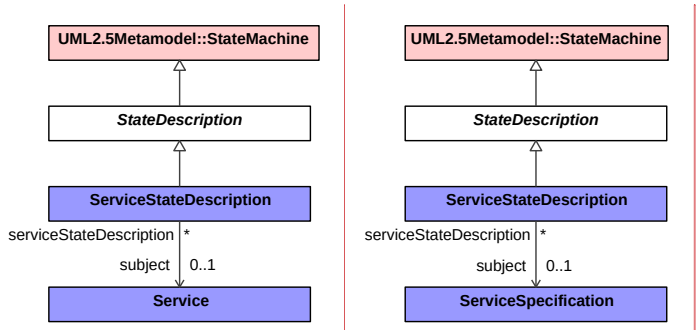

Figure 8:23 - Services States

Elements

- Service
- ServiceStateDescription
- StateDescription
- UML2.5Metamodel::StateMachine
- ~~ServiceSpecification~~
- ~~ServiceStateDescription~~
- ~~StateDescription~~
- ~~UML2.5Metamodel::StateMachine~~

View Specifications::Services:: Sequences~~Interaction Scenarios~~

Contains the diagrams that document the Services Sequences ~~Interaction Scenarios~~ View Specification.~~Viewpoint.~~

View Specifications::Services::~~Interaction Scenarios~~Segunces::Services

Sequences~~Interaction Scenarios~~

Stakeholders: Solution Providers, Systems Engineers, Software Architects, Business Architects.
Concerns: the behavior of a service specification in terms of expected time-ordered examination of the interactions between service roles.
Definition: specifies how a service roles interact with each other, service providers and consumers, and the sequence and dependencies of those interactions.
Recommended Implementation: SysML Sequence Diagram.

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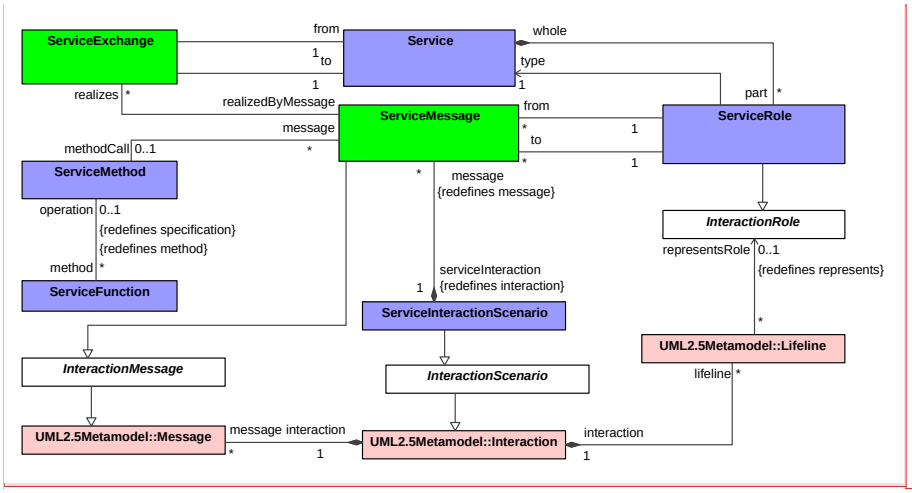

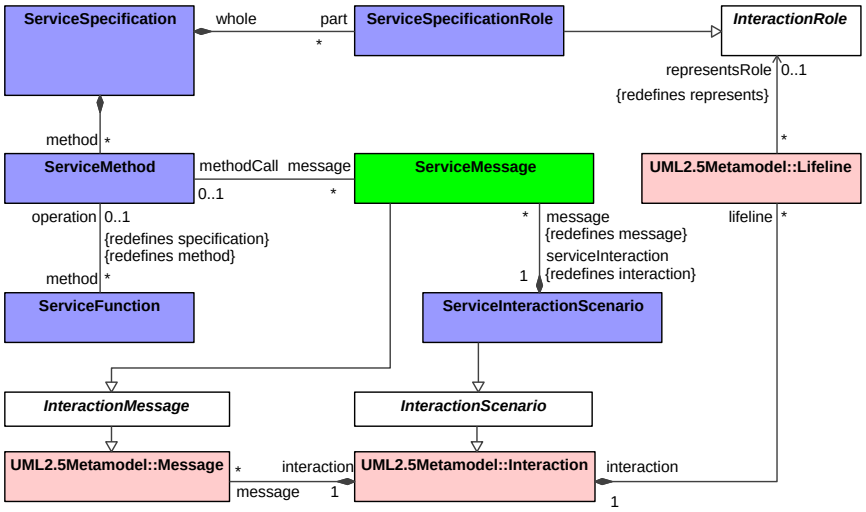

Figure 8:24 - Services SequencesInteraction Scenarios

Elements

- InteractionMessage
- InteractionRole
- InteractionScenario
- Service
- ServiceExchange
- ServiceFunction
- ServiceInteractionScenario

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- ServiceMessage
- ServiceMethod
- ServiceRole
- UML2.5Metamodel::Interaction
- UML2.5Metamodel::Lifeline
- UML2.5Metamodel::Message
- ~~InteractionMessage~~
- ~~InteractionRole~~
- ~~InteractionScenario~~
- ~~ServiceFunction~~
- ~~ServiceInteractionScenario~~
- ~~ServiceMessage~~
- ~~ServiceMethod~~
- ~~ServiceSpecification~~
- ~~ServiceSpecificationRole~~
- ~~UML2.5Metamodel::Interaction~~
- ~~UML2.5Metamodel::Lifeline~~
- ~~UML2.5Metamodel::Message~~

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View Specifications::Services::Constraints

Contains the diagrams that document the Services Constraints View Specification~~Viewpoint~~.

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View Specifications::Services::Constraints::Services Constraints

Stakeholders: Solution Providers, Systems Engineers, Software Architects, Business Architects.
Concerns: service policies that apply to implementations of service~~s specifications~~.
Definition: specifies traditional textual service policies that are constraints on the way that service specifications are implemented within resources. The addition of SysML parametrics provide a computational means of defining service policies across the enterprise or within a specific service configuration.
Recommended Implementation: tabular format, SysML Parametric Diagram.

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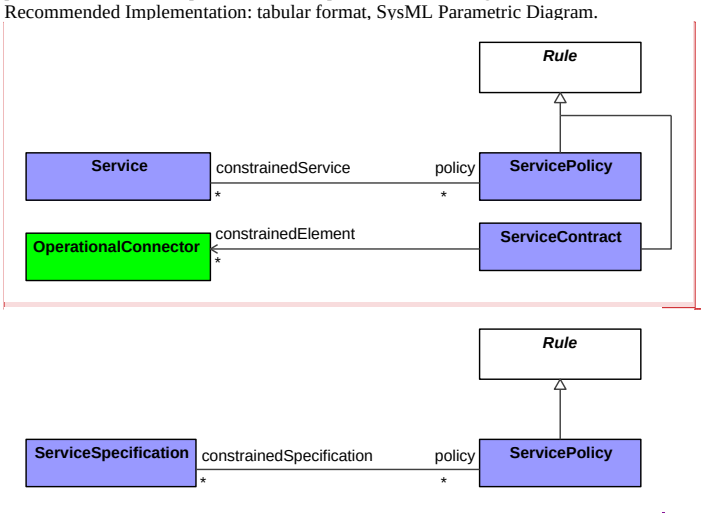

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Figure 8:25 - Services Constraints

Elements

- OperationalConnector

- Rule
- Service
- ServiceContract
- ServicePolicy
- ~~Rule~~
- ~~ServicePolicy~~
- ~~ServiceSpecification~~

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View Specifications::Services::Roadmap

Contains the diagrams that document the Services Roadmap View Specification~~Viewpoint~~.

Commented [KG131]: UAF12-41

View Specifications::Services::Roadmap::Services Roadmap

Stakeholders: Solution Providers, Systems Engineers, Software Architects, Business Architects.
Concerns: service ~~specification~~ changes over time.
Definition: provides an overview of how a service ~~specification~~ changes over time. It shows the combination of several service~~s specifications~~ mapped against a timeline.
Recommended Implementation: timeline, SysML Block Definition Diagram, SysML Internal Block Diagram.

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Commented [KG133]: UAF12-33

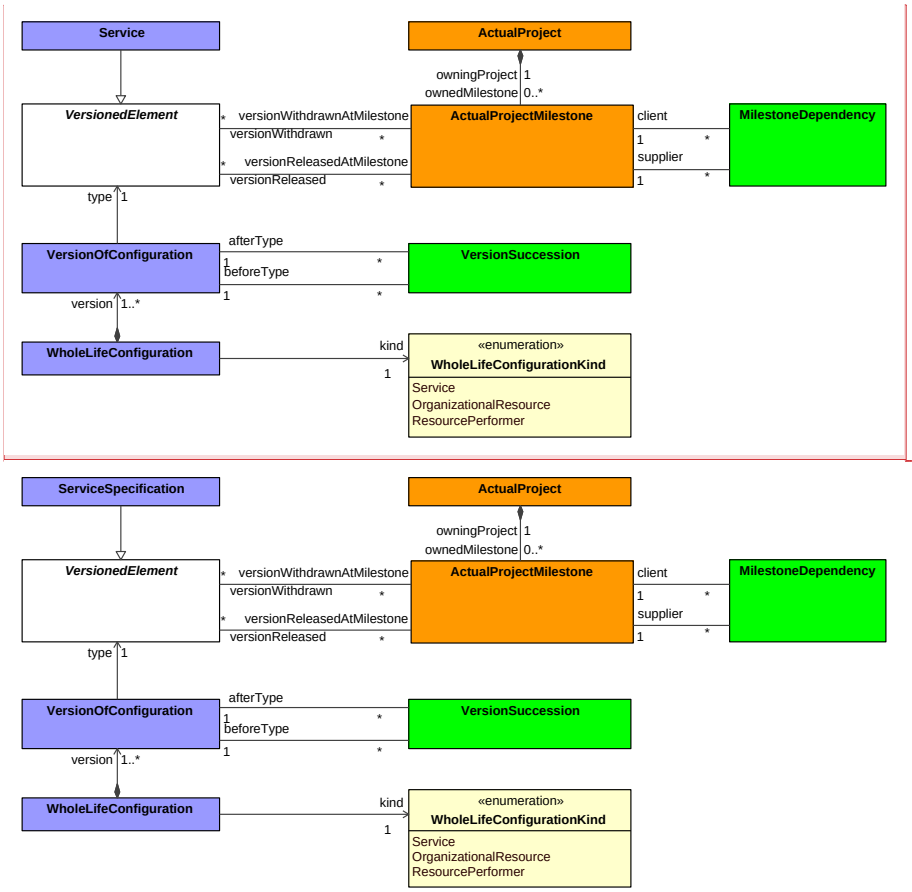


Figure 8:26 - Services Roadmap

Elements

- ActualProject
- ActualProjectMilestone
- MilestoneDependency
- Service
- VersionedElement
- VersionOfConfiguration
- VersionSuccession
- WholeLifeConfiguration
- ~~ActualProject~~
- ~~ActualProjectMilestone~~
- ~~MilestoneDependency~~
- ~~ServiceSpecification~~

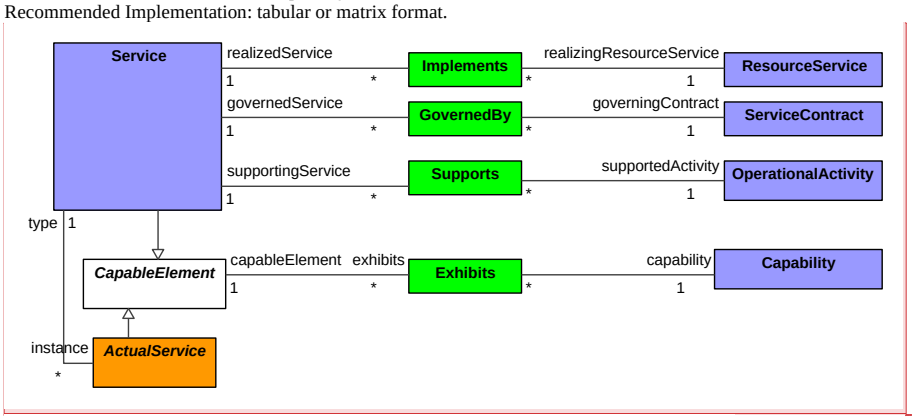
- ~~VersionedElement~~
- ~~VersionOfConfiguration~~
- ~~VersionSuccession~~
- ~~WholeLifeConfiguration~~

View Specifications::Services::Traceability

Contains the diagrams that document the Services Traceability View Specification~~Viewpoint~~.

View Specifications::Services::Traceability::Services Traceability

Stakeholders: Solution Providers, Systems Engineers, Software Architects, Business Architects.
Concerns: traceability between operational activities and services ~~specifications~~ that support them.
Definition: depicts the mapping of services ~~specifications~~ to operational activities and how services ~~specifications~~ contribute to the achievement of a capability.
Recommended Implementation: tabular or matrix format.



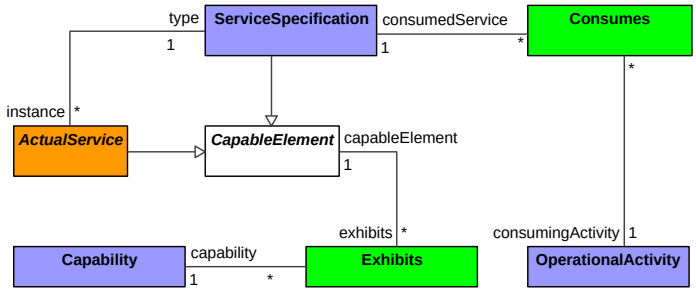


Figure 8:27 - Services Traceability

Elements

- ActualService
- Capability
- CapableElement
- Exhibits
- GovernedBy
- Implements

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Commented [KG135]: UAF12-33

Commented [KG136]: UAF12-33

Commented [KG137]: UAF12-33

- ~~OperationalActivity~~
- ~~ResourceService~~
- ~~Service~~
- ~~ServiceContract~~
- ~~Supports~~
- ~~ActualService~~
- ~~Capability~~
- ~~CapableElement~~
- ~~Consumes~~
- ~~Exhibits~~
- ~~OperationalActivity~~
- ~~ServiceSpecification~~

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~~8.1.27~~8.1.6 View Specifications::Personnel

Stakeholders: Human resources, Solution Providers, PMs.
Concerns: human factors.
Definition: aims to clarify the role of Human Factors (HF) when creating architectures in order to facilitate both Human Factors Integration (HFI) and systems engineering (SE).

View Specifications::Personnel::Taxonomy

Contains the diagrams that document the Personnel Taxonomy ~~View~~ Specification~~Viewpoint~~.

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View Specifications::Personnel::Taxonomy::Personnel Taxonomy

Stakeholders: Human resources, Solution Providers, PMs.
Concerns: organizational resource types.
Definition: shows the taxonomy of types of organizational resources.
Recommended Implementation: SysML Block Definition Diagram.

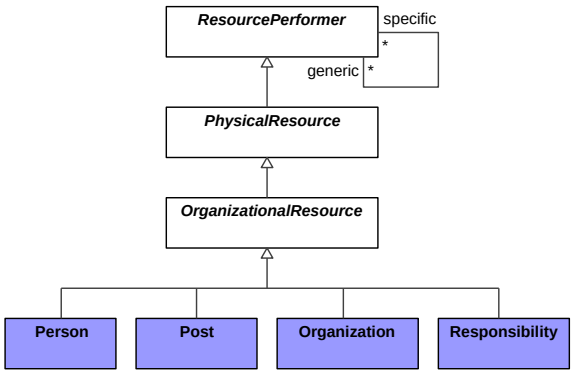

Figure 8:28 - Personnel Taxonomy
Elements

- Organization
- OrganizationalResource
- Person
- PhysicalResource
- Post
- ResourcePerformer

- Responsibility

View Specifications::Personnel::Structure

Contains the diagrams that document the Personnel Structure View Specification~~Viewpoint~~.

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View Specifications::Personnel::Structure::Personnel Structure

Stakeholders: Human resources, Solution Providers, PMs.
Concerns: typical organizational structure used to support a capability(ies).
Definition: shows organizational structures and possible interactions between organizational resources.
Recommended Implementation: SysML Block Definition Diagram, SysML Internal Block Diagram.

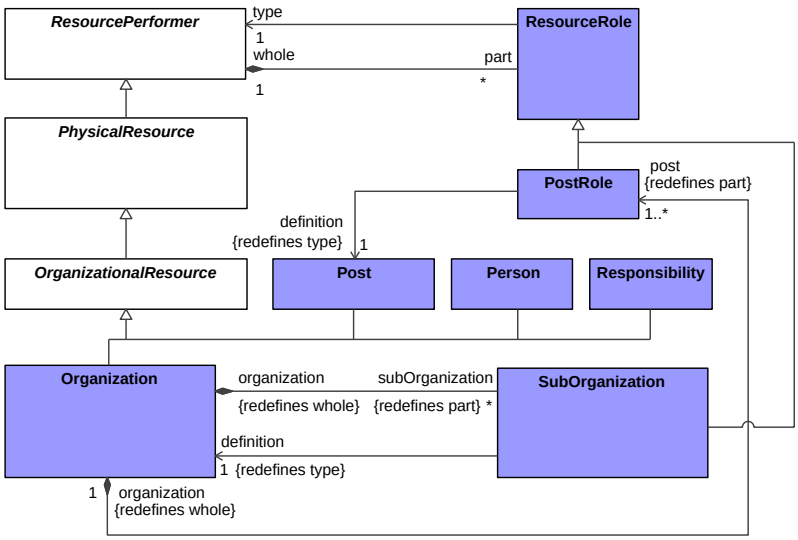

Figure 8:29 - Personnel Structure
Elements

- Organization
- OrganizationalResource
- Person
- PhysicalResource
- Post
- PostRole
- ResourcePerformer
- ResourceRole
- Responsibility
- SubOrganization

View Specifications::Personnel::Connectivity

Contains the diagrams that document the Personnel Connectivity View Specification~~Viewpoint~~.

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View Specifications::Personnel::Connectivity::Personnel Connectivity

Stakeholders: Solution providers.
Concerns: interaction of organizational resources.
Definition: captures the possible interactions between organizational resources, including command and control relationships. Interactions typically illustrate the fundamental roles and management responsibilities.
Recommended Implementation: tabular format.

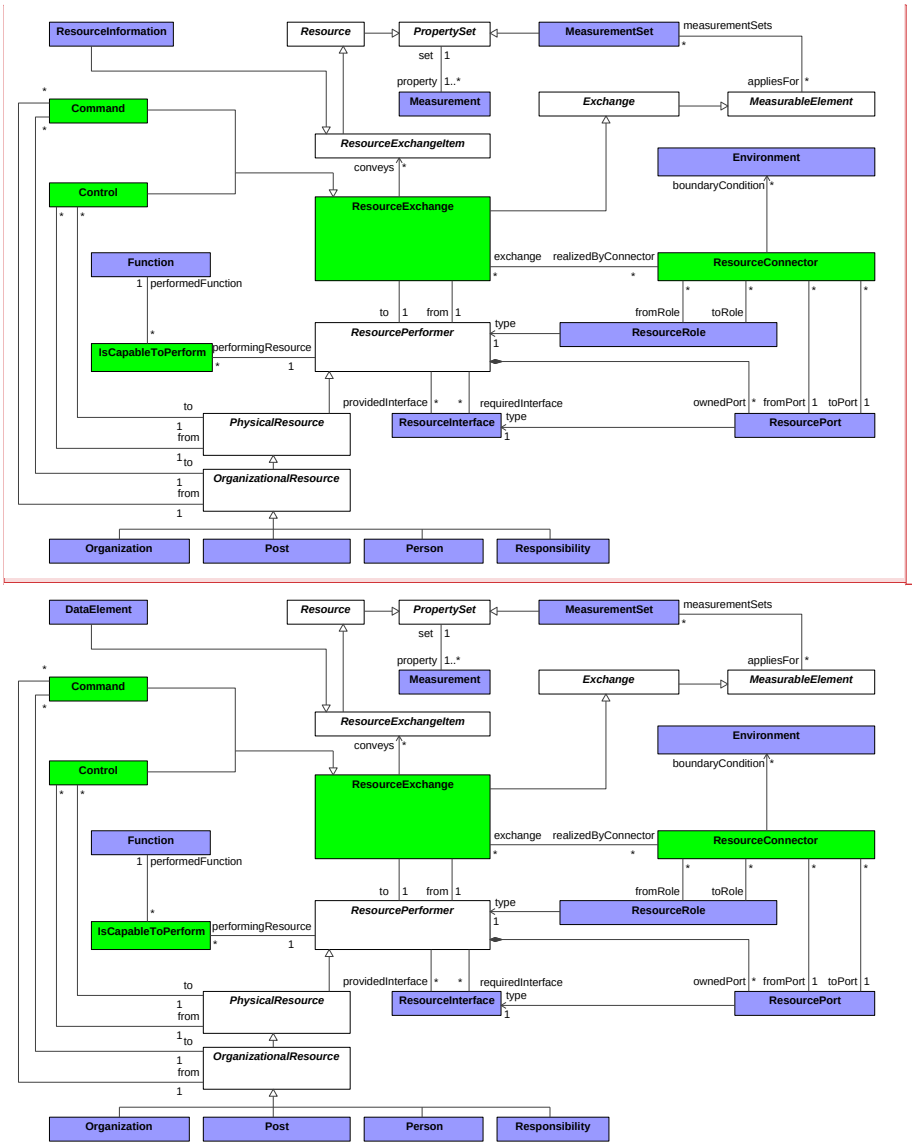

Figure 8:30 - Personnel Connectivity

Elements

- Command
- Control

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- Environment
- Exchange
- Function
- IsCapableToPerform
- MeasurableElement
- Measurement
- MeasurementSet
- Organization
- OrganizationalResource
- Person
- PhysicalResource
- Post
- PropertySet
- Resource
- ResourceConnector
- ResourceExchange
- ResourceExchangeItem
- ResourceInformation
- ResourceInterface
- ResourcePerformer
- ResourcePort
- ResourceRole
- Responsibility
- ~~Command~~
- ~~Control~~
- ~~DataElement~~
- ~~Environment~~
- ~~Exchange~~
- ~~Function~~
- ~~IsCapableToPerform~~
- ~~MeasurableElement~~
- ~~Measurement~~
- ~~MeasurementSet~~
- ~~Organization~~
- ~~OrganizationalResource~~
- ~~Person~~
- ~~PhysicalResource~~
- ~~Post~~
- ~~PropertySet~~
- ~~Resource~~
- ~~ResourceConnector~~
- ~~ResourceExchange~~
- ~~ResourceExchangeItem~~
- ~~ResourceInterface~~
- ~~ResourcePerformer~~
- ~~ResourcePort~~
- ~~ResourceRole~~
- ~~Responsibility~~

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View Specifications::Personnel::Processes

Contains the diagrams that document the Personnel Processes View Specification~~Viewpoint~~.

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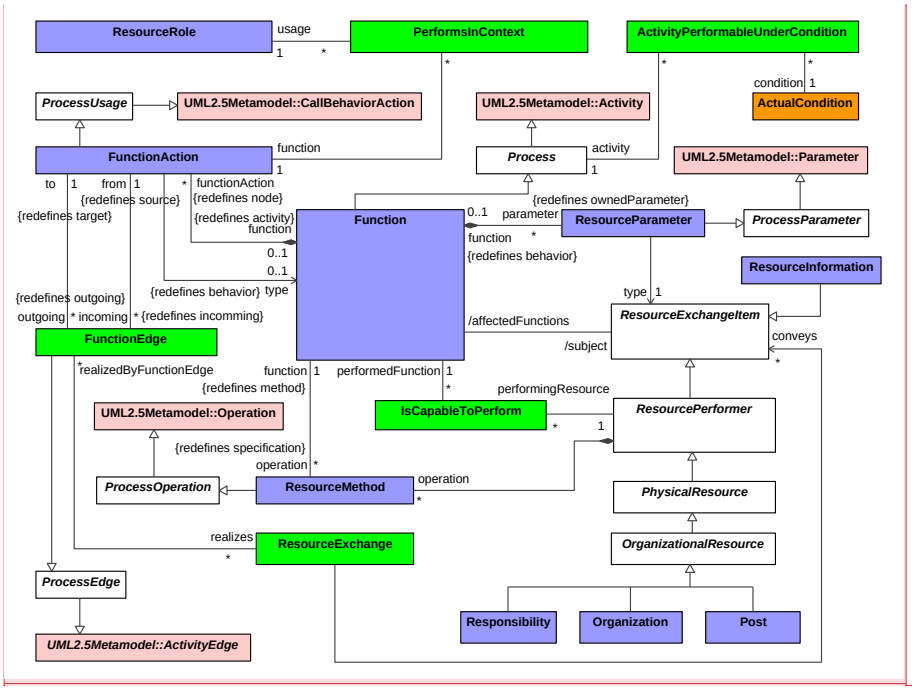
View Specifications::Personnel::Processes::Personnel Processes

Stakeholders: Systems engineers, Solution providers.
Concerns: functions that have to be carried out by organizational resources.
Definition: specifies organizational resource functions in relation to resource definitions.
Recommended Implementation: SysML Activity Diagram, SysML Block Definition Diagram, BPMN Process Diagram as described in the Resources Processes section.



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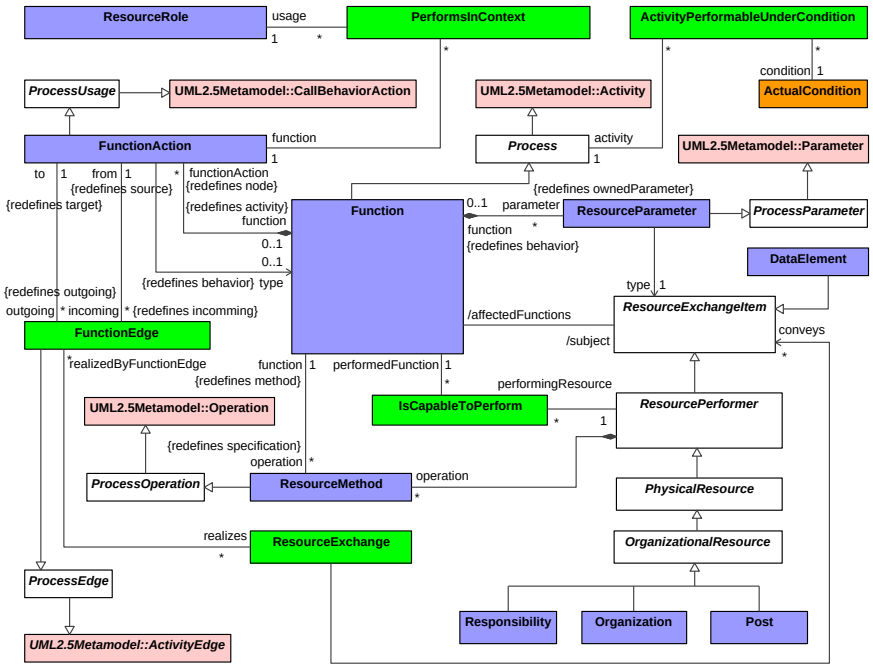

Figure 8:31 - Personnel Processes

Elements

- ActivityPerformableUnderCondition
- ActualCondition
- Function
- FunctionAction
- FunctionEdge
- IsCapableToPerform
- Organization
- OrganizationalResource
- PerformsInContext
- PhysicalResource
- Post
- Process
- ProcessEdge
- ProcessOperation
- ProcessParameter
- ProcessUsage
- ResourceExchange
- ResourceExchangeItem
- ResourceInformation
- ResourceMethod
- ResourceParameter

- ResourcePerformer
- ResourceRole
- Responsibility
- UML2.5Metamodel::Activity
- UML2.5Metamodel::ActivityEdge
- UML2.5Metamodel::CallBehaviorAction
- UML2.5Metamodel::Operation
- UML2.5Metamodel::Parameter
- ~~ActivityPerformableUnderCondition~~
- ~~ActualCondition~~
- ~~DataElement~~
- ~~Function~~
- ~~FunctionAction~~
- ~~FunctionEdge~~
- ~~IsCapableToPerform~~
- ~~Organization~~
- ~~OrganizationalResource~~
- ~~PerformsInContext~~
- ~~PhysicalResource~~
- ~~Post~~
- ~~Process~~
- ~~ProcessEdge~~
- ~~ProcessOperation~~
- ~~ProcessParameter~~
- ~~ProcessUsage~~
- ~~ResourceExchange~~
- ~~ResourceExchangeItem~~
- ~~ResourceMethod~~
- ~~ResourceParameter~~
- ~~ResourcePerformer~~
- ~~ResourceRole~~
- ~~Responsibility~~
- ~~UML2.5Metamodel::Activity~~
- ~~UML2.5Metamodel::ActivityEdge~~
- ~~UML2.5Metamodel::CallBehaviorAction~~
- ~~UML2.5Metamodel::Operation~~
- ~~UML2.5Metamodel::Parameter~~

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View Specifications::Personnel::States

Contains the diagrams that document the Personnel States View Specification~~Viewpoint~~.

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View Specifications::Personnel::States::Personnel States

Stakeholders: Systems Engineers, Software Engineers.
Concerns: capture state-based behavior of an organizational resource.
Definition: it is a graphical representation of states of an organizational resource and how that organizational resource responds to various events and actions.
Recommended Implementation: SysML State Machine Diagram.

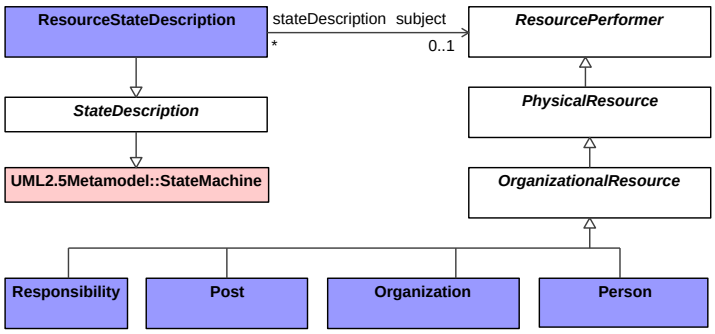

Figure 8:32 - Personnel States

Elements

- Organization
- OrganizationalResource
- Person
- PhysicalResource
- Post
- ResourcePerformer
- ResourceStateDescription
- Responsibility
- StateDescription
- UML2.5Metamodel::StateMachine

View Specifications::Personnel:: SequencesInteraction Scenarios

Contains the diagrams that document the Personnel Sequences Interaction Scenarios View SpecificationViewpoint.

View Specifications::Personnel:: Sequences::Personnel SequencesInteraction Scenarios::Personnel Interaction Scenarios

Stakeholders: Software Engineers, Systems Engineers.
Concerns: interactions between organizational resources (roles).
Definition: provides a time-ordered examination of the interactions between organizational resources.
Recommended Implementation: SysML Sequence Diagram, BPMN Collaboration Diagram.

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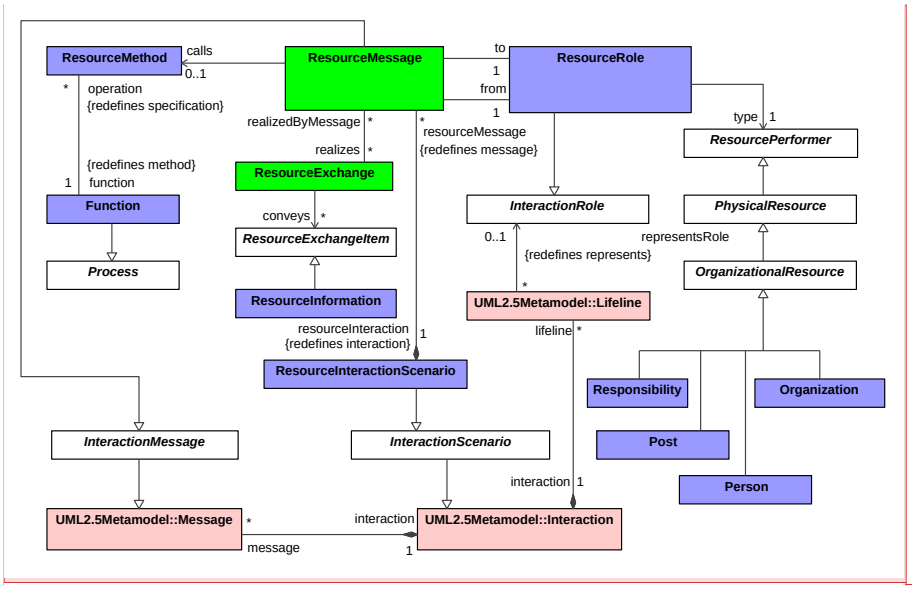
Commented [KG150]: UAF12-41

Commented [KG151]: UAF12-59



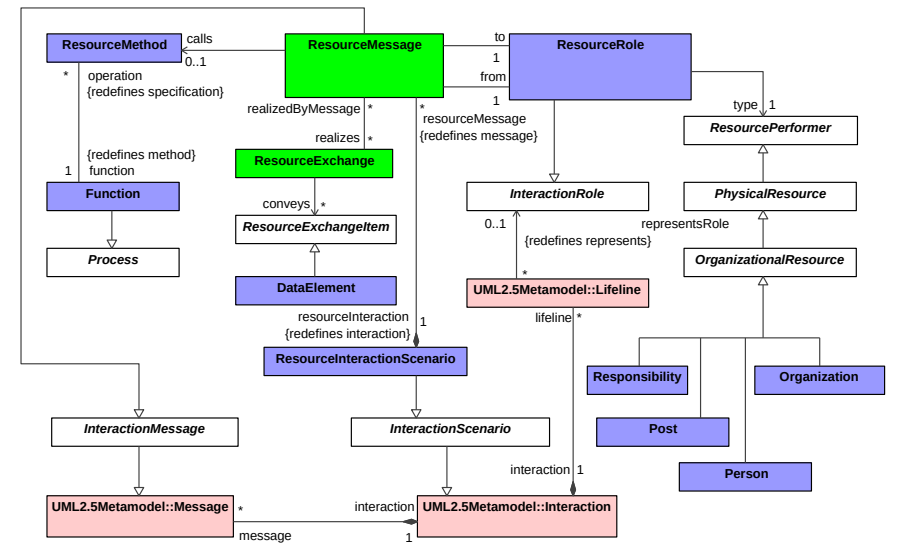


Figure 8:33 - Personnel Sequences ~~Interaction Scenarios~~

Elements

- Function
- InteractionMessage

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Commented [KG153]: UAF12-59

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- InteractionRole
- InteractionScenario
- Organization
- OrganizationalResource
- Person
- PhysicalResource
- Post
- Process
- ResourceExchange
- ResourceExchangeItem
- ResourceInformation
- ResourceInteractionScenario
- ResourceMessage
- ResourceMethod
- ResourcePerformer
- ResourceRole
- Responsibility
- UML2.5Metamodel::Interaction
- UML2.5Metamodel::Lifeline
- UML2.5Metamodel::Message
- ~~DataElement~~
- ~~Function~~
- ~~InteractionMessage~~
- ~~InteractionRole~~
- ~~InteractionScenario~~
- ~~Organization~~
- ~~OrganizationalResource~~
- ~~Person~~
- ~~PhysicalResource~~
- ~~Post~~
- ~~Process~~
- ~~ResourceExchange~~
- ~~ResourceExchangeItem~~
- ~~ResourceInteractionScenario~~
- ~~ResourceMessage~~
- ~~ResourceMethod~~
- ~~ResourcePerformer~~
- ~~ResourceRole~~
- ~~Responsibility~~
- ~~UML2.5Metamodel::Interaction~~
- ~~UML2.5Metamodel::Lifeline~~
- ~~UML2.5Metamodel::Message~~

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View Specifications::Personnel::Constraints

Contains the diagrams that document the Personnel Constraints View Specification~~Viewpoint~~.

Commented [KG155]: UAF12-41

View Specifications::Personnel::Constraints::Personnel Constraints: Competence

Stakeholders: Systems engineers, Solution providers.
Concerns: allocation of competencies to actual posts.
Definition: specifies requirements for actual organizational resources – by linking competencies and actual posts.
Recommended Implementation: SysML Block Definition Diagram.

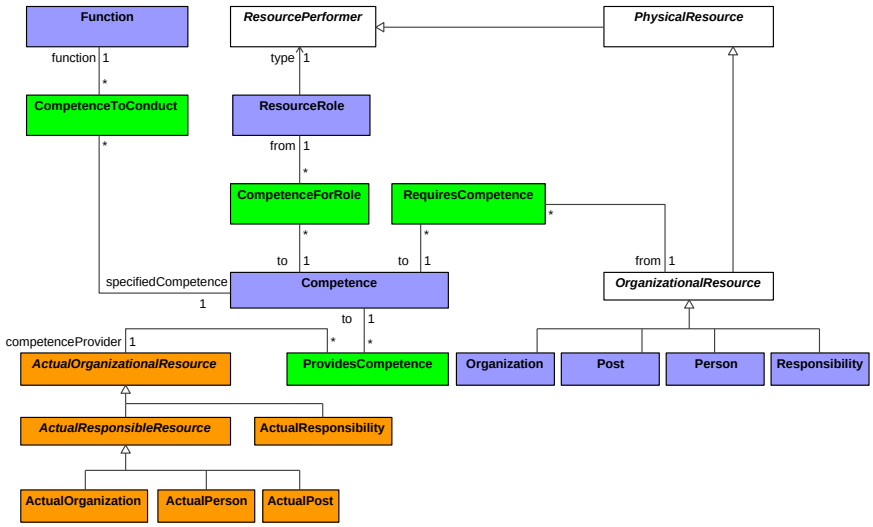

Figure 8:34 - Personnel Constraints: Competence

Elements

- ActualOrganization
- ActualOrganizationalResource
- ActualPerson
- ActualPost
- ActualResponsibility
- ActualResponsibleResource
- Competence
- CompetenceForRole
- CompetenceToConduct
- Function
- Organization
- OrganizationalResource
- Person
- PhysicalResource
- Post
- ProvidesCompetence
- RequiresCompetence
- ResourcePerformer
- ResourceRole
- Responsibility

View Specifications::Personnel::Constraints::Personnel Constraints: Drivers

Stakeholders: Systems engineers, Solution providers, Human resources.
Concerns: optimization of organizational resource behavior.
Definition: captures the factors that affect, constrain and characterize organizational resource behavior as the basis for performance predictions at the level of actual persons and actual organizations. It creates a bridge between static

architectural definitions and behavior predictions through executable models.
Recommended Implementation: tabular format, SysML Parametric Diagram, SysML Block Definition Diagram.

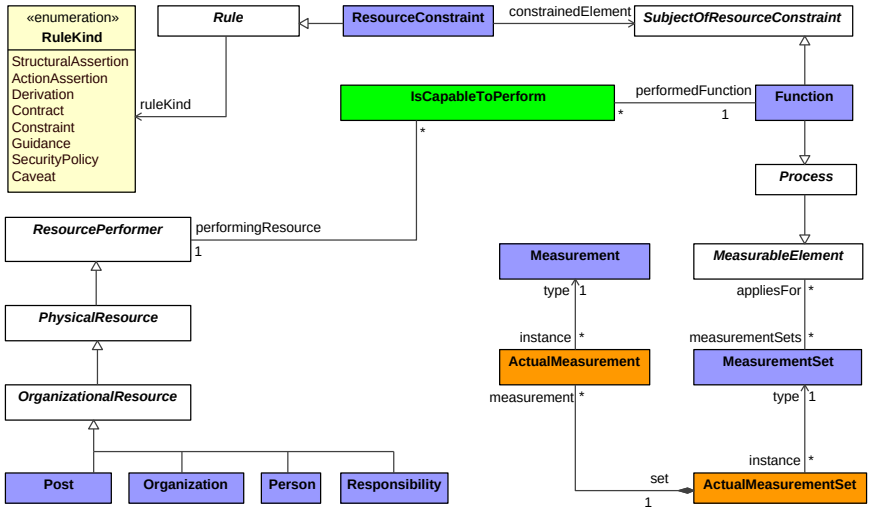

Figure 8:35 - Personnel Constraints: Drivers
Elements

- ActualMeasurement
- ActualMeasurementSet
- Function
- IsCapableToPerform
- MeasurableElement
- Measurement
- MeasurementSet
- Organization
- OrganizationalResource
- Person
- PhysicalResource
- Post
- Process
- ResourceConstraint
- ResourcePerformer
- Responsibility
- Rule
- SubjectOfResourceConstraint

View Specifications::Personnel::Constraints::Personnel Constraints: Performance

Stakeholders: Human resources, solution providers.
Concerns: how well an actual organizational resource matches the needs of the actual organization.
Definition: provides a repository for human-related measures (i.e. quality objectives and performance criteria (HFI values)), targets and competences.
Recommended Implementation: SysML Block Definition Diagram.

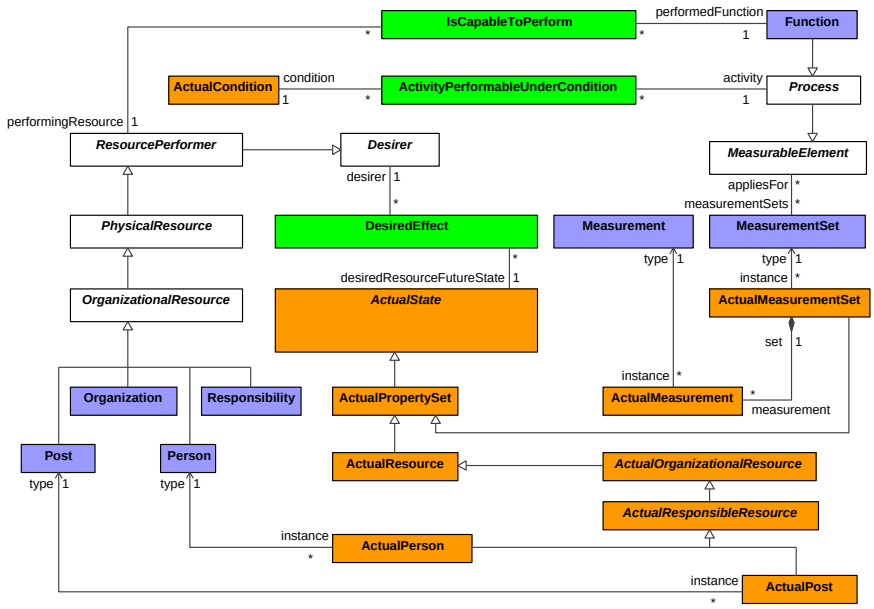

Figure 8:36 - Personnel Constraints: Performance

Elements

- ActivityPerformableUnderCondition
- ActualCondition
- ActualMeasurement
- ActualMeasurementSet
- ActualOrganizationalResource
- ActualPerson
- ActualPost
- ActualPropertySet
- ActualResource
- ActualResponsibleResource
- ActualState
- DesiredEffect
- Desirer
- Function
- IsCapableToPerform
- MeasurableElement
- Measurement
- MeasurementSet
- Organization
- OrganizationalResource
- Person
- PhysicalResource
- Post

- Process
- ResourcePerformer
- Responsibility

View Specifications::Personnel::Roadmap

Contains the diagrams that document the Personnel Roadmap View Specification~~Viewpoint~~.

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View Specifications::Personnel::Roadmap::Personnel Roadmap: Availability

Stakeholders: Human Resources, Training, Logisticians, Solution Providers.
Concerns: the staffing and training of resources.
Definition: defines the requirements and functions to ensure that actual persons with the right competencies, and in the right numbers, are available to fulfill actual posts.
Recommended Implementation: Timeline, SysML Block Definition Diagram.

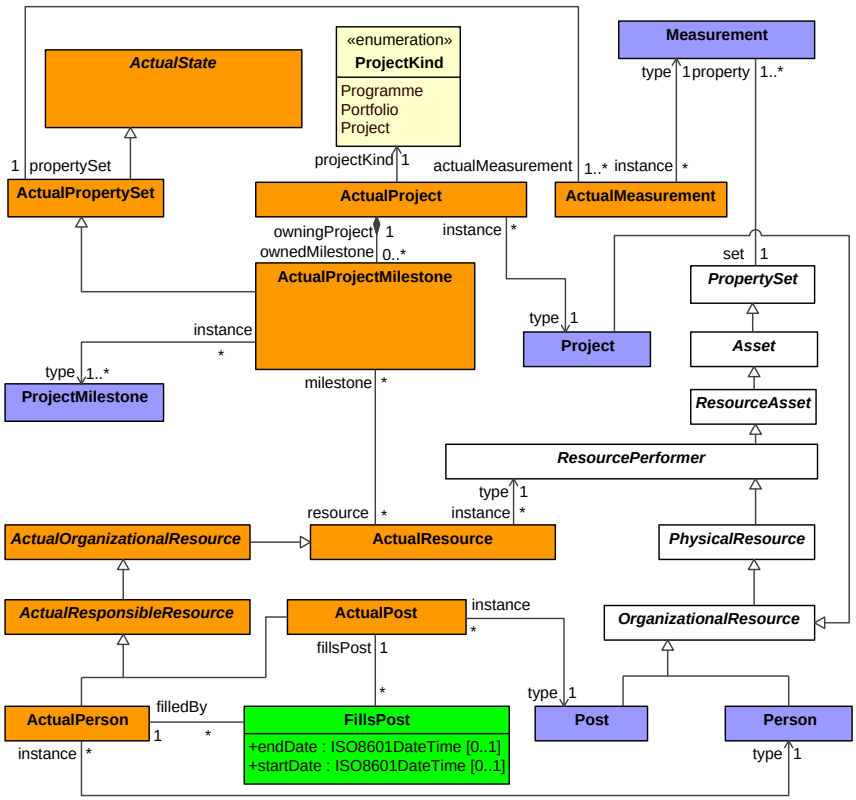

Figure 8:37 - Personnel Roadmap: Availability
Elements

- ActualMeasurement
- ActualOrganizationalResource

- ActualPerson
- ActualPost
- ActualProject
- ActualProjectMilestone
- ActualPropertySet
- ActualResource
- ActualResponsibleResource
- ActualState
- Asset
- FillsPost
- Measurement
- OrganizationalResource
- Person
- PhysicalResource
- Post
- Project
- ProjectMilestone
- PropertySet
- ResourceAsset
- ResourcePerformer

View Specifications::Personnel::Roadmap::Personnel Roadmap: Evolution

Stakeholders: Human resources, Solution Providers.
Concerns: organizational structure changes over time.
Definition: provides an overview of how a organizational structure changes over time. It shows the structure of several organizational structures mapped against a timeline.
Recommended Implementation: timeline, SysML Block Definition Diagram, SysML Internal Block Diagram.

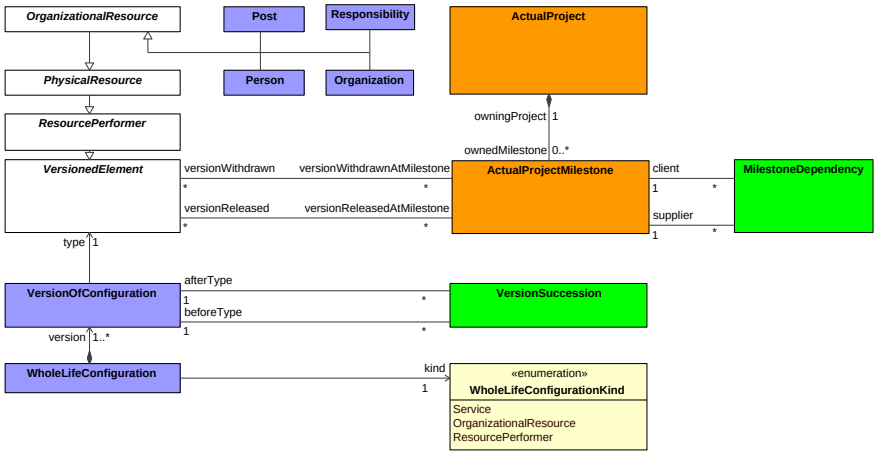

Figure 8:38 - Personnel Roadmap: Evolution
Elements

- ActualProject
- ActualProjectMilestone
- MilestoneDependency
- Organization

- OrganizationalResource
- Person
- PhysicalResource
- Post
- ResourcePerformer
- Responsibility
- VersionedElement
- VersionOfConfiguration
- VersionSuccession
- WholeLifeConfiguration

View Specifications::Personnel::Roadmap::Personnel Roadmap: Forecast

Stakeholders: Human resources, Logisticians, Solution Providers.
Concerns: competencies and skills forecast.
Definition: defines the underlying current and expected supporting competencies and skills of organizational resources.
Recommended Implementation: timeline, tabular format, SysML Block Definition Diagram.

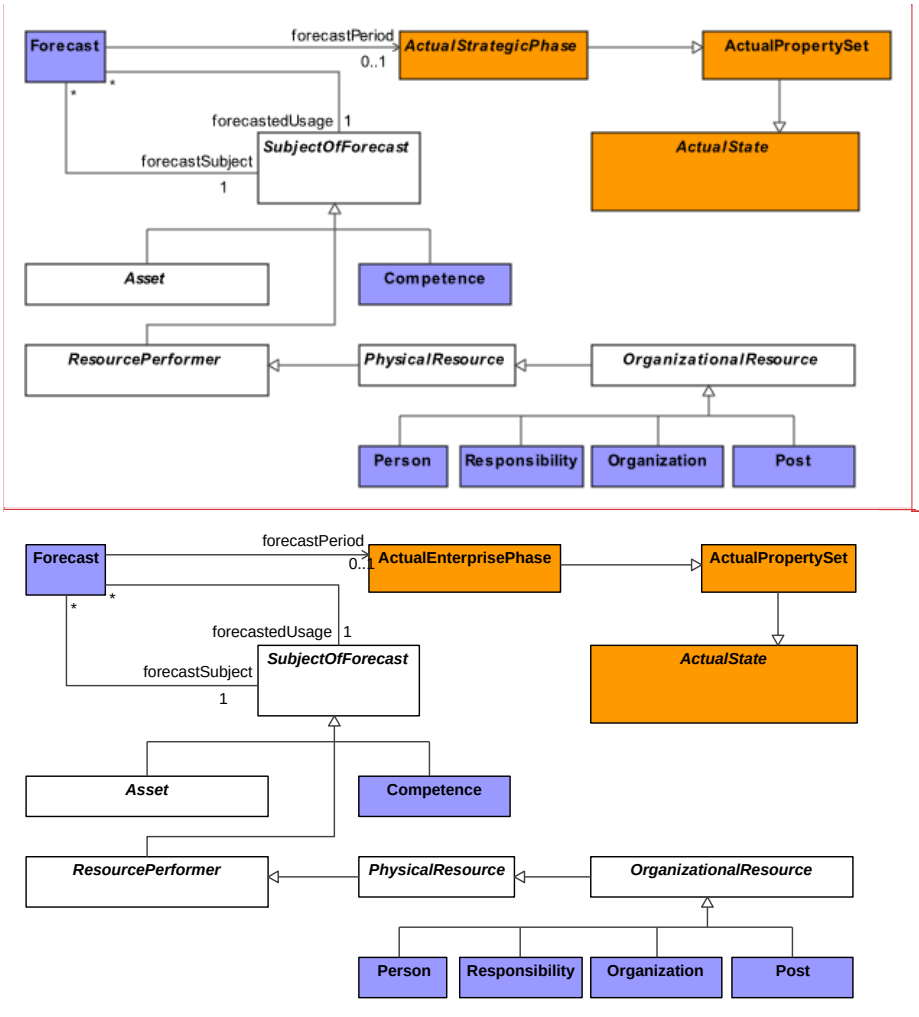

Figure 8:39 - Personnel Roadmap: Forecast

Elements

- ~~ActualEnterprisePhase~~ActualStrategicPhase
- ActualPropertySet
- ActualState
- Asset
- Competence
- Forecast
- Organization
- OrganizationalResource

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- Person
- PhysicalResource
- Post
- ResourcePerformer
- Responsibility
- SubjectOfForecast

View Specifications::Personnel::Traceability

Contains the diagrams that document the Personnel Traceability View Specification~~Viewpoint~~.

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View Specifications::Personnel::Traceability::Personnel Traceability

Stakeholders: Systems Engineers, Enterprise Architects, Solution Providers, Business Architects.
Concerns: traceability between operational activities and functions that implements them.
Definition: depicts the mapping of functions (performed by organizational resources) to operational activities and thus identifies the transformation of an operational need into a purposeful function performed by an organizational resource or solution.
Recommended Implementation: Matrix format, SysML Block Definition Diagram.

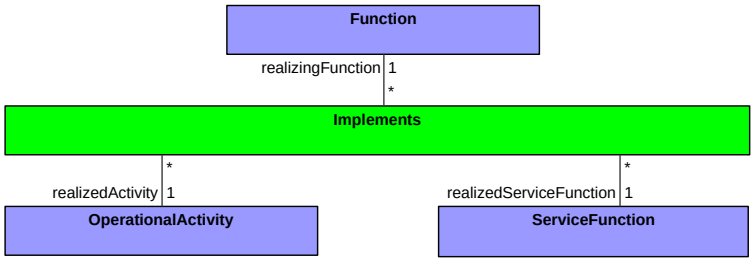

Figure 8:40 - Personnel Traceability
Elements

- Function
- Implements
- OperationalActivity
- ServiceFunction

~~8.1.28~~8.1.7 View Specifications::Resources

Stakeholders: Systems Engineers, Resource Owners, Implementers, Solution Providers, IT Architects.
Concerns: definition of solution architectures to implement operational requirements.
Definition: captures a solution architecture consisting of resources, e.g. organizational, software, artifacts, capability configurations, natural resources that implement the operational requirements. Further design of a resource is typically detailed in SysML or UML.

View Specifications::Resources::Taxonomy

Contains the diagrams that document the Resources Taxonomy View Specification~~Viewpoint~~.

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View Specifications::Resources::Taxonomy::Resources Taxonomy

Stakeholders: Solution Providers, Systems Engineers, IT Architects, Implementers.
Concerns: resource types.
Definition: shows the taxonomy of types of resources.
Recommended Implementation: SysML Block Definition Diagram.

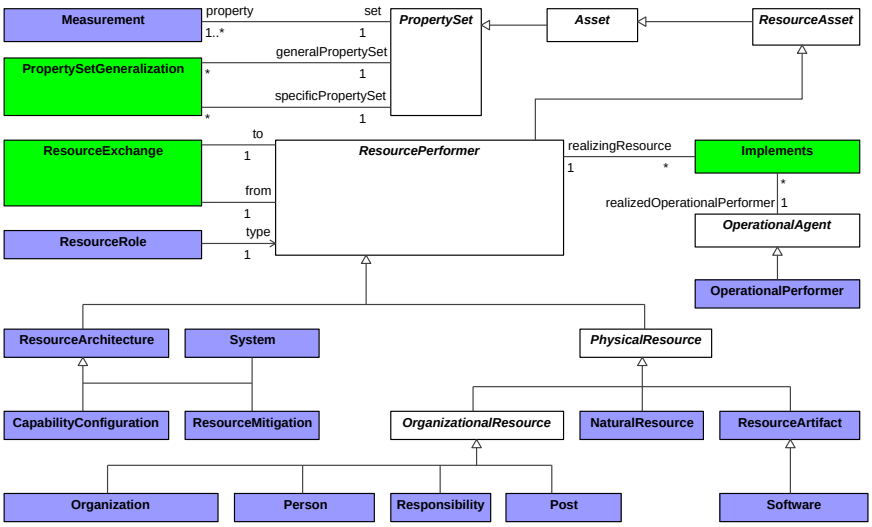

Figure 8:41 - Resources Taxonomy

Elements

- Asset
- CapabilityConfiguration
- Implements
- Measurement
- NaturalResource
- OperationalAgent
- OperationalPerformer
- Organization
- OrganizationalResource
- Person
- PhysicalResource
- Post
- PropertySet
- PropertySetGeneralization
- ResourceArchitecture
- ResourceArtifact
- ResourceAsset
- ResourceExchange
- ResourceMitigation
- ResourcePerformer
- ResourceRole
- Responsibility
- Software
- System

View Specifications::Resources::Structure

Contains the diagrams that document the Resources Structure View Specification~~Viewpoint~~.

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View Specifications::Resources::Structure::Resources Structure

Stakeholders: Systems Engineers, Resource Owners, Implementers, Solution Providers.
Concerns: reference the resource structure, connectors and interfaces in a specific context.
Definition: defines the physical resources, e.g. capability configuration(s)/system(s) and interactions necessary to implement a specific set of OperationalPerformer(s). Can be used to represent communications networks and pathways that link communications resources and provides details regarding their configuration.
Recommended Implementation: SysML Internal Block Diagram, SysML Bock Definition Diagram.

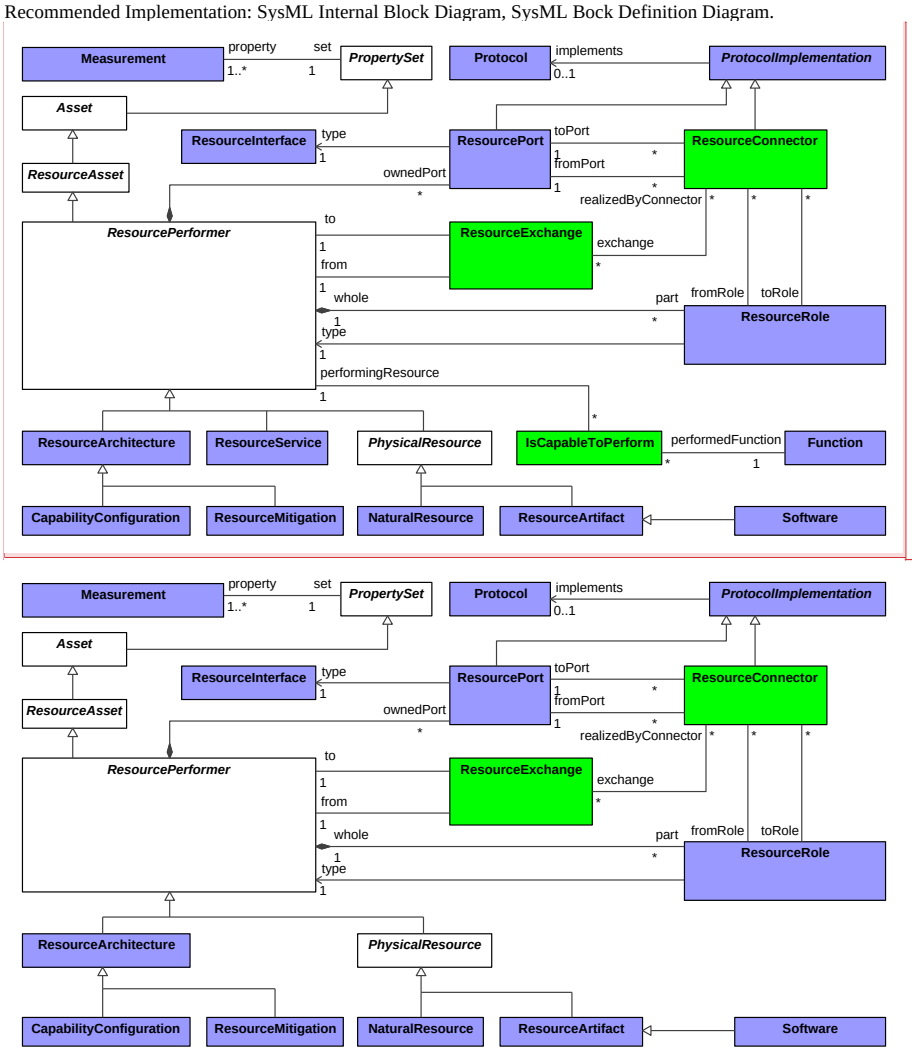

Figure 8:42 - Resources Structure

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UAF12-16

Elements

- Asset
- CapabilityConfiguration
- Function
- IsCapableToPerform
- Measurement
- NaturalResource
- PhysicalResource
- PropertySet
- Protocol
- ProtocolImplementation
- ResourceArchitecture
- ResourceArtifact
- ResourceAsset
- ResourceConnector
- ResourceExchange
- ResourceInterface
- ResourceMitigation
- ResourcePerformer
- ResourcePort
- ResourceRole
- ResourceService
- Software
- ~~Asset~~
- ~~CapabilityConfiguration~~
- ~~Measurement~~
- ~~NaturalResource~~
- ~~PhysicalResource~~
- ~~PropertySet~~
- ~~Protocol~~
- ~~ProtocolImplementation~~
- ~~ResourceArchitecture~~
- ~~ResourceArtifact~~
- ~~ResourceAsset~~
- ~~ResourceConnector~~
- ~~ResourceExchange~~
- ~~ResourceInterface~~
- ~~ResourceMitigation~~
- ~~ResourcePerformer~~
- ~~ResourcePort~~
- ~~ResourceRole~~
- ~~Software~~

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UAF12-16

View Specifications::Resources::Connectivity

Contains the diagrams that document the Resources Connectivity View Specification~~Viewpoint~~.

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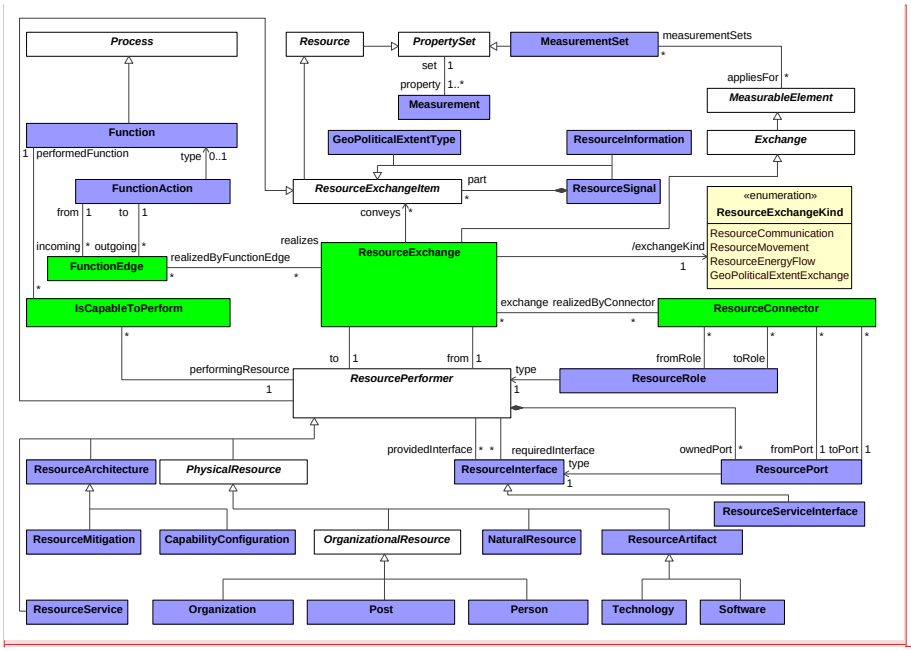
View Specifications::Resources::Connectivity::Resources Connectivity

Stakeholders: Systems Engineers, IT Architects, Solution Providers, Implementers.
Concerns: capture the interactions between resources.
Definition: summarizes interactions between resources of information, systems, personnel, natural resources etc. and the functions that produce and consume them. Measurements can optionally be included.
Recommended Implementation: SysML Internal Block Diagram, tabular format.



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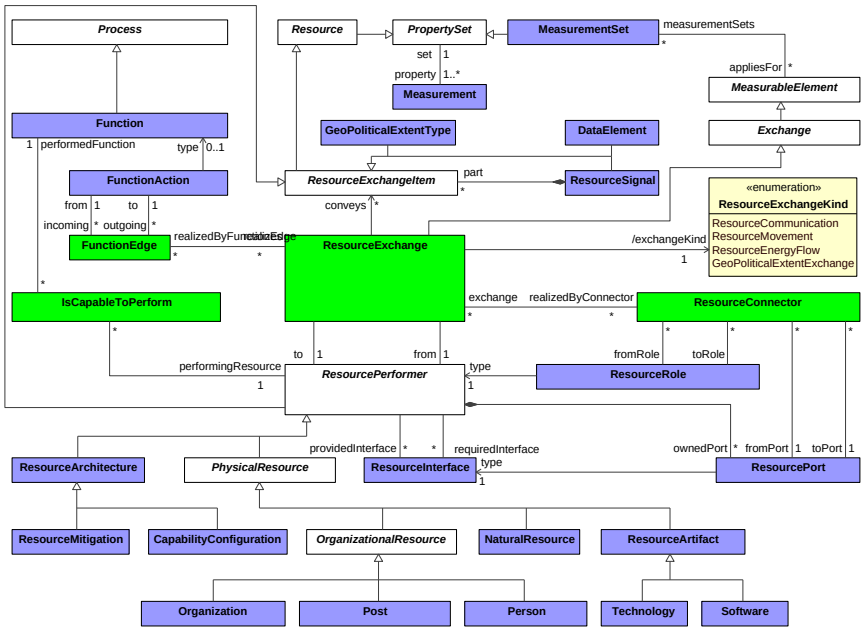

Figure 8:43 - Resources Connectivity

Elements

- CapabilityConfiguration
- Exchange
- Function
- FunctionAction
- FunctionEdge
- GeoPoliticalExtentType
- IsCapableToPerform
- MeasurableElement
- Measurement
- MeasurementSet
- NaturalResource
- Organization
- OrganizationalResource
- Person
- PhysicalResource
- Post
- Process
- PropertySet
- Resource
- ResourceArchitecture
- ResourceArtifact
- ResourceConnector
- ResourceExchange

- ResourceExchangeItem
- ResourceInformation
- ResourceInterface
- ResourceMitigation
- ResourcePerformer
- ResourcePort
- ResourceRole
- ResourceService
- ResourceServiceInterface
- ResourceSignal
- Software
- Technology
- ~~CapabilityConfiguration~~
- ~~DataElement~~
- ~~Exchange~~
- ~~Function~~
- ~~FunctionAction~~
- ~~FunctionEdge~~
- ~~GeoPoliticalExtentType~~
- ~~IsCapableToPerform~~
- ~~MeasurableElement~~
- ~~Measurement~~
- ~~MeasurementSet~~
- ~~NaturalResource~~
- ~~Organization~~
- ~~OrganizationalResource~~
- ~~Person~~
- ~~PhysicalResource~~
- ~~Post~~
- ~~Process~~
- ~~PropertySet~~
- ~~Resource~~
- ~~ResourceArchitecture~~
- ~~ResourceArtifact~~
- ~~ResourceConnector~~
- ~~ResourceExchange~~
- ~~ResourceExchangeItem~~
- ~~ResourceInterface~~
- ~~ResourceMitigation~~
- ~~ResourcePerformer~~
- ~~ResourcePort~~
- ~~ResourceRole~~
- ~~ResourceSignal~~
- ~~Software~~
- ~~Technology~~

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View Specifications::Resources::Processes

Contains the diagrams that document the Resources Processes View Specification~~Viewpoint~~.

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View Specifications::Resources::Processes::Resources Processes

Stakeholders: Solution Providers, Systems Engineers, IT Architects.
Concerns: captures activity based behavior and flows.
Definition: describes the functions that are normally conducted in the course of implementing operational activity(ies) in

support of capability(ies). It describes the functions, their Inputs/Outputs, function actions and flows between them. Recommended Implementation: SysML Activity Diagram, SysML Block Definition Diagram.

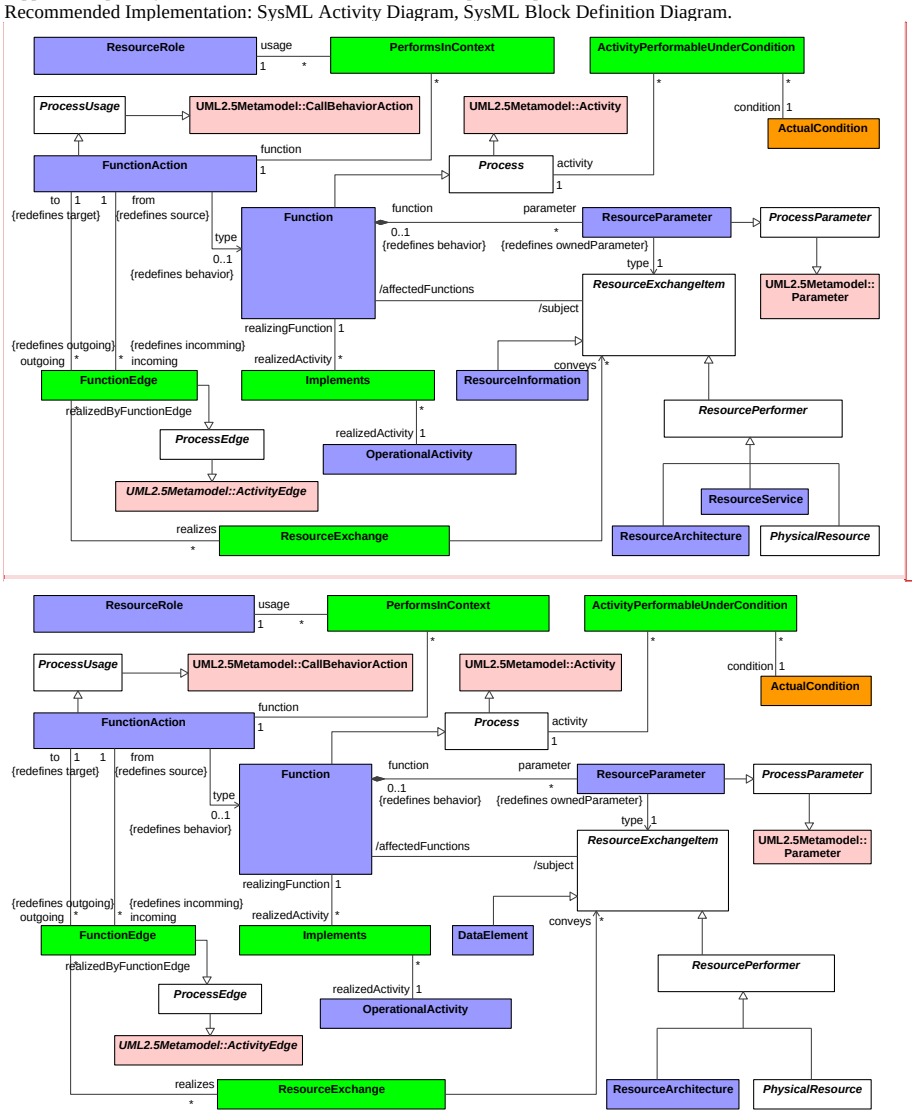

Figure 8:44 - Resources Processes

Elements

- ActivityPerformableUnderCondition
- ActualCondition

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- Function
- FunctionAction
- FunctionEdge
- Implements
- OperationalActivity
- PerformsInContext
- PhysicalResource
- Process
- ProcessEdge
- ProcessParameter
- ProcessUsage
- ResourceArchitecture
- ResourceExchange
- ResourceExchangeItem
- ResourceInformation
- ResourceParameter
- ResourcePerformer
- ResourceRole
- ResourceService
- UML2.5Metamodel::Activity
- UML2.5Metamodel::ActivityEdge
- UML2.5Metamodel::CallBehaviorAction
- UML2.5Metamodel::Parameter
- ~~ActivityPerformableUnderCondition~~
- ~~ActualCondition~~
- ~~DataElement~~
- ~~Function~~
- ~~FunctionAction~~
- ~~FunctionEdge~~
- ~~Implements~~
- ~~OperationalActivity~~
- ~~PerformsInContext~~
- ~~PhysicalResource~~
- ~~Process~~
- ~~ProcessEdge~~
- ~~ProcessParameter~~
- ~~ProcessUsage~~
- ~~ResourceArchitecture~~
- ~~ResourceExchange~~
- ~~ResourceExchangeItem~~
- ~~ResourceParameter~~
- ~~ResourcePerformer~~
- ~~ResourceRole~~
- ~~UML2.5Metamodel::Activity~~
- ~~UML2.5Metamodel::ActivityEdge~~
- ~~UML2.5Metamodel::CallBehaviorAction~~
- ~~UML2.5Metamodel::Parameter~~

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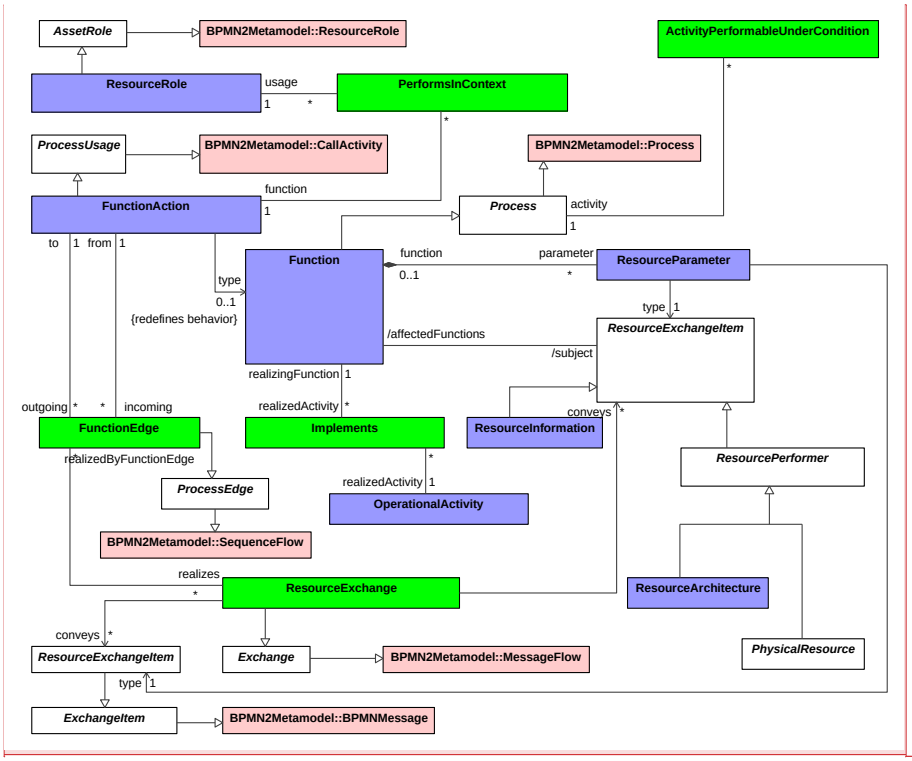
View Specifications::Resources::Processes::Resources Processes BPMN Semantics

Stakeholders: Solution Providers, IT Architects.
Concerns: captures activity based behavior and flows using BPMN.
Definition: describes the functions that are normally conducted in the course of implementing operational activity(ies) in support of capability(ies). It describes the functions, their Inputs/Outputs, function actions and flows between them using

BPMN.
Recommended Implementation: BPMN Process Diagram.



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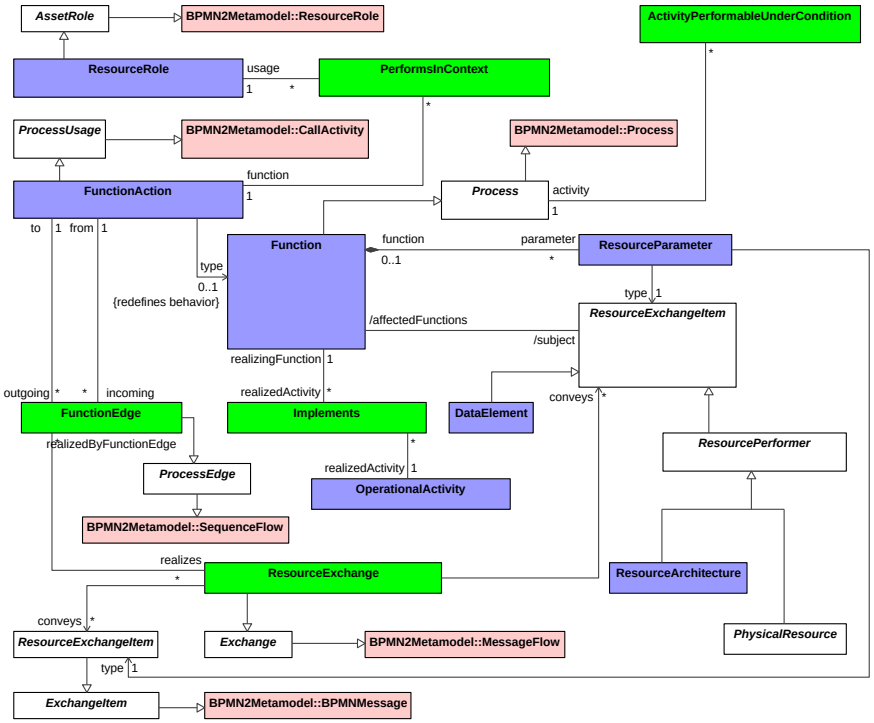

Figure 8:45 - Resources Processes BPMN Semantics

Elements

- ActivityPerformableUnderCondition
- AssetRole
- BPMN2Metamodel::BPMNMessage
- BPMN2Metamodel::CallActivity
- BPMN2Metamodel::MessageFlow
- BPMN2Metamodel::Process
- BPMN2Metamodel::ResourceRole
- BPMN2Metamodel::SequenceFlow
- Exchange
- ExchangeItem
- Function
- FunctionAction
- FunctionEdge
- Implements
- OperationalActivity
- PerformsInContext
- PhysicalResource
- Process
- ProcessEdge

- ProcessUsage
- ResourceArchitecture
- ResourceExchange
- ResourceExchangeItem
- ResourceInformation
- ResourceParameter
- ResourcePerformer
- ResourceRole
- ~~ActivityPerformableUnderCondition~~
- ~~AssetRole~~
- ~~BPMN2Metamodel::BPMNMessage~~
- ~~BPMN2Metamodel::CallActivity~~
- ~~BPMN2Metamodel::MessageFlow~~
- ~~BPMN2Metamodel::Process~~
- ~~BPMN2Metamodel::ResourceRole~~
- ~~BPMN2Metamodel::SequenceFlow~~
- ~~DataElement~~
- ~~Exchange~~
- ~~ExchangeItem~~
- ~~Function~~
- ~~FunctionAction~~
- ~~FunctionEdge~~
- ~~Implements~~
- ~~OperationalActivity~~
- ~~PerformsInContext~~
- ~~PhysicalResource~~
- ~~Process~~
- ~~ProcessEdge~~
- ~~ProcessUsage~~
- ~~ResourceArchitecture~~
- ~~ResourceExchange~~
- ~~ResourceExchangeItem~~
- ~~ResourceParameter~~
- ~~ResourcePerformer~~
- ~~ResourceRole~~

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View Specifications::Resources::States

Contains the diagrams that document the Resources States View Specification~~Viewpoint~~.

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View Specifications::Resources::States::Resources States

Stakeholders: Systems Engineers, Software Engineers.
Concerns: capture state-based behavior of a resource.
Definition: it is a graphical representation of states of a resource and how that resource responds to various events and actions.
Recommended Implementation: SysML State Machine Diagram.

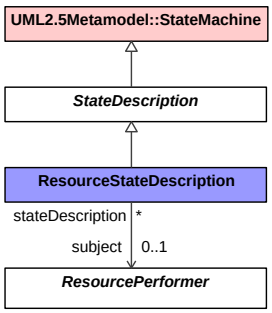

Figure 8:46 - Resources States

Elements

- ResourcePerformer
- ResourceStateDescription
- StateDescription
- UML2.5Metamodel::StateMachine

View Specifications::Resources:: Sequences~~Interaction Scenarios~~

Contains the diagrams that document the Resources Sequences ~~Interaction Scenarios~~ View Specification~~Viewpoint~~.

View Specifications::Resources::~~Interaction Scenarios~~Sequences::Resources Sequences ~~Interaction Scenarios~~

Stakeholders: Software Engineers, Systems Engineers.
Concerns: interactions between resources (roles).
Definition: provides a time-ordered examination of the interactions between resources.
Recommended Implementation: SysML Sequence Diagram.

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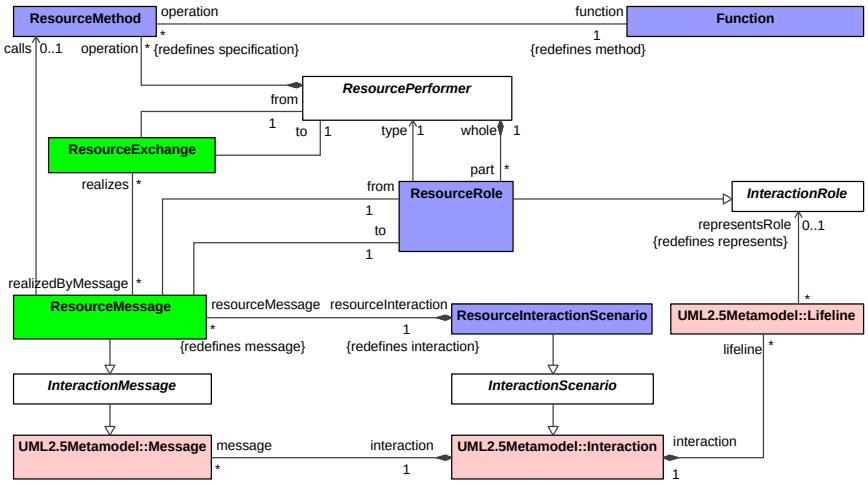

Figure 8:47 - Resources Sequences~~Interaction~~ ~~Scenarios~~

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Elements

- Function
- InteractionMessage
- InteractionRole
- InteractionScenario
- ResourceExchange
- ResourceInteractionScenario
- ResourceMessage
- ResourceMethod
- ResourcePerformer
- ResourceRole
- UML2.5Metamodel::Interaction
- UML2.5Metamodel::Lifeline
- UML2.5Metamodel::Message

View Specifications::Resources::Constraints

Contains the diagrams that document the Resources Constraints View Specification~~Viewpoint~~.

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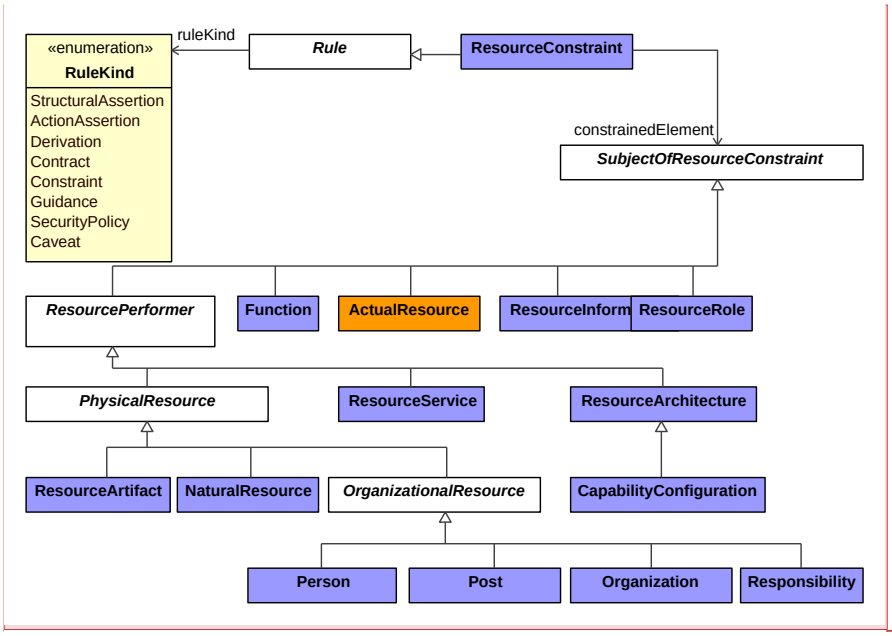
View Specifications::Resources::Constraints::Resources Constraints

Stakeholders: Systems Engineers, IT Architects, Solution Providers, Implementers.
Concerns: define limitations, constraints and performance parameters for resources, their interactions, performed functions, and data.
Definition: specifies traditional textual rules/non-functional requirements that are constraints on resources, their interactions, performed functions, and data. The addition of SysML parametrics provide a computational means of defining resource constraints within a specific context.
Recommended Implementation: tabular format, SysML Block Definition Diagram, SysML Parametric Diagram, OCL.



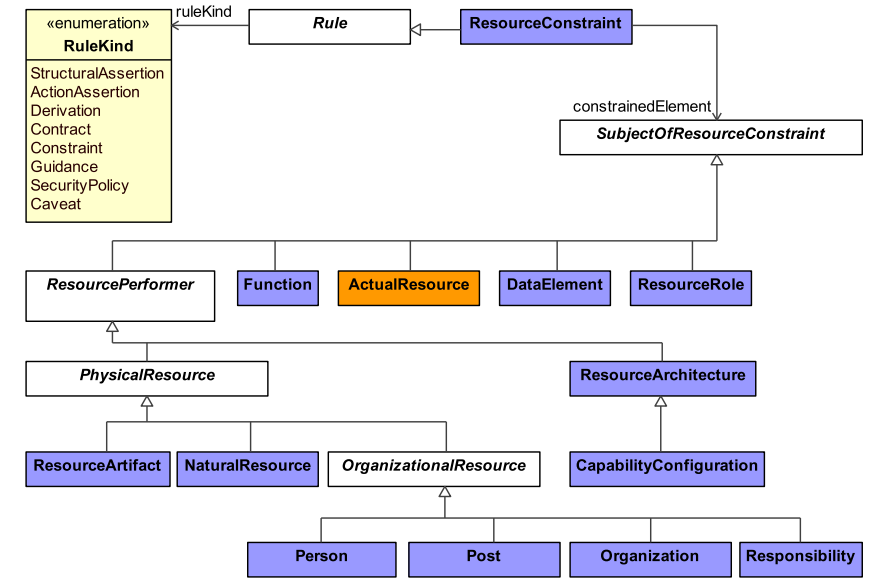


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Figure 8:48 - Resources Constraints

Elements

- ActualResource
- CapabilityConfiguration
- Function
- NaturalResource
- Organization
- OrganizationalResource
- Person
- PhysicalResource
- Post
- ResourceArchitecture
- ResourceArtifact
- ResourceConstraint
- ResourceInformation
- ResourcePerformer
- ResourceRole
- ResourceService
- Responsibility
- Rule
- SubjectOfResourceConstraint
- ~~ActualResource~~
- ~~CapabilityConfiguration~~
- ~~DataElement~~
- ~~Function~~
- ~~NaturalResource~~
- ~~Organization~~
- ~~OrganizationalResource~~
- ~~Person~~
- ~~PhysicalResource~~
- ~~Post~~
- ~~ResourceArchitecture~~
- ~~ResourceArtifact~~
- ~~ResourceConstraint~~
- ~~ResourcePerformer~~
- ~~ResourceRole~~
- ~~Responsibility~~
- ~~Rule~~
- ~~SubjectOfResourceConstraint~~

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View Specifications::Resources::Roadmap

Contains the diagrams that document the Resources Roadmap View Specification~~Viewpoint~~.

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View Specifications::Resources::Roadmap::Resources Roadmap: Evolution

Stakeholders: Systems Engineers, IT Architects, Solution Providers, Implements.
Concerns: resource structure changes over time.
Definition: provides an overview of how a resource structure changes over time. It shows the structure of several resources mapped against a timeline.
Recommended Implementation: timeline, SysML Block Definition Diagram, SysML Internal Block Diagram.

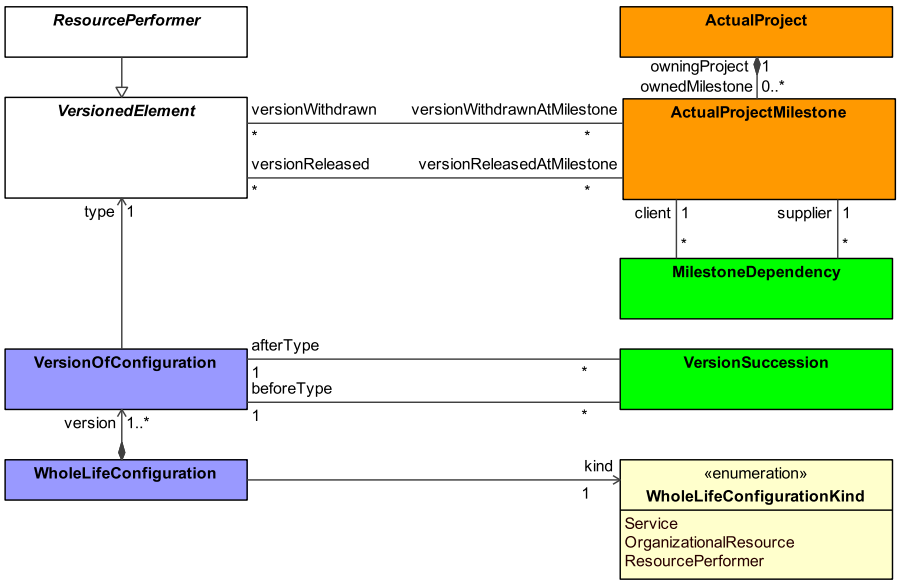

Figure 8:49 - Resources Roadmap: Evolution

Elements

- ActualProject
- ActualProjectMilestone
- MilestoneDependency
- ResourcePerformer
- VersionedElement
- VersionOfConfiguration
- VersionSuccession
- WholeLifeConfiguration

View Specifications::Resources::Roadmap::Resources Roadmap: Forecast

Stakeholders: Solution Providers, Systems Engineers, IT Architects.
Concerns: technology forecast.
Definition: defines the underlying current and expected supporting technologies. Expected supporting technologies are those that can be reasonably forecast given the current state of technology, and expected improvements / trends.
Recommended Implementation: timeline, tabular format, SysML Block Definition Diagram.

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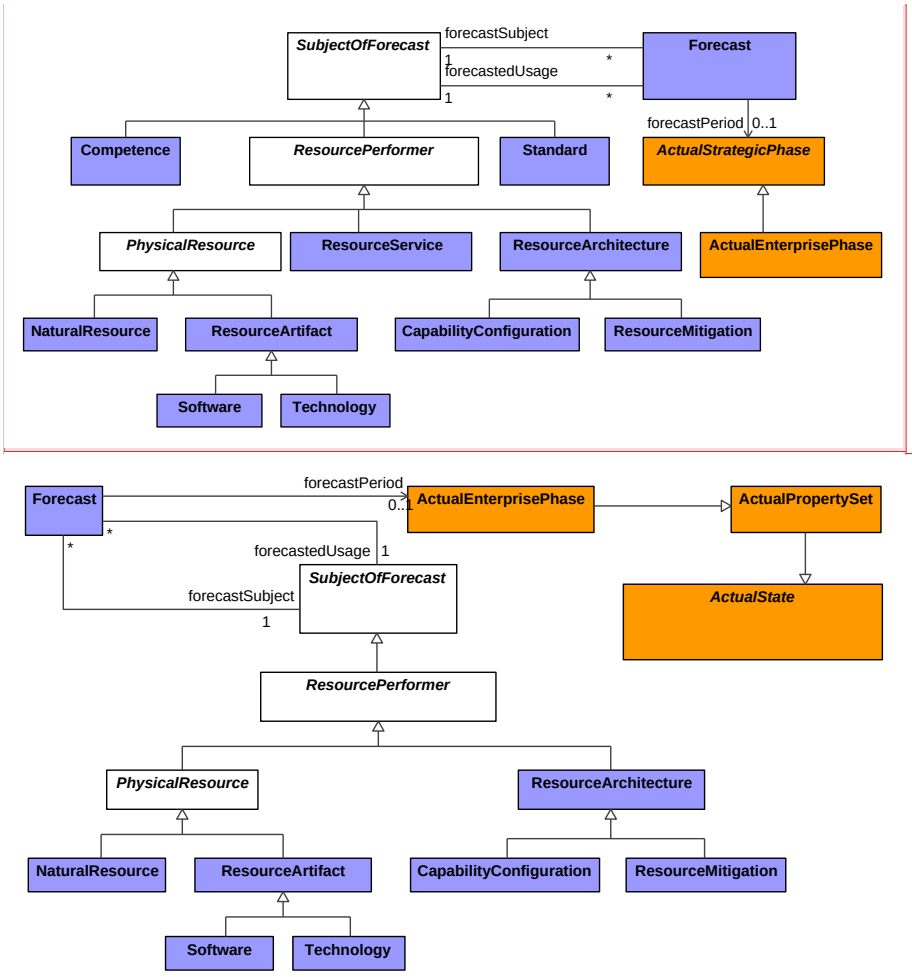

Figure 8:50 - Resources Roadmap: Forecast

Elements

- ActualEnterprisePhase
- ActualStrategicPhase
- CapabilityConfiguration
- Competence
- Forecast
- NaturalResource
- PhysicalResource
- ResourceArchitecture
- ResourceArtifact

- ResourceMitigation
- ResourcePerformer
- ResourceService
- Software
- Standard
- SubjectOfForecast
- Technology
- ~~ActualEnterprisePhase~~
- ~~ActualPropertySet~~
- ~~ActualState~~
- ~~CapabilityConfiguration~~
- ~~Forecast~~
- ~~NaturalResource~~
- ~~PhysicalResource~~
- ~~ResourceArchitecture~~
- ~~ResourceArtifact~~
- ~~ResourceMitigation~~
- ~~ResourcePerformer~~
- ~~Software~~
- ~~SubjectOfForecast~~
- ~~Technology~~

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View Specifications::Resources::Traceability

Contains the diagrams that document the Resources Traceability View Specification~~Viewpoint~~.

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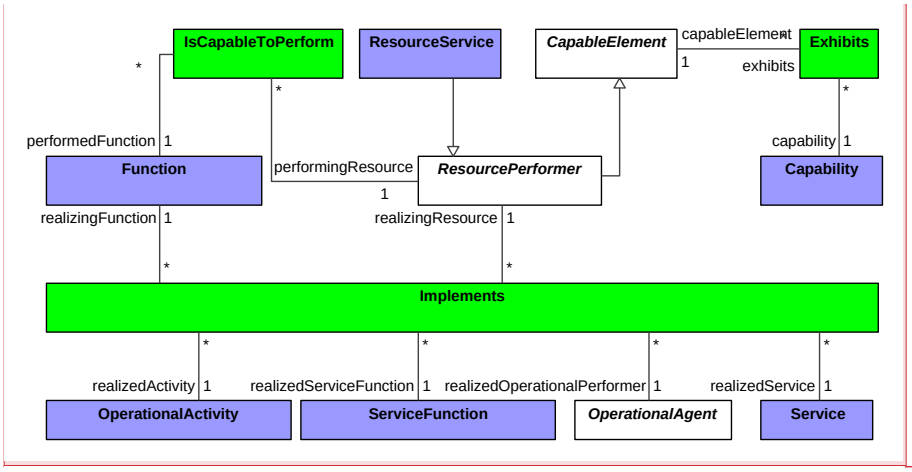
View Specifications::Resources::Traceability::Resources Traceability

Stakeholders: Systems Engineers, Enterprise Architects, Solution Providers, Business Architects.
Concerns: traceability between operational activities and functions that implements them.
Definition: depicts the mapping of functions to operational activities and thus identifies the transformation of an operational need into a purposeful function performed by a resource or solution.
Recommended Implementation: Matrix format, SysML Block Definition Diagram.



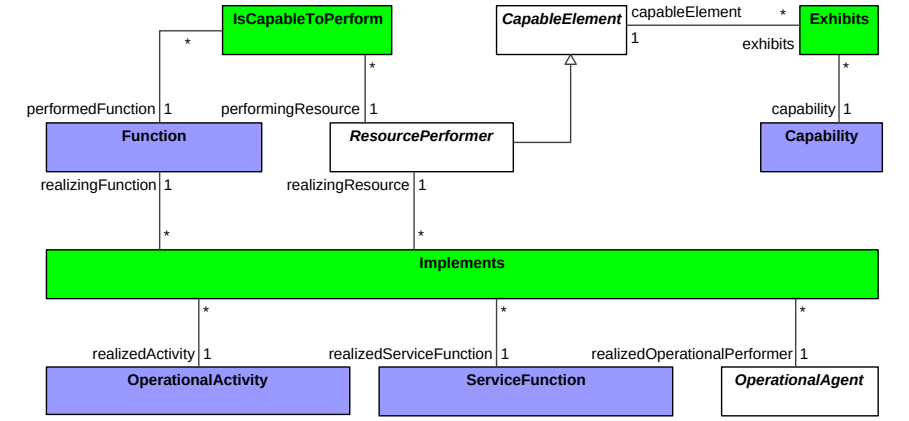


Figure 8:51 - Resources Traceability

Elements

- Capability
- CapableElement
- Exhibits
- Function
- Implements
- IsCapableToPerform
- OperationalActivity
- OperationalAgent
- ResourcePerformer
- ResourceService
- Service
- ServiceFunction

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- ~~Capability~~
- ~~CapableElement~~
- ~~Exhibits~~
- ~~Function~~
- ~~Implements~~
- ~~IsCapableToPerform~~
- ~~OperationalActivity~~
- ~~OperationalAgent~~
- ~~ResourcePerformer~~
- ~~ServiceFunction~~

~~8.1.39~~8.1.8 View Specifications::Security

Stakeholders: Security Architects, Security Engineers. Systems Engineers, Operational Architects.
Concerns: addresses the security constraints and information assurance attributes that exist on exchanges between resources and OperationalPerformers
Definition: illustrates the security assets, security constraints, security controls, families, and measures required to address specific security concerns.

View Specifications::Security::Motivation

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Contains the diagrams that document the Security Motivation View Specification.

View Specifications::Security::Motivation::Security Controls

Stakeholders: Security Architects, Security Engineers, Risk Analysts.

Concerns: security controls, security control families, and overlays.

Definition: identifies security controls to mitigate against the security risks.

Recommended Implementation: tabular or Matrix format, SysML Block Definition Diagram.

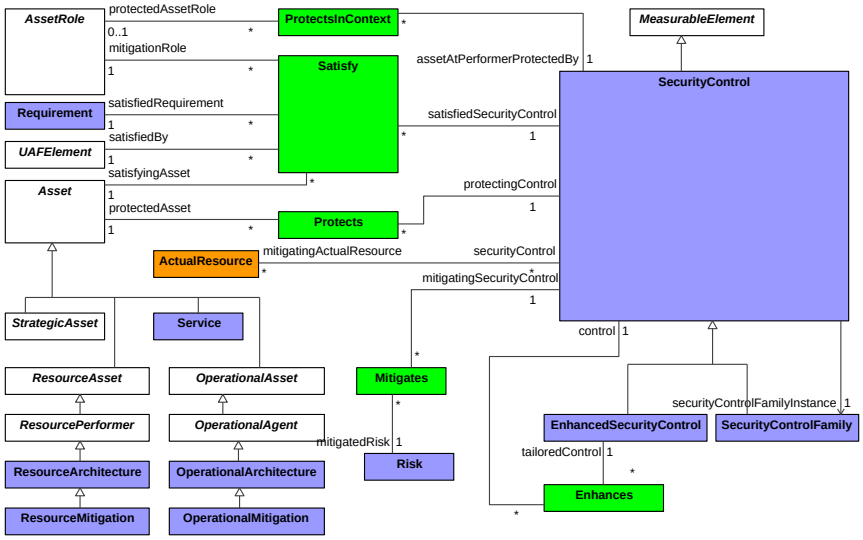

Figure 8:66 - Security Controls

- ActualResource
- Asset
- AssetRole
- EnhancedSecurityControl
- Enhances
- MeasurableElement
- Mitigates
- OperationalAgent
- OperationalArchitecture
- OperationalAsset
- OperationalMitigation
- Protects
- ProtectsInContext
- Requirement
- ResourceArchitecture
- ResourceAsset
- ResourceMitigation
- ResourcePerformer
- Risk
- Satisfy
- SecurityControl
- SecurityControlFamily
- Service
- StrategicAsset
- UAFElement

View Specifications::Security::Taxonomy

Contains the diagrams that document the Security Taxonomy View Specification~~Viewpoint~~.

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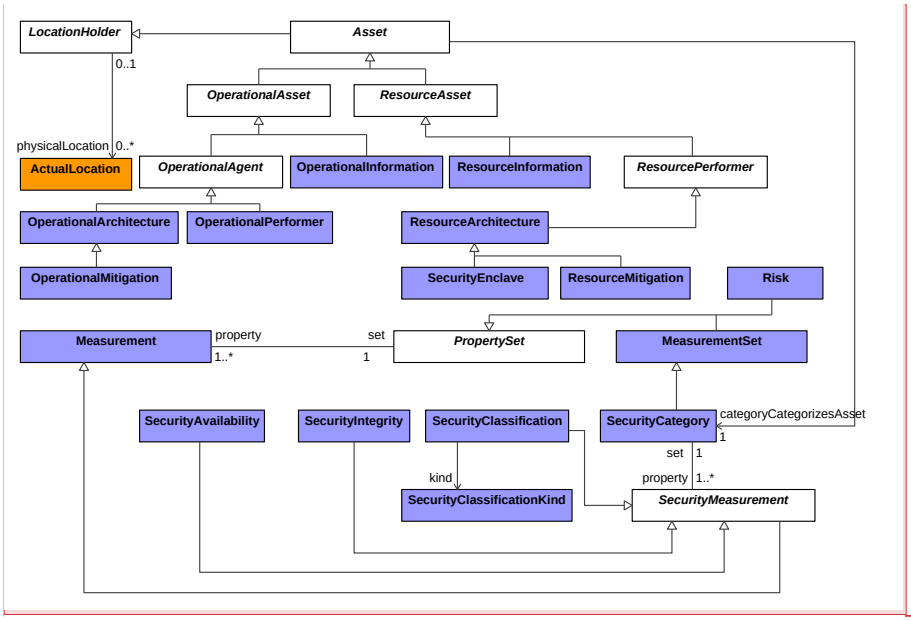
View Specifications::Security::Taxonomy::Security Taxonomy

Stakeholders: Security Architects, Security Engineers.
Concerns: Security assets and security enclaves.
Definition: Defines the hierarchy of security assets and asset owners that are available to implement security, security constraints (policy, guidance, laws and regulations) and details where they are located (security enclaves).
Recommended Implementation: tabular format, SysML Block Definition Diagram.



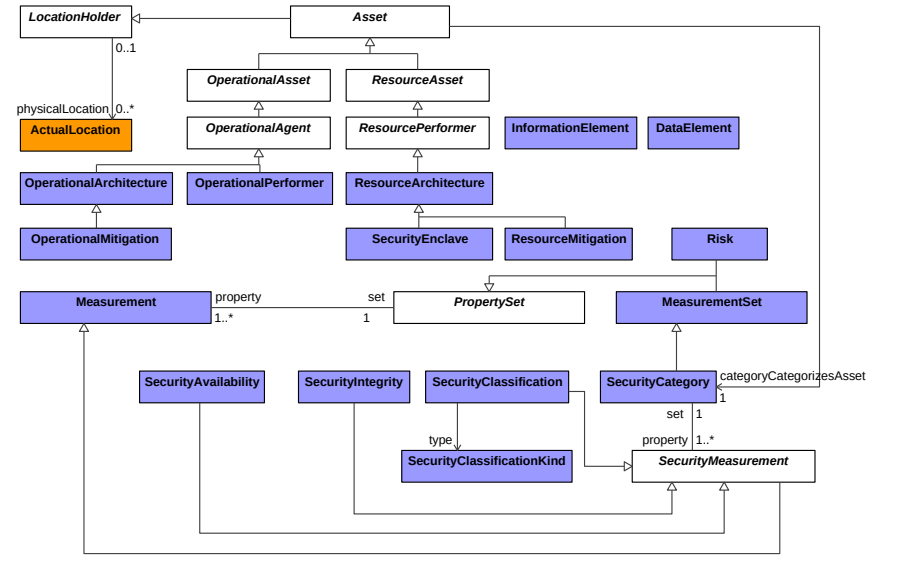


Figure 8:52 - Security Taxonomy
Elements

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- ActualLocation
- Asset
- LocationHolder
- Measurement
- MeasurementSet
- OperationalAgent
- OperationalArchitecture
- OperationalAsset
- OperationalInformation
- OperationalMitigation
- OperationalPerformer
- PropertySet
- ResourceArchitecture
- ResourceAsset
- ResourceInformation
- ResourceMitigation
- ResourcePerformer
- Risk
- SecurityAvailability
- SecurityCategory
- SecurityClassification
- SecurityClassificationKind
- SecurityEnclave
- SecurityIntegrity
- SecurityMeasurement
- ~~ActualLocation~~
- ~~Asset~~
- ~~DataElement~~
- ~~InformationElement~~
- ~~LocationHolder~~
- ~~Measurement~~
- ~~MeasurementSet~~
- ~~OperationalAgent~~
- ~~OperationalArchitecture~~
- ~~OperationalAsset~~
- ~~OperationalMitigation~~
- ~~OperationalPerformer~~
- ~~PropertySet~~
- ~~ResourceArchitecture~~
- ~~ResourceAsset~~
- ~~ResourceMitigation~~
- ~~ResourcePerformer~~
- ~~Risk~~
- ~~SecurityAvailability~~
- ~~SecurityCategory~~
- ~~SecurityClassification~~
- ~~SecurityClassificationKind~~
- ~~SecurityEnclave~~
- ~~SecurityIntegrity~~
- ~~SecurityMeasurement~~

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View Specifications::Security::Structure

Contains the diagrams that document the Security Structure View Specification~~Viewpoint~~.

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View Specifications::Security::Structure::Security Structure

Stakeholders: Security Architects, Security Engineers.
Concerns: The structure of security information and where it is used at the operational and resource level.
Definition: Captures the allocation of assets (operational and resource, information and data) across the security enclaves, shows applicable security controls necessary to protect organizations, systems and information during processing, while in storage (bdd), and during transmission (flows on an ibd). This view also captures Asset Aggregation and allocates the usage of the aggregated information at a location through the use of the SecurityProperty.
Recommended Implementation: SysML Internal Block Diagram, SysML Block Definition Diagram.

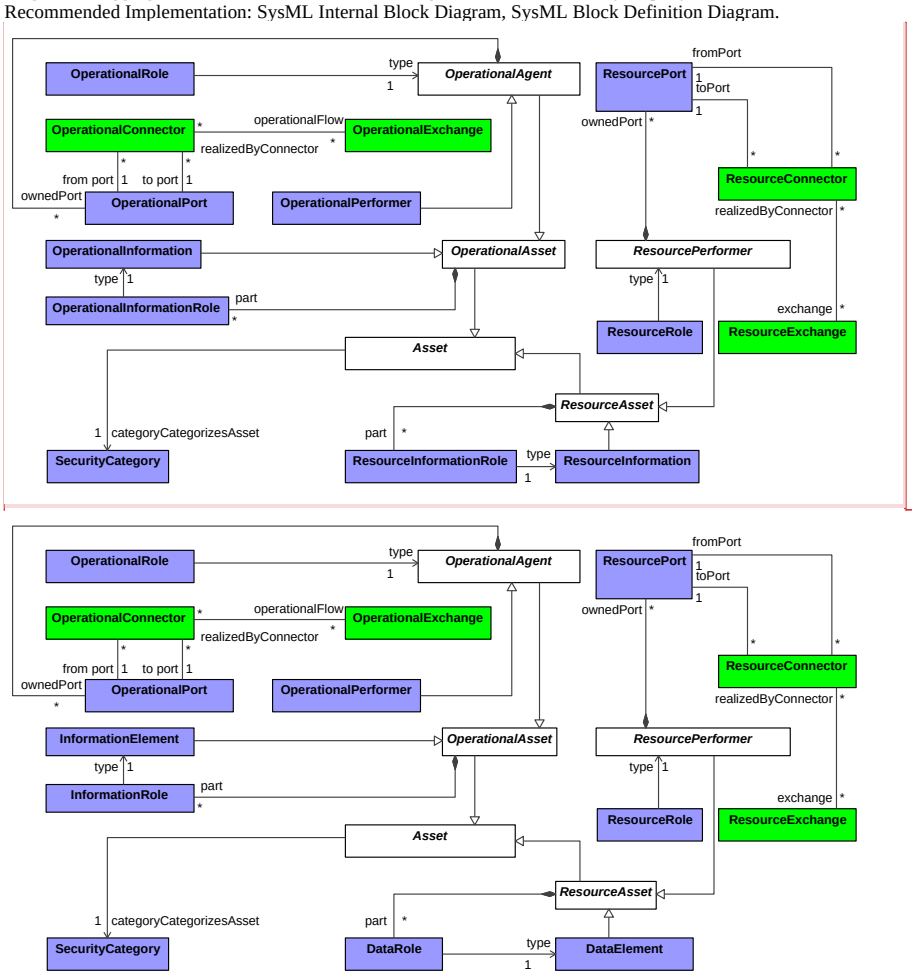

Figure 8:53 - Security Structure

Elements

- Asset
- OperationalAgent

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- OperationalAsset
- OperationalConnector
- OperationalExchange
- OperationalInformation
- OperationalInformationRole
- OperationalPerformer
- OperationalPort
- OperationalRole
- ResourceAsset
- ResourceConnector
- ResourceExchange
- ResourceInformation
- ResourceInformationRole
- ResourcePerformer
- ResourcePort
- ResourceRole
- SecurityCategory
- ~~Asset~~
- ~~DataElement~~
- ~~DataRole~~
- ~~InformationElement~~
- ~~InformationRole~~
- ~~OperationalAgent~~
- ~~OperationalAsset~~
- ~~OperationalConnector~~
- ~~OperationalExchange~~
- ~~OperationalPerformer~~
- ~~OperationalPort~~
- ~~OperationalRole~~
- ~~ResourceAsset~~
- ~~ResourceConnector~~
- ~~ResourceExchange~~
- ~~ResourcePerformer~~
- ~~ResourcePort~~
- ~~ResourceRole~~
- ~~SecurityCategory~~

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View Specifications::Security::Connectivity

Contains the diagrams that document the Security Connectivity View Specification~~Viewpoint~~.

Commented [KG194]: UAF12-41

View Specifications::Security::Connectivity::Security Connectivity

Stakeholders: Security Architects, Security Engineers.
Concerns: Addresses the security constraints and information assurance attributes that exist on exchanges across resources and across performers.
Definition: Lists security exchanges across security assets; the applicable security controls; and the security enclaves that house the producers and consumers of the exchanges. Measurements can optionally be included.
Recommended Implementation: SysML Internal Block Diagram, tabular format.

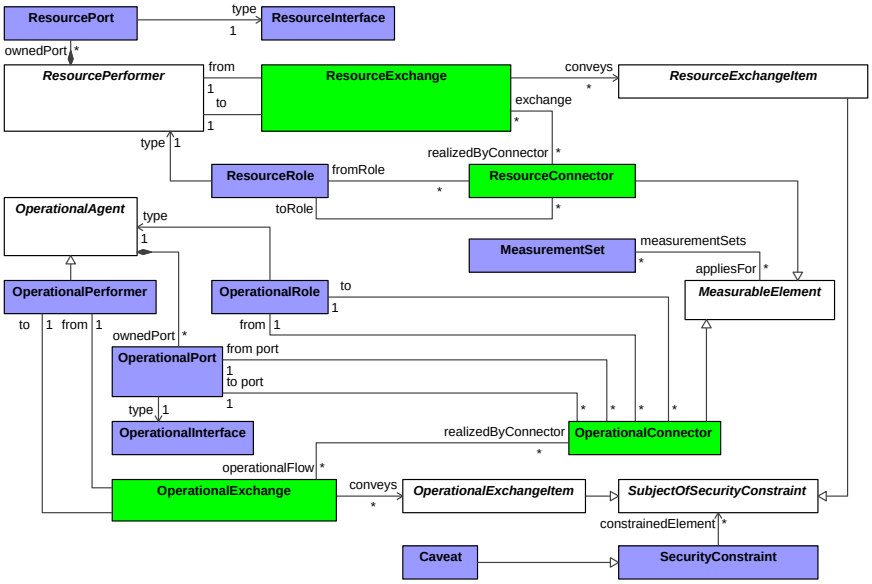

Figure 8:54 - Security Connectivity

Elements

- Caveat
- MeasurableElement
- MeasurementSet
- OperationalAgent
- OperationalConnector
- OperationalExchange
- OperationalExchangeItem
- OperationalInterface
- OperationalPerformer
- OperationalPort
- OperationalRole
- ResourceConnector
- ResourceExchange
- ResourceExchangeItem
- ResourceInterface
- ResourcePerformer
- ResourcePort
- ResourceRole
- SecurityConstraint
- SubjectOfSecurityConstraint

View Specifications::Security::Processes

Contains the diagrams that document the Security Processes View Specification~~Viewpoint~~.

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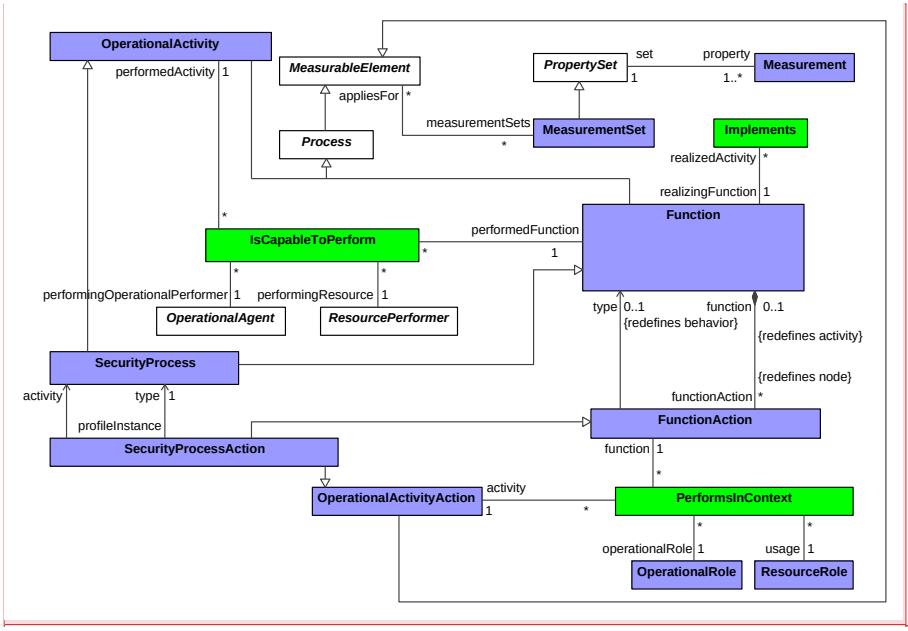
View Specifications::Security::Processes::Security Processes

Stakeholders: Security Architects, Security Engineers.
Concerns: The specification of the Security Control families, security controls, and measures required to address a specific security baseline.
Definition: Provides a set of Security Controls and any possible enhancements as applicable to assets. The activity diagram describes operational or resource level processes that apply (operational level) or implement (resource level) security controls/enhancements to assets located in enclaves and across enclaves. This Security Process view can be instantiated either as a variant of an activity/flow diagram or as a hierarchical work breakdown structure.
Recommended Implementation: SysML Activity Diagram, SysML Block Definition Diagram, BPMN Process Diagram as described in Operational Processes and Resources Processes sections.



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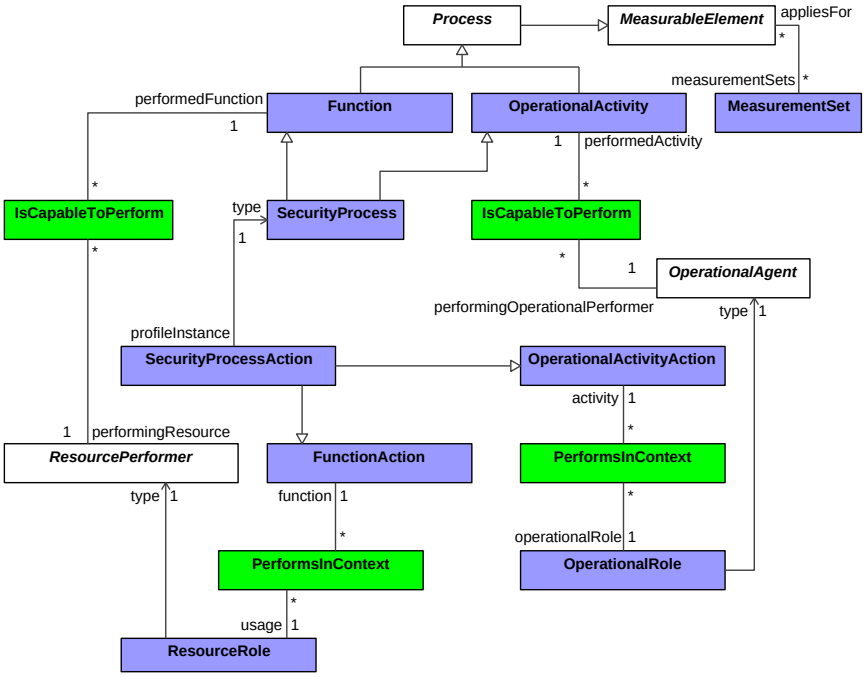

Figure 8:55 - Security Processes

Elements

- Function
- FunctionAction
- Implements
- IsCapableToPerform
- MeasurableElement
- Measurement
- MeasurementSet
- OperationalActivity
- OperationalActivityAction
- OperationalAgent
- OperationalRole
- PerformsInContext
- Process
- PropertySet
- ResourcePerformer
- ResourceRole
- SecurityProcess
- SecurityProcessAction
- ~~Function~~
- ~~FunctionAction~~

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- ~~IsCapableToPerform~~
- ~~MeasurableElement~~
- ~~MeasurementSet~~
- ~~OperationalActivity~~
- ~~OperationalActivityAction~~
- ~~OperationalAgent~~
- ~~OperationalRole~~
- ~~PerformsInContext~~
- ~~Process~~
- ~~ResourcePerformer~~
- ~~ResourceRole~~
- ~~SecurityProcess~~
- ~~SecurityProcessAction~~

View Specifications::Security::Constraints

Contains the diagrams that document the Security Constraints View Specification~~Viewpoint~~.

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View Specifications::Security::Constraints::Security Constraints

Stakeholders: Security Architects, Security Engineers, Risk Analysts.
Concerns: (i) Security-related policy, guidance, laws and regulations as applicable to assets, (ii) threats, vulnerabilities, and risk assessments as applicable to assets.
Definition: (i) Specifies textual rules/non-functional requirements that are security constraints on resources, information and data (e.g. security-related in the form of rules (e.g. access control policy). A common way of representing access control policy is through the use of XACML (eXtensible Access Control Markup Language), it is expected that implementations of UAF allow users to link security constraints to external files represented in XACML. (ii) Identifies risks, specifies risk likelihood, impact, asset criticality, other measurements and enables risk assessment.
Recommended Implementation: tabular or Matrix format, SysML Block Definition Diagram, SysML Parametric Diagram, or OCL.

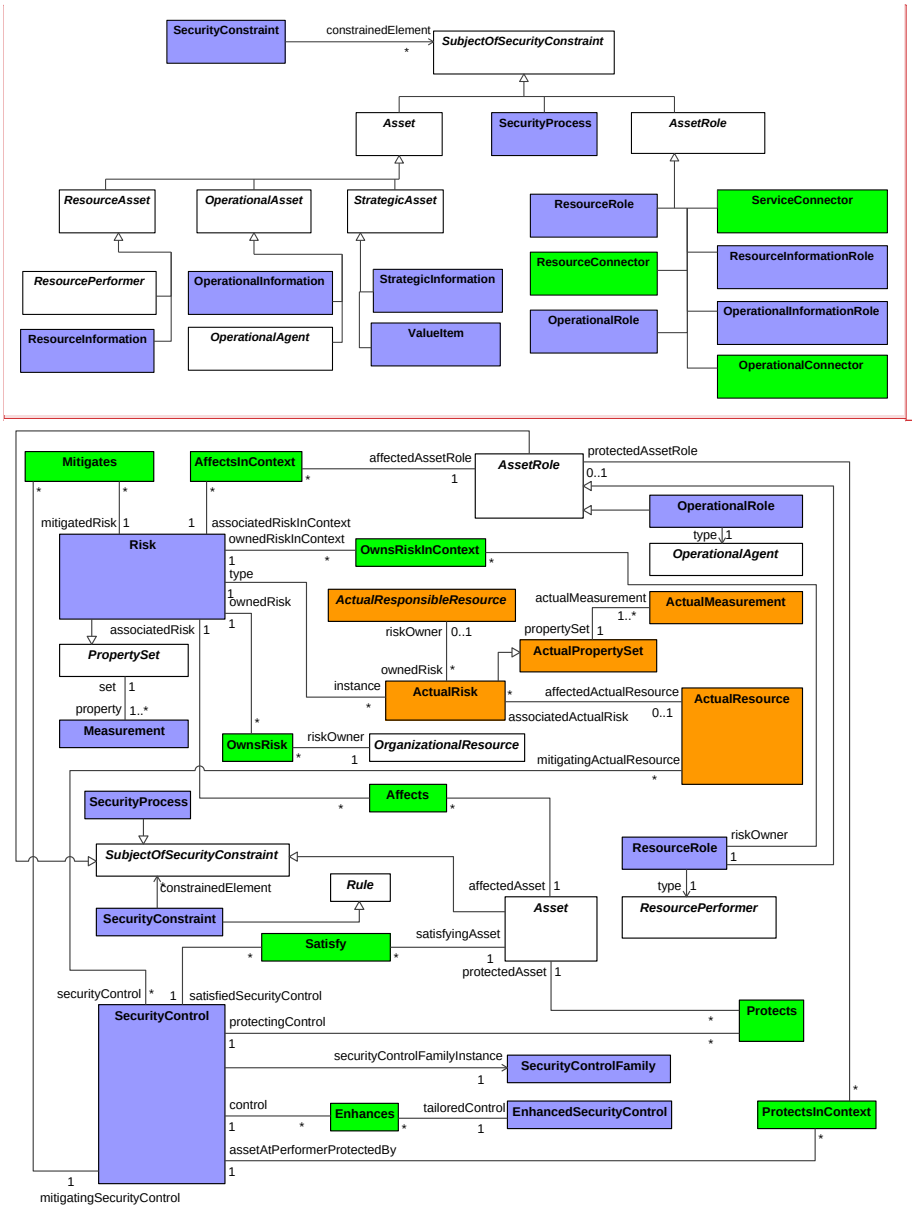

Figure 8:56 - Security Constraints

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UAF12-33
UAF12-5

Elements

- Asset
- AssetRole
- OperationalAgent
- OperationalAsset
- OperationalConnector
- OperationalInformation
- OperationalInformationRole
- OperationalRole
- ResourceAsset
- ResourceConnector
- ResourceInformation
- ResourceInformationRole
- ResourcePerformer
- ResourceRole
- SecurityConstraint
- SecurityProcess
- ServiceConnector
- StrategicAsset
- StrategicInformation
- SubjectOfSecurityConstraint
- ValueItem
- ~~ActualMeasurement~~
- ~~ActualPropertySet~~
- ~~ActualResource~~
- ~~ActualResponsibleResource~~
- ~~ActualRisk~~
- ~~Affects~~
- ~~AffectsInContext~~
- ~~Asset~~
- ~~AssetRole~~
- ~~EnhancedSecurityControl~~
- ~~Enhances~~
- ~~Measurement~~
- ~~Mitigates~~
- ~~OperationalAgent~~
- ~~OperationalRole~~
- ~~OrganizationalResource~~
- ~~OwnsRisk~~
- ~~OwnsRiskInContext~~
- ~~PropertySet~~
- ~~Protects~~
- ~~ProtectsInContext~~
- ~~ResourcePerformer~~
- ~~ResourceRole~~
- ~~Risk~~
- ~~Rule~~
- ~~Satisfy~~
- ~~SecurityConstraint~~
- ~~SecurityControl~~
- ~~SecurityControlFamily~~
- ~~SecurityProcess~~
- ~~SubjectOfSecurityConstraint~~

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UAF12-33

View Specifications::Security::Traceability

Contains the diagrams that document the Security Traceability View Specification~~Viewpoint~~.

Commented [KG201]: UAF12-41

View Specifications::Security::Traceability::Security Traceability

Stakeholders: Security Architects, Security Engineers, Risk Analysts.
Concerns: traceability between risk and risk owner, risk mitigations, and affected asset roles.
Definition: depicts the mapping of a risk to each of the following: risk owner, risk mitigations, and affected asset roles.
Recommended Implementation: Matrix format, SysML Block Definition Diagram.

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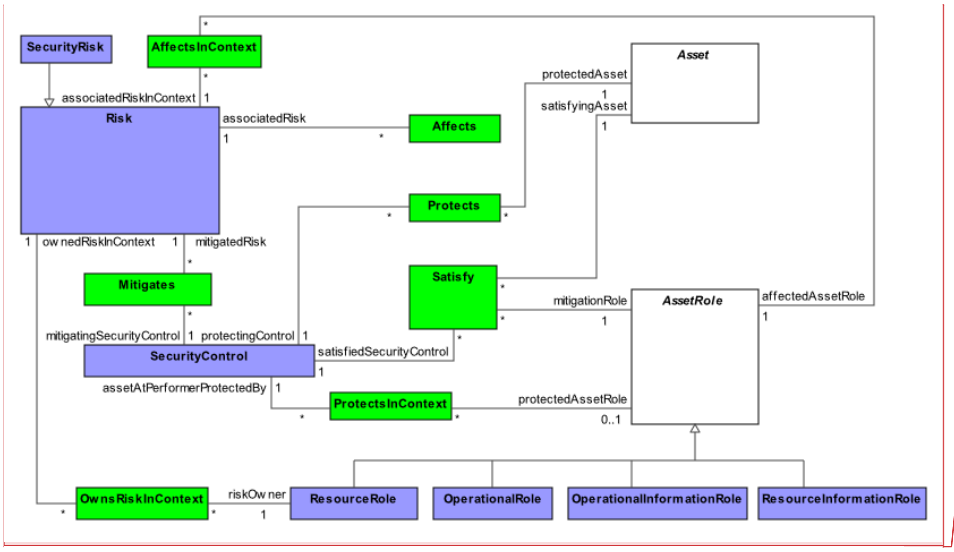

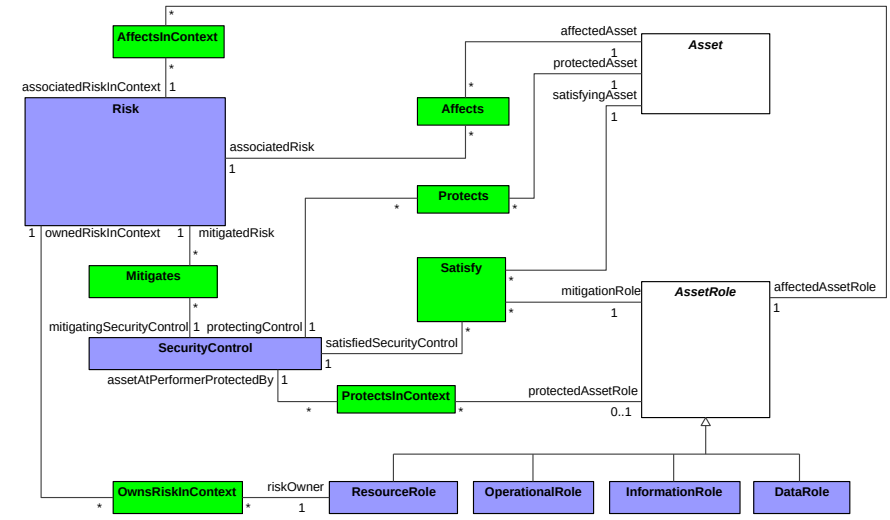

Figure 8:57 - Security Traceability

Elements

- Affects
- AffectsInContext
- Asset
- AssetRole
- Mitigates

- OperationalInformationRole
- OperationalRole
- OwnsRiskInContext
- Protects
- ProtectsInContext
- ResourceInformationRole
- ResourceRole
- Risk
- Satisfy
- SecurityControl
- ~~Affects~~
- ~~AffectsInContext~~
- ~~Asset~~
- ~~AssetRole~~
- ~~DataRole~~
- ~~InformationRole~~
- ~~Mitigates~~
- ~~OperationalRole~~
- ~~OwnsRiskInContext~~
- ~~Protects~~
- ~~ProtectsInContext~~
- ~~ResourceRole~~
- ~~Risk~~
- ~~Satisfy~~
- ~~SecurityControl~~

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~~8.1.55~~8.1.9 View Specifications::Projects

Stakeholders: PMs, Project Portfolio Managers, Enterprise Architects.
Concerns: project portfolio, projects and project milestones.
Definition: describes projects and project milestones, how those projects deliver capabilities, the organizations contributing to the projects and dependencies between projects.

View Specifications::Projects::Taxonomy

Contains the diagrams that document the Project Taxonomy View Specification~~Viewpoint~~.

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View Specifications::Projects::Taxonomy::Project Taxonomy

Stakeholders: PMs, Project Portfolio Managers, Enterprise Architects. Concerns: types of projects and project milestones. Definition: shows the taxonomy of types of projects and project milestones. Recommended Implementation: SysML Block Definition Diagram.

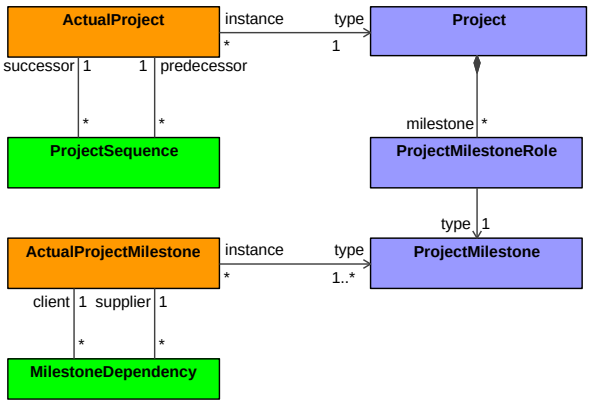

Figure 8:58 - Project Taxonomy
Elements

- ActualProject
- ActualProjectMilestone
- MilestoneDependency
- Project
- ProjectMilestone
- ProjectMilestoneRole
- ProjectSequence

View Specifications::Projects::Structure

Contains the diagrams that document the Project Structure View Specification~~Viewpoint~~.

Commented [KG205]: UAF12-41

View Specifications::Projects::Structure::Project Structure

Stakeholders: PMs.
Concerns: relationships between types of projects and project milestones.
Definition: provides a template for an actual project(s) road map(s) to be implemented.
Recommended Implementation: SysML Block Definition Diagram.

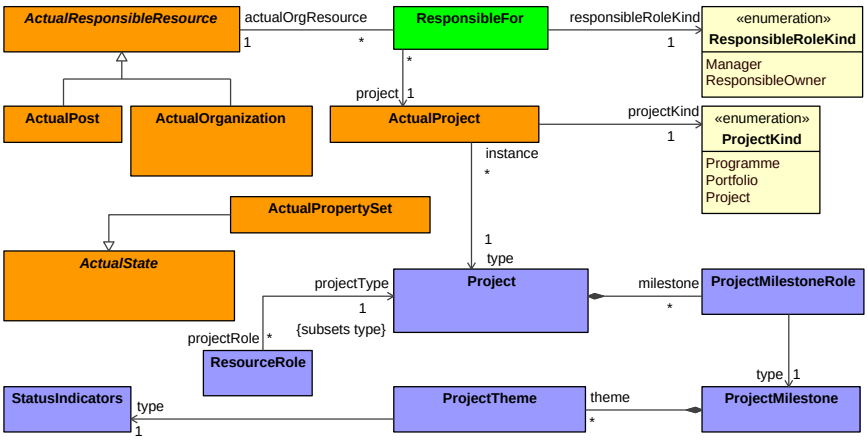

Figure 8:59 - Project Structure

Elements

- ActualOrganization
- ActualPost
- ActualProject
- ActualPropertySet
- ActualResponsibleResource
- ActualState
- Project
- ProjectMilestone
- ProjectMilestoneRole
- ProjectTheme
- ResourceRole
- ResponsibleFor
- StatusIndicators

View Specifications::Projects::Connectivity

Contains the diagrams that document the Project Connectivity View SpecificationViewpoint.

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View Specifications::Projects::Connectivity::Project Connectivity

Stakeholders: PMs.
Concerns: relationships between projects and project milestones.
Definition: shows how projects and project milestones are related in sequence.
Recommended Implementation: SysML Block Definition Diagram.

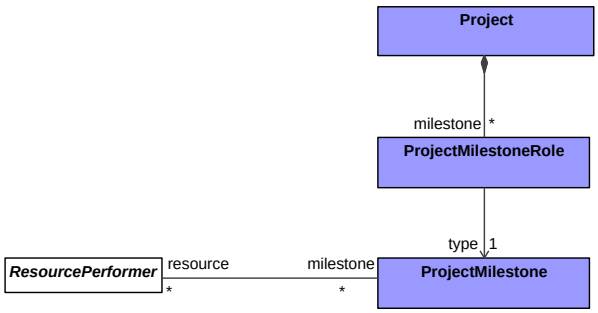


Figure 8:60 - Project Connectivity
Elements

- Project
- ProjectMilestone
- ProjectMilestoneRole
- ResourcePerformer

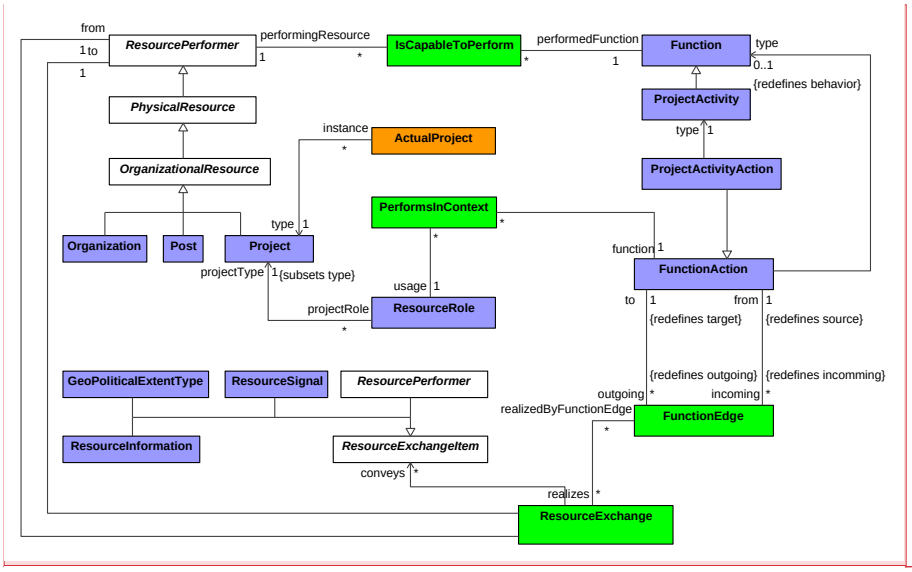
View Specifications::Projects::Processes

Contains the diagrams that document the Project Processes View Specification~~Viewpoint~~.

Commented [KG207]: UAF12-41

View Specifications::Projects::Processes::Project Processes

Stakeholders: PMs.
Concerns: captures project tasks (ProjectActivities) and flows between them.
Definition: describes the ProjectActivities that are normally conducted in the course of projects to support capability(ies) and implement resources. It describes the ProjectActivities, their Inputs/Outputs, ProjectActivityActions and flows between them.
Recommended Implementation: SysML Activity Diagram, SysML Block Definition Diagram, BPMN Process Diagram as described in Resources Processes section.



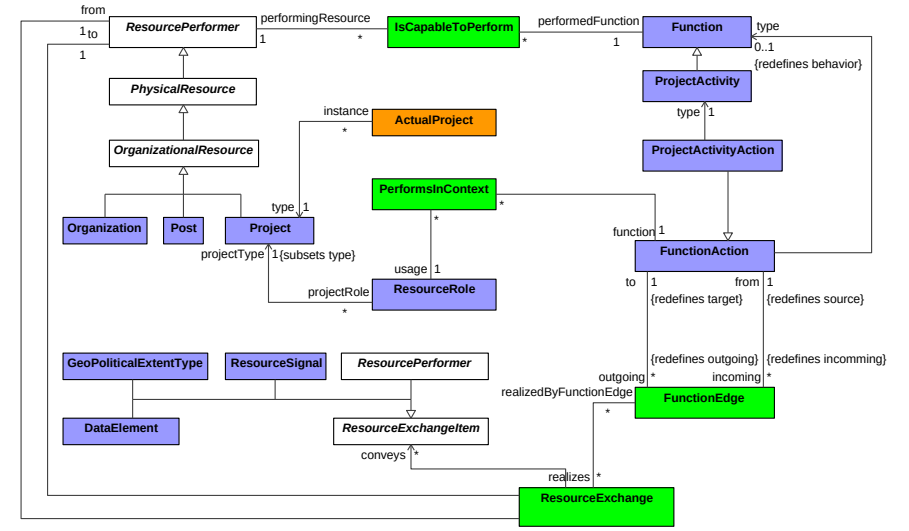


Figure 8:61 - Project Processes

Elements

- ActualProject
- Function
- FunctionAction

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- FunctionEdge
- GeoPoliticalExtentType
- IsCapableToPerform
- Organization
- OrganizationalResource
- PerformsInContext
- PhysicalResource
- Post
- Project
- ProjectActivity
- ProjectActivityAction
- ResourceExchange
- ResourceExchangeItem
- ResourceInformation
- ResourcePerformer
- ResourceRole
- ResourceSignal
- ~~ActualProject~~
- ~~DataElement~~
- ~~Function~~
- ~~FunctionAction~~
- ~~FunctionEdge~~
- ~~GeoPoliticalExtentType~~
- ~~IsCapableToPerform~~
- ~~Organization~~
- ~~OrganizationalResource~~
- ~~PerformsInContext~~
- ~~PhysicalResource~~
- ~~Post~~
- ~~Project~~
- ~~ProjectActivity~~
- ~~ProjectActivityAction~~
- ~~ResourceExchange~~
- ~~ResourceExchangeItem~~
- ~~ResourcePerformer~~
- ~~ResourceRole~~
- ~~ResourceSignal~~

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View Specifications::Projects::Roadmap

Contains the diagrams that document the Project Roadmap View Specification~~Viewpoint~~.

Commented [KG210]: UAF12-41

View Specifications::Projects::Roadmap::Project Roadmap

Stakeholders: PMs, Capability Owners, Solution Providers, Enterprise Architects.
Concerns: the product portfolio management; a planning of capability delivery.
Definition: provides a timeline perspective on programs or projects
Recommended Implementation: timeline, tabular format, SysML Block Definition Diagram.

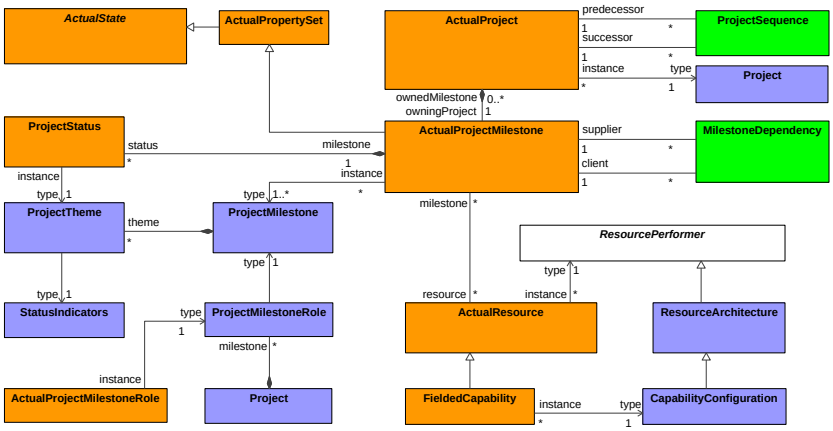

Figure 8:62 - Project Roadmap

Elements

- ActualProject
- ActualProjectMilestone
- ActualProjectMilestoneRole
- ActualPropertySet
- ActualResource
- ActualState
- CapabilityConfiguration
- FieldedCapability
- MilestoneDependency
- Project
- ProjectMilestone
- ProjectMilestoneRole
- ProjectSequence
- ProjectStatus
- ProjectTheme
- ResourceArchitecture
- ResourcePerformer
- StatusIndicators

View Specifications::Projects::Traceability

Contains the diagrams that document the Project Traceability Viewpoint.

View Specifications::Projects::Traceability::Project Traceability

Stakeholders: PMs, Project Portfolio Managers, Enterprise Architects.
Concerns: traceability between capabilities and projects that deliver them.
Definition: depicts the mapping of projects to capabilities and thus identifies the transformation of a capability(ies) into a purposeful implementation via projects.
Recommended Implementation: Matrix format, SysML Block Definition Diagram.

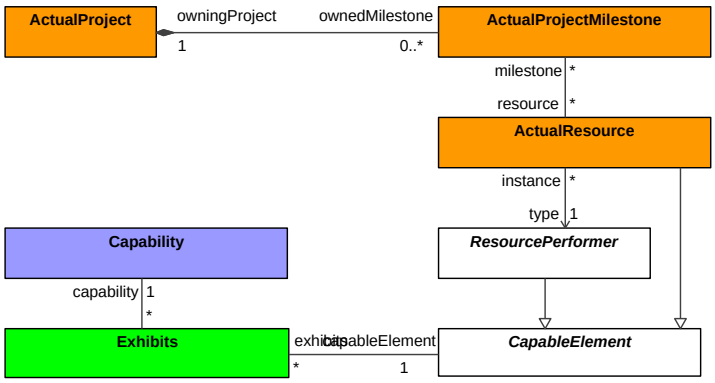

Figure 8:63 - Project Traceability

Elements

- ActualProject
- ActualProjectMilestone
- ActualResource
- Capability
- CapableElement
- Exhibits
- ResourcePerformer

~~8.1.56~~8.1.10 View Specifications::Standards

Stakeholders: Solution Providers, Systems Engineers, Software Engineers, Systems Architects, Business Architects.
Concerns: technical and non-technical Standards applicable to the architecture.
Definition: shows the technical, operational, and business Standards applicable to the architecture. Defines the underlying current and expected Standards.

View Specifications::Standards::Taxonomy

Contains the diagrams that document the Standards Taxonomy View Specification~~Viewpoint~~.

Commented [KG211]: UAF12-41

View Specifications::Standards::Taxonomy::Standards Taxonomy

Stakeholders: Solution Providers, Systems Engineers, Software Engineers, Systems Architects, Business Architects.
Concerns: technical and non-technical standards, guidance and policy applicable to the architecture.
Definition: shows the taxonomy of types of technical, operational, and business standards, guidance and policy applicable to the architecture.
Recommended Implementation: SysML Block Definition Diagram.

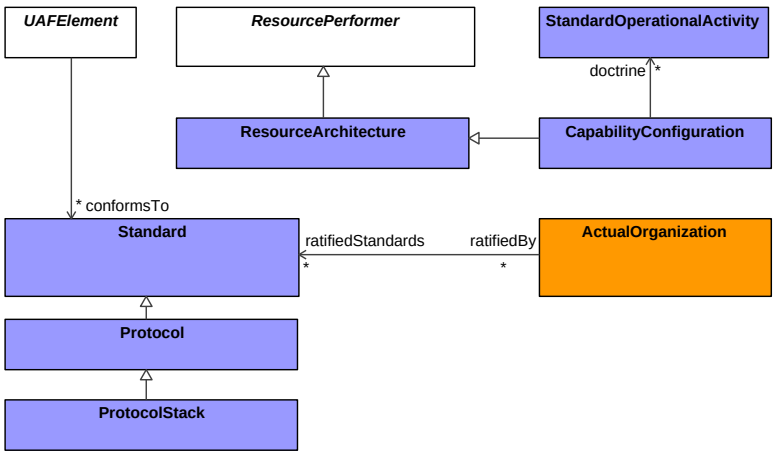

Figure 8:64 - Standards Taxonomy

Elements

- ActualOrganization
- CapabilityConfiguration
- Protocol
- ProtocolStack
- ResourceArchitecture
- ResourcePerformer
- Standard
- StandardOperationalActivity
- UAFElement

View Specifications::Standards::Structure

Contains the diagrams that document the Standards Structure View Specification~~Viewpoint~~.

Commented [KG212]: UAF12-41

View Specifications::Standards::Structure::Standards Structure

Stakeholders: Solution Providers, Systems Engineers, Software Engineers, Systems Architects.
Concerns: the specification of the protocol stack used in the architecture.
Definition: shows the composition of standards required to achieve the architecture's objectives.
Recommended Implementation: SysML Internal Block Diagram.

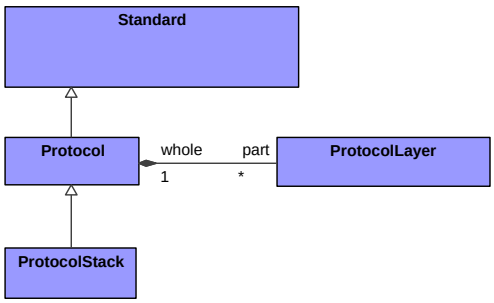

Figure 8:65 - Standards Structure
Elements

- Protocol
- ProtocolLayer
- ProtocolStack
- Standard

View Specifications::Standards::Roadmap

Contains the diagrams that document the Standards Roadmap View Specification~~Viewpoint~~.

Commented [KG213]: UAF12-41

View Specifications::Standards::Roadmap::Standards Roadmap

Stakeholders: Solution Providers, Systems Engineers, Systems Architects, Software Engineers, Business Architects.
Concerns: expected changes in technology-related standards and conventions, operational standards, or business standards and conventions.
Definition: defines the underlying current and expected standards. Expected standards are those that can be reasonably forecast given the current state of technology, and expected improvements / trends.
Recommended Implementation: timeline, tabular format, SysML Block Definition Diagram.

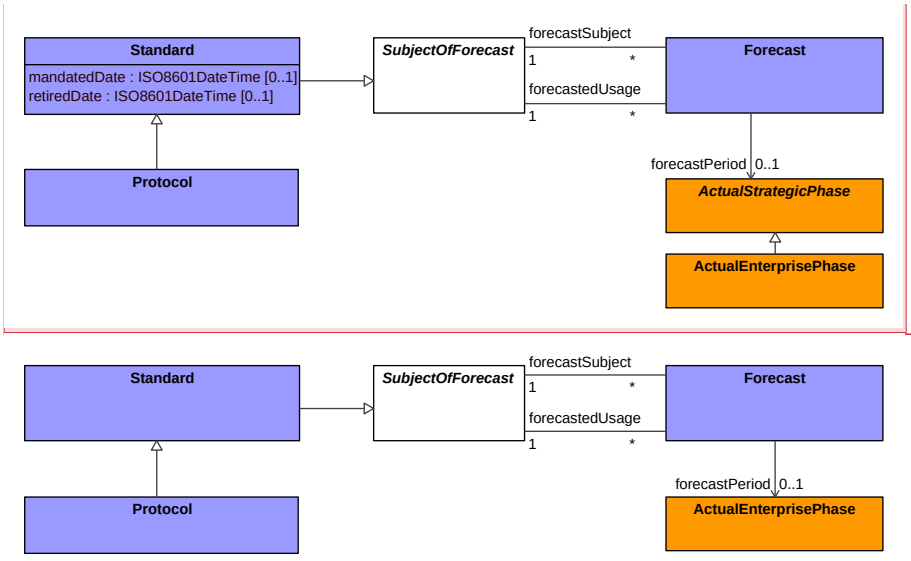

Figure 8:66 - Standards Roadmap

Elements

- ActualEnterprisePhase
- ActualStrategicPhase
- Forecast
- Protocol
- Standard
- SubjectOfForecast
- ~~ActualEnterprisePhase~~
- ~~Forecast~~
- ~~Protocol~~
- ~~Standard~~
- ~~SubjectOfForecast~~

View Specifications::Standards::Traceability

Contains the diagrams that document the Standards Traceability View Specification~~Viewpoint~~.

View Specifications::Standards::Traceability::Standards Traceability

Stakeholders: Solution Providers, Systems Engineers, Software Engineers, Systems Architects, Business Architects.
Concerns: standards that need to be taken in account to ensure the interoperability of the implementation of architectural elements.
Definition: shows the applicability of standards to specific elements in the architecture.
Recommended Implementation: tabular format, matrix format, SysML Block Definition Diagram.

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Commented [KG215]: UAF12-41

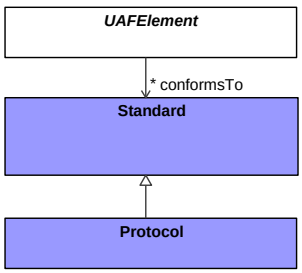

Figure 8:67 - Standards Traceability
Elements

- Protocol
- Standard
- UAFElement

~~8.1.57~~8.1.11 View Specifications::Actual Resources

Stakeholders: Solution Providers, Systems Engineers, Business Architects, Human Resources.
Concerns: the analysis.e.g. evaluation of different alternatives, what-if, trade-offs, V&V on the actual resource configurations.
Definition: illustrates the expected or achieved actual resource configurations and actual relationships between them.

View Specifications::Actual Resources::Structure

Contains the diagrams that document the Actual Resources Structure View Specification~~Viewpoint~~.

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View Specifications::Actual Resources::Structure::Actual Resources Structure

Stakeholders: Solution Providers, Systems Engineers, Business Architects.
Concerns: the analysis, e.g. evaluation of different alternatives, what-if, trade-offs, V&V on the actual resource configurations as it provides a means to capture different solution architectures. The detailed analysis (trade-off, what-if etc.) is carried out using the Resource Constraints view.
Definition: illustrates the expected or achieved actual resource configurations required to meet an operational need.
Recommended Implementation: SysML Block Definition Diagram.

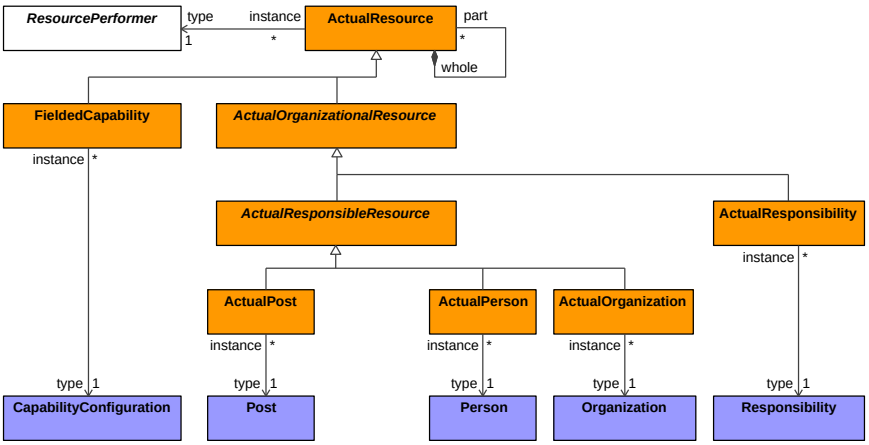

Figure 8:68 - Actual Resources Structure

Elements

- ActualOrganization
- ActualOrganizationalResource
- ActualPerson
- ActualPost
- ActualResource
- ActualResponsibility
- ActualResponsibleResource
- CapabilityConfiguration
- FieldedCapability
- Organization
- Person
- Post
- ResourcePerformer
- Responsibility

View Specifications::Actual Resources::Connectivity

Contains the diagrams that document the Actual Resources Connectivity View Specification~~Viewpoint~~.

Commented [KG217]: UAF12-41

View Specifications::Actual Resources::Connectivity::Actual Resources Connectivity

Stakeholders: Solution Providers, Systems Engineers, Business Architects.
Concerns: the communication of actual resource.
Definition: illustrates the actual resource configurations and actual relationships between them.
Recommended Implementation: tabular format, SysML Block Definition Diagram, SysML Internal Block Diagram, SysML Sequence Diagram.

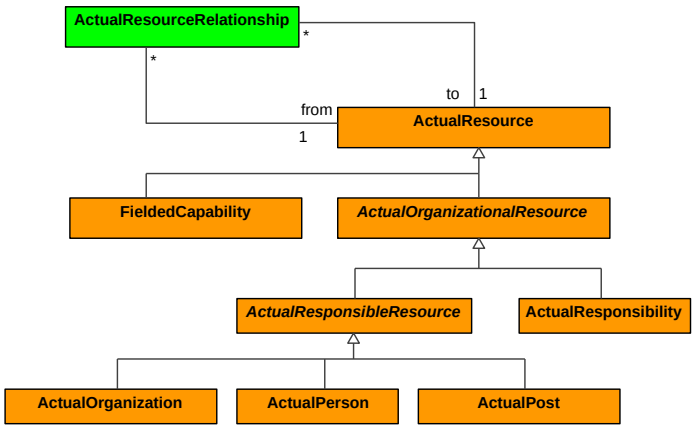

Figure 8:69 - Actual Resources Connectivity
Elements

- ActualOrganization
- ActualOrganizationalResource
- ActualPerson
- ActualPost
- ActualResource
- ActualResourceRelationship
- ActualResponsibility
- ActualResponsibleResource
- FieldedCapability

View Specifications::Actual Resources::Traceability

Contains the diagrams that document the Actual Resources Traceability View Specification~~Viewpoint~~.

Commented [KG218]: UAF12-41

View Specifications::Actual Resources::Traceability::Actual Resources Traceability

Stakeholders: Systems Engineers, Enterprise Architects, Solution Providers, Business Architects.
Concerns: traceability between operational activities and functions that implements them.
Definition: depicts the mapping of functions to operational activities and thus identifies the transformation of an operational need into a purposeful function performed by a resource or solution.
Recommended Implementation: Matrix format, SysML Block Definition Diagram.

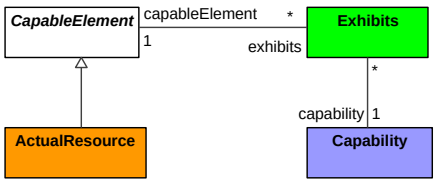

Figure 8:70 - Actual Resources Traceability
Elements

- ActualResource

- Capability
- CapableElement
- Exhibits

425.0.0 View Specifications::Dictionary

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Stakeholders: Architects, users of the architecture, Capability Owners, Systems Engineers, Solution Providers.
Concerns: Definitions for all the elements in the architecture, libraries of environments and measurements.
Definition: Presents all the elements used in an architecture. Can be used specifically to capture:
a. elements and relationships that are involved in defining the environments applicable to capability, operational concept or set of systems.
b. measurable properties that can be used to support analysis such as KPIs, MoEs, TPIs etc.

View Specifications::Dictionary::Dictionary

Stakeholders: Solution Providers, Systems Engineers, Software Architects, Business Architects.
Concerns: provides a central reference for a given architecture's data and metadata. It enables the set of architecture description to stand alone, with minimal reference to outside resources.
Definition: contains definitions of terms used in the given architecture. It consists of textual definitions in the form of a glossary, their taxonomies, and their metadata (i.e., data about architecture data), including metadata for any custom-tailored views. Architects should use standard terms where possible (i.e., terms from existing, approved dictionaries, glossaries, and lexicons).
Recommended Implementation: text, table format.

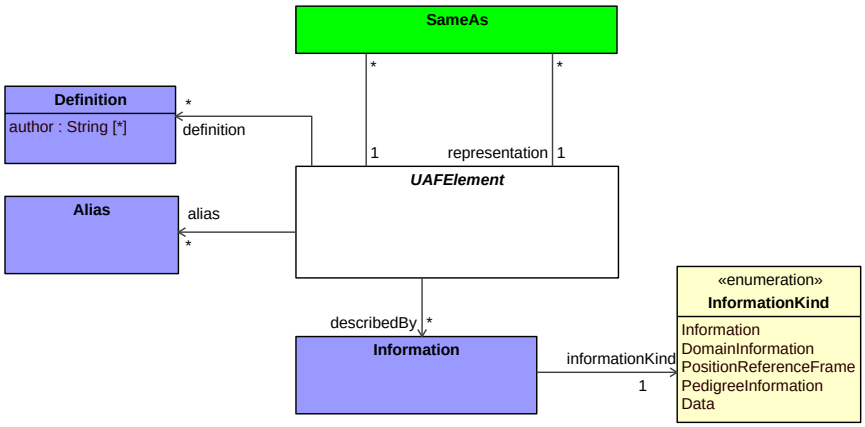

Figure 8:71 - Dictionary

Elements

- Alias
- Definition
- Information
- SameAs
- UAFElement

425.0.12 View Specifications::Summary & Overview

Stakeholders: Executives, PMs, Enterprise Architects.
Concerns: executive-level summary information in a consistent form.
Definition: provides executive-level summary information in a consistent form that allows quick reference and

comparison between architectural descriptions. Includes assumptions, constraints, and limitations that may affect high-level decisions relating to an architecture-based work programme.

View Specifications::Summary & Overview::Summary & Overview

Stakeholders: Decision makers, Solution Providers, Systems Engineers, Software Architects, Business Architects.
Concerns: quick overview of an architecture description and summary of analysis. In the initial phases of architecture development, it serves as a planning guide. Upon completion of an architecture, it provides a summary of findings, and any conducted analysis.
Definition: provides executive-level summary information in a consistent form that allows quick reference and comparison among architectures. The Summary and Overview includes assumptions, constraints, and limitations that may affect high-level decision processes involving the architecture.
Recommended Implementation: text, free form diagram, table format.

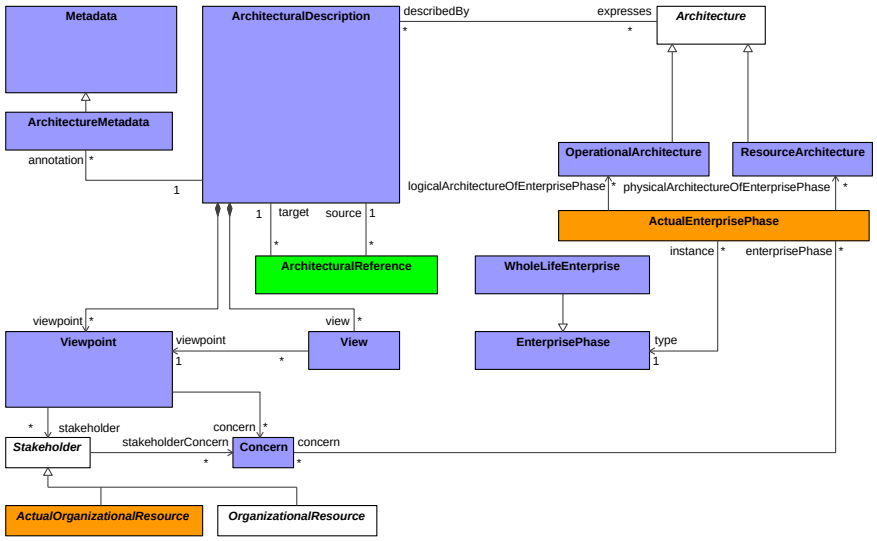

Figure 8:72 - Summary & Overview

Elements

- ActualEnterprisePhase
- ActualOrganizationalResource
- ArchitecturalDescription
- ArchitecturalReference
- Architecture
- ArchitectureMetadata
- Concern
- EnterprisePhase
- Metadata
- OperationalArchitecture
- OrganizationalResource
- ResourceArchitecture
- Stakeholder
- View

- ~~Viewpoint~~
- ~~WholeLifeEnterprise~~

8.1.12 View Specifications::Motivation

Stakeholders: Enterprise Architects, Enterprise Systems Engineers, Model Managers, System Architects, Requirement Engineers, Solution Providers, Systems Engineers, Software Engineers, Business Architects, Portfolio Managers, Program Managers, Security Architects, Security Engineers, Risk Analysts.
Concerns: (i) architecture drivers, challenges, opportunities, capabilities that address opportunities, phases and architectures that address challenges; (ii) requirements, their relationship (via traceability) to more detailed requirements and the solution described by the architecture that will meet those requirements; (iii) security controls, security control families, and overlays.
Definition: Identifies and defines motivational elements e.g., challenges, opportunities, and concerns, that pertain to enterprise transformation efforts, and different types of requirements, e.g., operational, services, personnel, resources, or security controls.
Recommended Implementation: SysML Block Definition Diagram, SysML Package Diagram, tabular format.

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~~8.1.58 View Specifications::Requirements~~

~~Stakeholders: Requirement Engineers, Solution Providers, Systems Engineers, Software Engineers, Systems Architects, Business Architects.~~
~~Concerns: requirements traceability.~~
~~Definition: used to represent requirements, their properties, and relationships (trace, verify, satisfy, refine) to UAF architectural elements.~~

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View Specifications::Motivation::Motivation: Requirements

~~View Specifications::Requirements::Requirements~~

Commented [KG222]: UAF12-50

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Stakeholders: Requirement Engineers, Solution Providers, Systems Engineers, Software Engineers, Systems Architects, Business Architects.
Concerns: provides a central reference for a set of stakeholder needs expressed as requirements, their relationship (via traceability) to more detailed requirements and the solution described by the architecture that will meet those requirements.
Definition: used to represent requirements, their properties, and relationships (trace, verify, satisfy, refine) between each other and to UAF architectural elements.
Recommended Implementation: SysML Requirement Diagram, tabular format, matrix format.

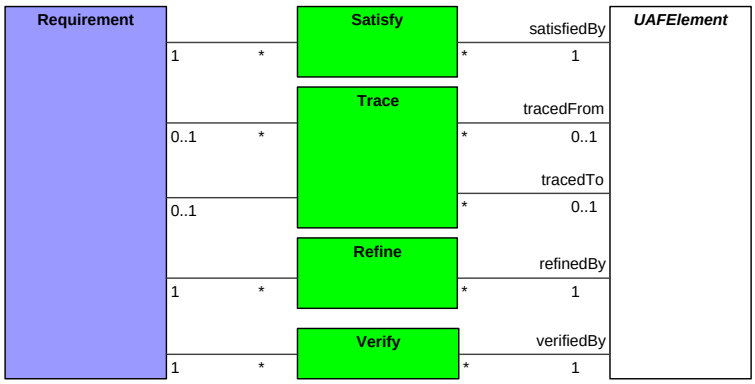

Figure 8:73 - Requirements

Elements

- Refine
- Requirement
- Satisfy
- Trace
- UAFElement
- Verify

~~8.1.59~~8.1.13 View Specifications::Information

Stakeholders: Data Modelers, Software Engineers, Systems Engineers
Concerns: address the information perspective on operational, service, and resource architectures.
Definition: allows analysis of an architecture's information and data definition aspect, without consideration of implementation specific issues.
Recommended Implementation: SysML Block Definition Diagram.

View Specifications::Information:: Information: Operational ~~Information Model~~

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Stakeholders: Data Modelers, Software Engineers, Systems Engineers, Operators and Users, Service Managers and Providers

Concerns: address the information perspective on operational and service architectures.

Definition: allows analysis of an architecture's information and data definition aspect, without consideration of implementation specific issues.

~~Stakeholders: Data Modelers, Software Engineers, Systems Engineers~~
~~Concerns: address the information perspective on operational, service, and resource architectures.~~
~~Definition: allows analysis of an architecture's information and data definition aspect, without consideration of implementation specific issues.~~

Commented [KG224]: UAF12-33

Recommended Implementation: SysML Block Definition Diagram.

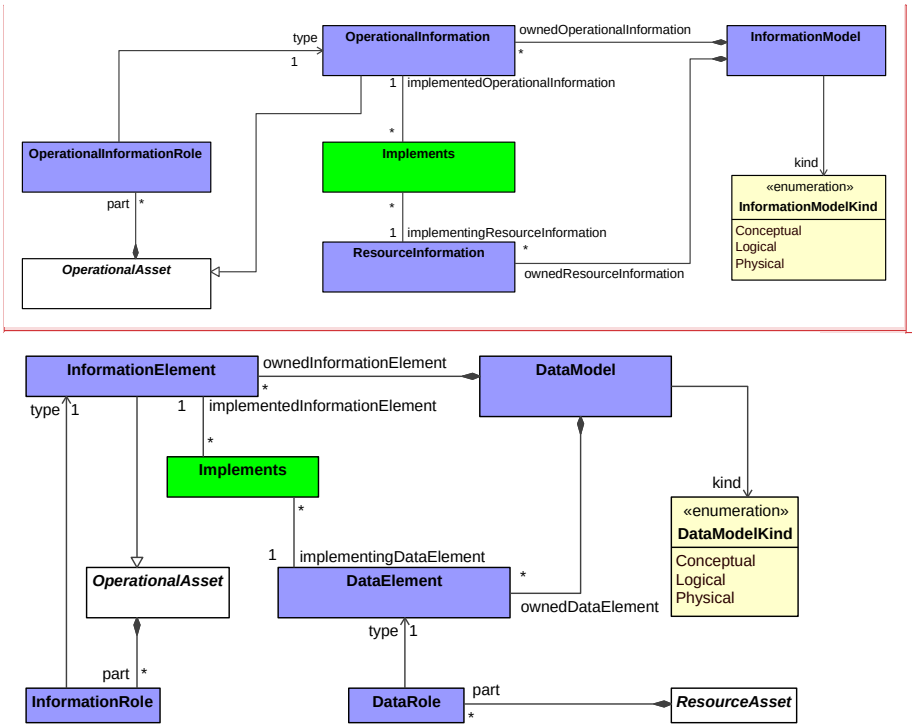

Figure 8:74 - Information: Operational Information ~~Information Model~~ Elements

- Implements
- InformationModel
- OperationalAsset
- OperationalInformation
- OperationalInformationRole
- ResourceInformation
- ~~DataElement~~
- ~~DataModel~~
- ~~DataRole~~
- ~~Implements~~
- ~~InformationElement~~
- ~~InformationRole~~
- ~~OperationalAsset~~
- ~~ResourceAsset~~

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View Specifications::Information::Information: Resources Information

Stakeholders: Data Modelers, Software Engineers, Systems Engineers

Concerns: address the information perspective on operational, service, and resource architectures.

Definition: allows analysis of an architecture's information and data definition aspect, without consideration of implementation specific issues.

Recommended Implementation: SysML Block Definition Diagram.

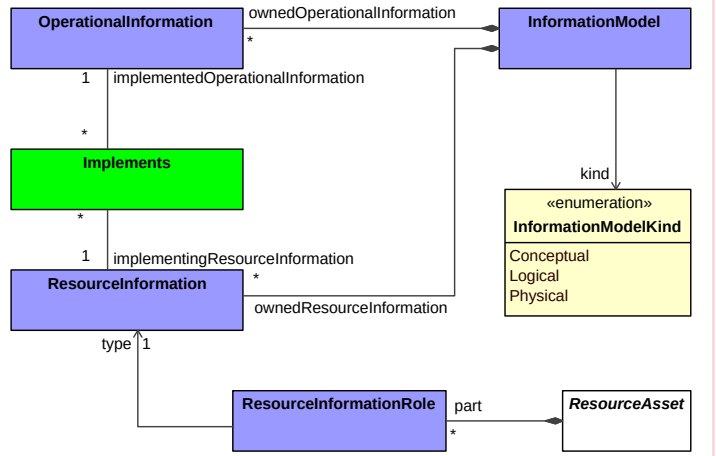

Figure 8:88 - Information: Resources Information

Elements

- Implements
- InformationModel
- OperationalInformation
- ResourceAsset
- ResourceInformation
- ResourceInformationRole

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~~8.1.60~~8.1.14 View Specifications::Parameters

Stakeholders: Capability owners, Systems Engineers, Solution Providers.
Concerns: identifies measurable properties that can be used to support engineering analysis and environment for the Capabilities
Definition: Shows the measurable properties of something in the physical world and elements and relationships that are involved in defining the environments applicable to capability, operational concept or set of systems.

View Specifications::Parameters::Parameters: Environment

Stakeholders: Capability owners, Systems Engineers, Solution Providers.
Concerns: defines the environment for the capabilities.
Definition: shows the elements and relationships that are involved in defining the environments applicable to capability, operational concept or set of systems.
Recommended Implementation: SysML Block Definition Diagram.

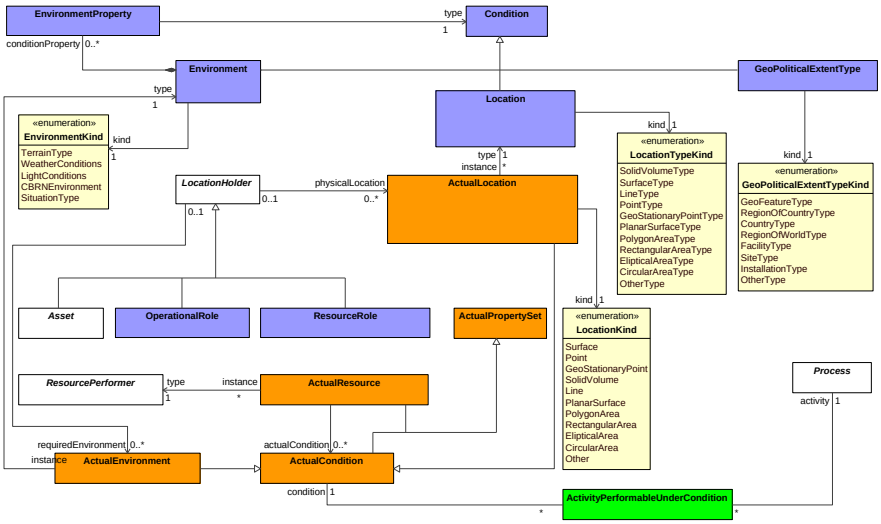
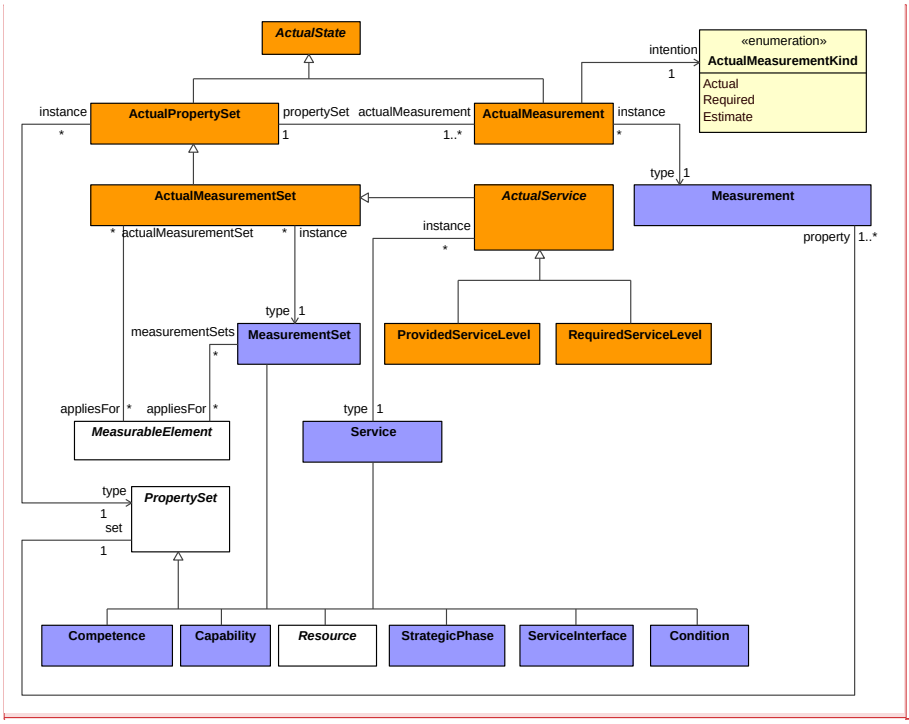


Figure 8:75 - Parameters: Environment
Elements

- ActivityPerformableUnderCondition
- ActualCondition
- ActualEnvironment
- ActualLocation
- ActualPropertySet
- ActualResource
- Asset
- Condition
- Environment
- EnvironmentProperty
- GeoPoliticalExtentType
- Location
- LocationHolder
- OperationalRole
- Process
- ResourcePerformer
- ResourceRole

View Specifications::Parameters::Parameters: Measurements

Stakeholders: Capability owners, Systems Engineers, Solution Providers.
Concerns: identifies measurable properties that can be used to support analysis such as KPIs, MoEs, TPIs etc.
Definition: Shows the measurable properties of something in the physical world, expressed in amounts of a unit of measure that can be associated with any element in the architecture.
Recommended Implementation: SysML Block Definition Diagram.



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UAF12-15

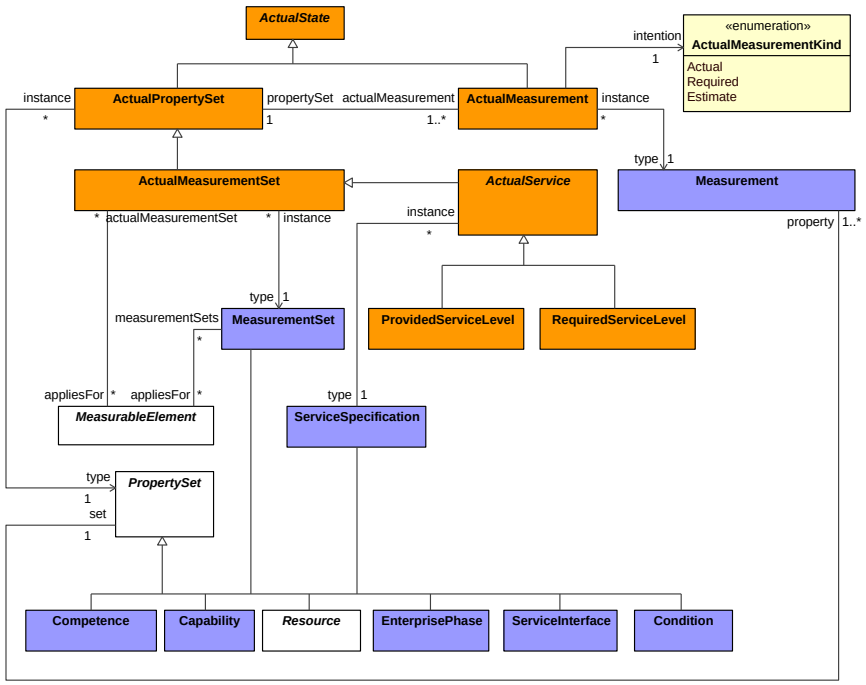

Figure 8:76 - Parameters: Measurements

Elements

- ActualMeasurement
- ActualMeasurementSet
- ActualPropertySet
- ActualService
- ActualState
- Capability
- Competence
- Condition
- MeasurableElement
- Measurement
- MeasurementSet
- PropertySet
- ProvidedServiceLevel
- RequiredServiceLevel
- Resource
- Service
- ServiceInterface
- StrategicPhase
- ~~ActualMeasurement~~
- ~~ActualMeasurementSet~~
- ~~ActualPropertySet~~

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UAF12-15

- ~~ActualService~~
- ~~ActualState~~
- ~~Capability~~
- ~~Competence~~
- ~~Condition~~
- ~~EnterprisePhase~~
- ~~MeasurableElement~~
- ~~Measurement~~
- ~~MeasurementSet~~
- ~~PropertySet~~
- ~~ProvidedServiceLevel~~
- ~~RequiredServiceLevel~~
- ~~Resource~~
- ~~ServiceInterface~~
- ~~ServiceSpecification~~

View Specifications::Parameters::Parameters: Risk

Stakeholders: Capability Owners, Systems Engineers, Solution Providers, Program Managers.

Concerns: identifies potential adverse conditions and situations that can inhibit achievement of goals.

Definition: Shows the relevant risks along with associated measures like likelihood of occurence and potential negative consequences.

Recommended Implementation: SysML Block Definition Diagram, matrix format.

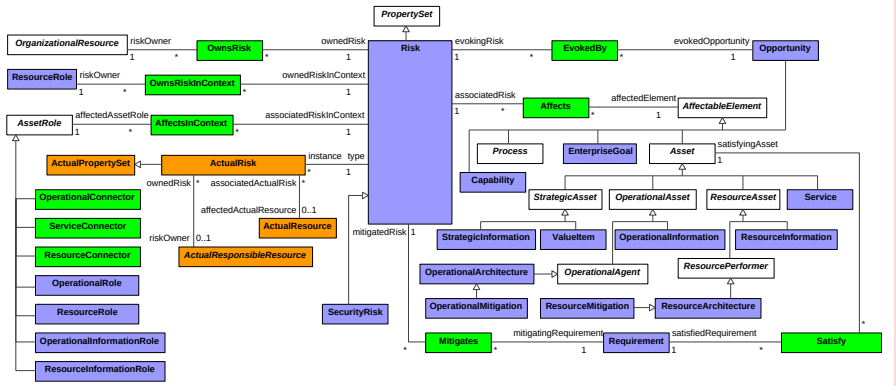

Figure 8:91 - Parameters: Risk

Elements

- ActualPropertySet
- ActualResource
- ActualResponsibleResource
- ActualRisk
- AffectableElement
- Affects
- AffectsInContext
- Asset
- AssetRole
- Capability
- EnterpriseGoal

- EvokedBy
- Mitigates
- OperationalAgent
- OperationalArchitecture
- OperationalAsset
- OperationalConnector
- OperationalInformation
- OperationalInformationRole
- OperationalMitigation
- OperationalRole
- Opportunity
- OrganizationalResource
- OwnsRisk
- OwnsRiskInContext
- Process
- PropertySet
- Requirement
- ResourceArchitecture
- ResourceAsset
- ResourceConnector
- ResourceInformation
- ResourceInformationRole
- ResourceMitigation
- ResourcePerformer
- ResourceRole
- Risk
- Satisfy
- SecurityRisk
- Service
- ServiceConnector
- StrategicAsset
- StrategicInformation
- ValueItem

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~~8.1.61~~8.1.15 View Specifications::Other

Contains the diagrams that document the use of BPMN, NIEM, IEPPV in the context of UAF.

View Specifications::Other::BPMN

Stakeholders: Business Architects, Enterprise Architects
Concerns: captures activity based behavior and flows.
Definition: describes the activities that are normally conducted in the course of achieving business goals that support a capability. It describes operational activities, their Inputs/Outputs, operational activity actions and flows between them using BPMN.
Recommended Implementation: BPMN Process Diagram.

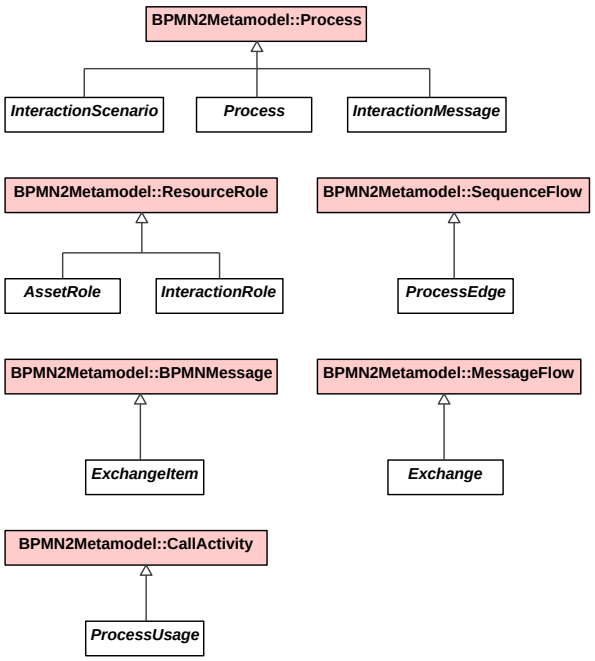

Figure 8:77 - BPMN
Elements

- AssetRole
- BPMN2Metamodel::BPMNMessage
- BPMN2Metamodel::CallActivity
- BPMN2Metamodel::MessageFlow
- BPMN2Metamodel::Process
- BPMN2Metamodel::ResourceRole
- BPMN2Metamodel::SequenceFlow
- Exchange
- ExchangeItem
- InteractionMessage
- InteractionRole
- InteractionScenario
- Process
- ProcessEdge
- ProcessUsage

View Specifications::Other::IEPPV

Stakeholders: Data Modelers, Solution Providers, Systems Engineers, Software Engineers, Systems Architects, Business Architects, information architects.
Concerns: information exchanges, information interfaces, information interoperability, information sharing and safeguarding.

Definition: UAFP supports information modeling and traceability to IEPPV model elements using the IEPPV-defined elements: Message, SemanticElement, and FilteredSemanticElement, used to represent data, properties/attributes, structure, format, and relationships. The IEPPV profile enables the specification of the policies, rules and constraints governing the packaging (assembly, transformation, marking, redaction) of data elements conforming to information sharing and safeguarding requirements. The IEPPV profile also governs the processing (parsing, transformation, and marshalling) received information and data element.
Recommended Implementation: UML Class Diagram, SysML Block Diagram.

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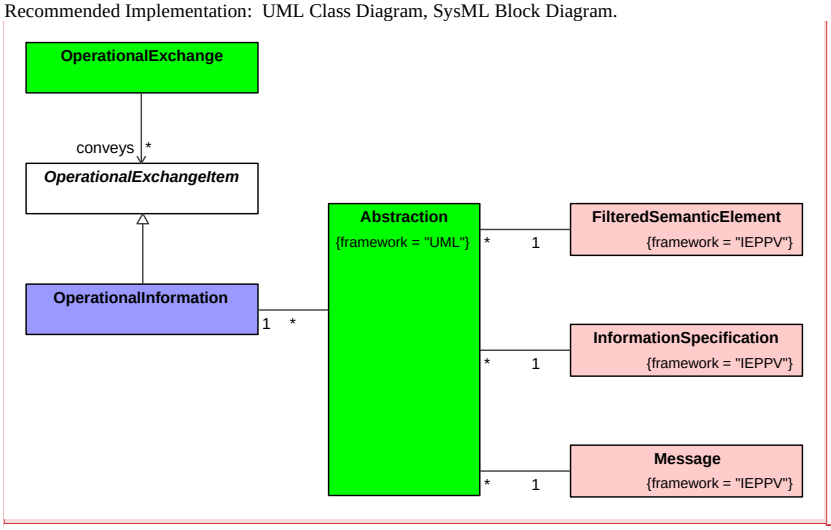

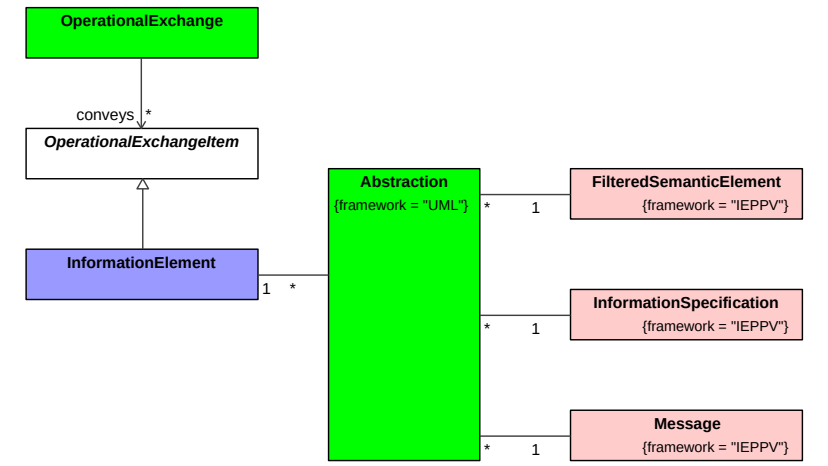

Figure 8:78 - IEPPV

Elements

- Abstraction
- FilteredSemanticElement

- InformationSpecification
- Message
- OperationalExchange
- OperationalExchangeItem
- OperationalInformation
- ~~Abstraction~~
- ~~FilteredSemanticElement~~
- ~~InformationElement~~
- ~~InformationSpecification~~
- ~~Message~~
- ~~OperationalExchange~~
- ~~OperationalExchangeItem~~

View Specifications::Other::NIEM

Stakeholders: Data Modelers, Solution Providers, Systems Engineers, Software Engineers, Systems Architects, Business Architects.
Concerns: information exchanges, information interoperability, data schema.
Definition: A specification representing the structure, semantics, and relationships of data objects that satisfy an information exchange requirement. Used for organizing and packaging Model Package Descriptions (MPDs) and Information Exchange Package Documentation (IEPD) as defined by the National Information Exchange Model (NIEM). An IEPD is a type of MPD. The NIEM MPD defines an Enterprise Information Exchange Model (EIEM) as an MPD that contains NIEM-conforming schemas that define and declare data components to be consistently reused in the IEPDs of an enterprise. An EIEM is a collection of schemas organized into a collection of subset schemas and one or more extension schemas. An information sharing enterprise creates and maintains an EIEM.
Recommended Implementation: UML Class Diagram, SysML Block Diagram.

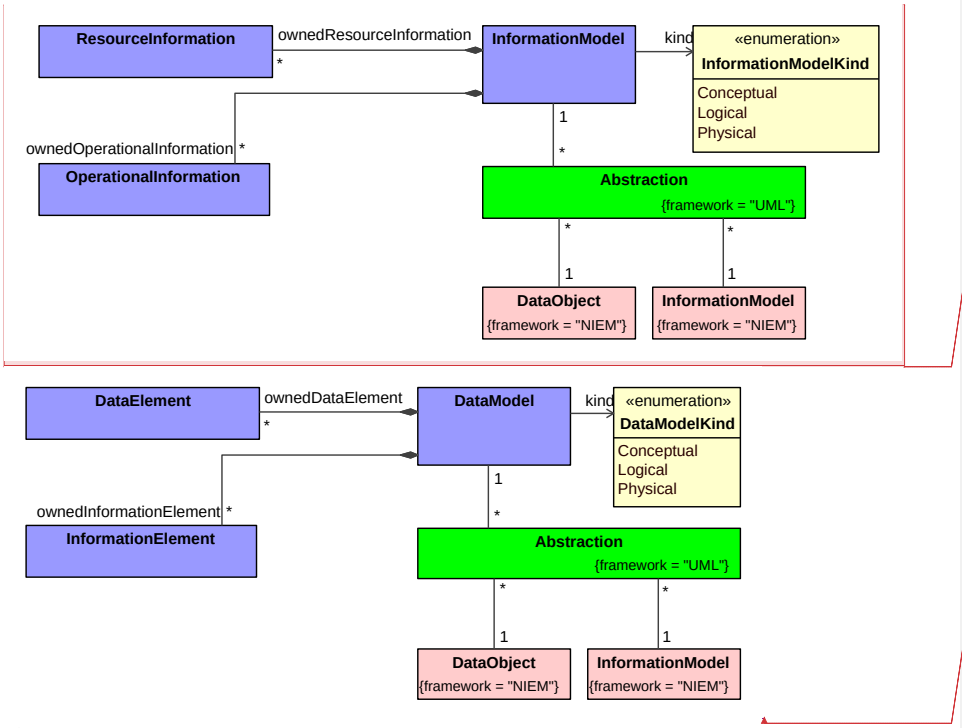

Figure 8:79 - NIEM

Elements

- Abstraction
- DataObject
- InformationModel
- InformationModel
- OperationalInformation
- ResourceInformation
- ~~Abstraction~~
- ~~DataElement~~
- ~~DataModel~~
- ~~DataObject~~
- ~~InformationElement~~
- ~~InformationModel~~

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~~15.~~9. Domain Metamodel (DMM) Elements

~~15.1~~9.1 Domain MetaModel

This package contains the elements of the DMM.

~~15.1.1~~9.1.1 Domain MetaModel:: Architecture Management~~Metadata~~

Stakeholders: Enterprise Architects, people who want to discover the architecture, Technical Managers.
Concerns: Captures meta-data relevant to the entire architecture
Definition: Provide information pertinent to the entire architecture. Present supporting information rather than architectural models.

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Domain MetaModel:: Architecture Management~~Metadata~~::Taxonomy

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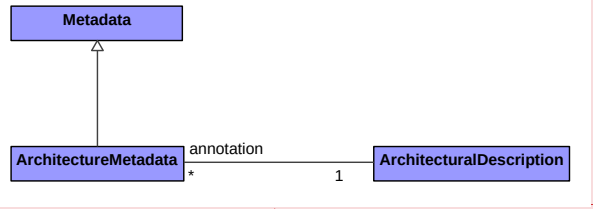
~~ArchitectureMetadata~~

~~**Package:** Taxonomy~~
~~isAbstract: No~~
~~**Generalization:** Metadata~~
~~Description~~
~~Information associated with an ArchitecturalDescription, that supplements the standard set of tags used to summarize the Architecture. It states things like what methodology was used, notation, etc.~~



~~**Figure 9:1 - ArchitectureMetadata**~~

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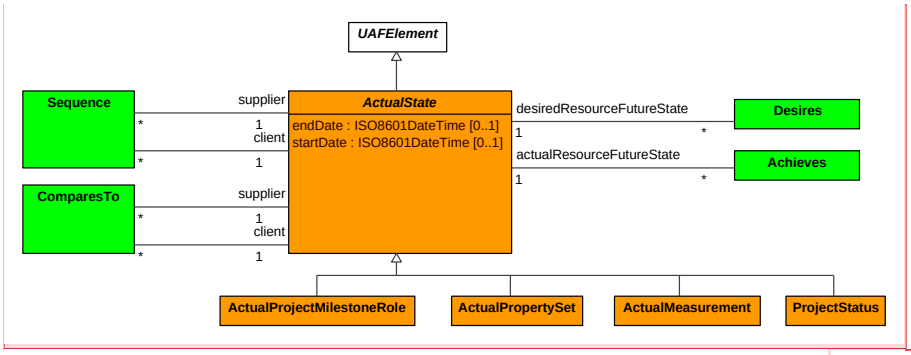
ActualState

Commented [KG238]: UAF12-54

Package: Parameters
isAbstract: Yes
Generalization: UAFElement
Description
Abstract element that applies temporal extent to a set of elements realized as Instance Specifications.



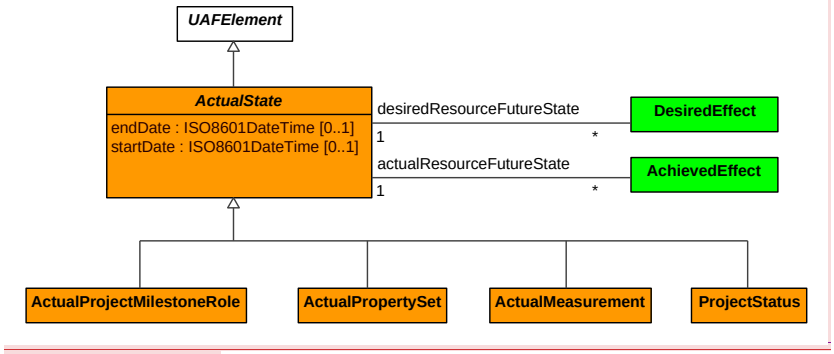


Figure 9:223 - ActualState

Attributes

endDate : ISO8601DateTime[0..1]	End time for all individual elements.
startDate : ISO8601DateTime[0..1]	Start time for all individual elements.

InteractionScenarioGeneralization

Package: Taxonomy

isAbstract: No

Generalization: UML2.5Metamodel::Generalization, MeasurableElement

Description

A InteractionScenarioGeneralization is a taxonomic relationship between a more general InteractionScenario and a more specific InteractionScenario.

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UAF12-117

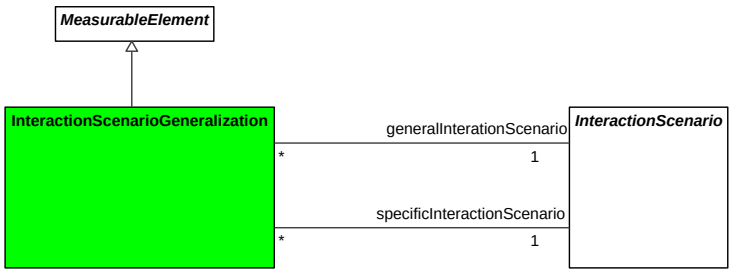

Figure 9:2 - InteractionScenarioGeneralization

ISO8601DateTime

Package: Parameters

isAbstract: No

Generalization: UAFElement

Description

A date and time specified in the ISO8601 date-time format including timezone designator (TZD): YYYY-MM-DDThh:mm:ssTZD.

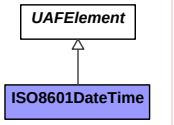

Figure 9:227 - ISO8601DateTime

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Moved from Parameters section

~~Metadata~~

~~Package:~~ ~~Taxonomy~~

~~isAbstract: No~~

~~Generalization:~~ ~~MeasurableElement~~

~~Description~~

~~A comment that can be applied to any element in the architecture. The attributes associated with this element details the relationship between the element and its related dublinCoreElement, metaDataScheme, category and name. This allows the element to be referenced using the Semantic Web.~~

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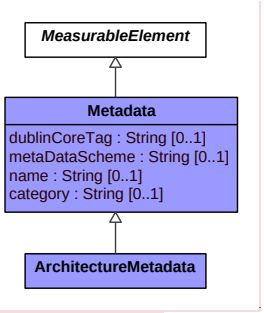
Moved to Architecture Management::Information. subsection



~~**Figure 9:3 - Metadata**~~

~~Attributes~~

~~category : String[0..1]~~	~~Defines the category of a Metadata element example: http://purl.org/dc/terms/abstract.~~
~~dublinCoreTag : String[0..1]~~	~~A metadata category that is a DublinCore tag.~~
~~metaDataScheme : String[0..1]~~	~~A representation scheme that defines a set of Metadata.~~
~~name : String[0..1]~~	~~The name of the Metadata.~~

ProcessGeneralization

Package: Taxonomy

isAbstract: No

Generalization: UML2.5Metamodel::Generalization, MeasurableElement

Description

A ProcessGeneralization is a taxonomic relationship between a more general Process and a more specific Process.

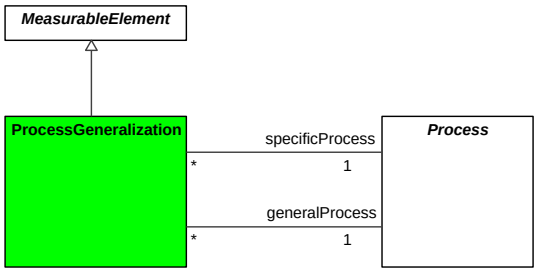


Figure 9:4 - ProcessGeneralization

PropertySetGeneralization

Package: Taxonomy

isAbstract: No

Generalization: UML2.5Metamodel::Generalization, MeasurableElement

Description

A PropertySetGeneralization is a taxonomic relationship between a more general PropertySet and a more specific PropertySet.

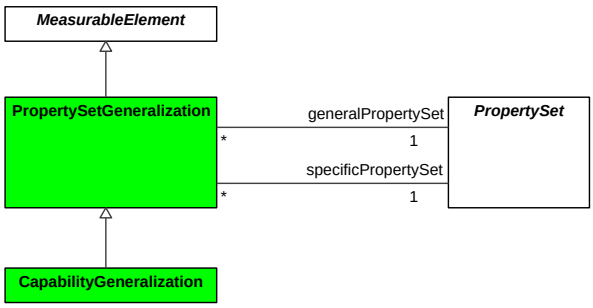


Figure 9:5 - PropertySetGeneralization

StateDescriptionGeneralization

Package: Taxonomy

isAbstract: No

Generalization: UML2.5Metamodel::Generalization, MeasurableElement

Description

A StateDescriptionGeneralization is a taxonomic relationship between a more general StateDescription and a more specific StateDescription.

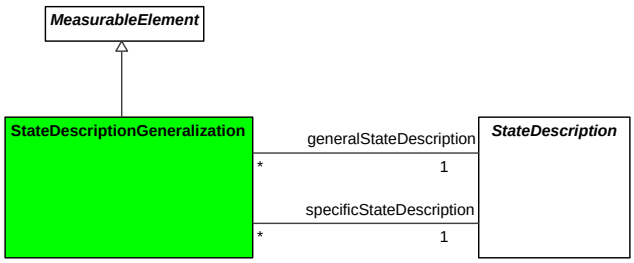


Figure 9:6 - StateDescriptionGeneralization

~~**Domain MetaModel::Metadata::Structure**~~

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~~**EnvironmentProperty**~~

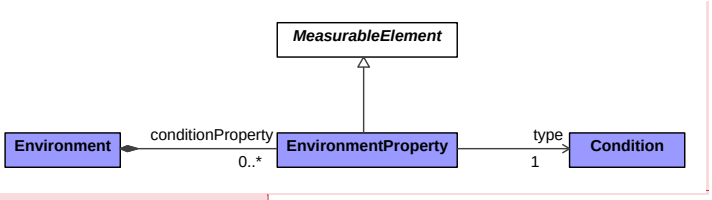
~~**Package:** Structure~~

~~isAbstract: No~~

~~**Generalization:** MeasurableElement~~

~~Description~~

~~A property of an Environment that is typed by a Condition. The kinds of Condition that can be represented are Location, GeoPoliticalExtentType and Environment.~~



~~Figure 9:7 - EnvironmentProperty~~

Commented [KG242]: Moved to Parameters section UAF12-54

Domain MetaModel:: Architecture Management~~Metadata~~::Connectivity

Commented [KG243]: UAF12-54

Exchange

Package: Connectivity

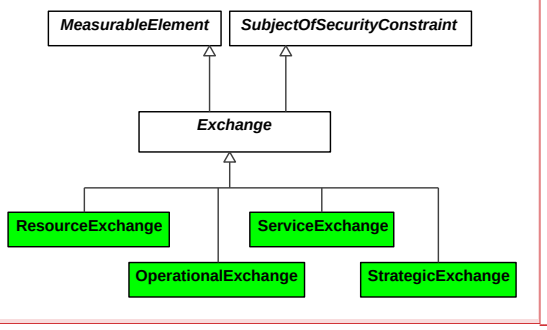
isAbstract: Yes

Generalization: MeasurableElement, BPMN2Metamodel::MessageFlow, SubjectOfSecurityConstraint

Description

Abstract tuple, grouping OperationalExchanges and ResourceExchanges that exchange Resources.

Commented [KG244]: UAF12-33
UAF12-52



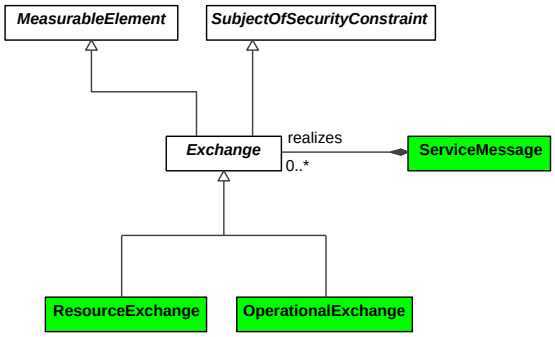


Figure 9:8 - Exchange

ExchangeItem

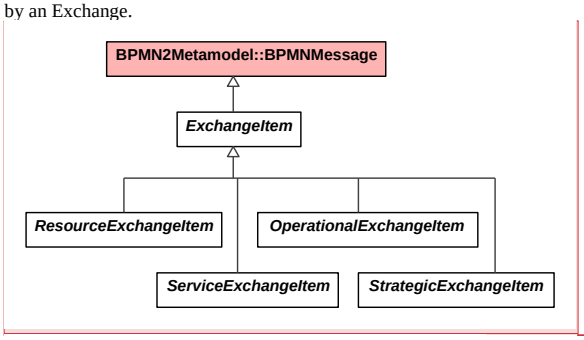
Package: Connectivity

isAbstract: Yes

Generalization: BPMN2Metamodel::BPMNMessage

Description

An abstract grouping for elements that defines the types of elements that can be exchanged between Assets and conveyed by an Exchange.



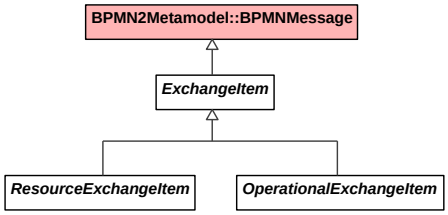


Figure 9:9 - ExchangeItem

Resource

Package: Connectivity

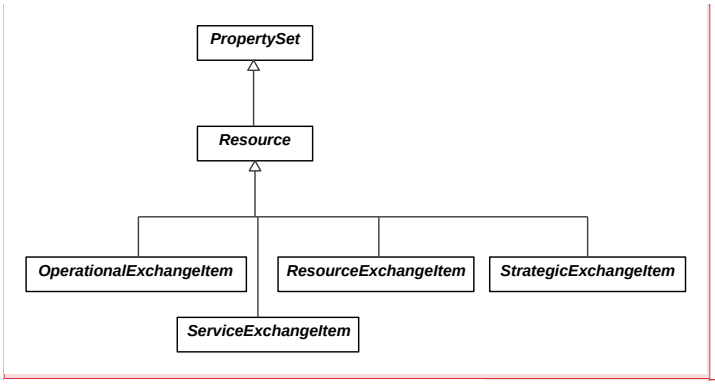
isAbstract: Yes

Generalization: PropertySet

Description

Abstract type grouping all elements that can be conveyed by an Exchange.

Commented [KG245]: UAF12-33
UAF12-52



Commented [KG246]: UAF12-33
UAF12-52

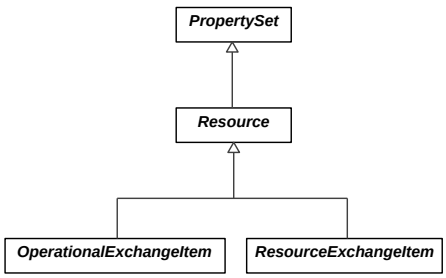


Figure 9:10 - Resource

Domain MetaModel:: Architecture ~~Management Metadata~~::Processes

Commented [KG247]: UAF12-54

ActivityPerformableUnderCondition

Package: Processes

isAbstract: No

Generalization: MeasurableElement

Description

The ActualCondition under which an Activity is performed.

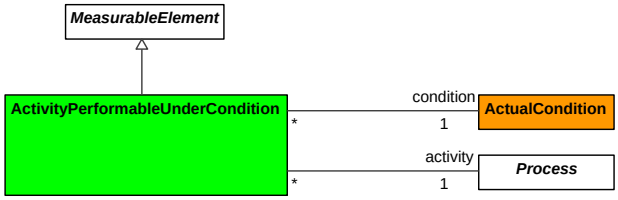


Figure 9:11 - ActivityPerformableUnderCondition

CapableElement

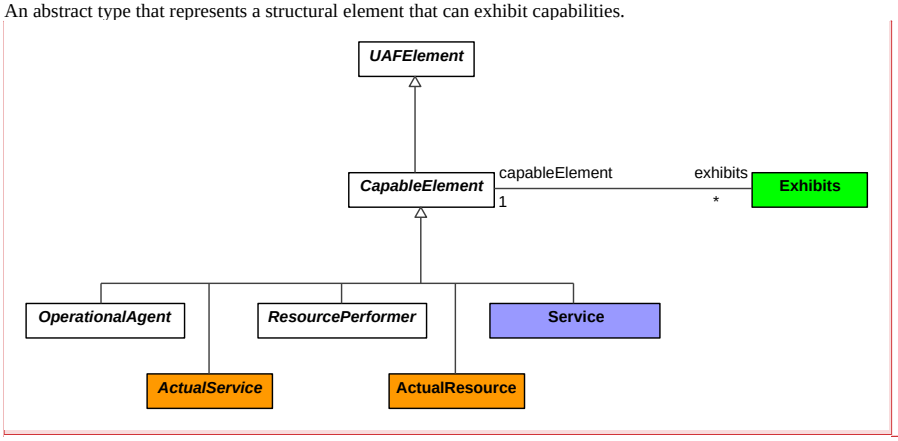
Package: Traceability

isAbstract: Yes

Generalization: UAFElement

Description

An abstract type that represents a structural element that can exhibit capabilities.



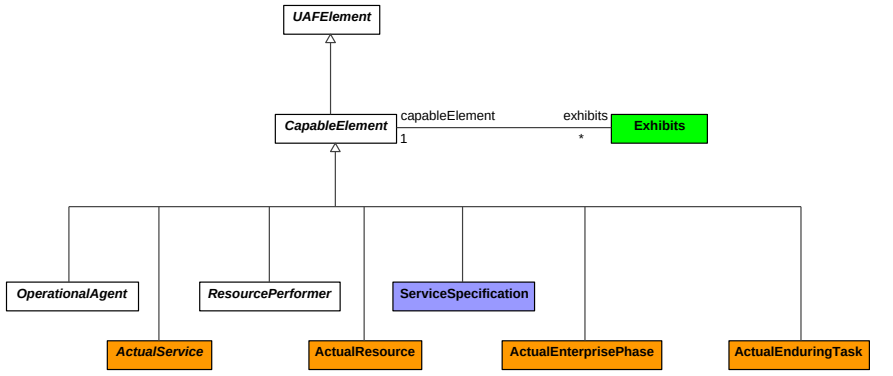


Figure 9:47 - CapableElement

Commented [KG248]: UAF12-15
UAF12-33

IsCapableToPerform

Package: Processes

isAbstract: No

Generalization: MeasurableElement

Description

A tuple defining the traceability between the structural elements to the Activities that they can perform.

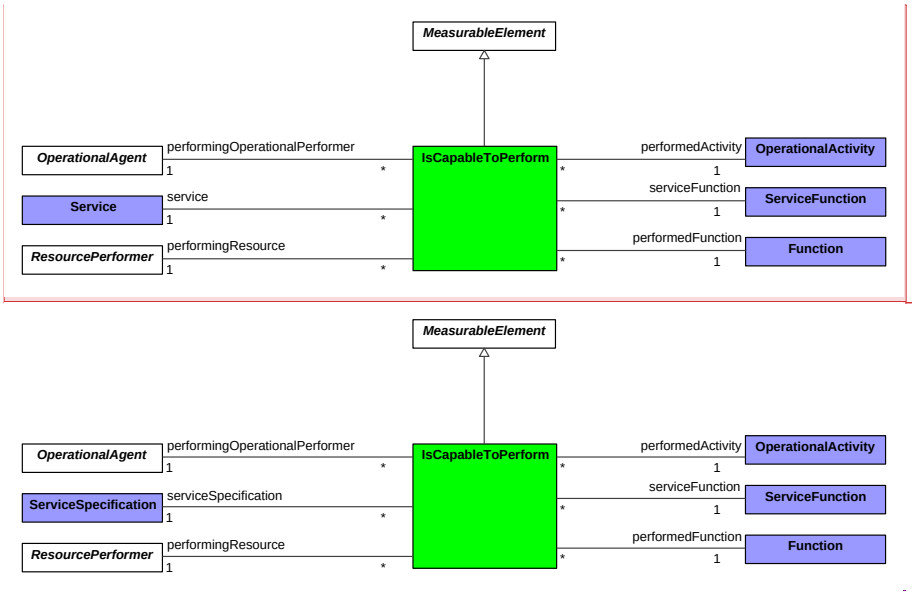


Figure 9:12 - IsCapableToPerform

PerformsInContext

Package: Processes

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that relates an OperationalAction to a OperationalRole, or a FunctionAction to a ResourceRole. It indicates that the action can be carried out by the role when used in a specific context or configuration.

Commented [KG249]: UAF12-33

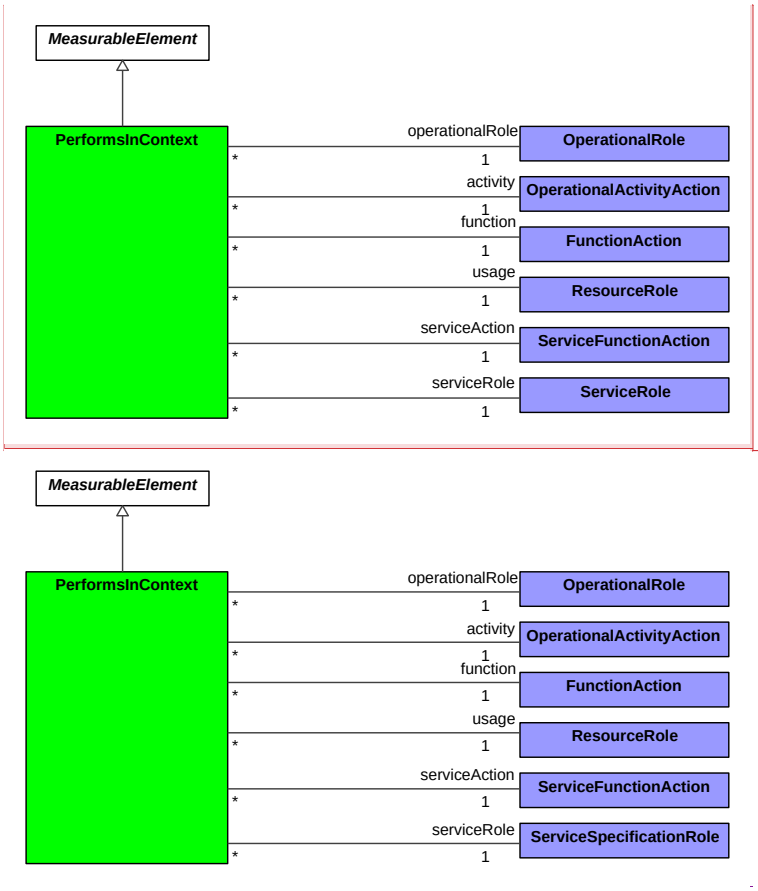


Figure 9:13 - PerformsInContext

Process

Package: Processes

isAbstract: Yes

Generalization: MeasurableElement, UML2.5Metamodel::Activity, BPMN2Metamodel::Process

Description

An abstract type that represents a behavior or process (i.e. a Function or OperationalActivity) that can be performed by a Performer.

Commented [KG250]: UAF12-33

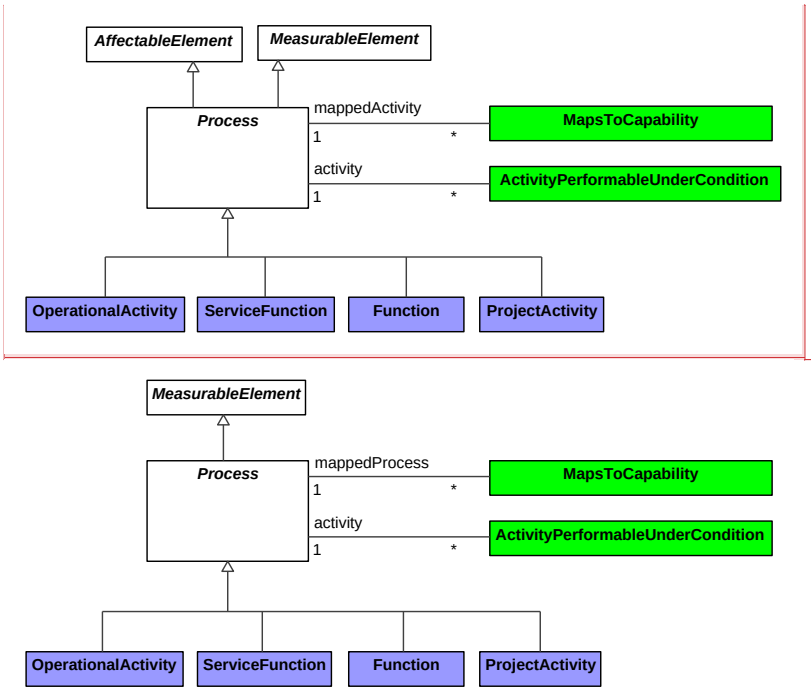


Figure 9:14 - Process

Commented [KG251]: UAF12-51

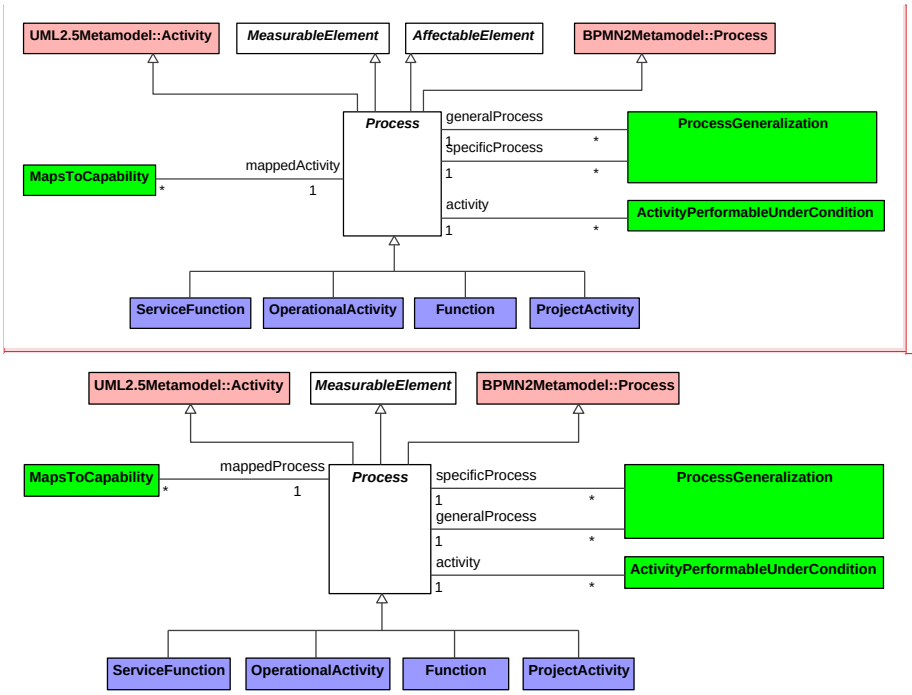


Figure 9:15 - Process

ProcessEdge

Package: Processes

isAbstract: Yes

Generalization: MeasurableElement, UML2.5Metamodel::Activity, UML2.5Metamodel::ActivityEdge, BPMN2Metamodel::SequenceFlow

Description

An abstract type that represents a behavior or process (i.e. a Function or OperationalActivity) that can be performed by a Performer.

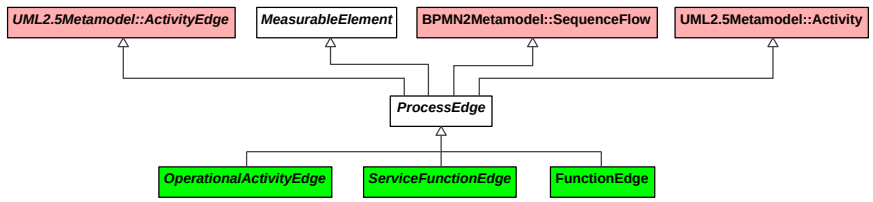


Figure 9:16 - ProcessEdge

Commented [KG252]: UAF12-51

ProcessOperation

Package: Processes

isAbstract: Yes

Generalization: MeasurableElement, UML2.5Metamodel::Activity, UML2.5Metamodel::Operation
Description

An abstract type that represents a behavior or process (i.e. a Function or OperationalActivity) that can be performed by a Performer.

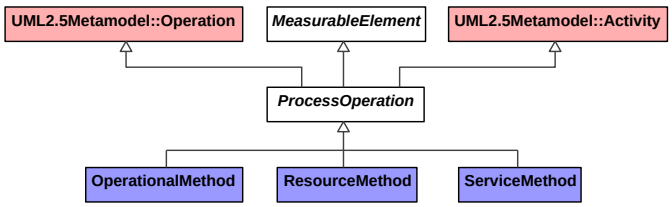


Figure 9:17 - ProcessOperation

ProcessParameter

Package: Processes

isAbstract: Yes

Generalization: MeasurableElement, UML2.5Metamodel::Activity, UML2.5Metamodel::CallBehaviorAction, UML2.5Metamodel::Parameter
Description

An abstract type that represents a behavior or process (i.e. a Function or OperationalActivity) that can be performed by a Performer.

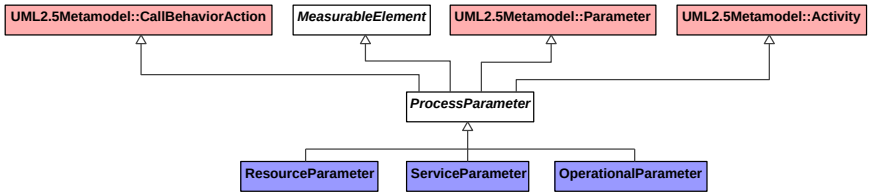


Figure 9:18 - ProcessParameter

ProcessUsage

Package: Processes

isAbstract: Yes

Generalization: MeasurableElement, UML2.5Metamodel::Activity, UML2.5Metamodel::CallBehaviorAction, BPMN2Metamodel::CallActivity
Description

An abstract type that represents a behavior or process (i.e. a Function or OperationalActivity) that can be performed by a Performer.

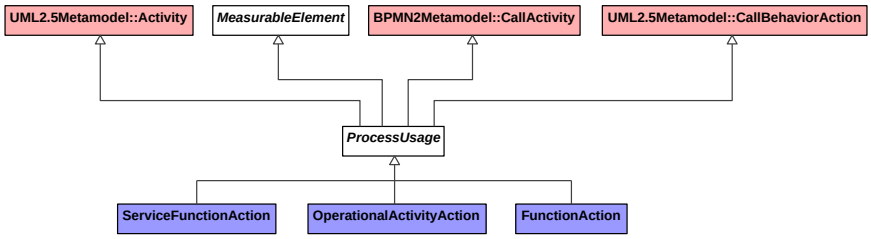


Figure 9:19 - ProcessUsage

Domain MetaModel:: Architecture Management~~Metadata~~::States

Commented [KG253]: UAF12-54

StateDescription

Package: States

isAbstract: Yes

Generalization: UML2.5Metamodel::StateMachine

Description

An abstract type that represents a state machine (i.e. an OperationalStateDescription or ResourceStateDescription), depicting how the Asset responds to various events and the actions.

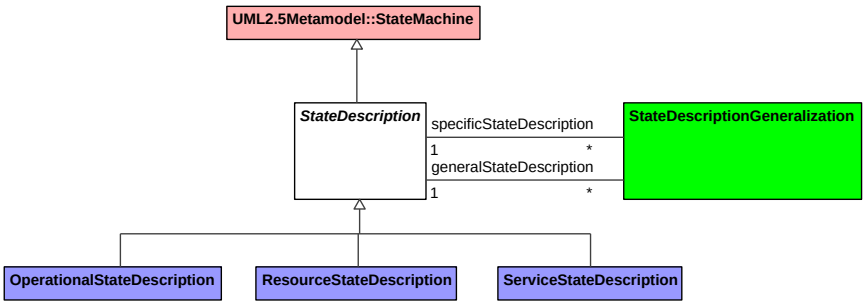


Figure 9:20 - StateDescription

Domain MetaModel:: Architecture Management~~Metadata~~:: Sequences~~Interaction Scenarios~~

Commented [KG254]: UAF12-54

Commented [KG255]: UAF12-59

InteractionMessage

Package: ~~Interaction Scenarios~~Sequences

Commented [KG256]: UAF12-59

isAbstract: Yes

Generalization: MeasurableElement, UML2.5Metamodel::Activity, BPMN2Metamodel::Process, UML2.5Metamodel::Interaction, UML2.5Metamodel::Message

Description

An abstract type that groups several types of messages used in the InteractionScenario.

InteractionRole

Package: Interaction Scenarios

isAbstract: Yes

Generalization: BPMN2Metamodel::ResourceRole

Description

An abstract type that represents an individual participant in the InteractionScenario.

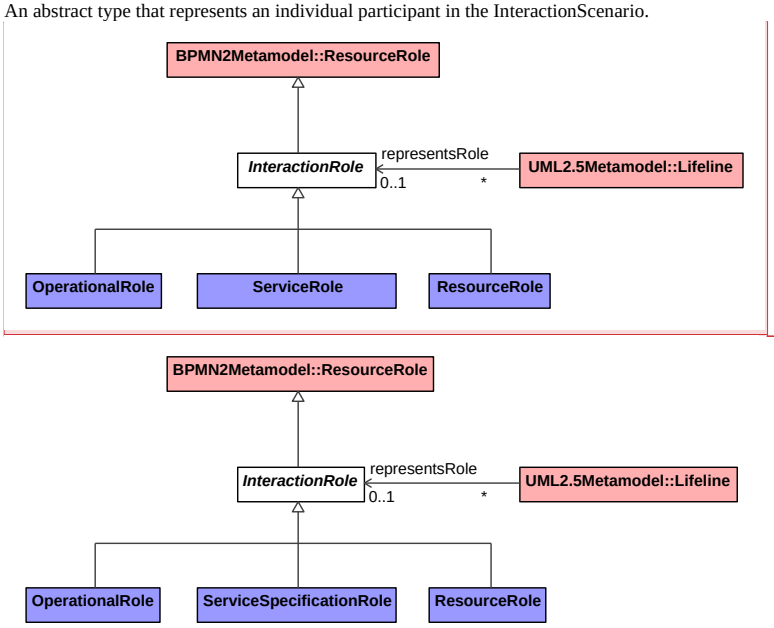


Figure 9:21 - InteractionRole

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InteractionScenario

Package: Interaction Scenarios

isAbstract: Yes

Generalization: MeasurableElement, UML2.5Metamodel::Activity, BPMN2Metamodel::Process, UML2.5Metamodel::Interaction

Description

An abstract type that specifies interactions between Assets, like ResourcePerformers, and ServiceSpecifications.

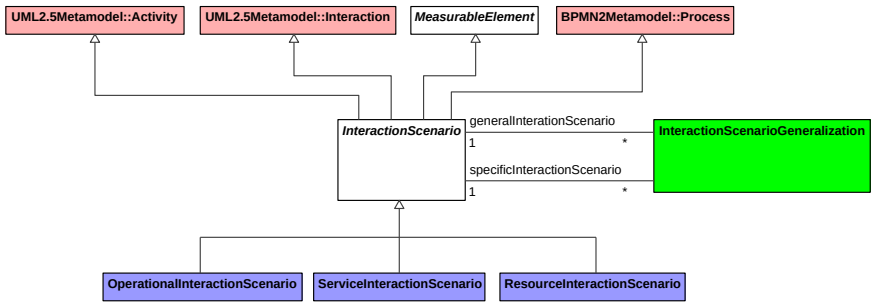

Figure 9:22 - InteractionScenario

Domain MetaModel:: Architecture ~~Management Metadata~~::Information

Commented [KG258]: UAF12-54

Alias

Commented [KG261]: UAF12-54

Package: ~~Dictionary~~ Information

Commented [KG259]: UAF12-54

isAbstract: No

Generalization: MeasurableElement

Description

A metamodel Artifact used to define an alternative name for an element.

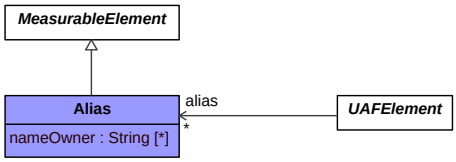

Figure 9:23 - Alias

Attributes

nameOwner : Someone or something that uses this alternative name.

ArchitectureMetadata

Package: Taxonomy

isAbstract: No

Generalization: Metadata

Description

Information associated with an ArchitecturalDescription, that supplements the standard set of tags used to summarize the Architecture. It states things like what methodology was used, notation, etc.

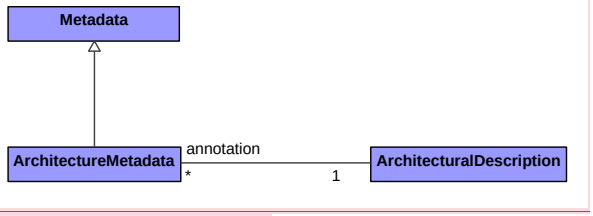

Figure 9:1 - ArchitectureMetadata

Definition

Package: ~~Dictionrary~~Information

isAbstract: No

Generalization: MeasurableElement

Description

A comment containing a description of an element in the architecture.

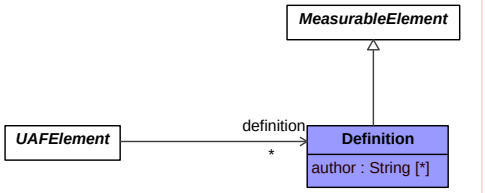

Figure 9:24 - Definition

Attributes

author : The original or current person (architect) responsible for the Definition.

Information

Package: Information

isAbstract: No

Generalization: MeasurableElement

Description

A comment that describes the state of an item of interest in any medium or form -- and is communicated or received.

Commented [KG260]: UAF12-54

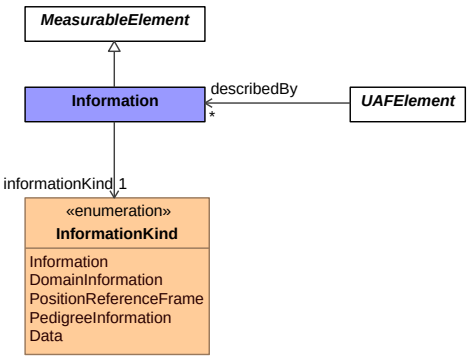

Figure 9:23 - Information

InformationModel

Package: Information

isAbstract: No

Generalization: SubjectOfOperationalConstraint, SubjectOfResourceConstraint

Description

A structural specification of data types, showing relationships between them. The type of information captured in the InformationModel is described using the enumeration InformationModelKind (Conceptual, Logical, and Physical).

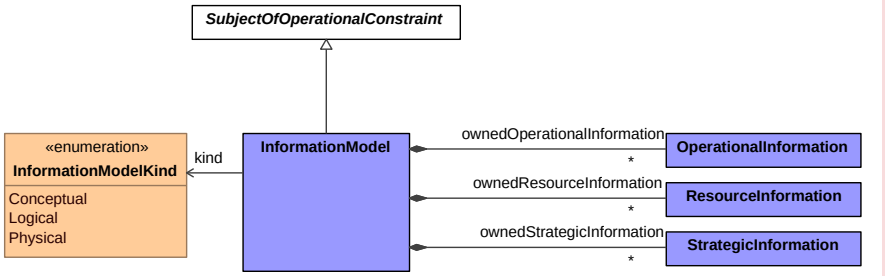

Figure 9:26 - InformationModel

Metadata

Commented [KG262]: UAF12-54
Moved from Taxonomy subsection

Package: Taxonomy

isAbstract: No

Generalization: MeasurableElement

Description

A comment that can be applied to any element in the architecture. The attributes associated with this element details the relationship between the element and its related dublinCoreElement, metaDataScheme, category and name. This allows the element to be referenced using the Semantic Web.

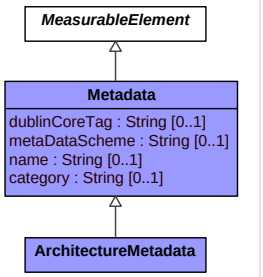

Figure 9:3 - Metadata

Attributes

category : String[0..1]	Defines the category of a Metadata element example: http://purl.org/dc/terms/abstract.
dublinCoreTag : String[0..1]	A metadata category that is a DublinCore tag.
metaDataScheme : String[0..1]	A representation scheme that defines a set of Metadata.
name : String[0..1]	The name of the Metadata.

SameAs

Package: Information

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that asserts that two elements refer to the same real-world thing.

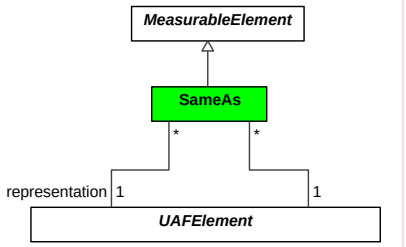

Figure 9:27 - SameAs

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Domain MetaModel:: Architecture Management~~Metadata~~::Constraints

Rule

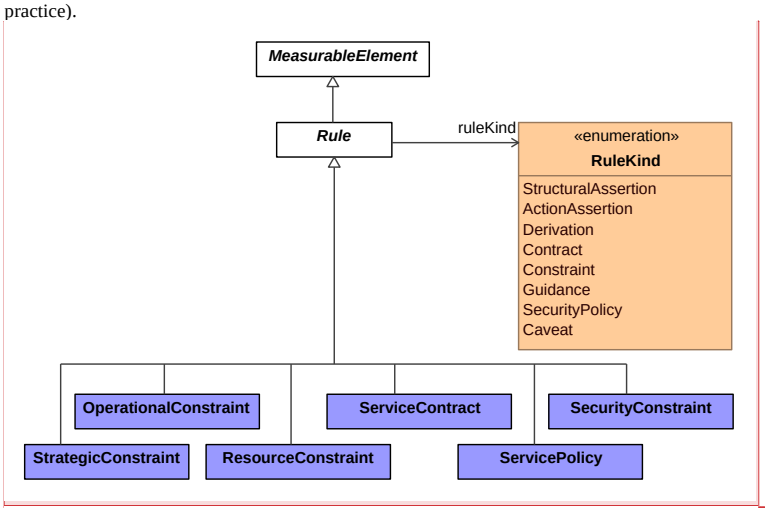
Package: Constraints

isAbstract: Yes

Generalization: MeasurableElement

Description

An abstract type for all types of constraint (i.e. an OperationalConstraint could detail the rules of accountancy best practice).



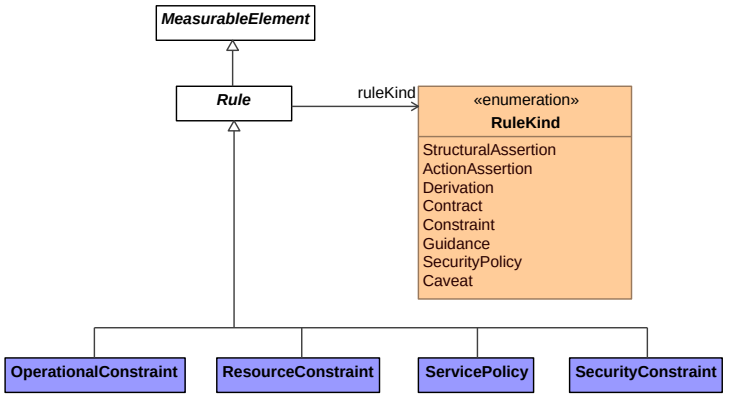


Figure 9:24 - Rule

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UAF12-118

Domain MetaModel:: Architecture ~~Management Metadata~~::Traceability

Commented [KG266]: UAF12-54

ArchitecturalReference

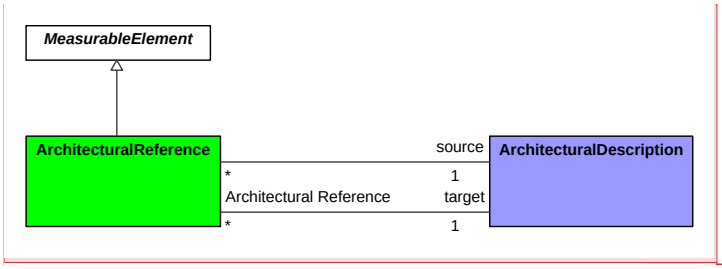
Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that specifies that one architectural description refers to another.



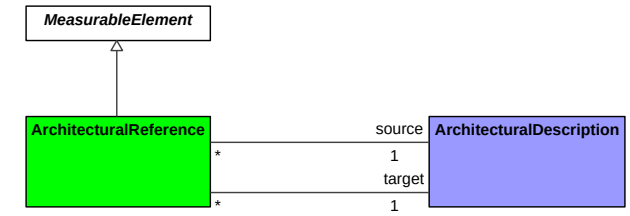


Figure 9:25 - ArchitecturalReference

ComparesTo

Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple used to relate the effect that is achieved with the originally expected DesiredEffect. Providing a means of comparison, between the expectation of the desirer and the actual result.

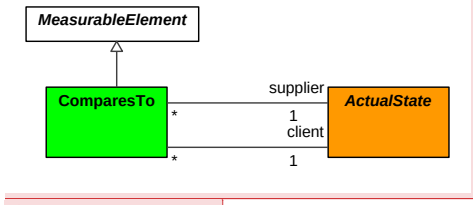


Figure 9:30 - ComparesTo

Implements

Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that defines how an element in the upper layer of abstraction is implemented by a semantically equivalent element (for example tracing the Functions to the OperationalActivities) in the lower level of abstraction.

Commented [KG267]: UAF12-54

Commented [KG268]: UAF12-48
UAF12-11

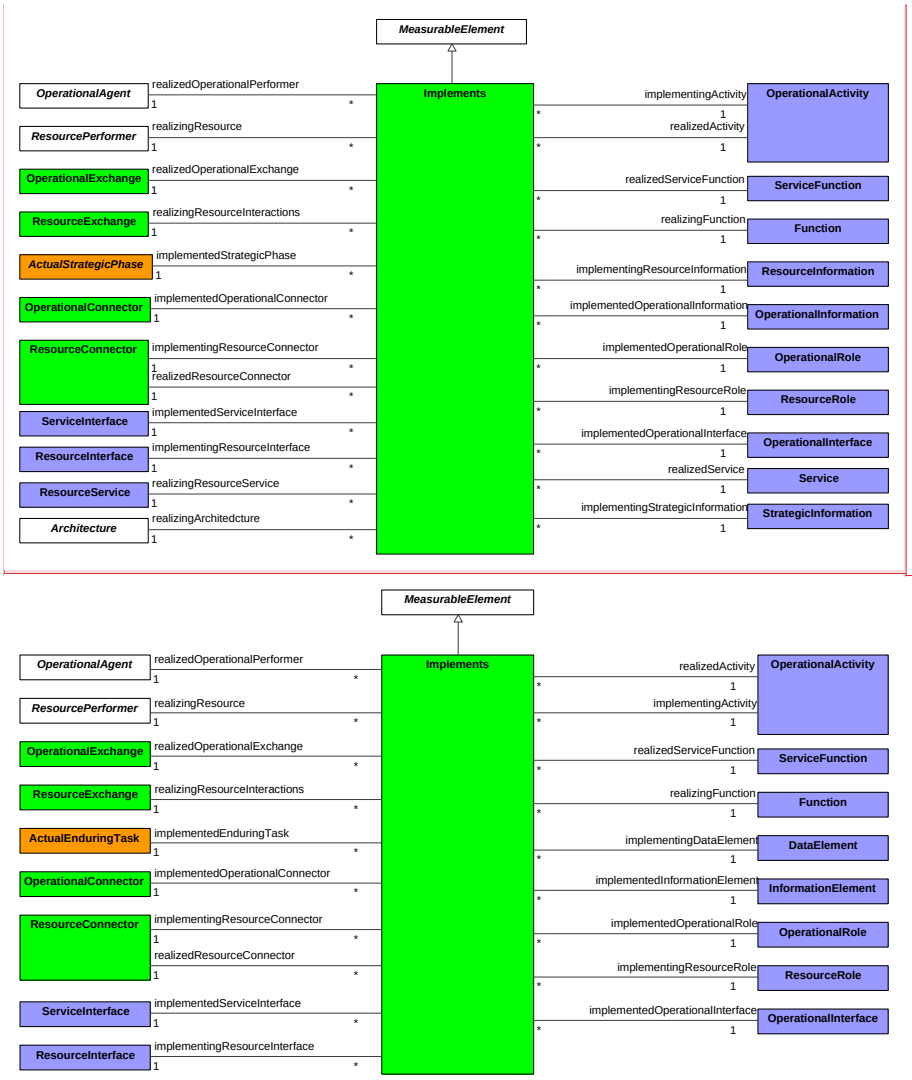


Figure 9:26 – Implements

Sequence

Package: Traceability
isAbstract: No

Commented [KG269]: UAF12-52
UAF12-33
UAF12-15

Generalization: MeasurableElement
Description
A tuple that asserts one Individual's temporal extent is completely before the temporal extent of another.

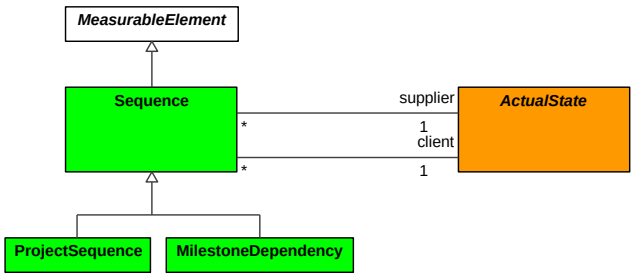


Figure 9:32 - Sequence

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~~15.1.2~~9.1.2 Domain MetaModel::Summary & Overview

Commented [KG271]: UAF12-50
Moved from 9.1.12 section

ArchitecturalDescription

Package: Summary & Overview

isAbstract: No

Generalization: MeasurableElement
Description

An Architecture Description is a work product used to express the Architecture of some System Of Interest.
It provides executive-level summary information about the architecture description in a consistent form to allow quick reference and comparison between architecture descriptions -- It includes assumptions, constraints, and limitations that may affect high-level decisions relating to an architecture-based work program.

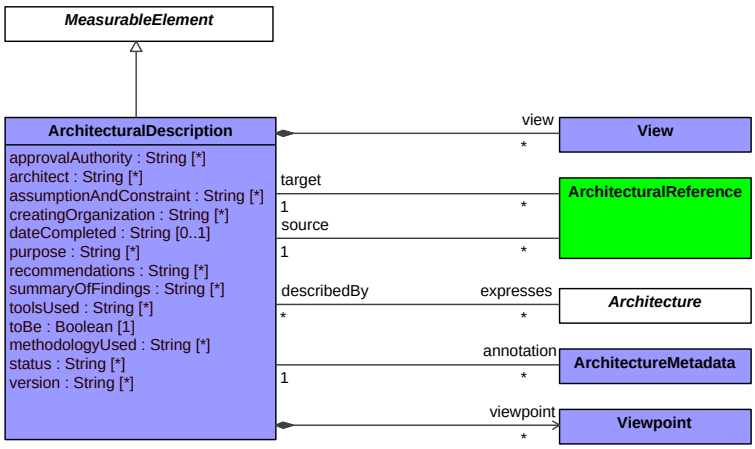

Figure 9:209 - ArchitecturalDescription
Attributes

approvalAuthority : String[*]	Someone or something that has the authority to approve the ArchitecturalDescription.
architect : String[*]	Someone responsible for the creation of ArchitecturalDescription.
assumptionAndConstraint : String[*]	Any assumptions, constraints, and limitations contained in the ArchitecturalDescription, including those affecting deployment, communications performance, information assurance environments, etc.
creatingOrganization : String[*]	The organization responsible for creating the ArchitecturalDescription.
dateCompleted : String[0..1]	Date that the ArchitecturalDescription was completed.
methodologyUsed : String[*]	Name of the documented methodology that will be or has been used in describing the architecture~~The methodology used in developing the architecture.~~
purpose : String[*]	Explains the need for the Architecture, what it will demonstrate, the types of analyses that will be applied to it, who is expected to perform the analyses, what decisions are expected to be made on the basis of each form of analysis, who is expected to make those decisions, and what actions are expected to result.
recommendations : String[*]	States the recommendations that have been developed based on the architecture effort. Examples include recommended system implementations, and opportunities for technology insertion.
status : String[*]	State of the architecture description in terms of its development, baselining, activity (e.g., active or inactive), or some other factor of importance.~~Approval status of the architecture.~~
summaryOfFindings : String[*]	Summarizes the findings that have been developed so far. This may be updated several times during the development of the ArchitecturalDescription.
toBe : Boolean[1]	Indicates whether the ArchitecturalDescription represents an Architecture that exists or will exist in the future.
toolsUsed : String[*]	Identifies any tools used to develop the ArchitecturalDescription as well as file names and formats if appropriate.
version : String[*]	Identifier that indicates the particular edition or revision of the architecture description.~~Version number of the architecture.~~

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Architecture

Package: Summary & Overview

isAbstract: Yes

Generalization: UAFElement

Description

An abstract type that represents a generic architecture. Subtypes are OperationalArchitecture, Service Architecture, and ResourceArchitecture.

~~An abstract type that represents a generic architecture. Subtypes are OperationalArchitecture and PhysicalArchitecture.~~

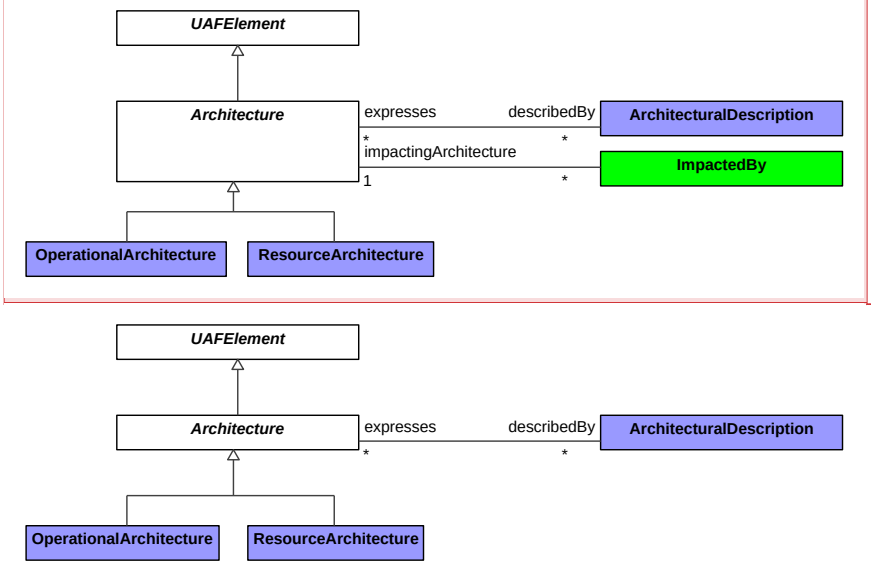

Figure 9:210 - Architecture

Concern

Package: Summary & Overview

isAbstract: No

Generalization: PropertySet, PhaseableElement~~PropertySet~~

Description

A matter of relevance or importance to a stakeholder regarding an entity of interest.

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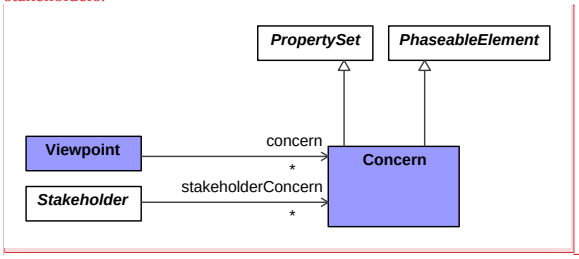
~~Interest in an EnterprisePhase (EnterprisePhase is synonym for System in ISO 42010) relevant to one or more of its stakeholders.~~



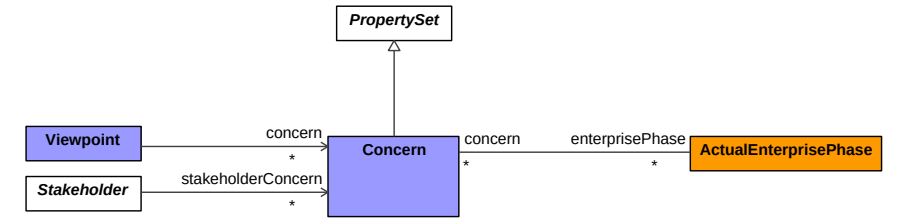


Figure 9:211 - Concern

Phases

Package: Summary & Overview

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that exists between a PhaseableElement and an ActualStrategicPhase that it is assigned to.

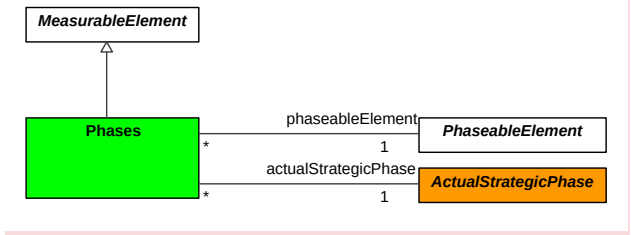


Figure 9:36 - Phases

Stakeholder

Package: Summary & Overview

isAbstract: Yes

Generalization: UAFElement

Description

An individual organizational resource, or a type of organizational resource (both internal and external to the enterprise) who has an interest in, or is affected by, outcomes or intermediate effects generated or influenced by the

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enterpriseIndividual, team, organization, or classes thereof, having an interest in an EnterprisePhase [ISO/IEC/IEEE 42010:2011].

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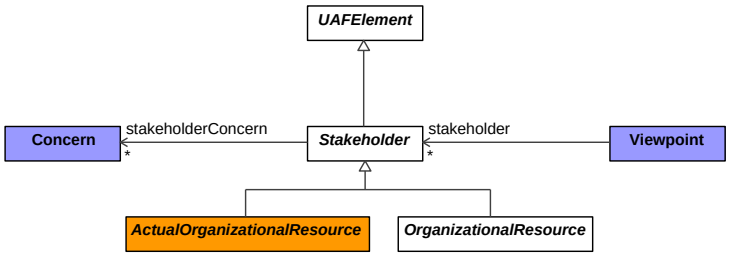


Figure 9:212 - Stakeholder

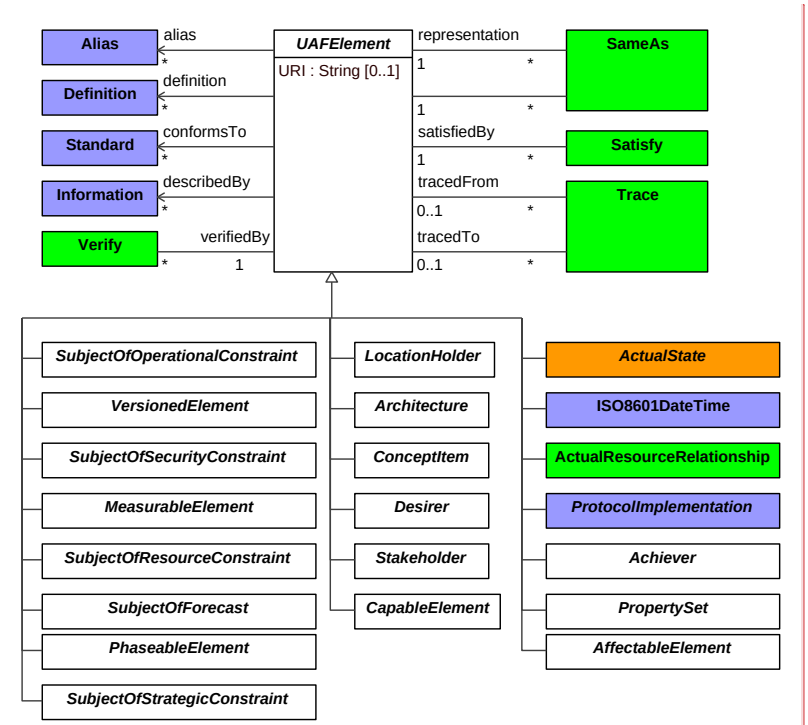
UAFElement

Package: Summary & Overview

isAbstract: Yes

Description

Abstract super type for all of the UAF elements. It provides a way for all of the UAF elements to have a common set of properties.



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UAF12-118

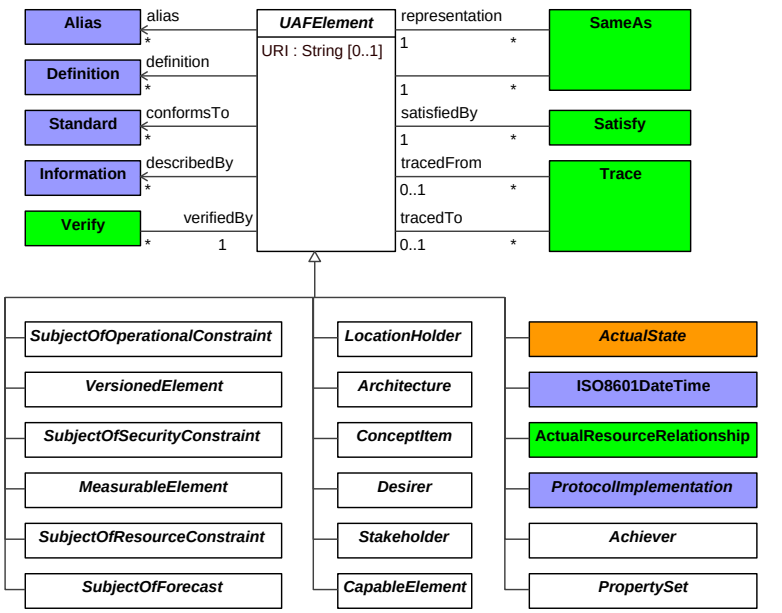

Figure 9:213 - UAFElement

Attributes

URI : String[0..1] Captures Unique identifier for the element.

View

Package: Summary & Overview

isAbstract: No

Generalization: PropertySet

Description

An information item, governed by an architecture viewpoint, comprising part of an architecture description that communicates some aspect of an architecture. ~~An architecture view expresses the architecture of the system of interest in accordance with an architecture viewpoint (or simply, viewpoint). [ISO/IEC/IEEE 42010:2011(E)].~~

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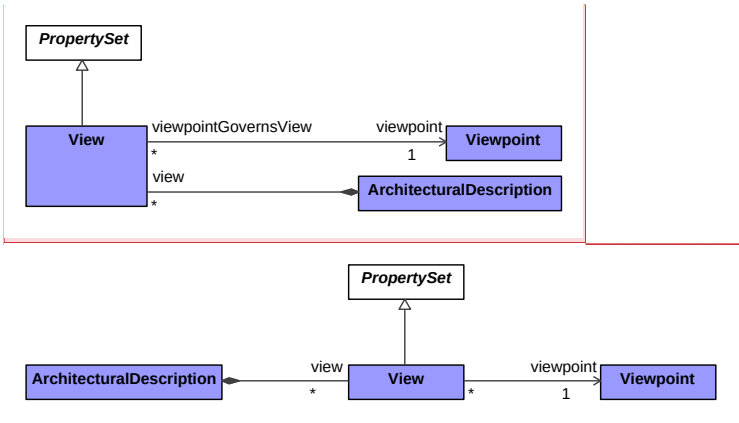

Figure 9:214 - View

Viewpoint

Package: Summary & Overview

isAbstract: No

Generalization: PropertySet

Description

Conventions for the creation, interpretation and use of an architecture view to frame one or more concerns that governs the creation of views.~~An architecture viewpoint frames (to formulate or construct in a particular style or language) one or more concerns. A concern can be framed by more than one viewpoint. [ISO/IEC/IEEE 42010:2011(E)].~~

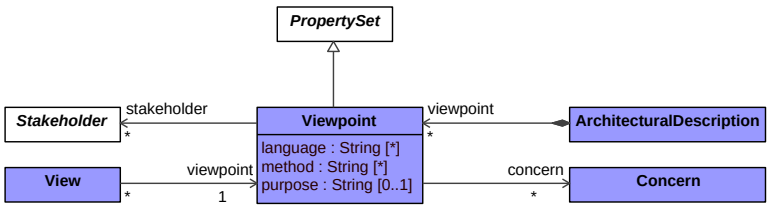

Figure 9:215 - Viewpoint

Attributes

language : String[*]	The languages used to express the Viewpoint.
method : String[*]	The methods employed in the development of the Viewpoint.
purpose : String[0..1]	The purpose of the Viewpoint.

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~~15.1.3~~9.1.3 Domain MetaModel::Strategic

Domain MetaModel::Strategic::Motivation

Commented [KG286]: UAF12-50

Challenge

Package: Motivation

isAbstract: No

Generalization: MotivationalElement

Description

An existing or potential difficulty, circumstance, or obstacle which will require effort and determination from an enterprise to overcome in achieving its goals.

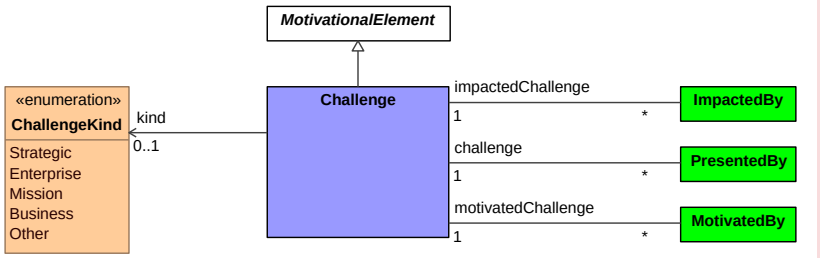

Figure 9:41 - Challenge

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Driver

Package: Motivation

isAbstract: No

Generalization: MotivationalElement

Description

A factor which will have a significant impact on the activities, and goals of an enterprise

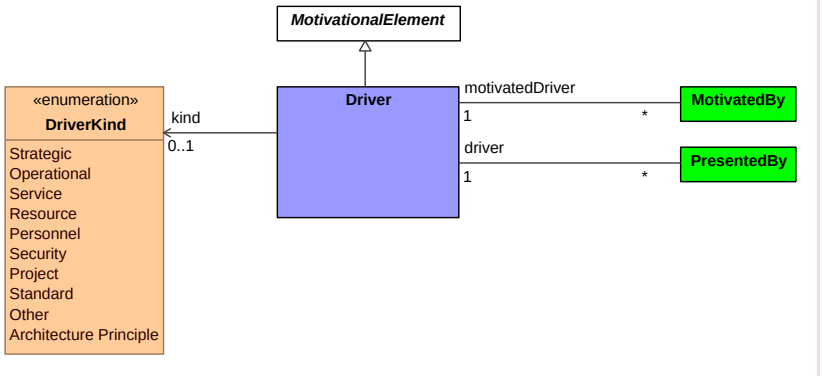

Figure 9:42 - Driver

Commented [KG288]: UAF12-50

Enables

Package: Motivation

isAbstract: No

Generalization: MeasurableElement

Description

A tuple used to denote that an Opportunity provides the means for achieving an EnterpriseGoal or Objective.

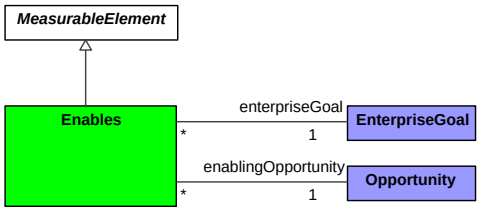

Figure 9:43 - Enables

Commented [KG289]: UAF12-49

ImpactedBy

Package: Motivation

isAbstract: No

Generalization: MeasurableElement

Description

A tuple used to denote that a Capability is affected by an Opportunity.

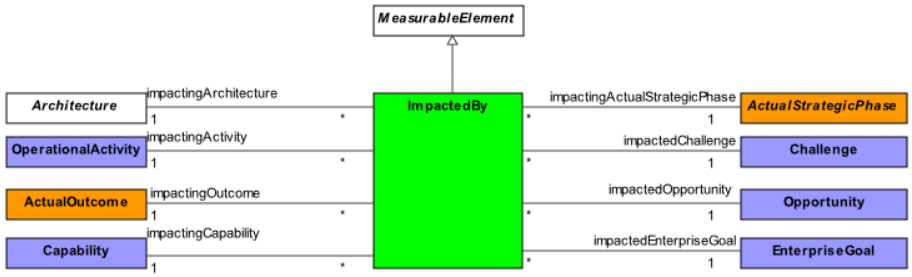

Figure 9:44 - ImpactedBy

Commented [KG290]: UAF12-50

MotivatedBy

Package: Motivation

isAbstract: No

Generalization: MeasurableElement

Description

A tuple denoting the reason or reasons one has for acting or behaving in a particular way

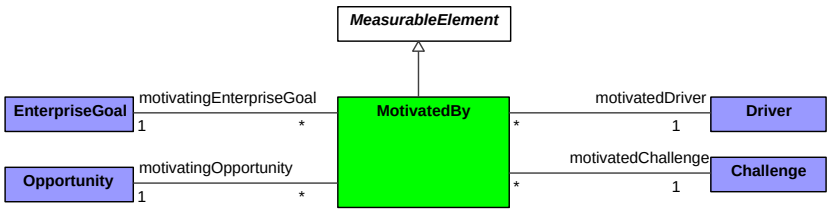

Figure 9:45 - MotivatedBy

Commented [KG291]: UAF12-50

MotivationalElement

Package: Motivation

isAbstract: Yes

Generalization: PropertySet

Description

An abstract kind of element in the model that provides the reason or reasons one has for acting or behaving in a particular way

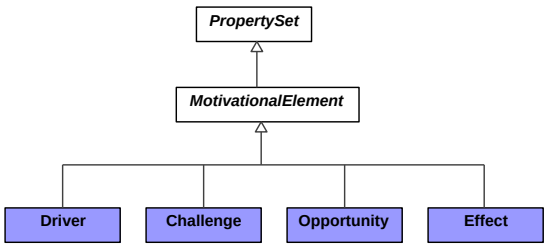

Figure 9:46 - MotivationalElement

Commented [KG292]: UAF12-50

Opportunity

Package: Motivation

isAbstract: No

Generalization: MotivationalElement, PhaseableElement, AffectableElement

Description

An existing or potential favorable circumstance or combination of circumstances which can be advantageous for addressing enterprise Challenges.

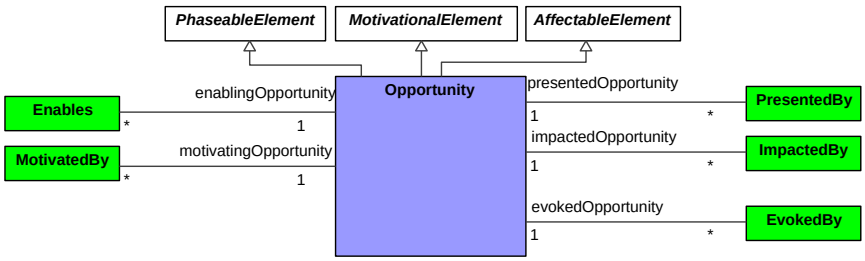

Figure 9:47 - Opportunity

Commented [KG293]: UAF12-49

PresentedBy

Package: Motivation

isAbstract: No

Generalization: MeasurableElement

Description

A tuple denoting that a Challenge must be overcome for addressing a Driver.

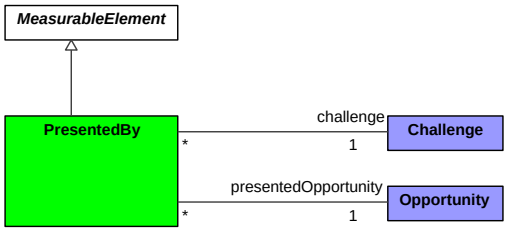

Figure 9:48 - PresentedBy

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Domain MetaModel::Strategic::Taxonomy

Capability

Package: Taxonomy

isAbstract: No

Generalization: PropertySet, Desirer, PhaseableElement, AffectableElement, SubjectOfStrategicConstraint

~~**Generalization:** PropertySet, Desirer~~

Description

An enterprise's ability to Achieve a desired effect realized through a combination of ways and means (e.g. CapabilityConfigurations) along with specified measures.

~~A high level specification of the enterprise's ability to execute a specified course of action.~~

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UAF12-118

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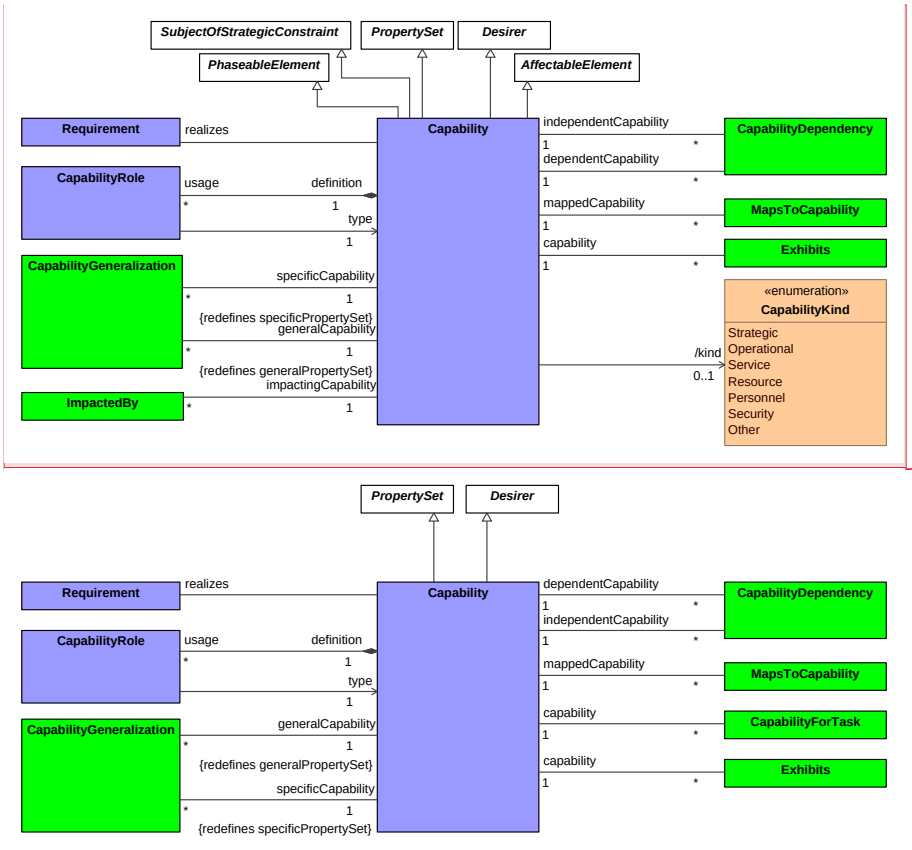

Figure 9:27 - Capability

CapabilityGeneralization

Package: Taxonomy

isAbstract: No

Generalization: PropertySetGeneralization

Description

A CapabilityGeneralization is a taxonomic relationship between a more general Capability and a more specific Capability.

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UAF12-50
UAF12-51
UAF12-118

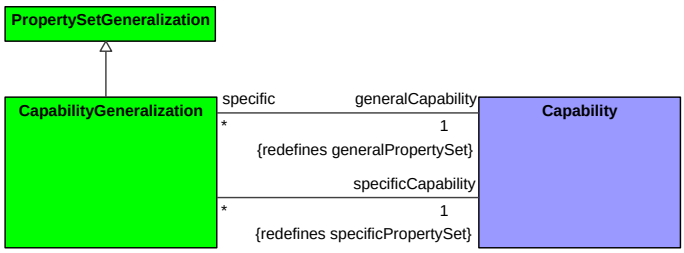

Figure 9:28 - CapabilityGeneralization

EnterpriseGoal

Package: Structure

isAbstract: No

Generalization: PropertySet, PhaseableElement, AffectableElement, Requirement

Description

A statement about a state or condition of the enterprise to be brought about or sustained through appropriate Means. An EnterpriseGoal amplifies an EnterpriseVision that is, it indicates what must be satisfied on a continuing basis to effectively attain the EnterpriseVision. BMM: OMG dtc-13-08-24.

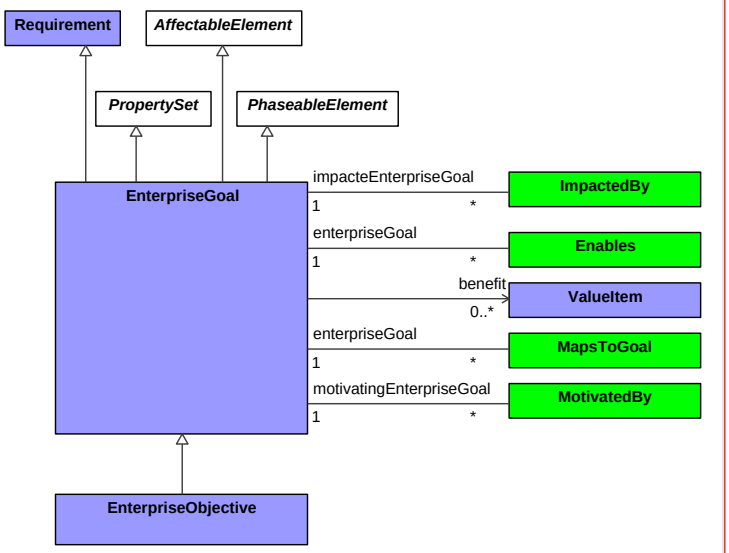

Figure 9:33 - EnterpriseGoal

EnterpriseObjective

Package: Taxonomy

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UAF12-51

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Commented [KG300]: UAF12-15
UAF12-51
UAF12-50
UAF12-49
UAF12-52

isAbstract: No

Generalization: EnterpriseGoal

Description

A statement of an attainable, time-targeted, and measurable target that the enterprise seeks to meet in order to achieve its Goals. http://www.omg.org/spec/BMM/1.3/

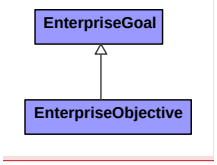

Figure 9:51 - EnterpriseObjective

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EnterpriseVision

Package: Structure

isAbstract: No

Generalization: PropertySet, PhaseableElement

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Description

A Vision describes the future state of the enterprise, without regard to how it is to be achieved. BMM: OMG dtc-13-08-24.

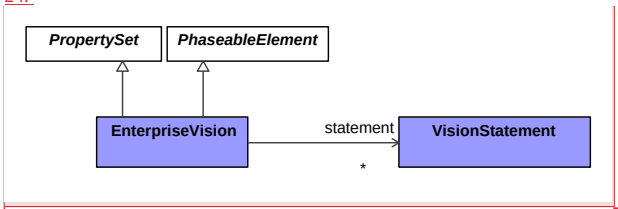

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Figure 9:35 - EnterpriseVision

OwnsValue

Package: Taxonomy

isAbstract: No

Generalization: MeasurableElement

Description

An tuple denoting that an ActualOrganizationalResource owns a ValueItem.

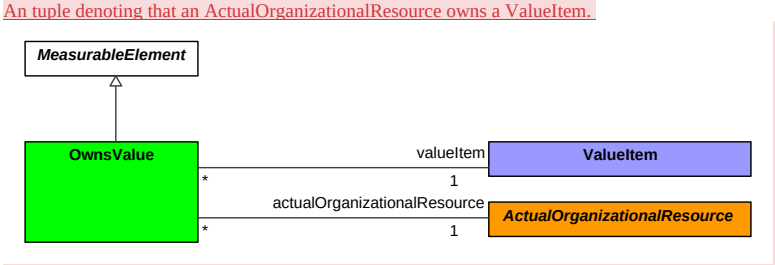

Figure 9:52 - OwnsValue

Commented [KG304]: UAF12-117

PhaseableElement

Package: Taxonomy

isAbstract: Yes

Generalization: UAFElement

Description

An abstract element that indicates the types of elements that can be assigned to a specific ActualStrategicPhase.

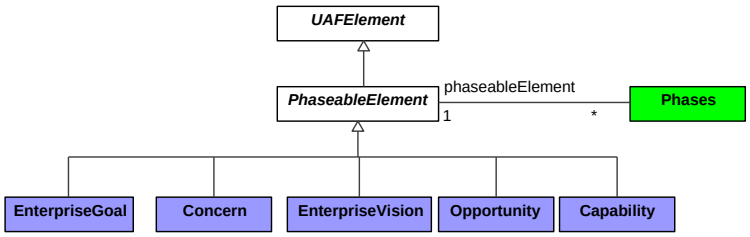

Figure 9:53 - PhaseableElement

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StrategicAsset

Package: Taxonomy

isAbstract: Yes

Generalization: Asset

Description

An abstract element that indicates the types of strategic elements that can be affected by Risk.

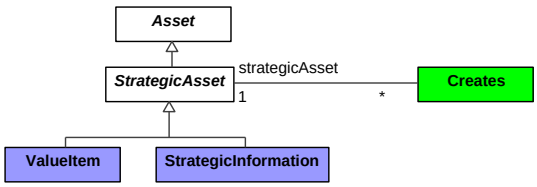

Figure 9:54 - StrategicAsset

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~~EnterprisePhase~~StrategicPhase

Commented [KG307]: 1.UAF12-15

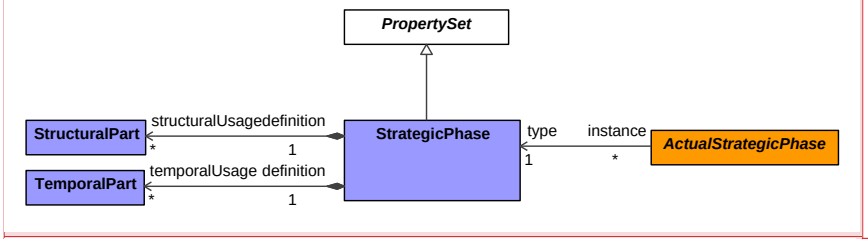
Package: Structure

isAbstract: No

Generalization: PropertySet

Description

A type of a current or future state of the enterprise, mission, ValueStream, or EnduringTask. ~~A type of a current or future state of the enterprise.~~



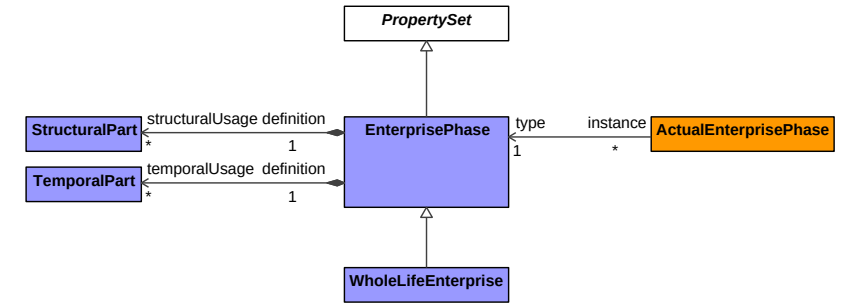


Figure 9:34 - ~~EnterprisePhase~~StrategicPhase

ValueItem

Package: Taxonomy

isAbstract: No

Generalization: MeasurementSet, StrategicAsset

Description

An ideal, custom, or institution that an enterprise promotes or agrees with. It may be positive or negative, depending on point of view.

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UAF12-117

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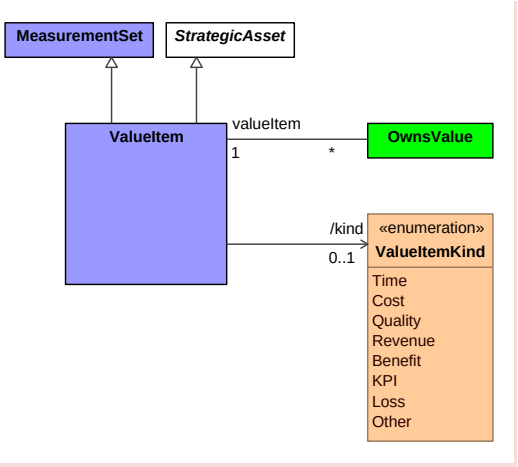

Figure 9:55 - ValueItem

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VisionStatement

Package: ~~Structure~~Taxonomy

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isAbstract: No

Generalization: MeasurableElement

Description

A type of comment that describes the future state of the enterprise, without regard to how it is to be achieved. BMM: OMG dtc-13-08-24.

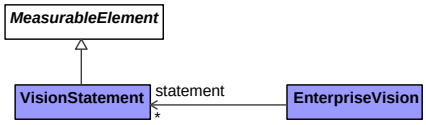

Figure 9:38 - VisionStatement

WholeLifeEnterprise

Package: ~~Structure~~Taxonomy

Commented [KG313]: UAF12-52

isAbstract: No

Generalization: ~~EnterprisePhase~~ActualEnterprisePhase

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Description

A WholeLifeEnterprise is a purposeful endeavor of any size involving people, organizations and supporting systems. It is made up of TemporalParts and StructuralParts.

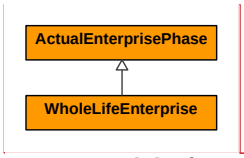

Figure 9:39 - WholeLifeEnterprise

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Domain MetaModel::Strategic::Structure

~~ActualEnduringTask~~

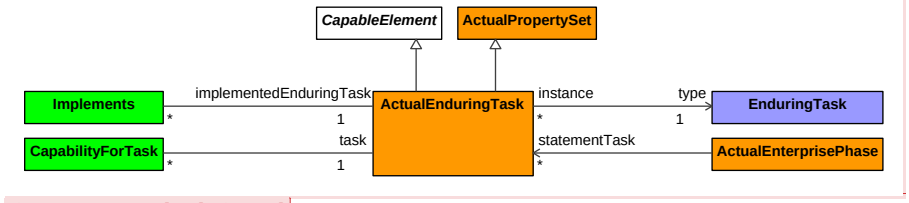
~~**Package:** Structure~~

~~isAbstract: No~~

~~**Generalization:** CapableElement, ActualPropertySet~~

~~Description~~

~~An actual undertaking recognized by an enterprise as being essential to achieving its goals – i.e. a strategic specification of what the enterprise does.~~



~~**Figure 9:29 - ActualEnduringTask**~~

Commented [KG316]: UAF12-52
Move to Processes subsection

~~ActualEnterprisePhase~~

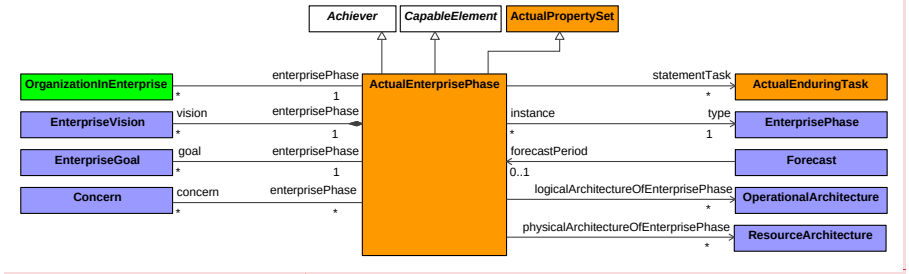
~~**Package:** Structure~~

~~isAbstract: No~~

~~**Generalization:** CapableElement, ActualPropertySet, Achiever~~

~~Description~~

~~An individual that describes the phase of an actual enterprise endeavor.~~



~~**Figure 9:30 - ActualEnterprisePhase**~~

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Moved to Startegic Proccess

CapabilityRole

Package: Structure

isAbstract: No

Generalization: PropertySet, Desirer, MeasurableElement

Description

A high level specification of the enterprise's ability to execute a specified course of action.

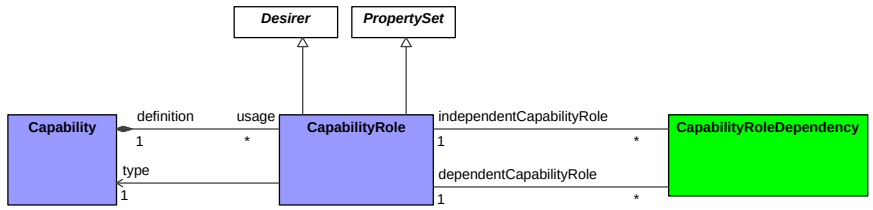


Figure 9:31 - CapabilityRole

~~EnduringTask~~

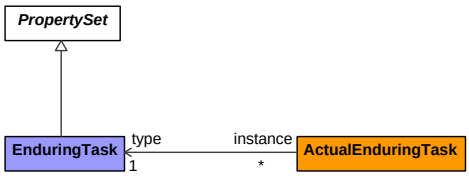
~~Package:~~ ~~Structure~~

~~isAbstract: No~~

~~Generalization:~~ ~~PropertySet~~

~~Description~~

~~A type of template behavior recognized by an enterprise as being essential to achieving its goals - i.e. a template for a strategic specification of what the enterprise does.~~



~~Figure 9:32 - EnduringTask~~

~~EnterpriseGoal~~

~~Package:~~ ~~Structure~~

~~isAbstract: No~~

~~Generalization:~~ ~~PropertySet~~

~~Description~~

~~A statement about a state or condition of the enterprise to be brought about or sustained through appropriate Means. An EnterpriseGoal amplifies an EnterpriseVision that is, it indicates what must be satisfied on a continuing basis to effectively attain the EnterpriseVision. BMM: OMG dtc-13-08-24.~~

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UAF12-117

Commented [KG320]: Move to Taxonomy section

Commented [KG319]: UAF12-15
UAF12-51

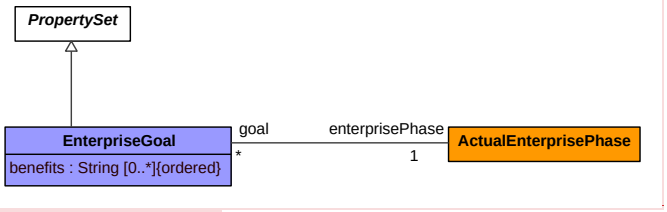

Figure 9:33 - EnterpriseGoal

Attributes

benefits : String[0..*]	A description of the usefulness of the Goal in terms of why the state or condition of the Enterprise is worth attaining.

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EnterpriseVision

Commented [KG322]: UAF12-52
Move to Taxonomy subsection

Package: Structure

isAbstract: No

Generalization: PropertySet

Description

A Vision describes the future state of the enterprise, without regard to how it is to be achieved. BMM: OMG dtc-13-08-24.

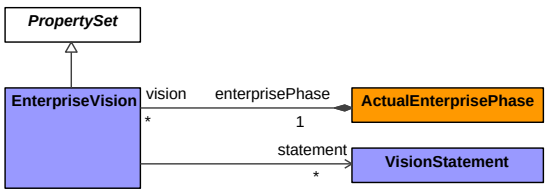

Figure 9:35 - EnterpriseVision

EnterprisePhase

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Move to Taxonomy subsection

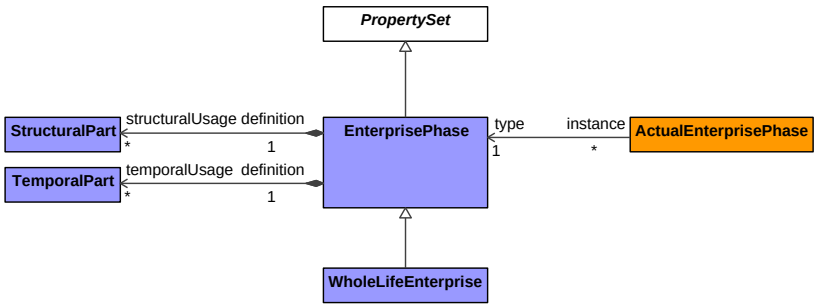
Package: Structure

isAbstract: No

Generalization: PropertySet

Description

A type of a current or future state of the enterprise.



~~Figure 9:34 - EnterprisePhase~~

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StructuralPart

Package: Structure

isAbstract: No

Generalization: MeasurableElement

Description

Usage of a StrategicPhase in the context of another StrategicPhase. It asserts that one StrategicPhase is a spatial part of another. Creates a whole-part relationship that represents the structure of the StrategicPhase~~A current or future state of the wholeLifeEnterprise or another EnterprisePhase.~~

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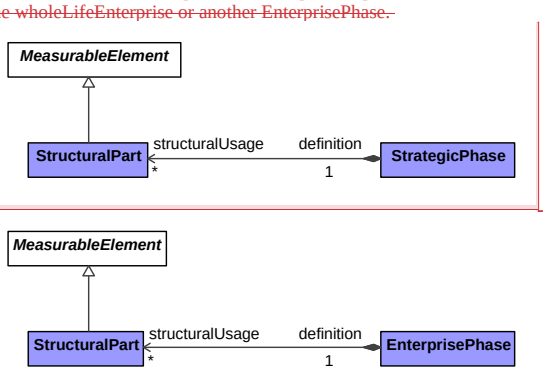


Figure 9:36 - StructuralPart

TemporalPart

Package: Structure

isAbstract: No

Generalization: MeasurableElement

Description

Usage of an StrategicPhase in the context of another StrategicPhase. It asserts that one StrategicPhase is a spatial part of another. Creates a whole-part relationship that represents the temporal structure of the StrategicPhase.

~~A current or future state of the wholeLifeEnterprise or another EnterprisePhase.~~

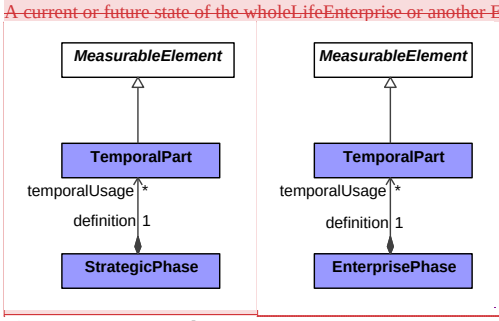


Figure 9:37 - TemporalPart

~~VisionStatement~~

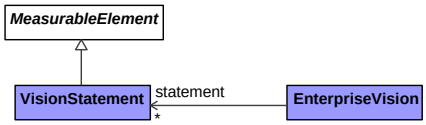
~~**Package:** Structure~~

~~isAbstract: No~~

~~**Generalization:** MeasurableElement~~

~~Description~~

~~A type of comment that describes the future state of the enterprise, without regard to how it is to be achieved. BMM: OMG dtc-13-08-24.~~



~~**Figure 9:38 - VisionStatement**~~

~~WholeLifeEnterprise~~

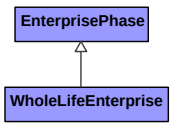
~~**Package:** Structure~~

~~isAbstract: No~~

~~**Generalization:** EnterprisePhase~~

~~Description~~

~~A WholeLifeEnterprise is a purposeful endeavor of any size involving people, organizations and supporting systems. It is made up of TemporalParts and StructuralParts.~~



~~**Figure 9:39 - WholeLifeEnterprise**~~

Domain MetaModel::Strategic::Connectivity

CapabilityDependency

Package: Connectivity

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Commented [KG330]: UAF12-52
Moved to Taxonomy subsection

Commented [KG331]: UAF12-117

Commented [KG332]: UAF12-52
Moved to Taxonomy subsection

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that asserts that one CapabilityDependency is dependent from another.

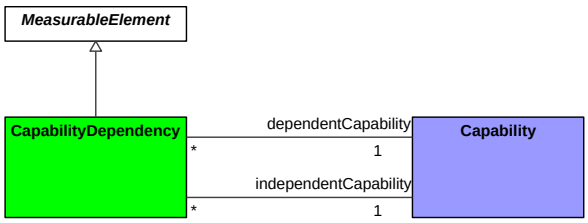

Figure 9:40 - CapabilityDependency

CapabilityRoleDependency

Package: Connectivity

isAbstract: No

Generalization: MeasurableElement

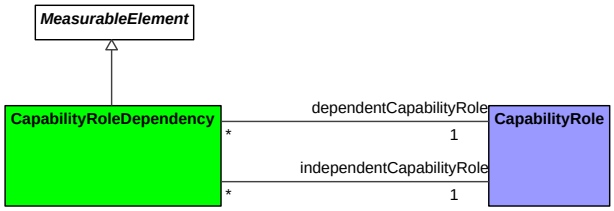

Figure 9:41 - CapabilityRoleDependency

StrategicExchange

Package: Connectivity

isAbstract: No

Generalization: Exchange

Description

Asserts that a flow can exist between ActualStrategicPhases (i.e. flows of information, people, materiel, or energy).

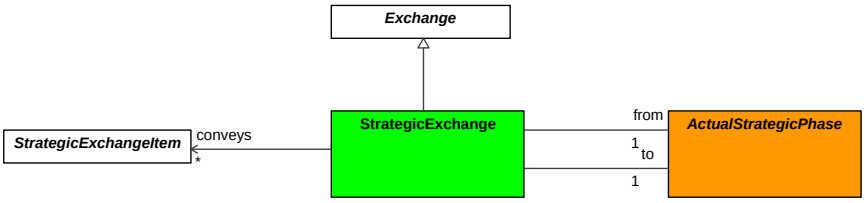

Figure 9:67 - StrategicExchange

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StrategicExchangeItem

Package: Connectivity

isAbstract: Yes

Generalization: Resource, ExchangeItem

Description

An abstract grouping for elements that defines the types of elements that can be exchanged between ActualStrategicPhases and conveyed by a StrategicExchange.

Commented [KG334]: UAF12-52

Domain MetaModel::Strategic::Processes

Commented [KG335]: UAF12-52

ActualEnduringTask

Package: Processes

isAbstract: No

Generalization: ActualStrategicP

Description

An actual undertaking recognized by an enterprise as being essential to achieving its goals - i.e. a strategic specification of what the enterprise does.

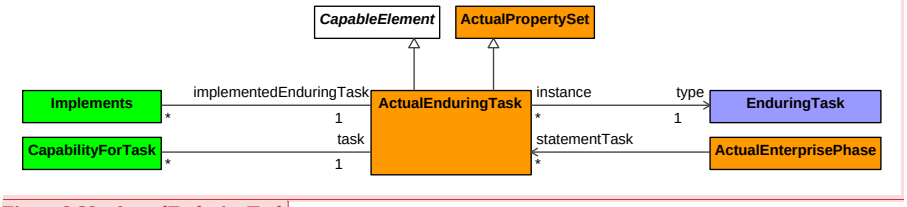

Figure 9:29 - ActualEnduringTask

Commented [KG336]: UAF12-52

ActualEnterprisePhase

Package: Processes

isAbstract: No

Generalization: ActualStrategicPhase

Description

A time period within which a set of Capabilities are deployed.

~~An individual that describes the phase of an actual enterprise endeavor.~~

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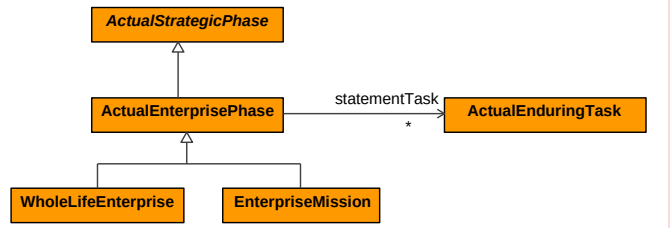

Figure 9:68 - ActualEnterprisePhase

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UAF12-117

ActualStrategicPhase

Package: Processes

isAbstract: Yes

Generalization: Achiever, ActualPropertySet

Description

A phase of an actual enterprise, mission, ValueStream or EnduringTask endeavor.

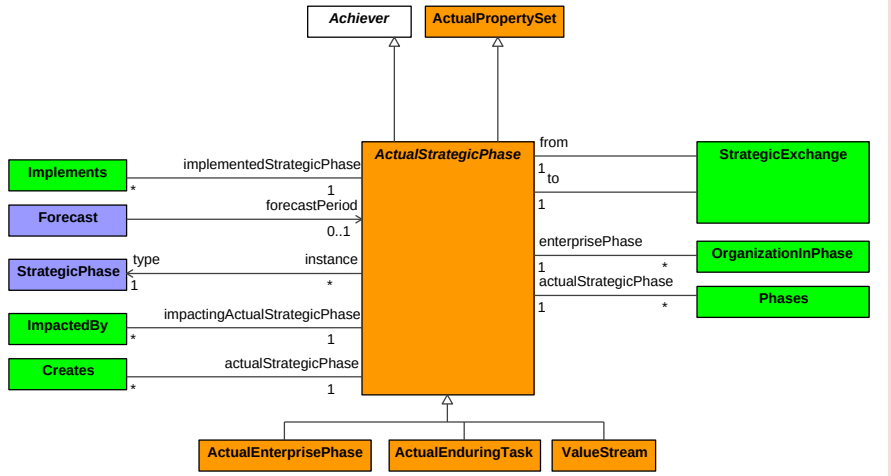

Figure 9:69 - ActualStrategicPhase

Commented [KG339]: UAF12-15
UAF12-52

Creates

Package: Processes

isAbstract: No

Generalization: MeasurableElement

Description

A tuple used to denote that an ActualStrategicPhase brings into existence a StrategicAsset.

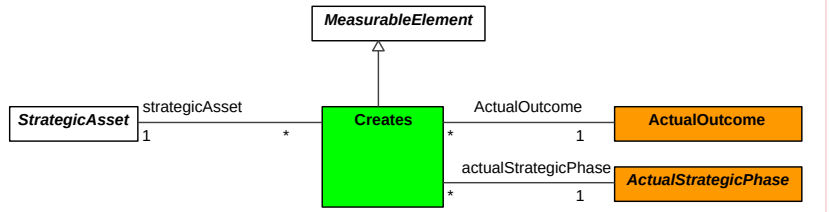

Figure 9:70 - Creates

Commented [KG340]: UAF12-52

EnterpriseMission

Package: Processes

isAbstract: No

Generalization: ActualEnterprisePhase

Description

Mission captures at a high level what you will do to realize your vision.

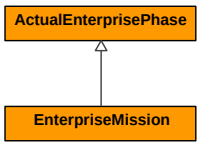

Figure 9:71 - EnterpriseMission

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UAF12-117

ValueStream

Package: Processes

isAbstract: No

Generalization: ActualStrategicPhase

Description

An end-to-end collection of activities that create a result for a customer, who may be the ultimate customer or an internal end-user of the value stream. Value stream nested within another value stream may represent Value Stream Stage - a distinct, identifiable phase or step within a value stream [The Business Architecture Metamodel Guide, 2020]

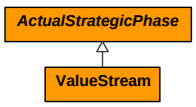

Figure 9:72 - ValueStream

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Domain MetaModel::Strategic::States

Achiever

Package: States

isAbstract: Yes

Generalization: UAFElement

Description

An ActualResource, ActualProject or ActualStrategicPhase ~~ActualEnterprisePhase~~ that can deliver a DesiredEffect.

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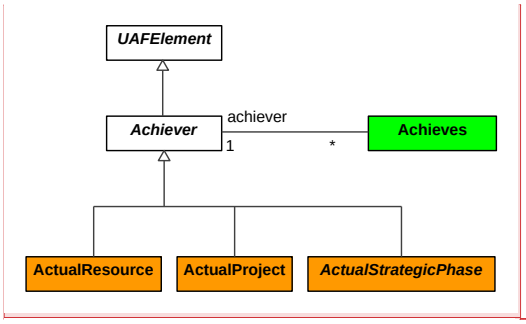
UAF12-15



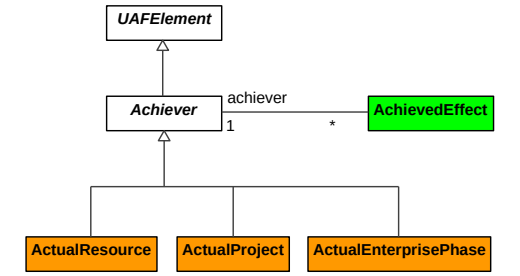


Figure 9:43 - Achiever

~~Achieves~~~~AchievedEffect~~

Package: States

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that exists between an ActualState (e.g., observed/measured during testing) of an element that attempts to achieve a DesiredEffect and an Achiever.

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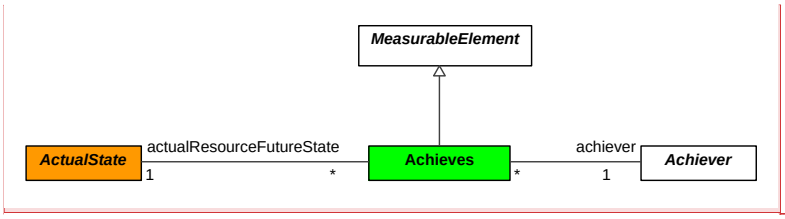

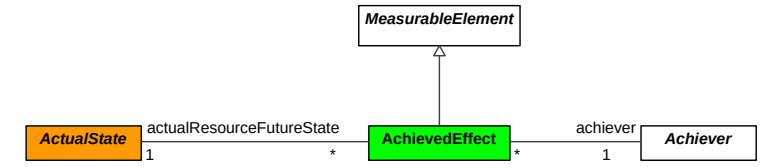

Figure 9:42 - ~~Achieves~~AchievedEffect

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ActualEffect

Package: States

isAbstract: No

Generalization: ActualPropertySet

Description

A real world phenomenon that follows and is caused by some previous phenomenon.

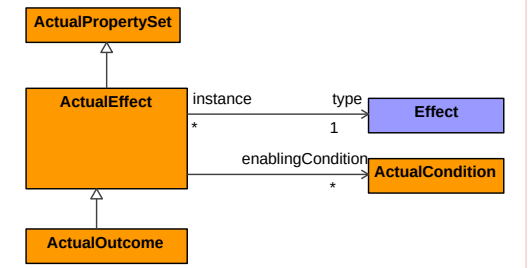

Figure 9:75 - ActualEffect

Commented [KG348]: UAF12-48

ActualOutcome

Package: States

isAbstract: No

Generalization: ActualEffect

Description

An individual that describes something that happens or is produced as the final consequence or product and is related to one of the goals for the business or enterprise. Outcome is a special kind of effect, one that is usually at the end of a chain of effects, i.e. an "end effect".

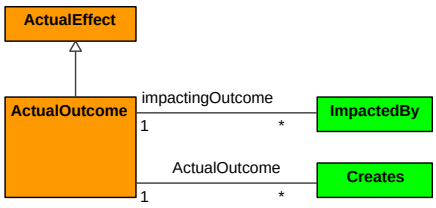

Figure 9:76 - ActualOutcome

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~~DesiredEffect~~

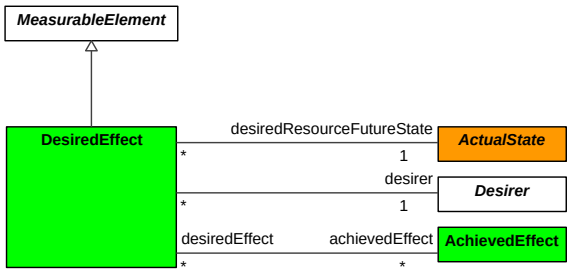
~~Package: States~~

~~isAbstract: No~~

~~**Generalization:** MeasurableElement~~

~~Description~~

~~A tuple relating the Desirer (a Capability or OrganizationalResource) to an ActualState.~~



~~Figure 9:44 - DesiredEffect~~

Commented [KG350]: UAF12-48 Renamed to Desires and moved down to reflect the alphabetic ordering.

Desirer

Package: States

isAbstract: Yes

Generalization: UAFElement

Description

Abstract type used to group architecture elements that might desire a particular effect.

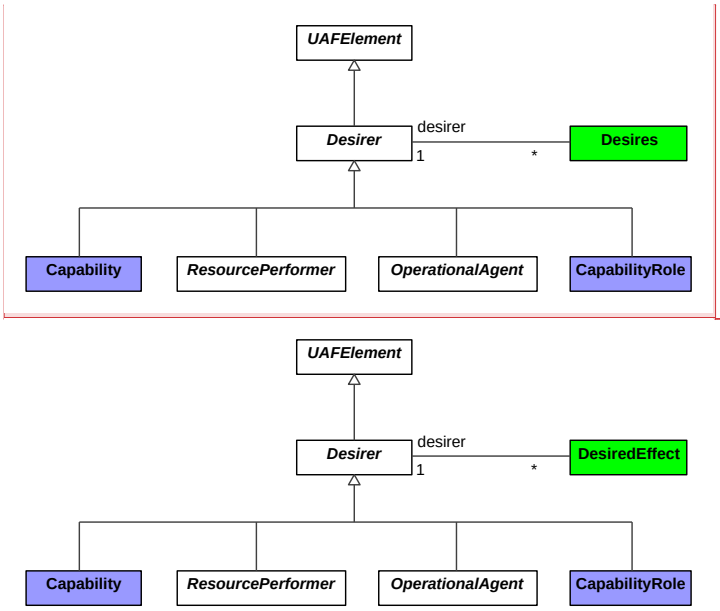


Figure 9:45 - Desirer

~~Desires~~~~DesiredEffect~~

Package: States

isAbstract: No

Generalization: MeasurableElement

Description

A tuple relating the Desirer (a Capability or OrganizationalResource) to an ActualState.

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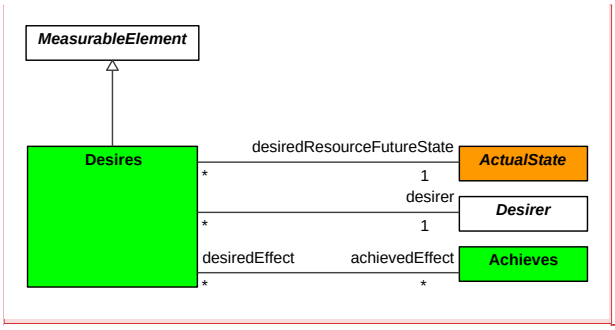

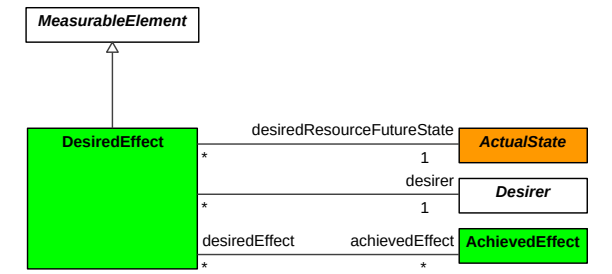

Figure 9:44 - ~~Desires~~DesiredEffect

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Effect

Package: States
isAbstract: No
Generalization: MotivationalElement
Description
A kind of phenomenon that follows and is caused by some previous phenomenon that could lead to downstream effects or to one or more desired outcomes.

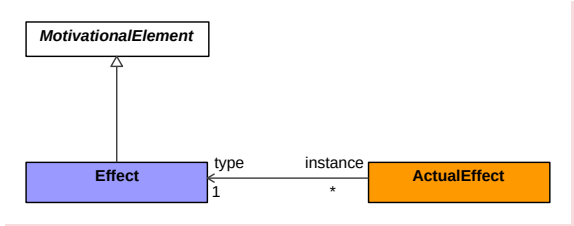

Figure 9:79 - Effect

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Domain MetaModel::Strategic::Information

MapsToGoal

Package: Information

isAbstract: No

Generalization: MeasurableElement

Description

A tuple denoting that some StrategicInformation contributes to achieving an EnterpriseGoal or Objective.

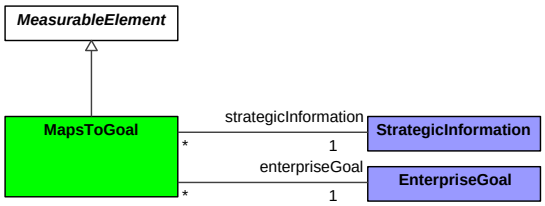

Figure 9:80 - MapsToGoal

StrategicInformation

Package: Information

isAbstract: No

Generalization: StrategicExchangeItem, StrategicAsset

Description

Knowledge communicated or received concerning a particular fact or circumstance that is strategic in nature that is important or essential in relation to a plan of action

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Domain MetaModel::Strategic::Constraints

StrategicConstraint

Package: Constraints

isAbstract: No

Generalization: Rule

Description

A Rule governing a Capability.

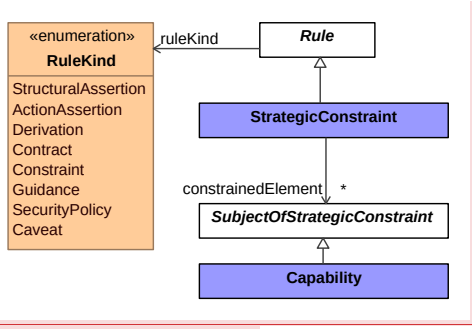

Figure 9:81 - StrategicConstraint

SubjectOfStrategicConstraint

Package: Constraints

isAbstract: Yes

Generalization: UAFElement

Description

An abstract grouping of elements that can be the subject of a StrategicConstraint.

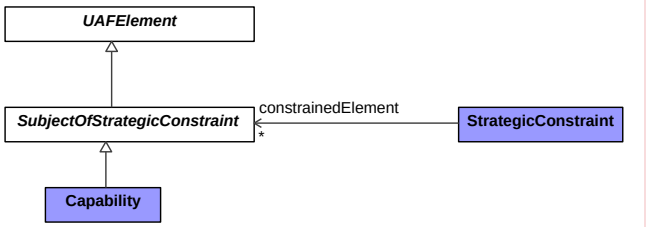

Figure 9:82 - SubjectOfStrategicConstraint

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Commented [KG358]: UAF12-118

Domain MetaModel::Strategic::Traceability

EvokedBy

Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple used to denote that a Risk is drawn out by an Opportunity.

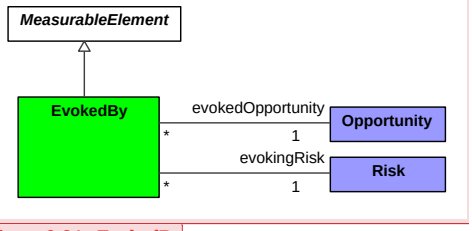

Figure 9:84 - EvokedBy

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~~CapabilityForTask~~

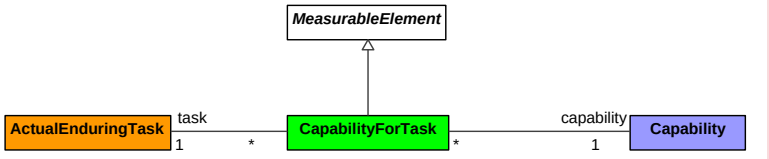
~~**Package:** Traceability~~

~~isAbstract: No~~

~~**Generalization:** MeasurableElement~~

~~Description~~

~~A tuple that asserts that a Capability is required in order for an Enterprise to conduct a phase of an EnduringTask.~~



~~**Figure 9:46 - CapabilityForTask**~~

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Exhibits

Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that exists between a CapableElement and a Capability that it meets under specific environmental conditions.

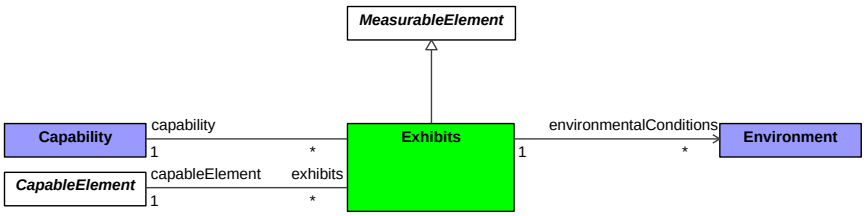

Figure 9:48 - Exhibits

MapsToCapability

Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple denoting that an Activity contributes to providing a Capability.

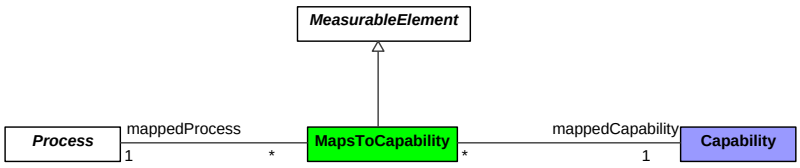

Figure 9:49 - MapsToCapability

OrganizationInPhase~~OrganizationInEnterprise~~

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Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple relating an ActualOrganization to an ActualStrategicPhase ~~ActualEnterprisePhase~~ to denote that the ActualOrganization plays a role or is a stakeholder in an ActualStrategicPhase~~ActualEnterprisePhase~~.

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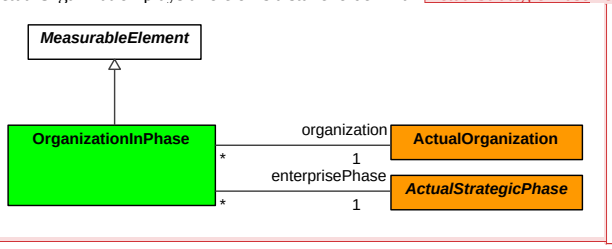
Commented [KG364]: UAF12-15



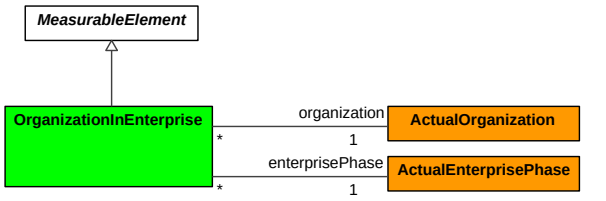


Figure 9:50 - OrganizationInPhase~~OrganizationInEnterprise~~

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~~15.1.4~~9.1.4 Domain MetaModel::Operational

Domain MetaModel::Operational::Taxonomy

ArbitraryConnector

Package: Taxonomy

isAbstract: No

Generalization: MeasurableElement

Description

Represents a visual indication of a connection used in high level operational concept diagrams.

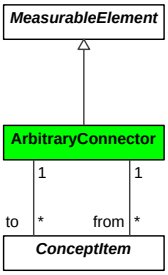

Figure 9:51 - ArbitraryConnector

ConceptItem

Package: Taxonomy

isAbstract: Yes

Generalization: UAFElement

Description

An abstract type which represents some part played by an asset or location in a HighLevelOperationalConcept~~Abstract, an item which may feature in a HighLevelOperationalConcept~~.

Commented [AM366]: UAF12-58

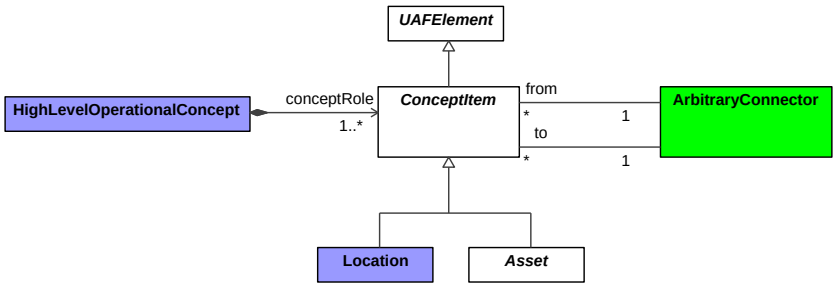

Figure 9:52 - ConceptItem

HighLevelOperationalConcept

Package: Taxonomy

isAbstract: No

Generalization: PropertySet

Description

Describes the Resources and Locations required to meet an operational scenario from an integrated systems point of view. It is used to communicate overall quantitative and qualitative system characteristics to stakeholders.

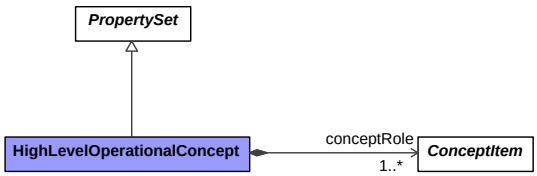

Figure 9:53 - HighLevelOperationalConcept

Domain MetaModel::Operational::Structure

KnownResource

Package: Structure

isAbstract: No

Generalization: OperationalPerformer, ResourcePerformer

Description

Asserts that a known ResourcePerformer constrains the implementation of the OperationalPerformer that plays the role in the OperationalArchitecture.

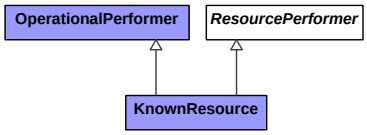

Figure 9:54 - KnownResource

OperationalAgent

Package: Structure

isAbstract: Yes

Generalization: SubjectOfOperationalConstraint, CapableElement, OperationalAsset, Desirer

Description

An abstract type grouping OperationalArchitecture and OperationalPerformer.

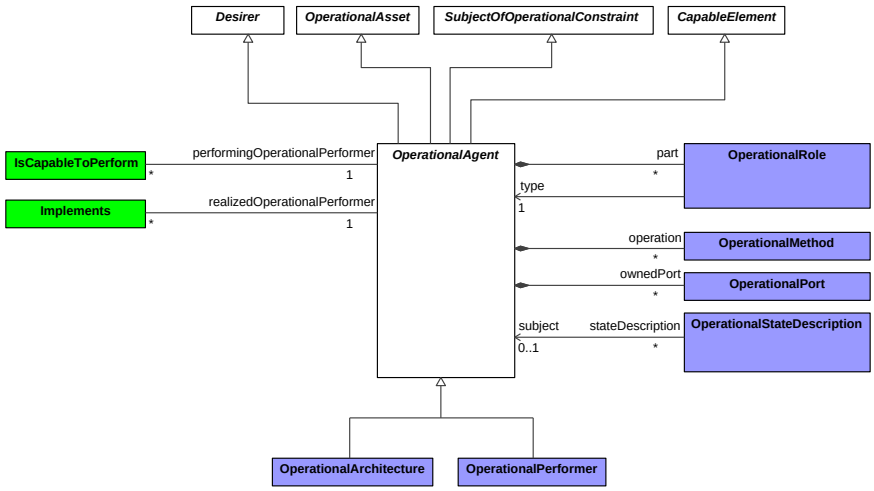

Figure 9:55 - OperationalAgent

OperationalArchitecture

Package: Structure

isAbstract: No

Generalization: OperationalAgent, Architecture

Description

A type used to denote a model of the Architecture, described from the Operational perspective.

Commented [KG367]: UAF12-15

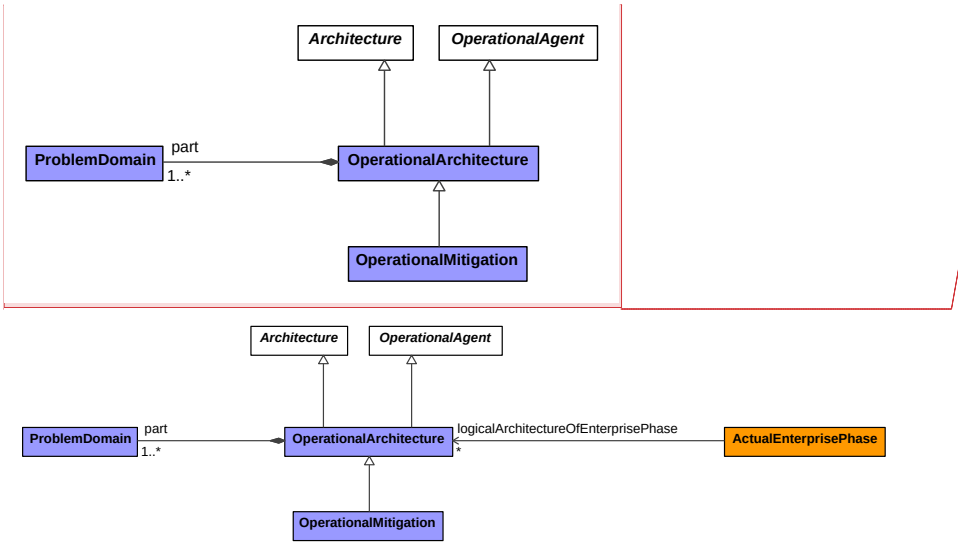

Figure 9:56 - OperationalArchitecture

OperationalMethod

Package: Structure

isAbstract: No

Generalization: ProcessOperation

Description

A behavioral feature of an OperationalAgent whose behavior is specified in an OperationalActivity.

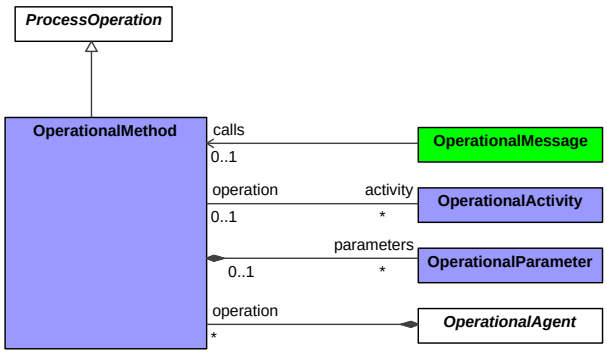

Figure 9:57 - OperationalMethod

OperationalParameter

Package: Structure

isAbstract: No

Generalization: ProcessParameter

Description

A type that represents inputs and outputs of an OperationalActivity. It is typed by an OperationalExchangeItem.

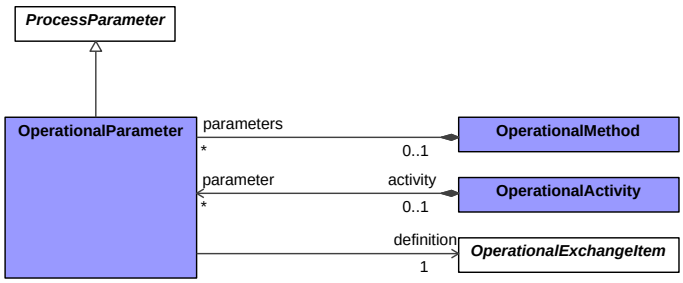

Figure 9:58 - OperationalParameter

OperationalPerformer

Package: Structure

isAbstract: No

Generalization: OperationalAgent

Description

A logical entity that IsCapableToPerform OperationalActivities which produce, consume and process Resources.

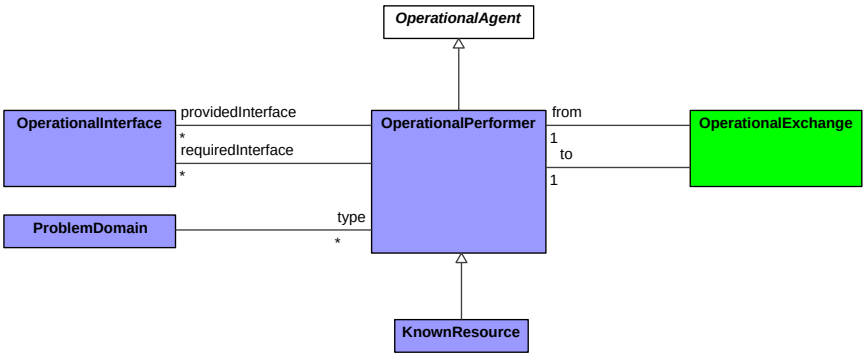

Figure 9:59 - OperationalPerformer

OperationalRole

Package: Structure

isAbstract: No

Generalization: LocationHolder, AssetRole, InteractionRole

Description

Usage of a OperationalPerformer or OperationalArchitecture in the context of another OperationalPerformer or OperationalArchitecture. Creates a whole-part relationship.

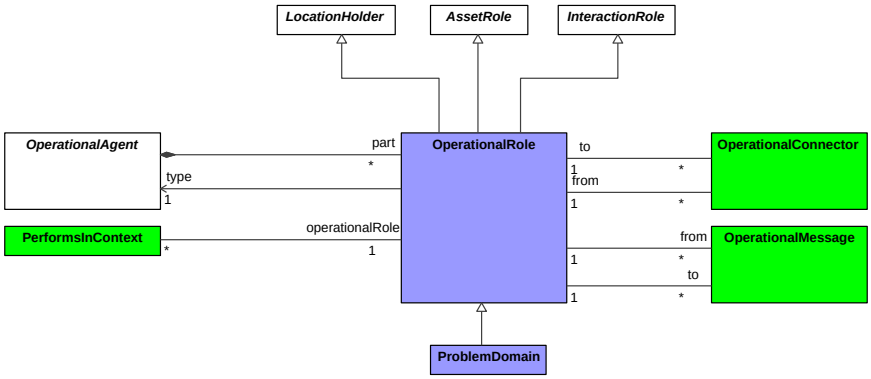

Figure 9:60 - OperationalRole

ProblemDomain

Package: Structure

isAbstract: No

Generalization: OperationalRole

Description

A property associated with an OperationalArchitecture, used to specify the scope of the problem.

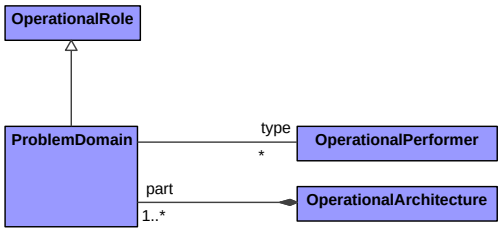

Figure 9:61 - ProblemDomain

Domain MetaModel::Operational::Connectivity

OperationalConnector

Package: Connectivity

isAbstract: No

Generalization: AssetRole~~MeasurableElement~~

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Description

A Connector that goes between OperationalRoles representing a need to exchange Resources. It can carry a number of OperationalExchanges.

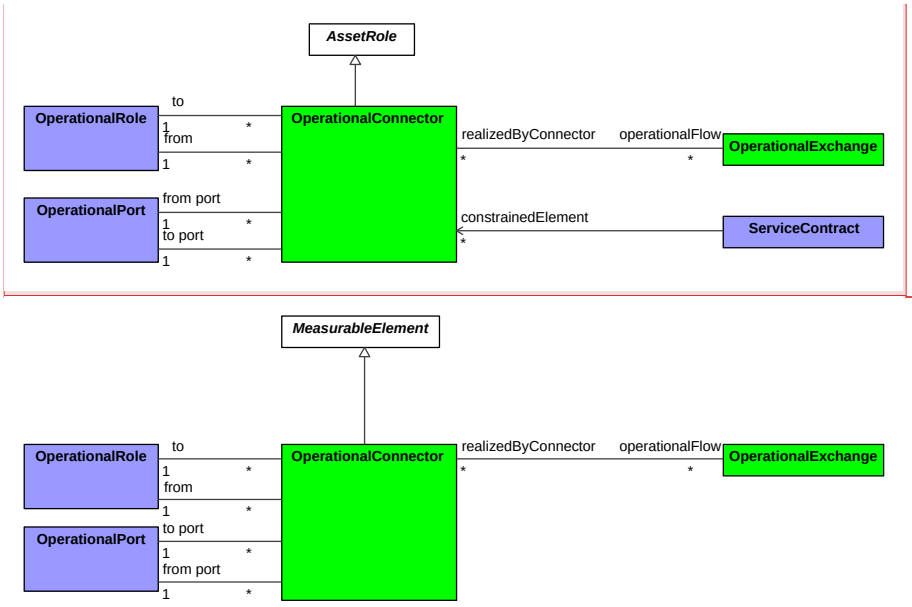

Figure 9:62 - OperationalConnector

OperationalExchange

Package: Connectivity

isAbstract: No

Generalization: Exchange, SubjectOfOperationalConstraint

Description

Asserts that a flow can exist between OperationalPerformers (i.e. flows of information, people, materiel, or energy).

Commented [KG369]: UAF12-51
UAF12-33

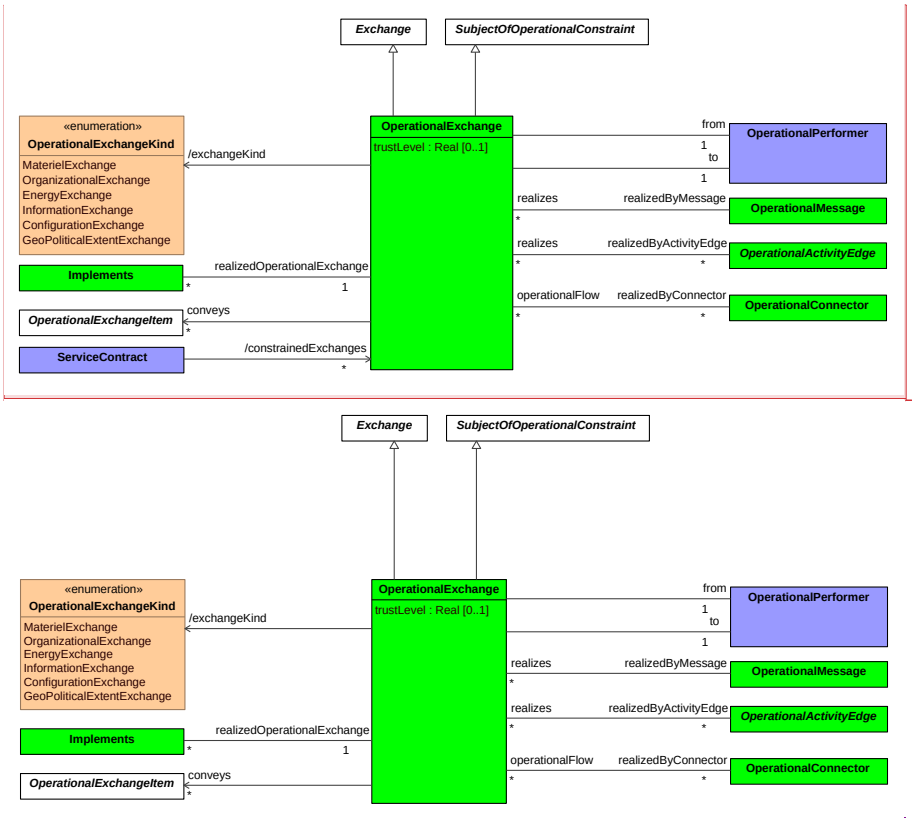

Figure 9:63 - OperationalExchange

Attributes

trustLevel :	Real[0..1]	Captures the directional arbitrary level of trust related to an OperationalExchange between two OperationalPerformers.

OperationalExchangeItem

Package: Connectivity

isAbstract: Yes

Generalization: Resource, SubjectOfSecurityConstraint, ExchangeItem

Description

An abstract grouping for elements that defines the types of elements that can be exchanged between OperationalPerformers and conveyed by an OperationalExchange.

Commented [KG370]: UAF12-33

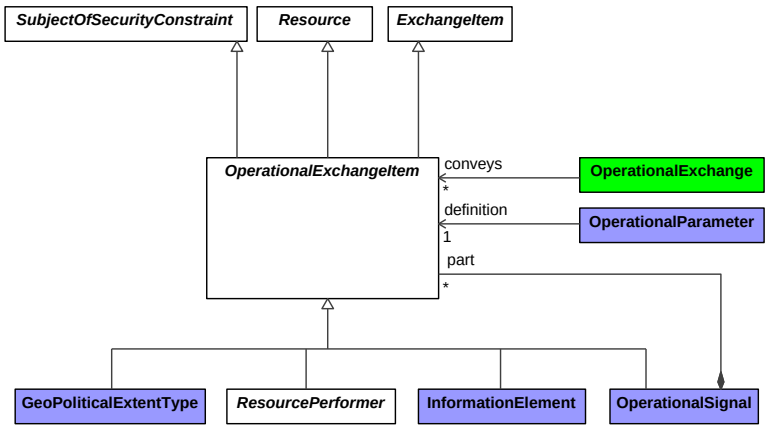

Figure 9:64 - OperationalExchangeItem

OperationalInterface

Package: Connectivity

isAbstract: No

Generalization: PropertySet

Description

A declaration that specifies a contract between the OperationalPerformer it is related to, and any other OperationalPerformers it can interact with.

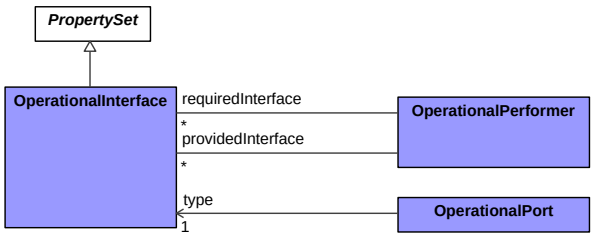

Figure 9:65 - OperationalInterface

OperationalPort

Package: Connectivity

isAbstract: No

Generalization: MeasurableElement

Description

An interaction point for an OperationalAgent through which it can interact with the outside environment and which is defined by an OperationalInterface.

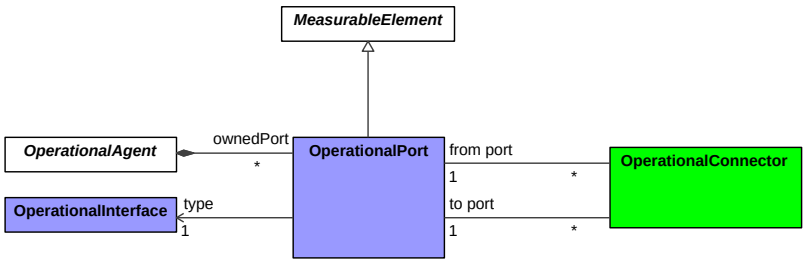

Figure 9:66 - OperationalPort

OperationalSignal

Package: Connectivity

isAbstract: No

Generalization: SubjectOfOperationalConstraint, OperationalExchangeItem

Description

An item of information that flows between OperationalPerformers and is produced and consumed by the OperationalActivities that the OperationalPerformers are capable of performing (see IsCapableToPerform).

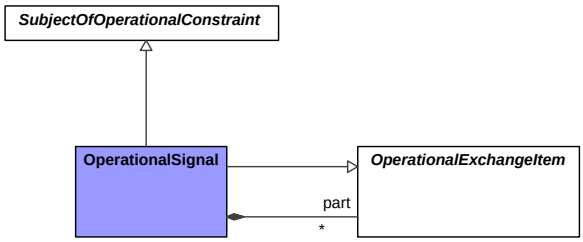

Figure 9:67 - OperationalSignal

Domain MetaModel::Operational::Processes

OperationalActivity

Package: Processes

isAbstract: No

Generalization: SubjectOfOperationalConstraint, Process

Description

An Activity that captures a logical process, specified independently of how the process is carried out.

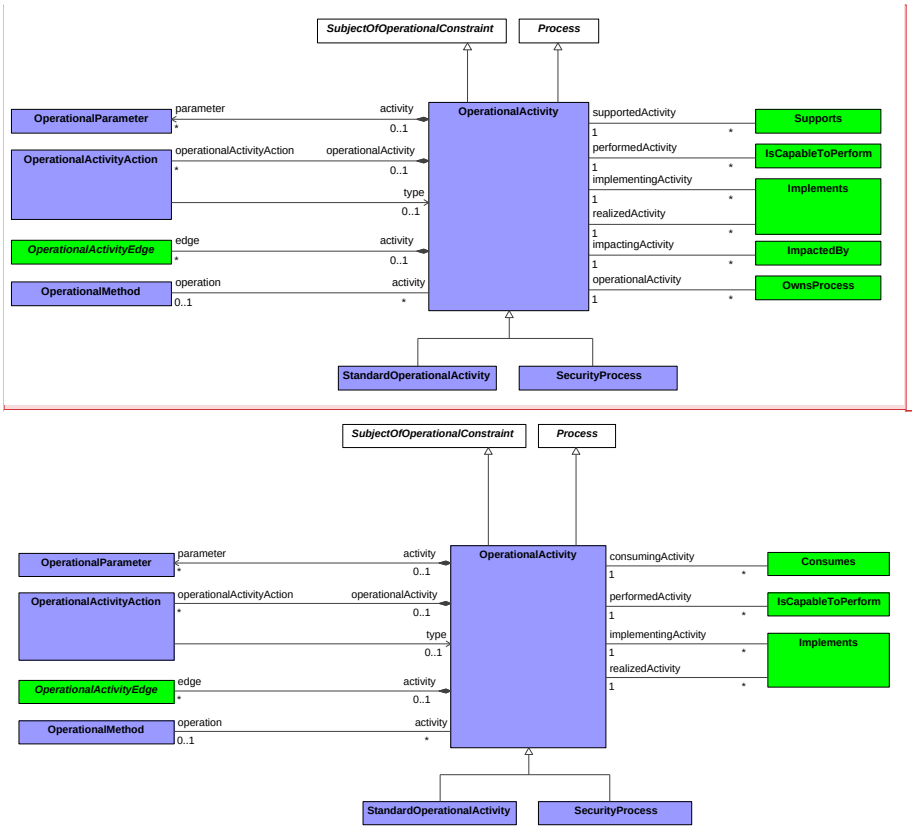

Figure 9:68 - OperationalActivity

OperationalActivityAction

Package: Processes

isAbstract: No

Generalization: ProcessUsage

Description

A call of an OperationalActivity in the context of another OperationalActivity.

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UAF12-50

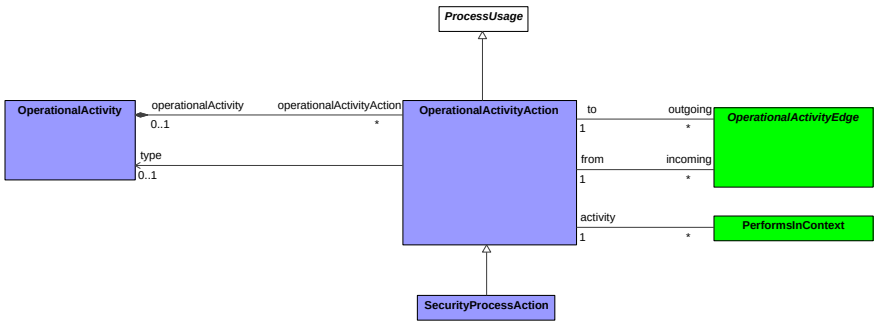

Figure 9:69 - OperationalActivityAction

OperationalActivityEdge

Package: Processes

isAbstract: Yes

Generalization: ProcessEdge

Description

A tuple that shows the flow of Resources (objects/information) between OperationalActivityActions.

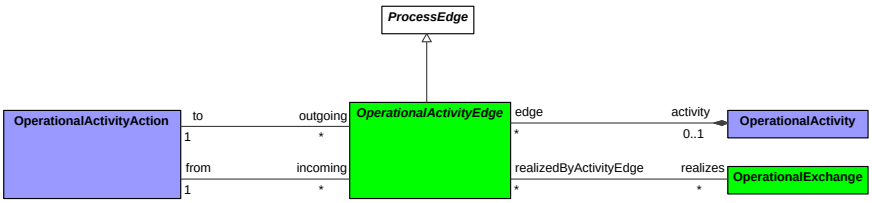

Figure 9:70 - OperationalActivityEdge

StandardOperationalActivity

Package: Processes

isAbstract: No

Generalization: OperationalActivity

Description

A sub-type of OperationalActivity that is a standard operating procedure.

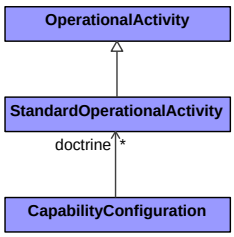

Figure 9:71 - StandardOperationalActivity

Domain MetaModel::Operational::States

OperationalStateDescription

Package: States

isAbstract: No

Generalization: MeasurableElement, StateDescription

Description

A state machine describing the behavior of a OperationalPerformer, depicting how the OperationalPerformer responds to various events and the actions.

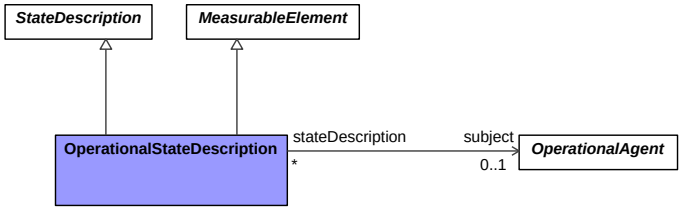

Figure 9:72 - OperationalStateDescription

Domain MetaModel::Operational:: Sequences ~~Interaction Scenarios~~

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OperationalInteractionScenario

Package: Sequences ~~Interaction~~ ~~Scenarios~~

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isAbstract: No

Generalization: InteractionScenario

Description

A specification of the interactions between OperationalPerformers in an OperationalArchitecture.

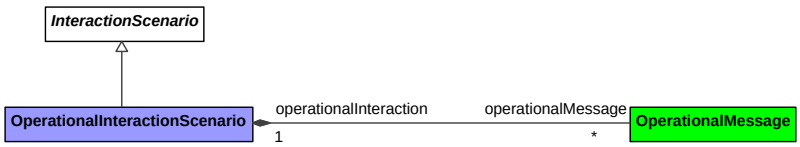

Figure 9:73 - OperationalInteractionScenario

OperationalMessage

Package: Interaction Scenarios

isAbstract: No

Generalization: InteractionMessage

Description

Message for use in an OperationalInteractionScenario which carries any of the subtypes of OperationalExchange.

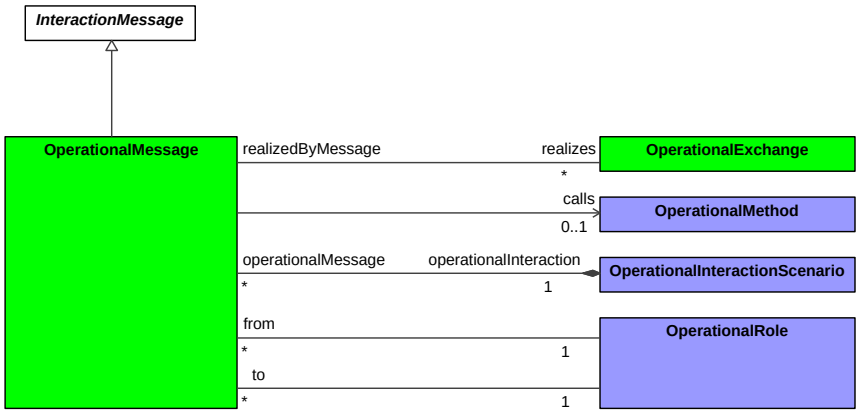

Figure 9:74 - OperationalMessage

Domain MetaModel::Operational::Information

~~OperationalInformation~~~~InformationElement~~

Package: Information

isAbstract: No

Generalization: SubjectOfOperationalConstraint, OperationalAsset, OperationalExchangeItem, ServiceExchangeItem

Description

An item of information that flows between OperationalPerformers and is produced and consumed by the OperationalActivities that the OperationalPerformers are capable to perform (see IsCapableToPerform).

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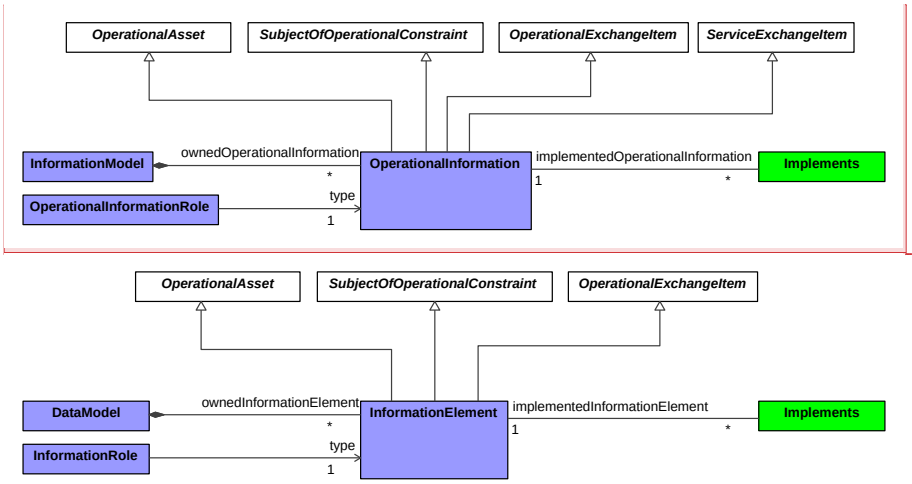

Figure 9:75 - InformationElement

Domain MetaModel::Operational::Constraints

OperationalConstraint

Package: Constraints

isAbstract: No

Generalization: Rule

Description

A Rule governing an operational architecture element i.e. OperationalPerformer, OperationalActivity, OperationalInformation ~~InformationElement~~ etc.

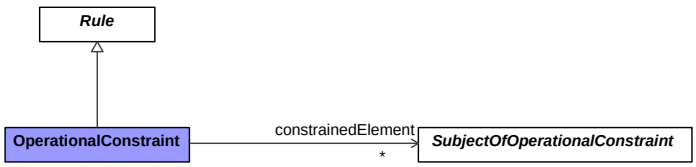

Figure 9:76 - OperationalConstraint

SubjectOfOperationalConstraint

Package: Constraints

isAbstract: Yes

Generalization: UAFElement

Description

An abstract type grouping elements that can be the subject of an OperationalConstraint.

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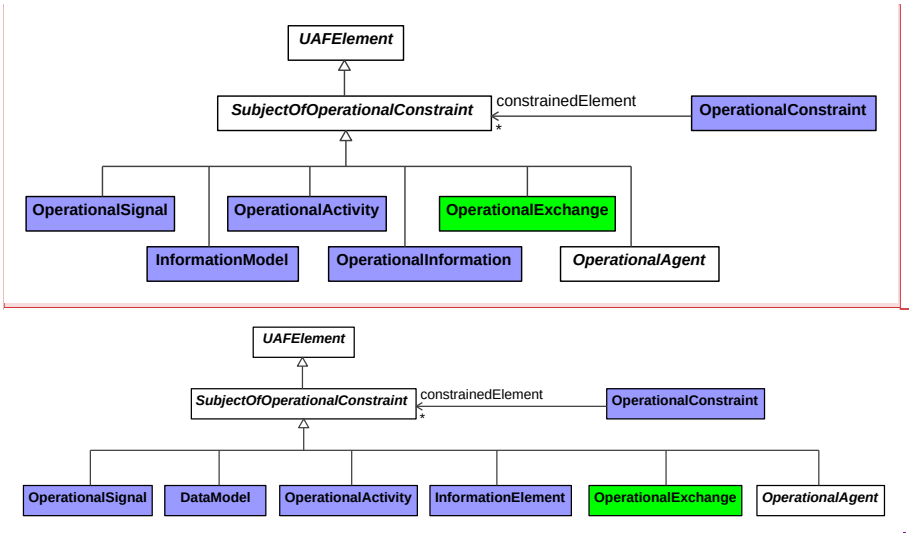


Figure 9:77 - SubjectOfOperationalConstraint

~~15.1.5~~9.1.5 Domain MetaModel::Services

Stakeholders: Enterprise Architects, Solution Providers, Systems Engineers, Software Architects, Business Architects..

Concerns: specifications of services required to exhibit a Capability.

Definition: shows Service~~s Specifications~~ and required and provided service levels of these specifications required to exhibit a Capability or to support an Operational Activity.

Domain MetaModel::Services::Taxonomy

Service~~Specification~~

Package: Taxonomy

isAbstract: No

Generalization: PropertySet, VersionedElement, CapableElement, Asset

Description

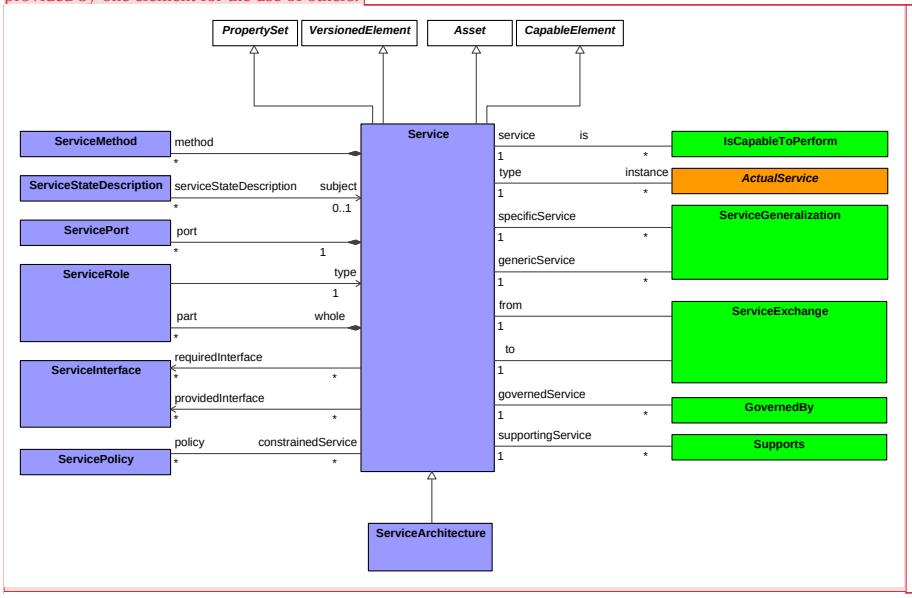
Commented [KG378]: UAF12-33

Commented [KG379]: UAF12-33

Commented [KG380]: UAF12-33

Commented [KG381]: UAF12-51

A mechanism to enable access to one or more capabilities, where the access is provided using a prescribed service interface and is exercised consistent with service constraints and policies.~~The specification of a set of functionality provided by one element for the use of others.~~



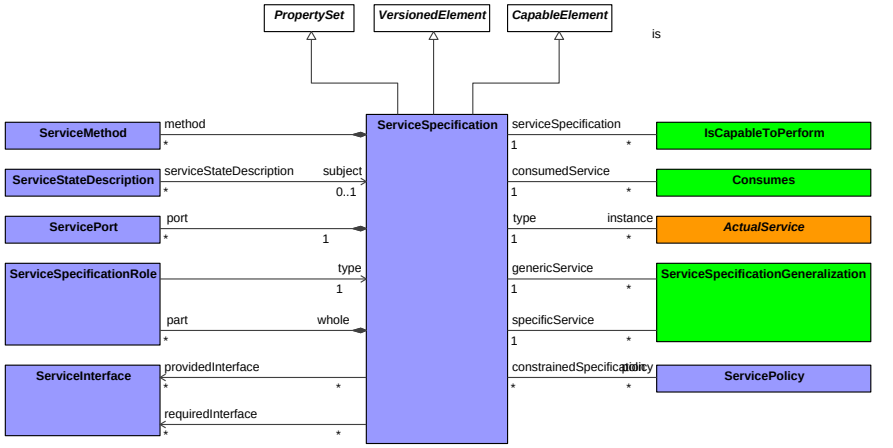


Figure 9:78 - ~~Service~~~~ServiceSpecification~~

ServiceArchitecture

Package: Taxonomy

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UAF12-51

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isAbstract: No

Generalization: Service, Architecture

Description

An element used to denote a model of the Architecture, described from the Services perspective.

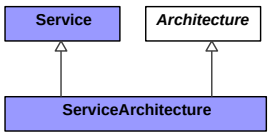

Figure 9:117 - ServiceArchitecture

ServiceGeneralization~~ServiceSpecificationGeneralization~~

Package: Taxonomy

isAbstract: No

Generalization: PropertySetGeneralization

Description

A ServiceGeneralization is a taxonomic relationship between a more general Service and a more specific Service.

~~A ServiceSpecificationGeneralization is a taxonomic relationship between a more general ServiceSpecification and a more specific ServiceSpecification.~~

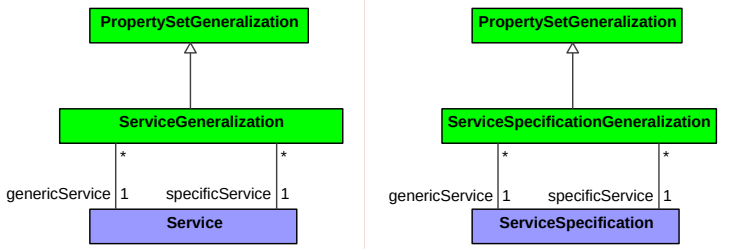

Figure 9:79 - ServiceSpecificationGeneralization

Domain MetaModel::Services::Structure

~~**ServiceConnector**~~

~~**Package:** Structure~~

~~isAbstract: No~~

~~**Generalization:** MeasurableElement~~

~~Description~~

~~A channel for exchange between two ServiceSpecifications. Where one acts as the consumer of the other.~~

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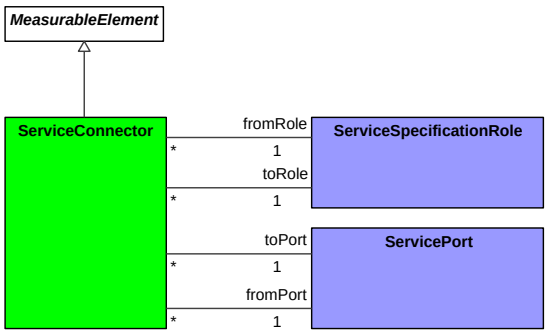
Move to Services Connectivity subsection



~~Figure 9:80 - ServiceConnector~~

ServiceMethod

Package: Structure

isAbstract: No

Generalization: ProcessOperation

Description

A behavioral feature of a Service ~~ServiceSpecification~~ whose behavior is specified in a ServiceFunction.

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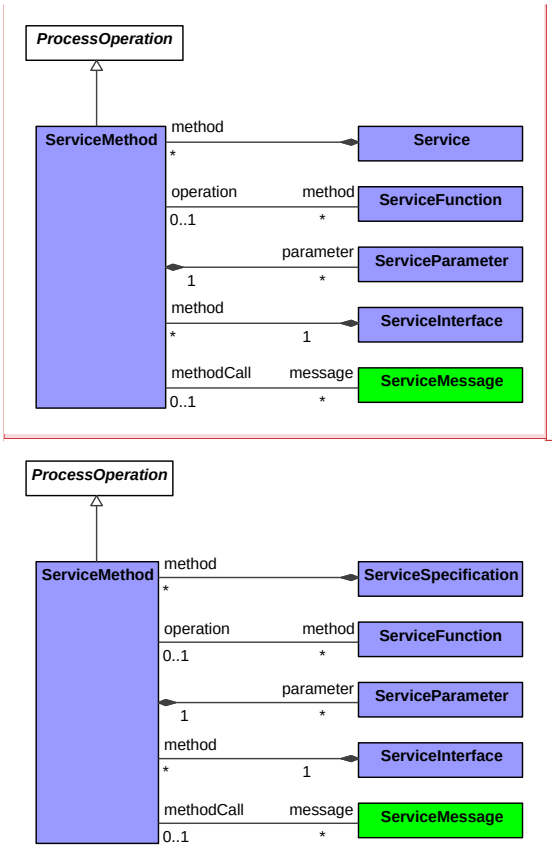


Figure 9:81 - ServiceMethod

ServiceParameter

Package: Structure

isAbstract: No

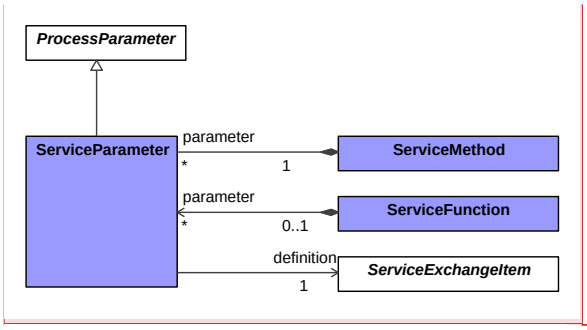
Generalization: ProcessParameter

Description

A type that represents inputs and outputs of a ServiceFunction, represents inputs and outputs of a ServiceServiceSpecification.

Commented [KG391]: UAF12-33

Commented [KG392]: UAF12-33



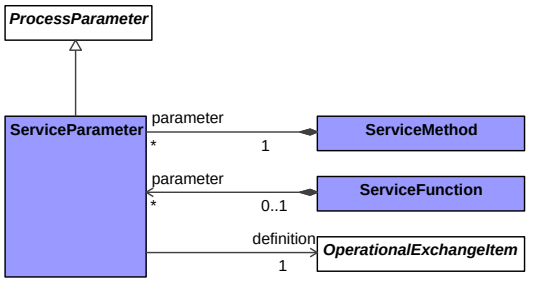


Figure 9:82 - ServiceParameter

ServiceRole~~ServiceSpecificationRole~~

Package: Structure

isAbstract: No

Generalization: MeasurableElement, InteractionRole

Description

A behavioral feature of a Service ~~ServiceSpecification~~ whose behavior is specified in a ServiceFunction.

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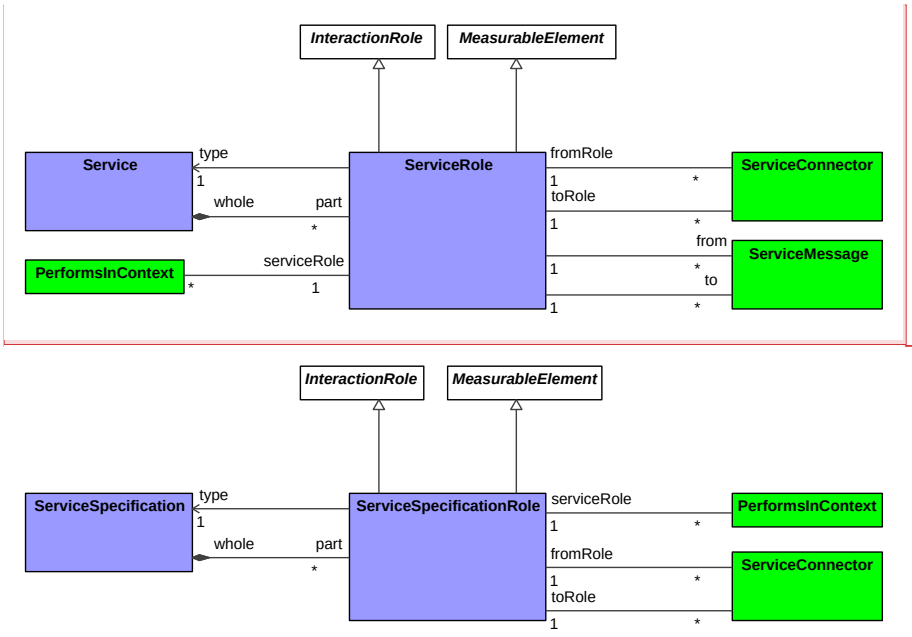

Figure 9:83 - ServiceRole~~ServiceSpecificationRole~~

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Commented [KG397]: UAF12-33

Domain MetaModel::Services::Connectivity

ServiceConnector

Package: Structure

isAbstract: No

Generalization: AssetRole

Description

A channel for exchange between two Service. Where one acts as the consumer of the other.

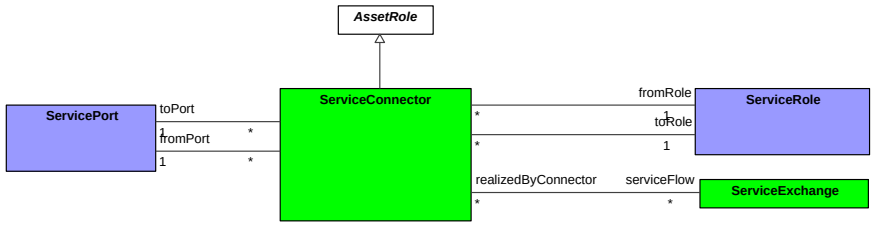

Figure 9:120 - ServiceConnector

Commented [KG398]: UAF12-33

ServiceExchange

Package: Connectivity

isAbstract: No

Generalization: Exchange

Description

Asserts that a flow can exist between Services (i.e. flows of information, people, materiel, or energy).

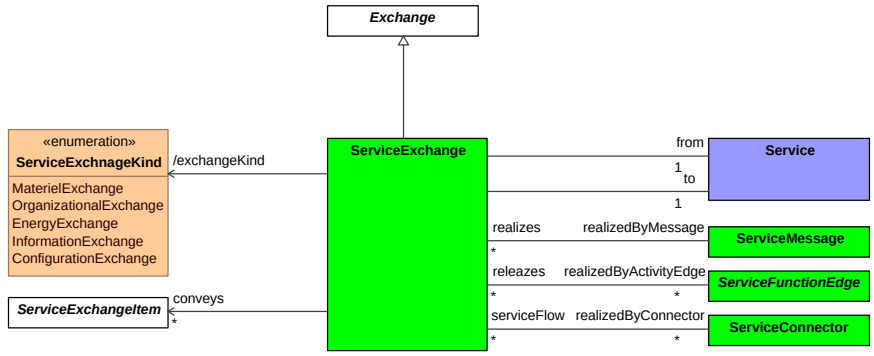

Figure 9:124 - ServiceExchange

ServiceExchangeItem

Package: Connectivity

isAbstract: Yes

Generalization: Resource, ExchangeItem

Description

An abstract grouping for elements that defines the types of elements that can be exchanged between Services and conveyed by a ServiceExchange.

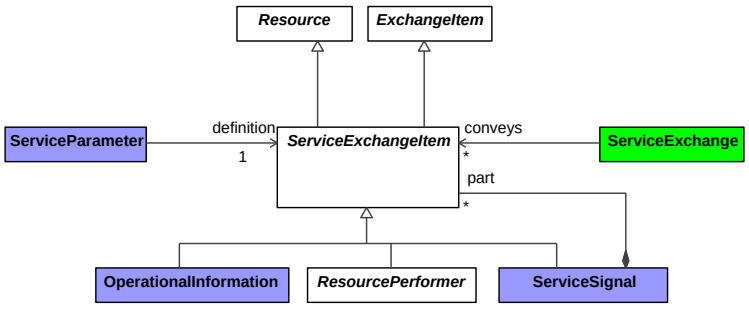

Figure 9:125 - ServiceExchangeItem

ServiceInterface

Package: Connectivity

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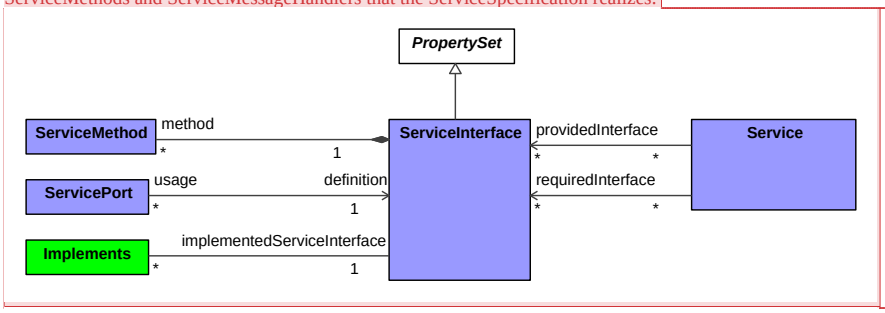
Commented [KG400]: UAF12-33

isAbstract: No

Generalization: PropertySet

Description

A contract that defines the ServiceMethods and ServiceSignals that the Service realizes ~~A contract that defines the ServiceMethods and ServiceMessageHandlers that the ServiceSpecification realizes.~~



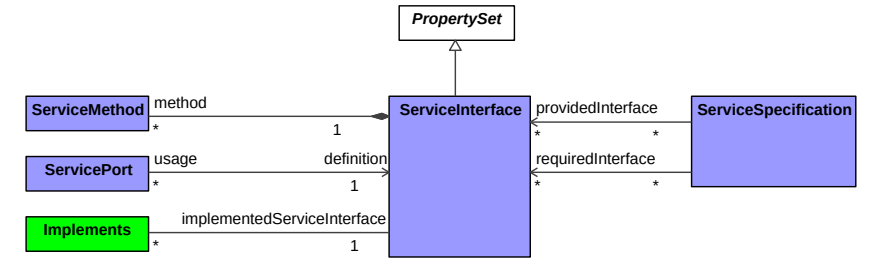


Figure 9:84 - ServiceInterface

ServicePort

Package: Connectivity

isAbstract: No

Generalization: MeasurableElement

Description

An interaction point for a Service through which it can interact with the outside environment and which is defined by a ServiceInterface.

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Commented [KG402]: UAF12-33

Commented [KG403]: UAF12-33

~~An interaction point for a ServiceSpecification through which it can interact with the outside environment and which is defined by a ServiceInterface.~~

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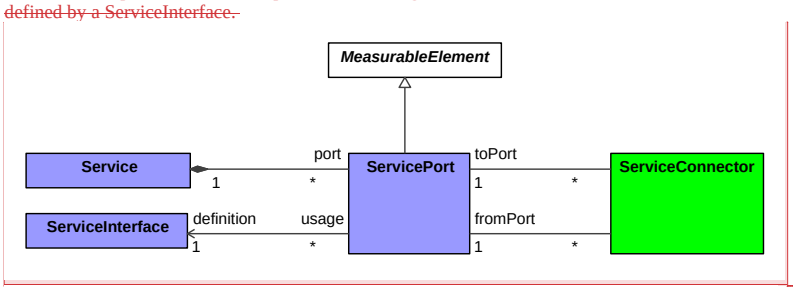

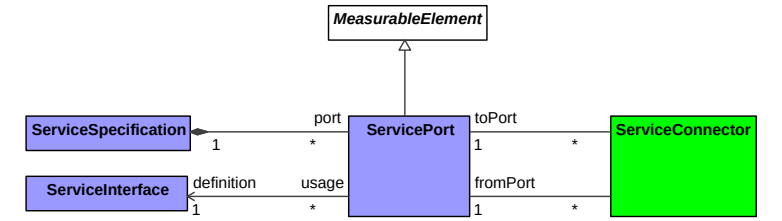

Figure 9:85 – ServicePort

ServiceSignal

Package: Connectivity

isAbstract: No

Generalization: ServiceExchangeItem

Description

A specification of a kind of communication between Services in which a reaction is asynchronously triggered in the receiver without a reply.

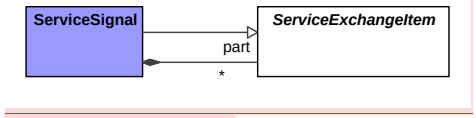

Figure 9:128 - ServiceSignal

ServiceSignalProperty

Package: Connectivity

isAbstract: No

Description

A property of a ServiceSignal typed by ServiceExchangeItem. It enables ServiceExchangeItem e.g. OperationalInformation to be passed as arguments of the ServiceSignal.

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Domain MetaModel::Services::Processes

ServiceFunction

Package: Processes

isAbstract: No

Generalization: Process

Description

An Activity that describes the abstract behavior of Service~~ServiceSpecifications~~, regardless of the actual implementation.

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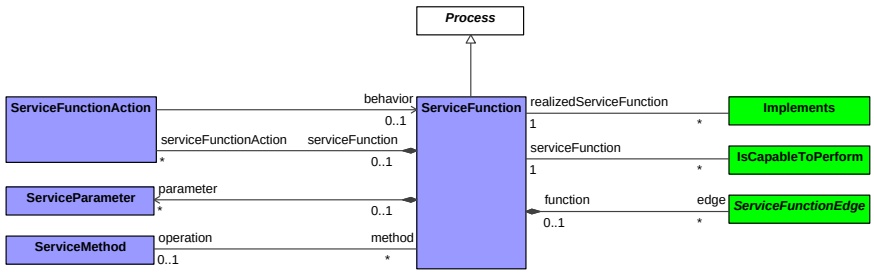


Figure 9:86 - ServiceFunction

ServiceFunctionAction

Package: Processes

isAbstract: No

Generalization: ProcessUsage

Description

A call of a ServiceFunction in the context of another ServiceFunction.

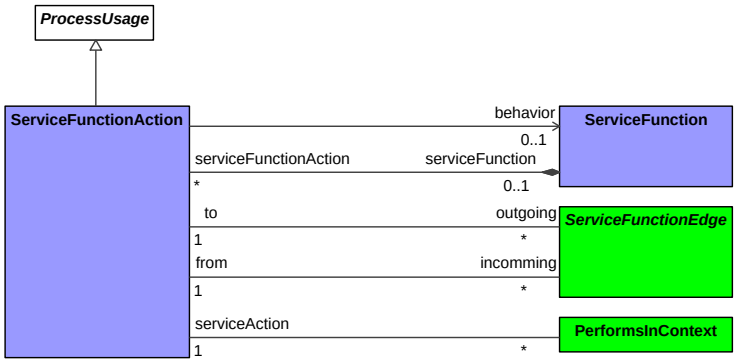


Figure 9:87 - ServiceFunctionAction

ServiceFunctionEdge

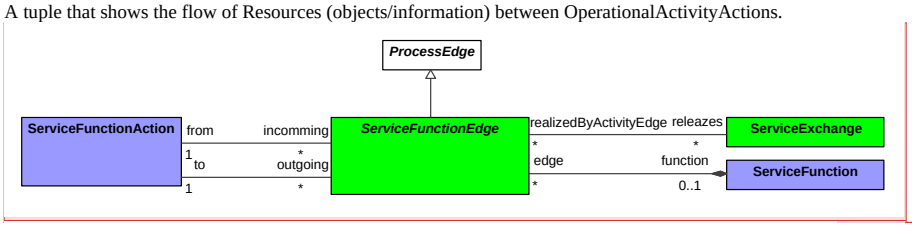
Package: Processes

isAbstract: Yes

Generalization: ProcessEdge

Description

A tuple that shows the flow of Resources (objects/information) between OperationalActivityActions.



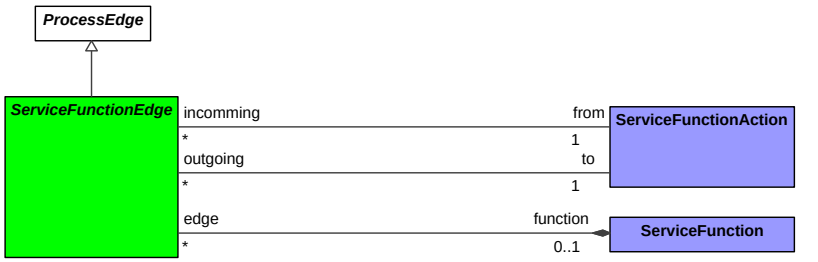


Figure 9:88 - ServiceFunctionEdge

Domain MetaModel::Services::States

ServiceStateDescription

Package: States

isAbstract: No

Generalization: MeasurableElement, StateDescription

Description

A state machine describing the behavior of a ServiceServiceSpecification, depicting how the Service ServiceSpecification responds to various events and the actions.

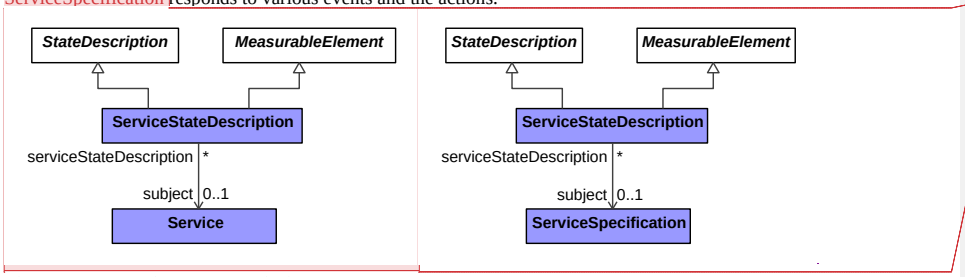


Figure 9:89 - ServiceStateDescription

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Commented [KG409]: UAF12-33

Domain MetaModel::Services:: Sequences ~~Interaction Scenarios~~

Commented [KG410]: UAF12-59

ServiceInteractionScenario

Package: Interaction Scenarios

Commented [KG411]: UAF12-59

isAbstract: No

Generalization: InteractionScenario

Description

A specification of the interactions between Service~~ServiceSpecifications~~.

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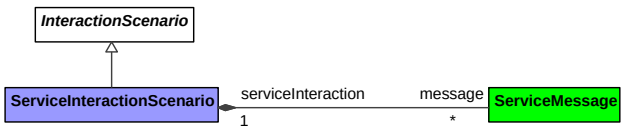

Figure 9:90 - ServiceInteractionScenario

ServiceMessage

Package: Sequences~~Interaction Scenarios~~

Commented [KG413]: UAF12-59

isAbstract: No

Generalization: InteractionMessage

Description

Message for use in a services interaction scenario which carries any of the subtypes of ServiceExchange~~Message for use in a Service Event Trace~~.

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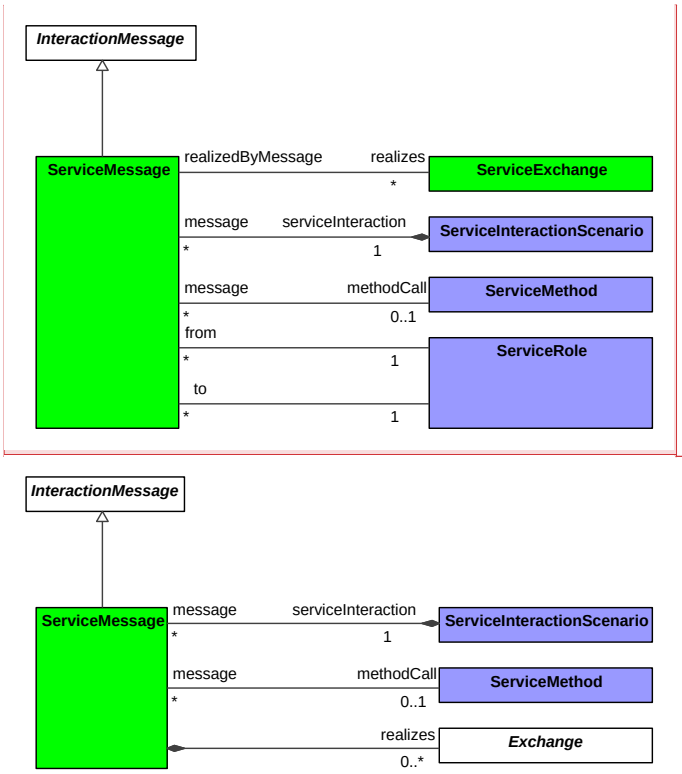


Figure 9:91 - ServiceMessage

Domain MetaModel::Services::Constraints

ServiceContract

Package: Constraints

isAbstract: No

Generalization: Rule

Description

A constraint governing the use of one or more Services.

Commented [KG415]: UAF12-33

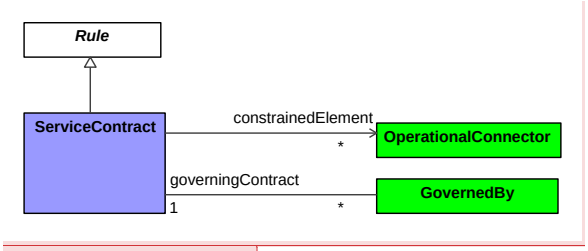


Figure 9:135 - ServiceContract

Commented [KG416]: UAF12-33

ServicePolicy

Package: Constraints

isAbstract: No

Generalization: Rule

Description

A constraint governing the use of one or more ServiceServiceSpecifications.

Commented [KG417]: UAF12-33

Commented [KG418]: UAF12-33

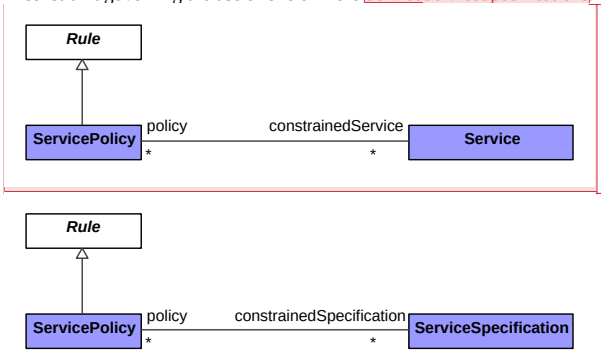


Figure 9:92 - ServicePolicy

Domain MetaModel::Services::Traceability

GovernedBy

Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that exists between the ServiceContract and the Service that it governs.

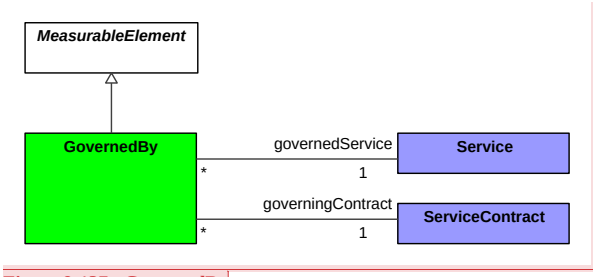


Figure 9:137 - GovernedBy

SupportsConsumes

Package: Traceability

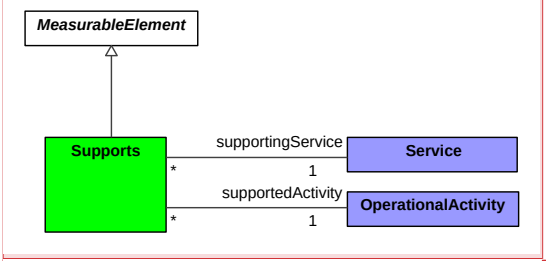
isAbstract: No

Generalization: MeasurableElement

Description

A tuple that asserts that asserts that a service in someway contributes or assists in the execution of an OperationalActivity

A tuple that asserts that an OperationalActivity make use of a service.



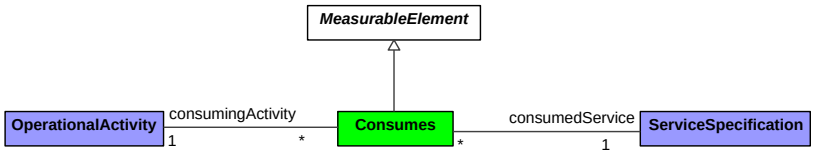


Figure 9:93 - Consumes

15.1.69.1.6 Domain MetaModel::Personnel

Stakeholders: Human resources, Solution Providers, PMs.
Concerns: human factors.
Definition: aims to clarify the role of Human Factors (HF) when creating architectures in order to facilitate both Human Factors Integration (HFI) and systems engineering (SE).

Domain MetaModel::Personnel::Taxonomy

Organization

Package: Taxonomy

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isAbstract: No

Generalization: OrganizationalResource

Description

A group of OrganizationalResources (Persons, Posts, Organizations and Responsibilities) associated for a particular purpose.

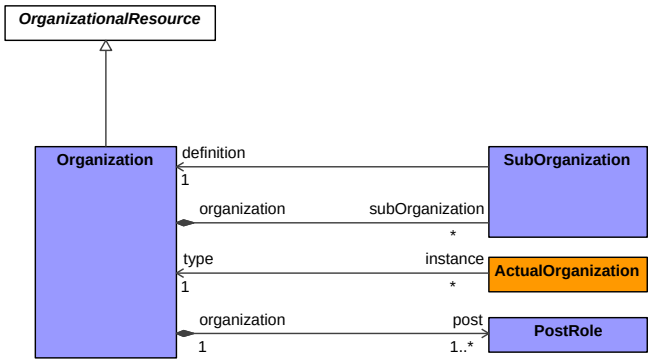

Figure 9:94 - Organization

OrganizationalResource

Package: Taxonomy

isAbstract: Yes

Generalization: PhysicalResource, Stakeholder

Description

An abstract type for Organization, Person, Post and Responsibility.

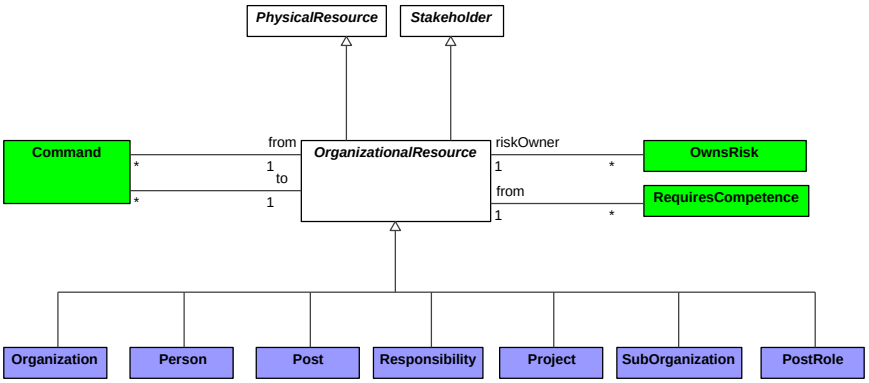

Figure 9:95 - OrganizationalResource

Person

Package: Taxonomy

isAbstract: No

Generalization: OrganizationalResource

Description

A type of a human being used to define the characteristics that need to be described for ActualPersons (e.g. properties such as address, telephone number, nationality, etc).

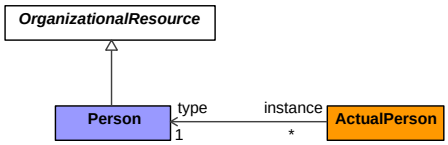

Figure 9:96 - Person

Post

Package: Taxonomy

isAbstract: No

Generalization: OrganizationalResource

Description

A type of job title or position that a person can fill (e.g. Lawyer, Solution Architect, Machine Operator or Chief Executive Officer).

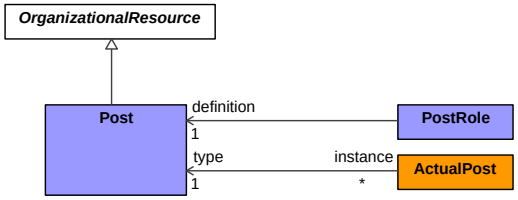

Figure 9:97 - Post

Responsibility

Package: Taxonomy

isAbstract: No

Generalization: OrganizationalResource

Description

The type of duty required of a Person or Organization.

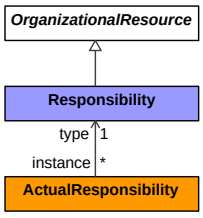

Figure 9:98 - Responsibility

Domain MetaModel::Personnel::Structure

PostRole

Package: Structure

isAbstract: No

Generalization: OrganizationalResource, ResourceRole

Description

A usage of a post in the context of another OrganizationalResource. Creates a whole-part relationship.

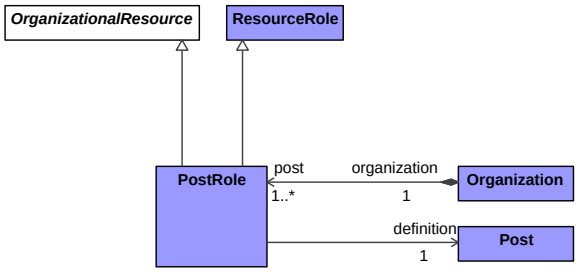

Figure 9:99 - PostRole

SubOrganization

Package: Structure

isAbstract: No

Generalization: OrganizationalResource, ResourceRole

Description

A type of a human being used to define the characteristics that need to be described for ActualPersons (e.g. properties such as address, telephone number, nationality, etc).

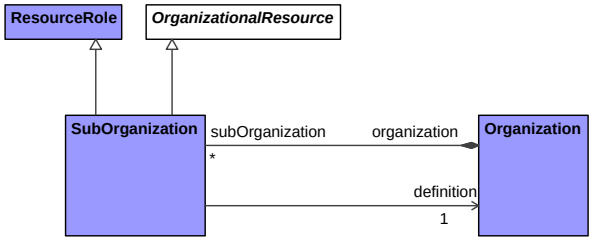

Figure 9:100 - SubOrganization

Domain MetaModel::Personnel::Connectivity

Command

Package: Connectivity

isAbstract: No

Generalization: ResourceExchange

Description

A type of ResourceExchange that asserts that one OrganizationalResource commands another.

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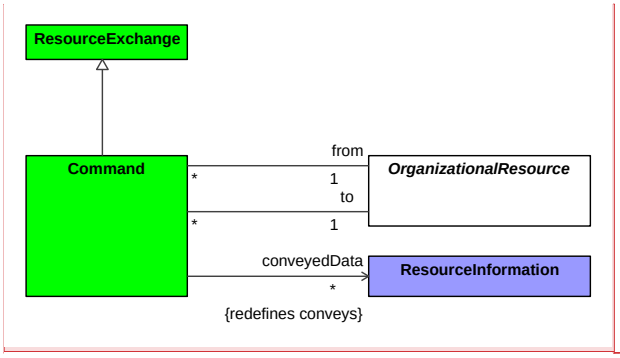

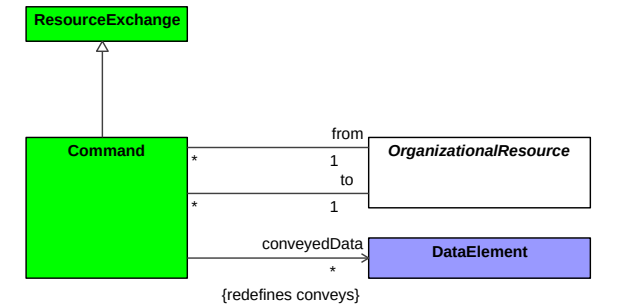

Figure 9:101 - Command

Control

Package: Connectivity

isAbstract: No

Generalization: ResourceExchange

Description

A type of ResourceExchange that asserts that one PhysicalResource controls another PhysicalResource (i.e. the driver of a vehicle controlling the vehicle speed or direction).

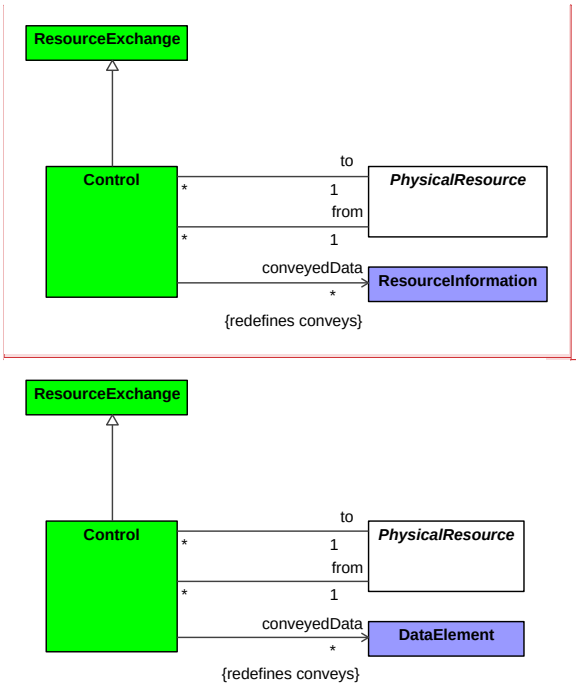

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Figure 9:102 - Control

Domain MetaModel::Personnel:: Sequences ~~Interaction Scenarios~~

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ResourceInteractionScenario

Package: Sequences ~~Interaction~~ ~~Scenarios~~

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isAbstract: No

Generalization: InteractionScenario

Description

A specification of the interactions between ResourcePerformers in a ResourceArchitecture.

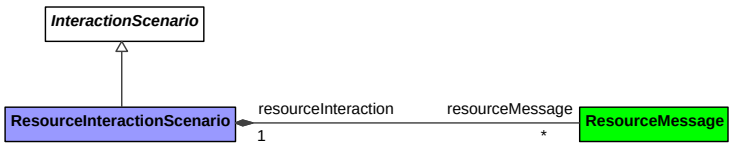


Figure 9:103 - ResourceInteractionScenario

Domain MetaModel::Personnel::Constraints

Competence

Package: Constraints

isAbstract: No

Generalization: PropertySet, SubjectOfForecast

Description

A specific set of abilities defined by knowledge, skills and aptitude.

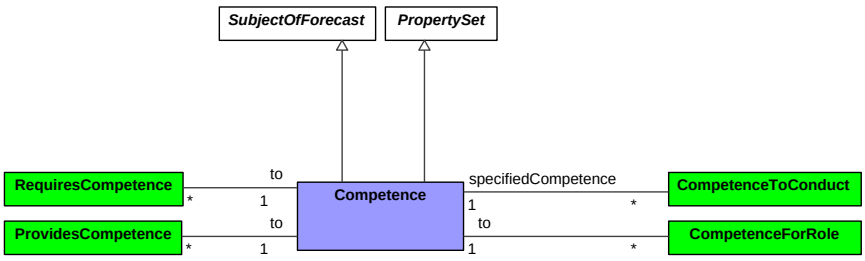


Figure 9:104 - Competence

CompetenceForRole

Package: Constraints

isAbstract: No

Generalization: MeasurableElement

Description

A tuple used to associate an organizational role with a specific set of required competencies.

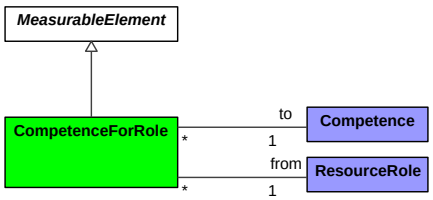


Figure 9:105 - CompetenceForRole

RequiresCompetence

Package: Constraints

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that asserts that an ActualOrganizationalResource is required to have a specific set of Competencies.

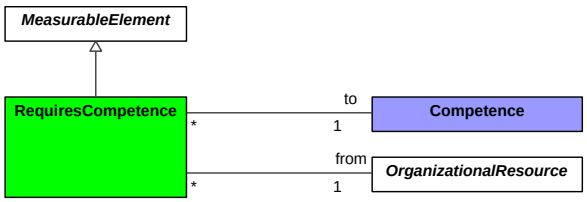


Figure 9:106 - RequiresCompetence

Domain MetaModel::Personnel::Roadmap

FillsPost

Package: Roadmap

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that asserts that an ActualPerson fills an ActualPost.

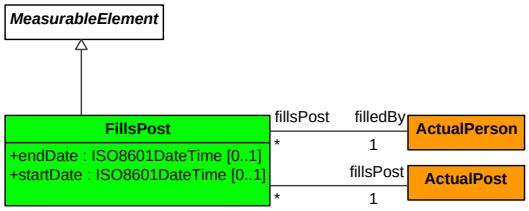


Figure 9:107 - FillsPost

Attributes

endDate :	ISO8601DateTime[0..1]	End date of an ActualPerson filling an ActualPost.
startDate :	ISO8601DateTime[0..1]	Start date of an ActualPerson filling an ActualPost.

Domain MetaModel::Personnel::Traceability

CompetenceToConduct

Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple used to associate a Function with a specific set of Competencies needed to conduct the Function.

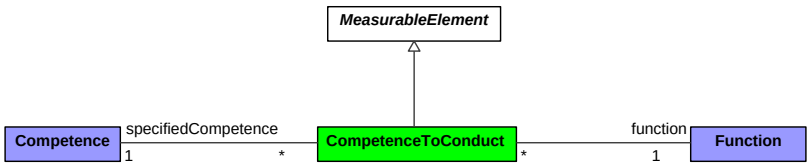


Figure 9:108 - CompetenceToConduct

~~15.1.7~~9.1.7 Domain MetaModel::Resources

Domain MetaModel::Resources::Taxonomy

CapabilityConfiguration

Package: Taxonomy

isAbstract: No

Generalization: ResourceArchitecture
Description

A composite structure representing the physical and human resources (and their interactions) in an enterprise, assembled to meet a capability.

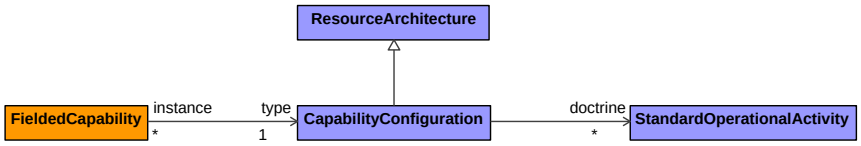


Figure 9:109 - CapabilityConfiguration

NaturalResource

Package: Taxonomy

isAbstract: No

Generalization: PhysicalResource
Description

Type of physical resource that occurs in nature such as oil, water, gas or coal.

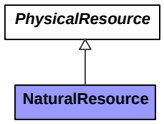


Figure 9:110 - NaturalResource

PhysicalResource

Package: Taxonomy

isAbstract: Yes

Generalization: ResourcePerformer
Description

An abstract type defining physical resources (i.e. OrganizationalResource, ResourceArtifact and NaturalResource).

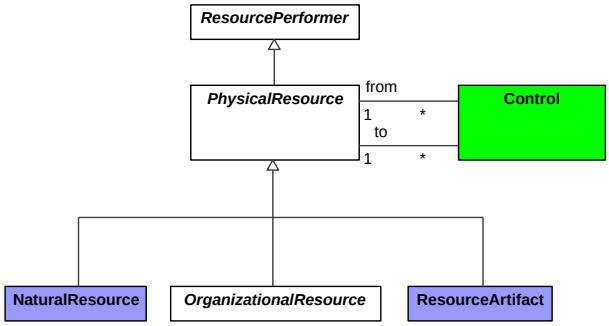


Figure 9:111 - PhysicalResource

ResourceArchitecture

Package: Taxonomy

isAbstract: No

Generalization: ResourcePerformer, Architecture

Description

A type used to denote a model of the Architecture, described from the ResourcePerformer perspective.

Commented [KG427]: UAF12-15

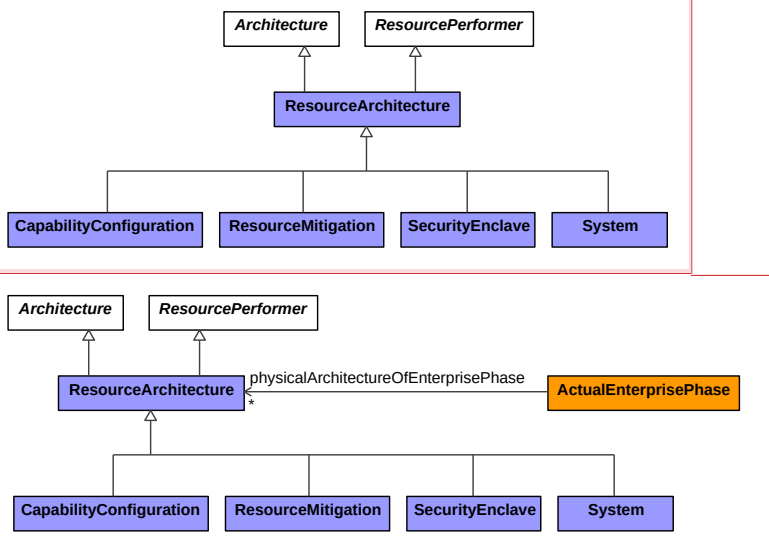


Figure 9:112 - ResourceArchitecture

ResourceArtifact

Package: Taxonomy

isAbstract: No

Generalization: PhysicalResource

Description

A type of man-made object that contains no human beings (i.e. satellite, radio, petrol, gasoline, etc.).

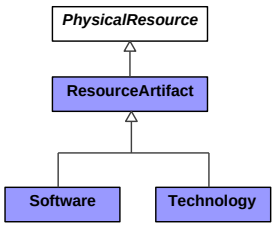


Figure 9:113 - ResourceArtifact

ResourcePerformer

Package: Taxonomy

isAbstract: Yes

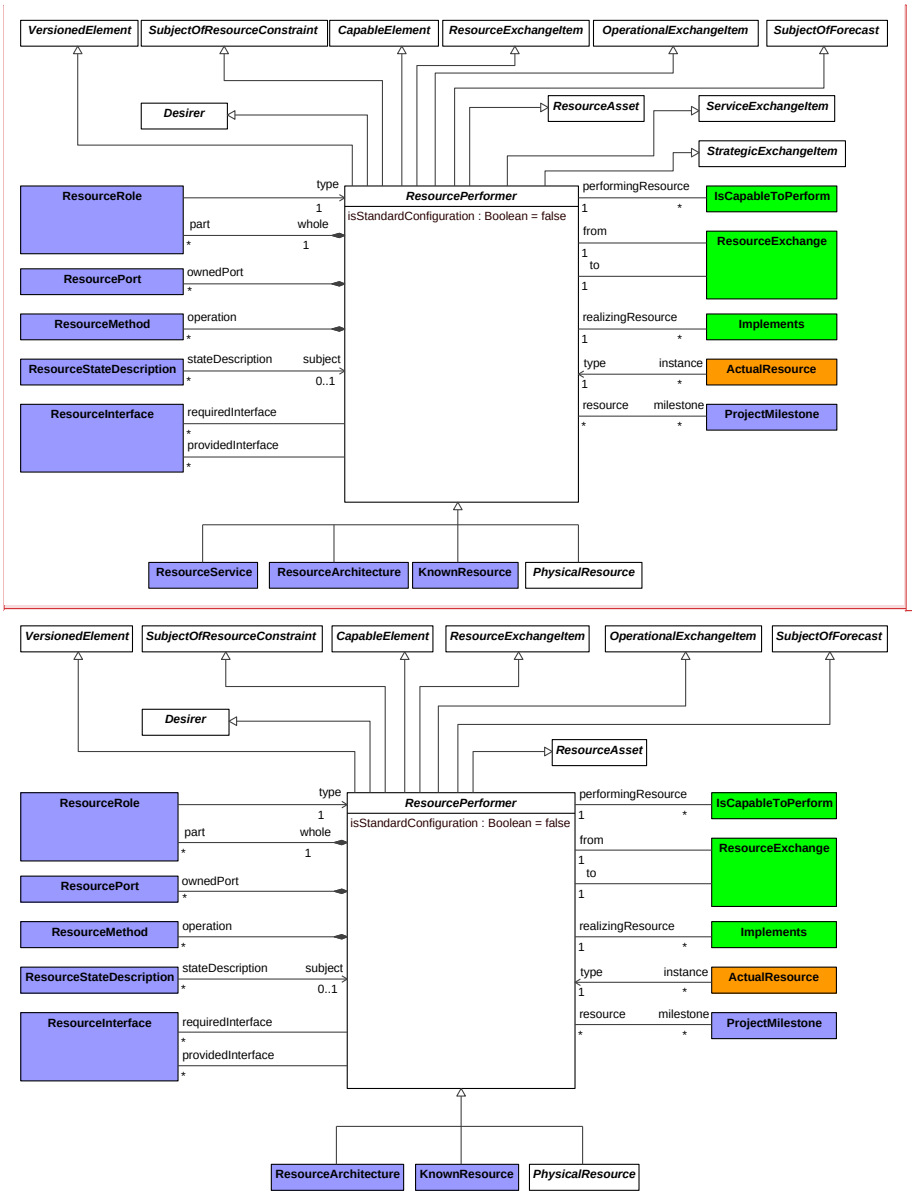
Generalization: ResourceExchangeItem, SubjectOfResourceConstraint, OperationalExchangeItem, SubjectOfForecast, CapableElement, Desirer, VersionedElement, ResourceAsset, ServiceExchangeItem, StrategicExchangeItem

Commented [KG428]: UAF12-33

Description

An abstract grouping of elements that can perform Functions.

Commented [KG429]: UAF12-33



VersionedElement
SubjectOfResourceConstraint
CapableElement
ResourceExchangeItem
OperationalExchangeItem
SubjectOfForecast
Desirer
ResourceAsset
ResourceRole
type
1
part
whole
*
1
ResourcePerformer
isStandardConfiguration : Boolean = false
performingResource
1
*
IsCapableToPerform
from
1
to
1
ResourceExchange
ResourcePort
ownedPort
*
ResourceMethod
operation
*
realizingResource
1
*
Implements
ResourceStateDescription
stateDescription
subject
*
0..1
type
instance
1
*
ActualResource
ResourceInterface
requiredInterface
*
providedInterface
*
resource
milestone
*
*
ProjectMilestone
ResourceArchitecture
KnownResource
PhysicalResource

Figure 9:114 - ResourcePerformer

Attributes

isStandardConfiguration : Boolean[] Indicates if the ResourcePerformer is StandardConfiguration, default=false.

ResourceService

Package: Taxonomy

isAbstract: No

Generalization: ResourcePerformer

Description

A services that a ResourcePerformer provides to support higher level Services or OperationalActivities. Employee provisioning, backup and recovery, storage, self-service help desk are examples of ResourceServices.

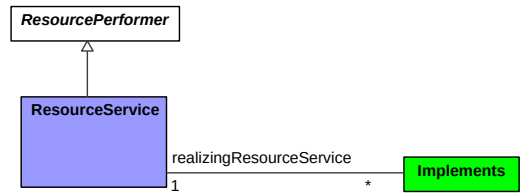


Figure 9:115 - ResourceService

Commented [KG430]: UAF12-33

Software

Package: Taxonomy

isAbstract: No

Generalization: ResourceArtifact

Description

A sub-type of ResourceArtifact that specifies an executable computer program.

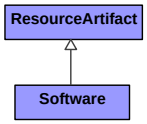


Figure 9:115 - Software

System

Package: Taxonomy

isAbstract: No

Generalization: ResourceArchitecture

Description

An integrated set of elements, subsystems, or assemblies that accomplish a defined objective. These elements include products (hardware, software, firmware), processes, people, information, techniques, facilities, services, and other support elements (INCOSE SE Handbook V4, 2015).

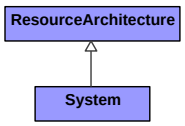


Figure 9:116 - System

Domain MetaModel::Resources::Structure

ResourceMethod

Package: Structure

isAbstract: No

Generalization: ProcessOperation

Description

A behavioral feature of a ResourcePerformer whose behavior is specified in a Function.

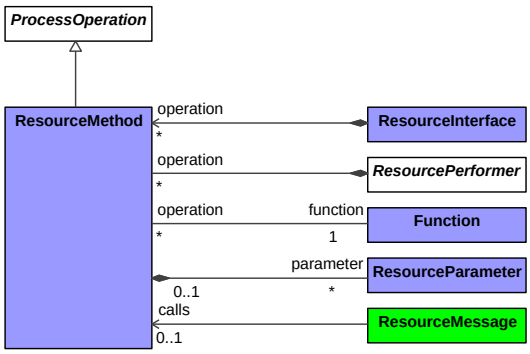


Figure 9:117 - ResourceMethod

ResourceParameter

Package: Structure

isAbstract: No

Generalization: ProcessParameter

Description

A type that represents inputs and outputs of an Function. It is typed by a ResourceInteractionItem.

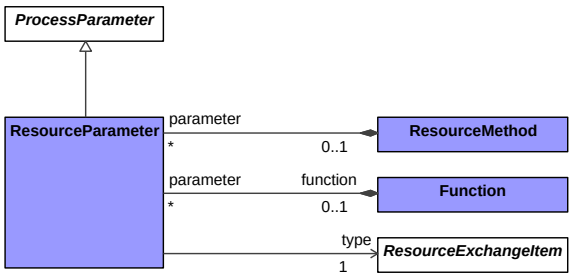


Figure 9:118 - ResourceParameter

ResourcePort

Package: Structure

isAbstract: No

Generalization: ProtocolImplementation, MeasurableElement

Description

An interaction point for a ResourcePerformer through which it can interact with the outside environment and which is defined by a ResourceInterface.

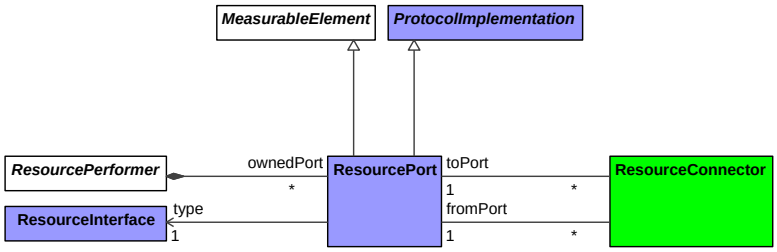


Figure 9:119 - ResourcePort

ResourceRole

Package: Structure

isAbstract: No

Generalization: SubjectOfResourceConstraint, LocationHolder, AssetRole, InteractionRole

Description

Usage of a ResourcePerformer in the context of another ResourcePerformer. Creates a whole-part relationship.

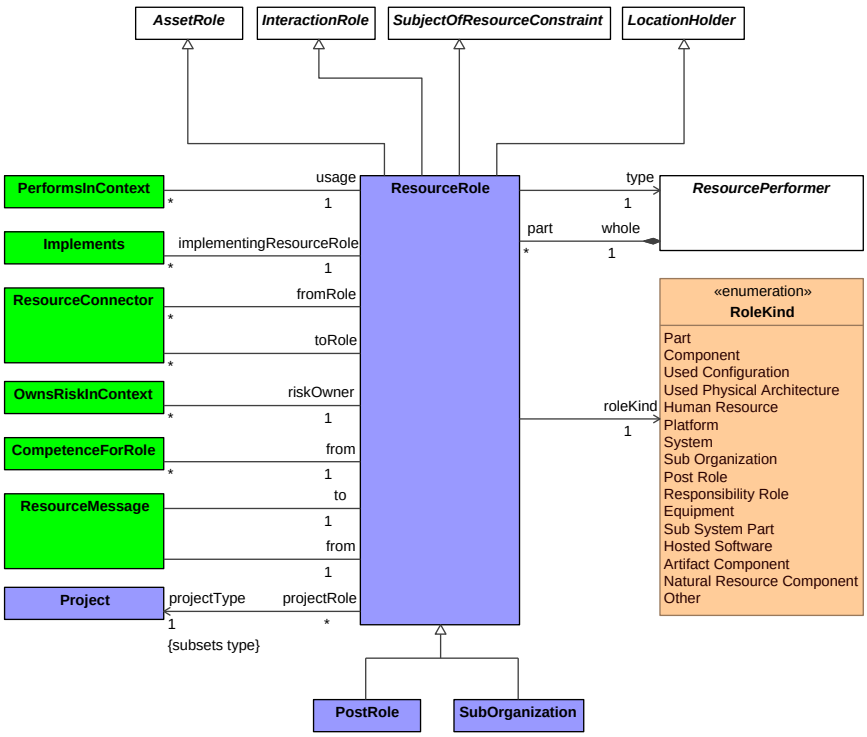


Figure 9:120 - ResourceRole

Domain MetaModel::Resources::Connectivity

ResourceConnector

Package: Connectivity

isAbstract: No

Generalization: ProtocolImplementation, AssetRole~~MeasurableElement~~

Commented [KG431]: UAF12-51

Description

A channel for exchange between two ResourceRoles.

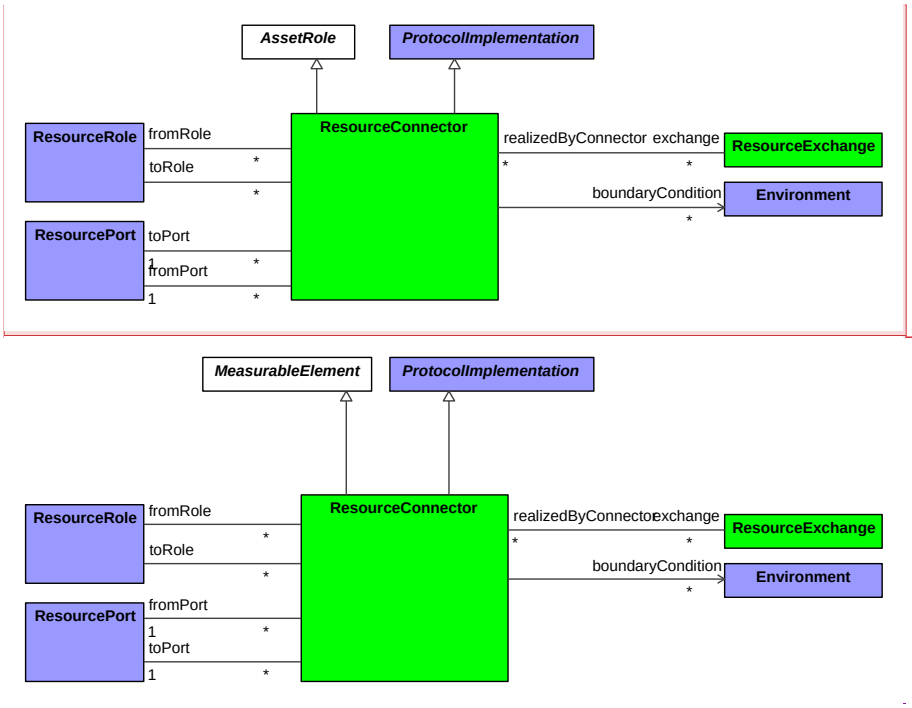


Figure 9:121 - ResourceConnector

ResourceExchange

Package: Connectivity

isAbstract: No

Generalization: Exchange

Description

Asserts that a flow can exist between ResourcePerformers (i.e. flows of data, people, material, or energy).

Commented [KG432]: UAF12-51

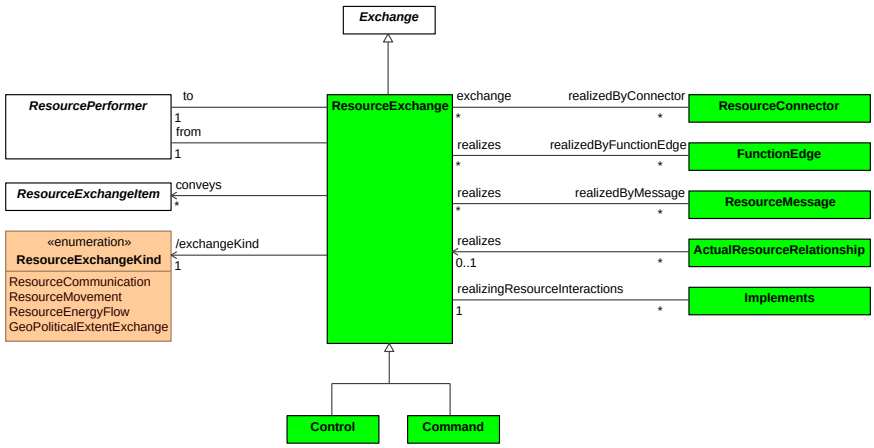


Figure 9:122 - ResourceExchange

ResourceExchangeItem

Package: Connectivity

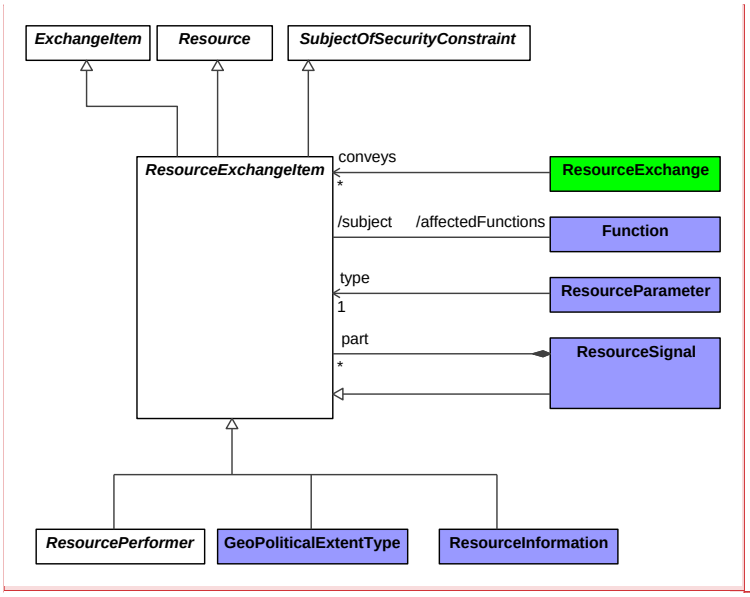
isAbstract: Yes

Generalization: Resource, SubjectOfSecurityConstraint, ExchangeItem

Description

An abstract type grouping elements that defines the types of elements that can be exchanged between ResourcePerformers and conveyed by a ResourceExchange.

Commented [KG433]: UAF12-33



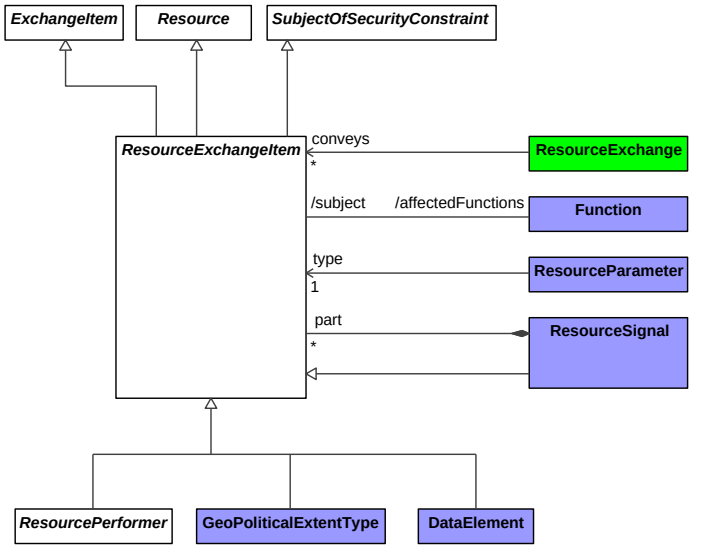


Figure 9:123 - ResourceExchangeItem

ResourceInterface

Package: Connectivity

isAbstract: No

Generalization: PropertySet

Description

A declaration that specifies a contract between the ResourcePerformers it is related to and any other ResourcePerformers it can interact with. It is also intended to be an implementation of a specification of an Interface in the Business and/or Service layer.

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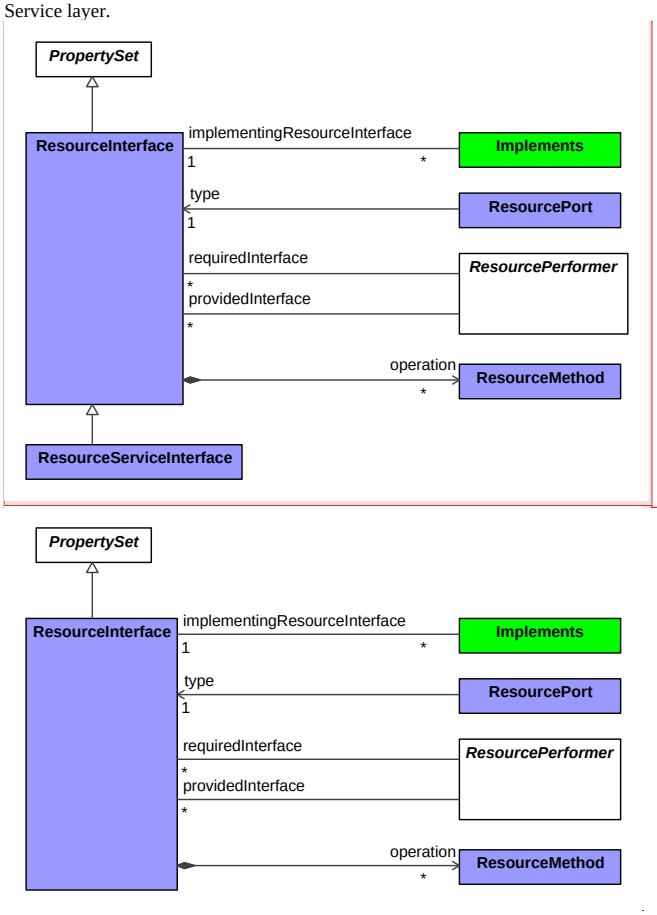

Figure 9:124 - ResourceInterface

ResourceServiceInterface

Package: Structure

isAbstract: No

Generalization: ResourceInterface
Description
A contract that defines the ResourceMethods and ResourceSignal receptions that the ResourceServices realize.

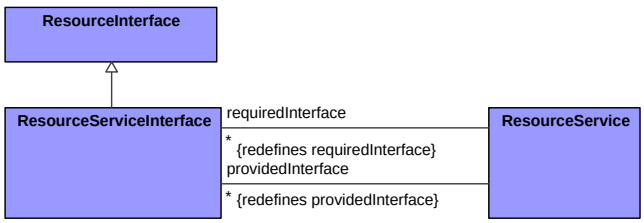

Figure 9:119 - ResourceServiceInterface

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ResourceSignal

Package: Connectivity
isAbstract: No
Generalization: ResourceExchangeItem
Description
A property of an element representing something in the physical world, expressed in amounts of a unit of measure.

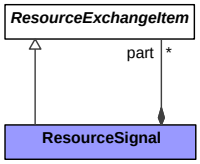


Figure 9:125 - ResourceSignal

Domain MetaModel::Resources::Processes

Function

Package: Processes
isAbstract: No
Generalization: SubjectOfResourceConstraint, Process
Description
An Activity which is specified in the context to the ResourcePerformer (human or machine) that IsCapableToPerform it.

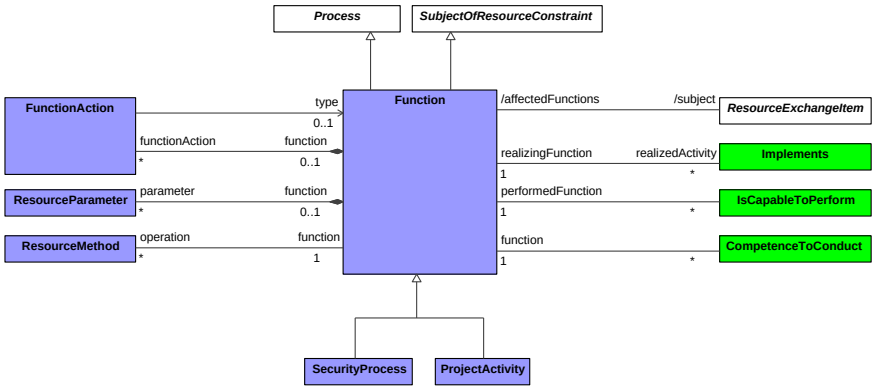


Figure 9:126 - Function

FunctionAction

Package: Processes

isAbstract: No

Generalization: ProcessUsage

Description

A call of a Function indicating that the Function is performed by a ResourceRole in a specific context.

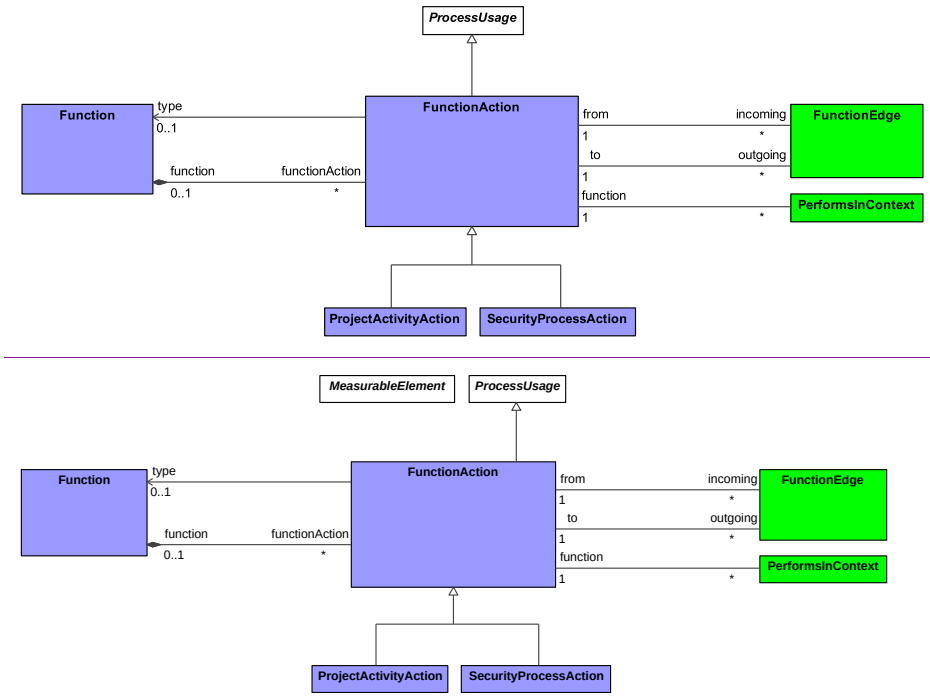


Figure 9:127 - FunctionAction

FunctionEdge

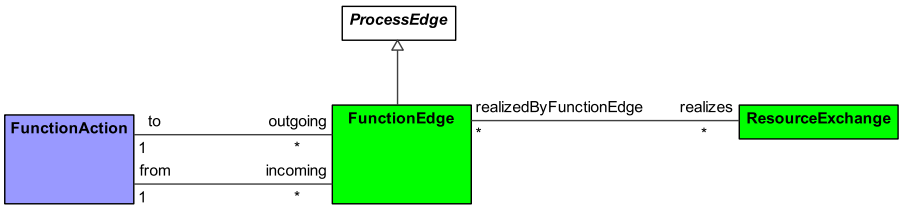
Package: Processes

isAbstract: No

Generalization: ProcessEdge

Description

A tuple that shows the flow of Resources (objects/data) between FunctionActions.



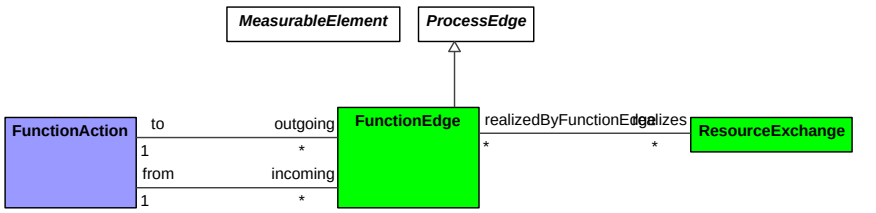


Figure 9:128 - FunctionEdge

Domain MetaModel::Resources::States

ResourceStateDescription

Package: States

isAbstract: No

Generalization: MeasurableElement, StateDescription

Description

A state machine describing the behavior of a ResourcePerformer, depicting how the ResourcePerformer responds to various events and the actions.

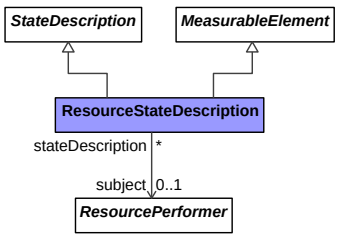


Figure 9:129 - ResourceStateDescription

Domain MetaModel::Resources:: Sequences ~~Interaction Scenarios~~

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ResourceMessage

Package: Sequences ~~Interaction Scenarios~~

Commented [KG437]: UAF12-59

isAbstract: No

Generalization: InteractionMessage

Description

Message for use in an Resource Event-Trace which carries any of the subtypes of ResourceExchange.

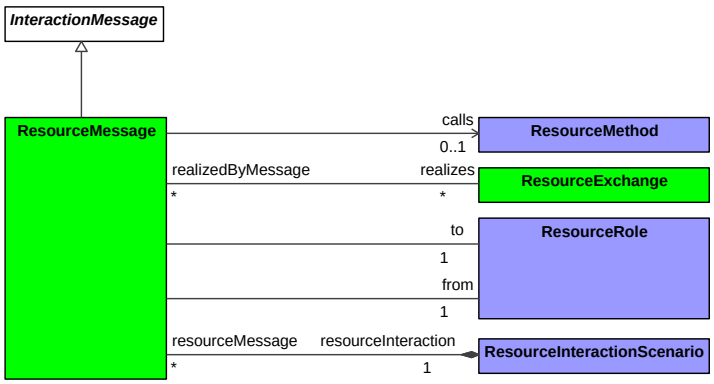

Figure 9:130 - ResourceMessage

Domain MetaModel::Resources::Information

ResourceInformation~~DataElement~~

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Package: Information

isAbstract: No

Generalization: SubjectOfResourceConstraint, ResourceAsset, ResourceExchangeItem

Description

A formalized representation of data that is managed by or exchanged between resources.

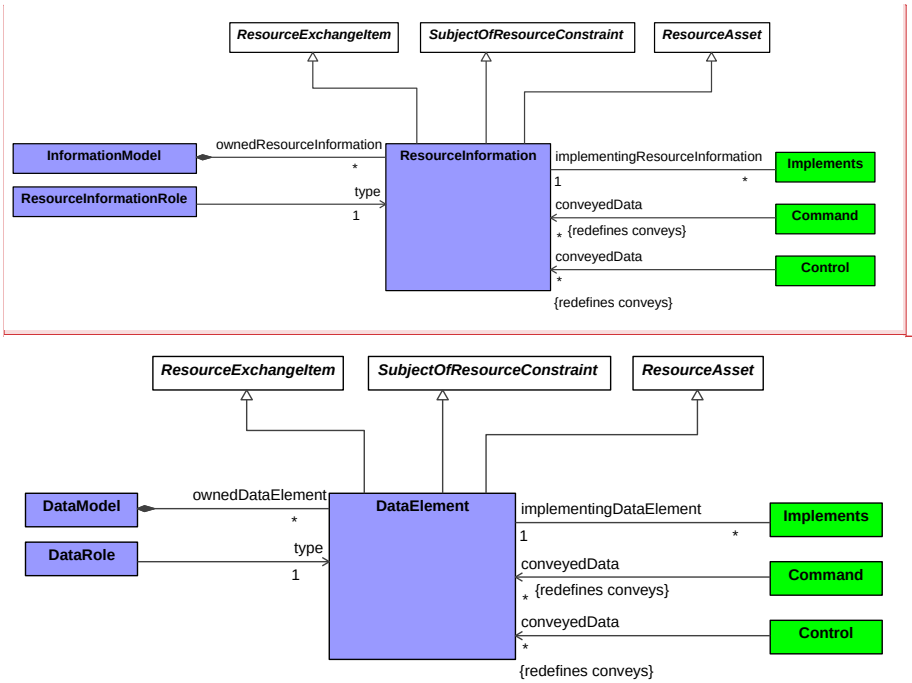

Figure 9:131 - ResourceInformation~~DataElement~~

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Commented [KG440]: UAF12-33

~~DataRole~~

Commented [KG441]: UAF12-33

~~**Package:** Information~~

~~isAbstract: No~~

~~**Generalization:** AssetRole~~

~~Description~~

~~A usage of DataElement that exists in the context of an ResourceAsset. It also allows the representation of the whole-part aggregation of DataElements.~~

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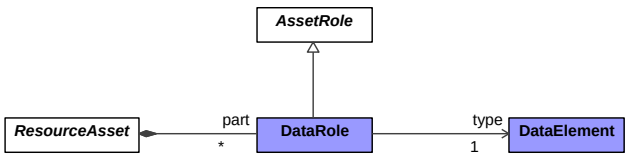

~~**Figure 9:132 - DataRole**~~

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Domain MetaModel::Resources::Constraints

ResourceConstraint

Package: Constraints

isAbstract: No

Generalization: Rule

Description

A rule governing the structural or functional aspects of an implementation.

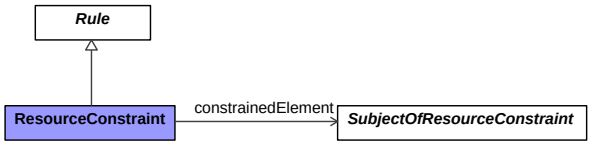

Figure 9:133 - ResourceConstraint

SubjectOfResourceConstraint

Package: Constraints

isAbstract: Yes

Generalization: UAFElement

Description

An abstract type grouping elements that can be the subject of a ResourceConstraint.

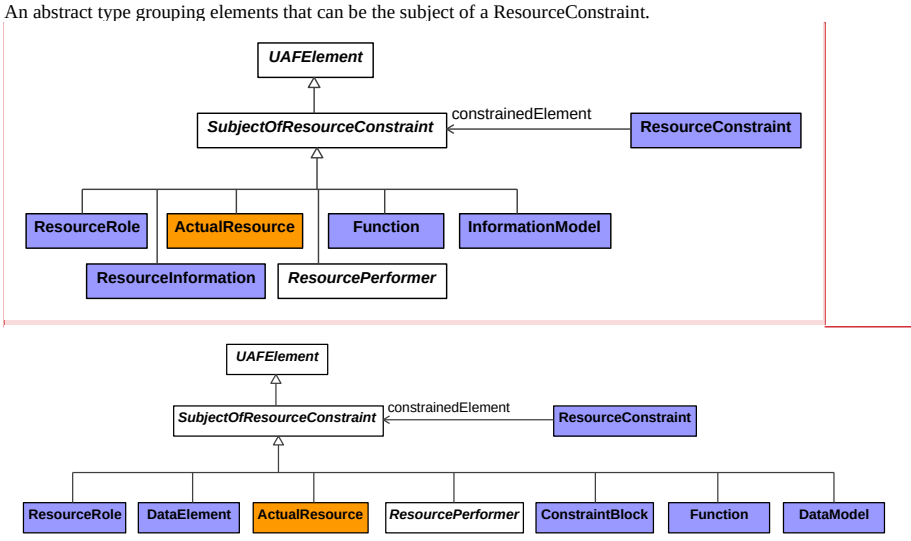

Figure 9:134 - SubjectOfResourceConstraint

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Domain MetaModel::Resources::Roadmap

Forecast

Package: Roadmap

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that specifies a transition from one Asset, Standard, Competence to another future one. It is related to an ActualStrategicPhase ~~ActualEnterprisePhase~~ to give it a temporal context.

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UAF12-12

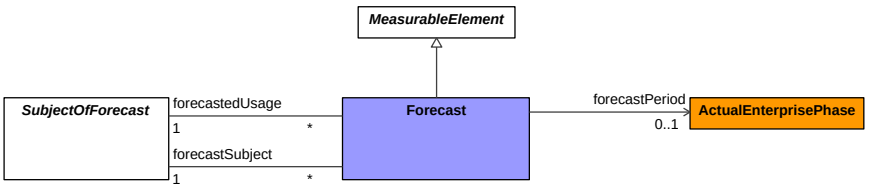

Figure 9:135 - Forecast

SubjectOfForecast

Package: Roadmap

isAbstract: Yes

Generalization: UAFElement

Description

An abstract type grouping elements that can be the subject of a Forecast.

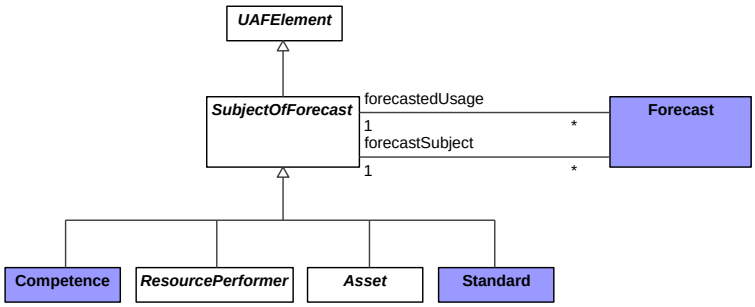

Figure 9:136 - SubjectOfForecast

Technology

Package: Roadmap

isAbstract: No

Generalization: ResourceArtifact

Description

A sub type of ResourceArtifact that indicates a technology domain, i.e. nuclear, mechanical, electronic, mobile telephony etc.

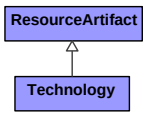

Figure 9:137 - Technology

VersionedElement

Package: Roadmap

isAbstract: Yes

Generalization: UAFElement

Description

An abstract type grouping ResourcePerformer and Service ~~ServiceSpecification~~ that allows VersionOfConfiguration to be related to ActualProjectMilestones.

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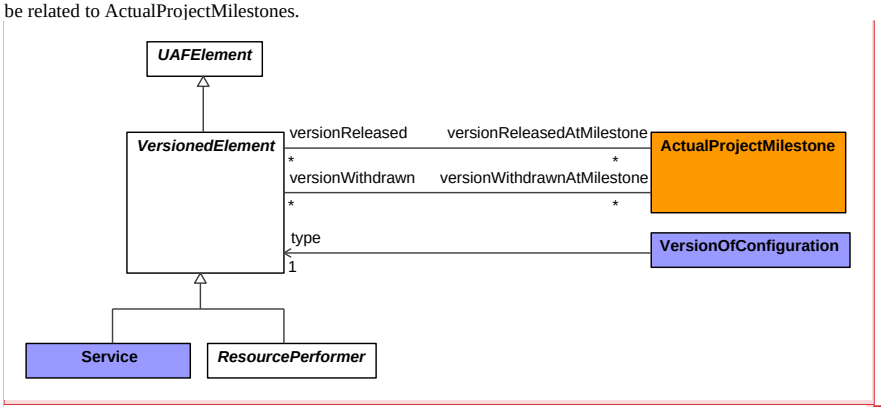

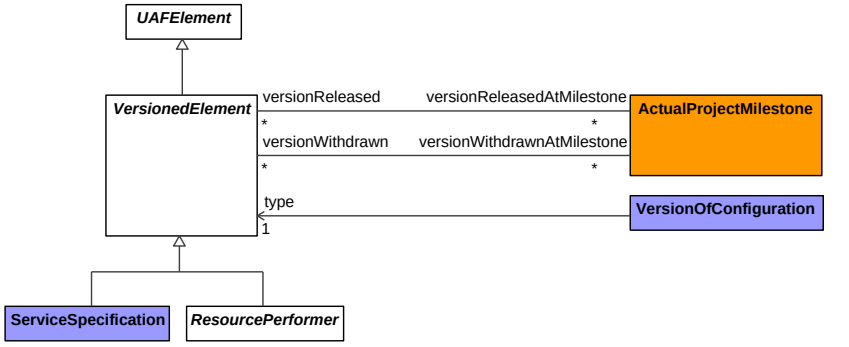

Figure 9:138 - VersionedElement

VersionOfConfiguration

Package: Roadmap

isAbstract: No

Generalization: MeasurableElement

Description

A property of a WholeLifeConfiguration, used in version control of a VersionedElement. It asserts that a VersionedElement is a version of a WholeLifeConfiguration.

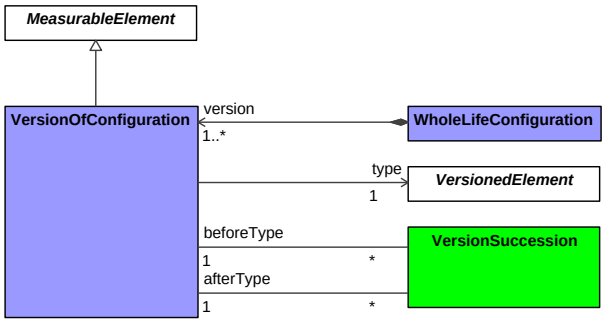

Figure 9:139 - VersionOfConfiguration

VersionSuccession

Package: Roadmap

isAbstract: No

Generalization: MeasurableElement

Description

A tuple between two VersionOfConfigurations that denotes that one VersionOfConfiguration follows from another.

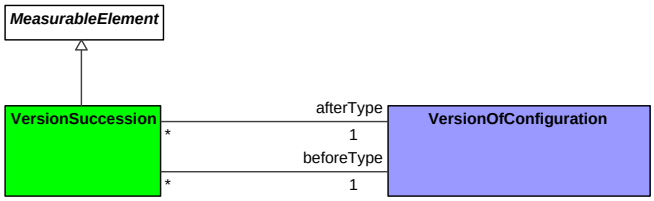

Figure 9:140 - VersionSuccession

WholeLifeConfiguration

Package: Roadmap

isAbstract: No

Generalization: PropertySet

Description

A set of VersionedElements, e.g., Services for a service provider or ResourcePerformers deployed for implementation~~A set of VersionedElements~~.

Commented [AM448]: UAF12-33

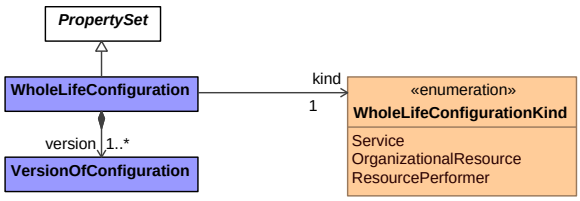

Figure 9:141 - WholeLifeConfiguration

Domain MetaModel::Resources::Traceability

ProtocolImplementation

Package: Traceability

isAbstract: Yes

Generalization: UAFElement

Description

An abstract type grouping architectural elements that can implement Protocols.

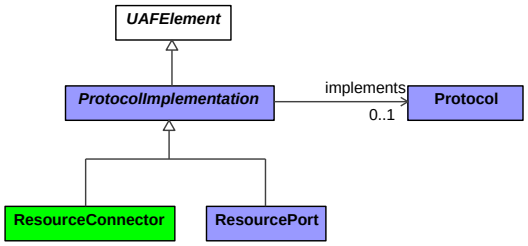

Figure 9:142 - ProtocolImplementation

~~15.1.8~~9.1.8 Domain MetaModel::Security

Stakeholders: Security Architects, Security Engineers. Systems Engineers, Operational Architects.
Concerns: addresses the security constraints and information assurance attributes that exist on exchanges between resources and OperationalPerformers
Definition: illustrates the security assets, security constraints, security controls, families, and measures required to address specific security concerns.

Domain MetaModel::Security::Motivation

Commented [KG449]: UAF12-50

EnhancedSecurityControl

Package: Motivation~~Processes~~

Commented [KG450]: UAF12-50

isAbstract: No

Generalization: SecurityControl

Description

Statement of security capability to: (i) build in additional but related, functionality to a basic control; and/or (ii)increase the strength of a basic control.

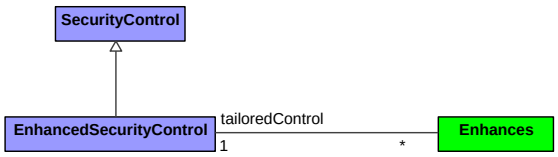

Figure 9:151 - EnhancedSecurityControl

Enhances

Package: Motivation~~Processes~~

Commented [KG451]: UAF12-50

isAbstract: No

Generalization: MeasurableElement

Description

A tuple relating the EnhancedSecurityControl to a SecurityControl.

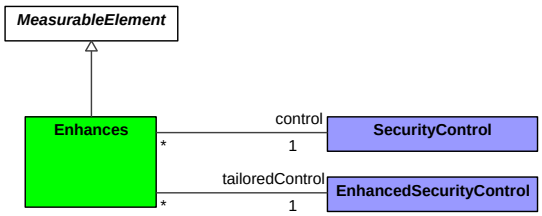

Figure 9:152 - Enhances

Protects

Package: Motivation~~Processes~~

Commented [KG452]: UAF12-50

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that asserts that a SecurityControl is required to protect an Asset.

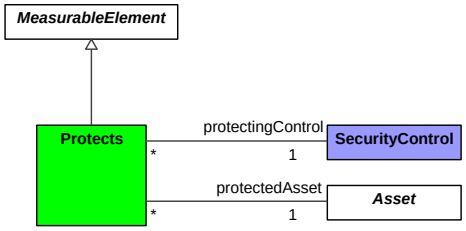

Figure 9:153 - Protects

ProtectsInContext

Package: Motivation~~Processes~~

Commented [KG453]: UAF12-50

isAbstract: No

Generalization: MeasurableElement
Description

A tuple that relates a SecurityControlAction to a OperationalRole, or a ResourceRole. It indicates that SecurityControl is required to protect an Asset in a specific context or configuration.

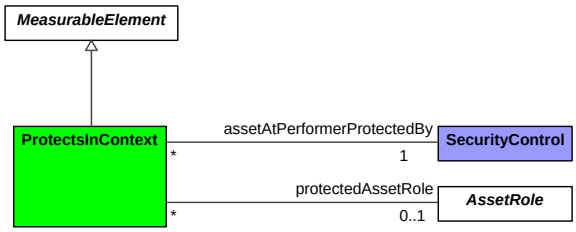

Figure 9:154 - ProtectsInContext

SecurityControl

Package: MotivationConstraints

Commented [KG454]: UAF12-50

isAbstract: No

Generalization: MeasurableElement
Description

The management, operational, and technical control (i.e., safeguard or countermeasure) prescribed for an information system to protect the confidentiality, integrity, and availability of the system and its information [NIST SP 800-53].

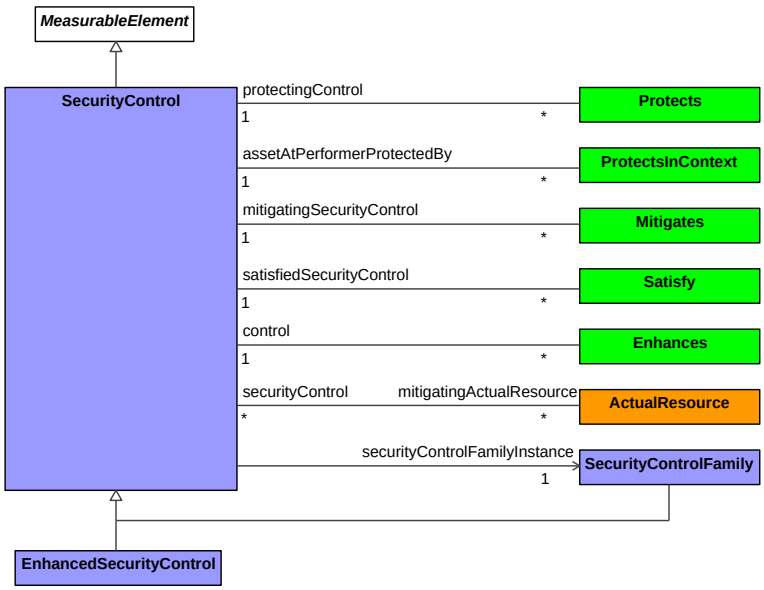

Figure 9:165 - SecurityControl

SecurityControlFamily

Package: ~~Constraints~~Motivation

isAbstract: No

Generalization: SecurityControl

Description

An element that organizes security controls into a family. Each Security Control Family contains security controls related to the general security topic of the family.

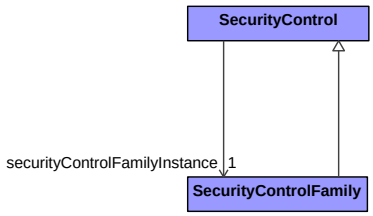

Figure 9:166 - SecurityControlFamily

Domain MetaModel::Security::Taxonomy

Asset

Package: Taxonomy

isAbstract: Yes

Generalization: SubjectOfForecast, ConceptItem, LocationHolder, PropertySet, SubjectOfSecurityConstraint, AffectableElement

Description

An abstract element that indicates the types of elements that can be affected by Risk. Asset as applied to Security views is an abstract element that indicates the types of elements that can be considered as a subject for security analysis

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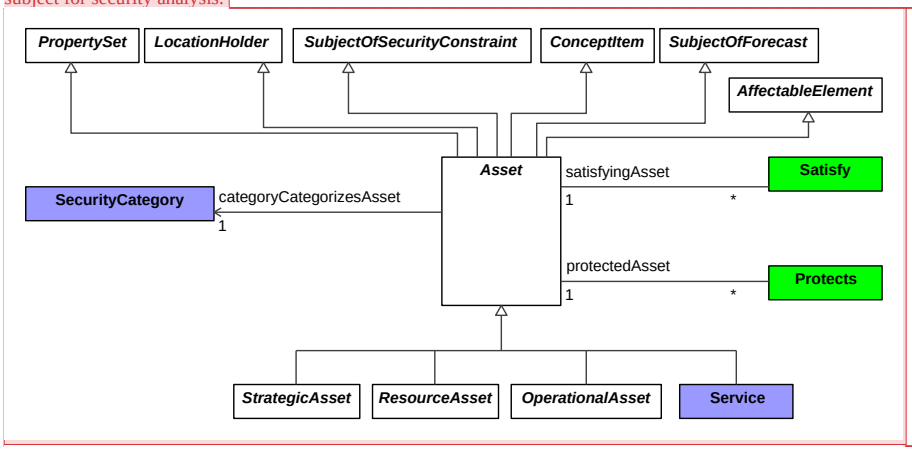
~~Asset as applied to Security views, an abstract type that indicates the types of elements that can be considered as a subject for security analysis.~~



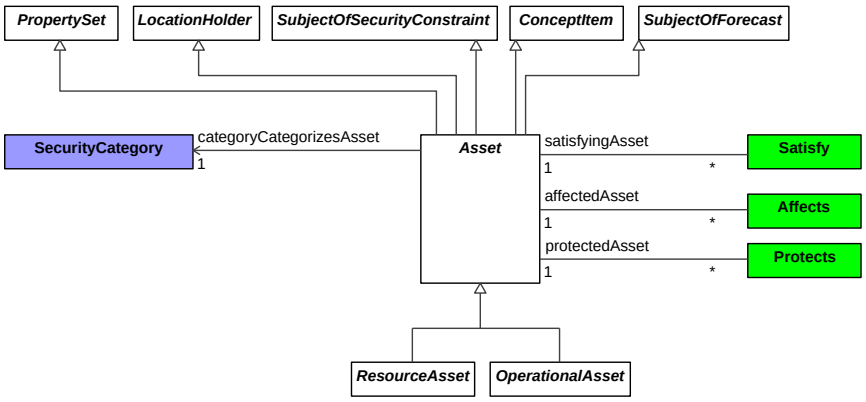


Figure 9:143 - Asset

OperationalAsset

Package: Taxonomy

isAbstract: Yes

Generalization: Asset

Description

An abstract element used to group the elements of OperationalAgent and OperationalInformation allowing them to own OperationalInformationRoles.

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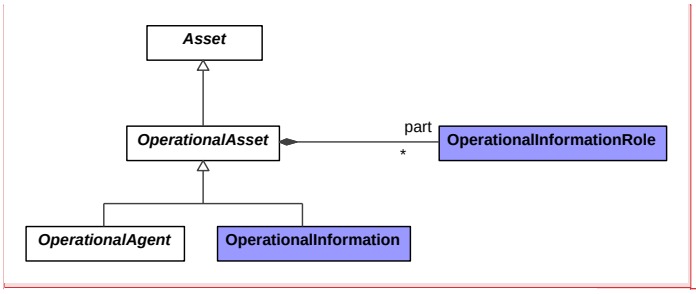

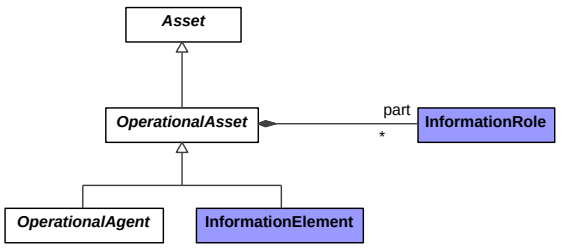

Figure 9:144 - OperationalAsset

OperationalMitigation

Package: Taxonomy

isAbstract: No

Generalization: OperationalArchitecture

Description

A set of OperationalPerformers intended to address against specific operational risks.

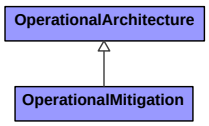

Figure 9:145 - OperationalMitigation

ResourceAsset

Package: Taxonomy

isAbstract: Yes

Generalization: Asset

Description

An abstract element used to group the elements of ResourcePerformer and ResourceInformation allowing them to own ResourceInformationRoles

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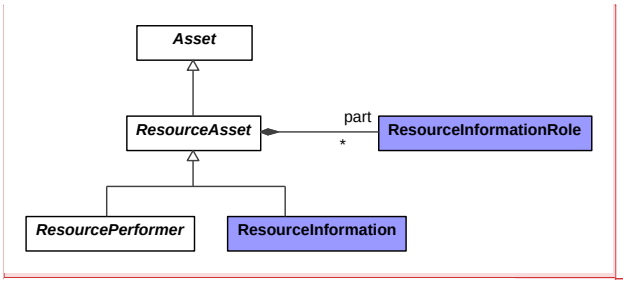
Commented [KG461]: UAF12-33

Commented [KG462]: UAF12-33



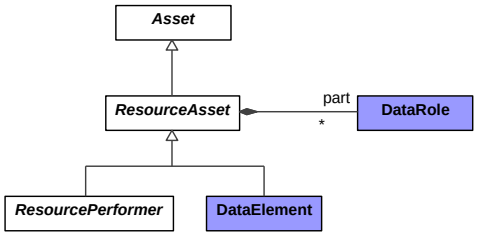


Figure 9:146 - ResourceAsset

ResourceMitigation

Package: Taxonomy

isAbstract: No

Generalization: ResourceArchitecture

Description

A set of ResourcePerformers intended to address against specific risks.

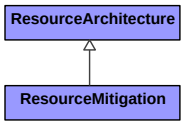


Figure 9:147 - ResourceMitigation

SecurityEnclave

Package: Taxonomy

isAbstract: No

Generalization: ResourceArchitecture

Description

Collection of information systems connected by one or more internal networks under the control of a single authority and security policy. The systems may be structured by physical proximity or by function, independent of location.

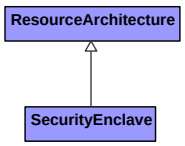


Figure 9:148 - SecurityEnclave

Domain MetaModel::Security::Structure

AssetRole

Package: Structure

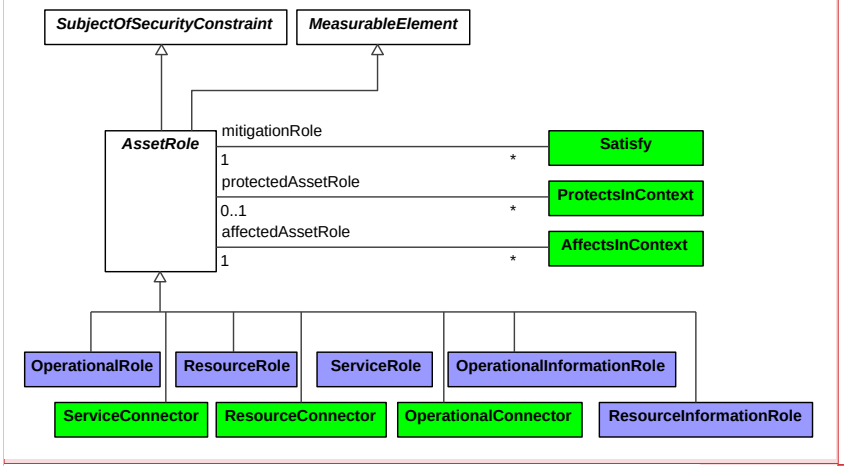
isAbstract: Yes

Generalization: BPMN2Metamodel::ResourceRole, SubjectOfSecurityConstraint, MeasurableElement

Description

An abstract element that indicates the types of elements that can be affected by Risk in the particular context. AssetRole as applied to Security views, is an abstract element that indicates the type of elements that can be considered as a subject for security analysis in the particular context.

~~AssetRole as applied to Security views, an abstract element that indicates the type of elements that can be considered as a subject for security analysis in the particular context.~~



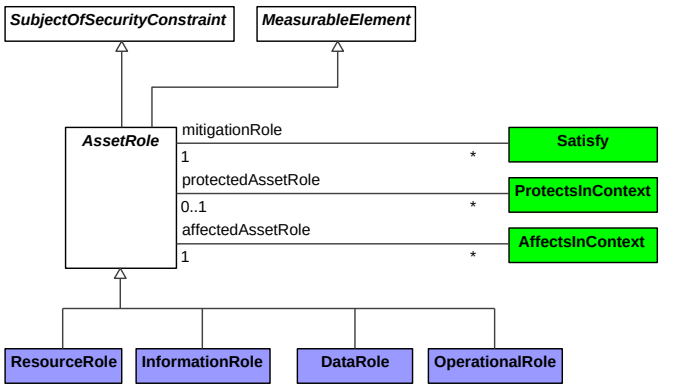


Figure 9:149 - AssetRole

OperationalInformationRole~~InformationRole~~

Package: Structure

isAbstract: No

Generalization: AssetRole

Description

A usage of OperationalInformation ~~InformationElement~~ that exists in the context of an OperationalAsset. It also allows the representation of the whole-part aggregation of OperationalInformation~~InformationElements~~.

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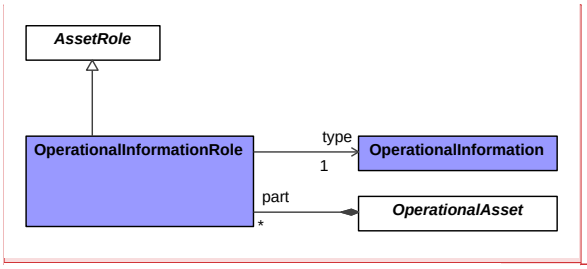


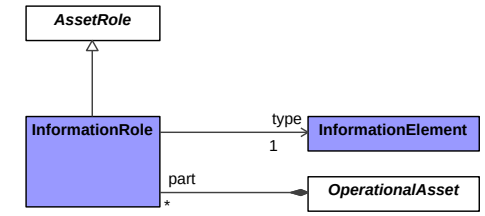


Figure 9:150 - OperationalInformationRole~~InformationRole~~

ResourceInformationRole

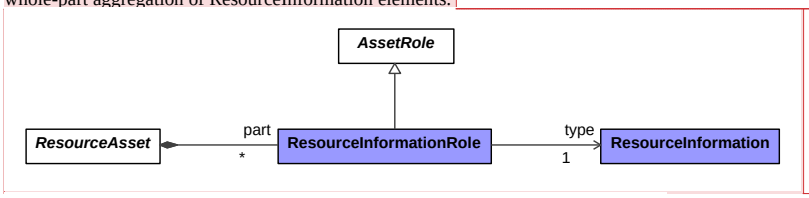
Package: ~~Information~~Structure

isAbstract: No

Generalization: AssetRole

Description

A usage of ResourceInformation that exists in the context of an ResourceAsset. It also allows the representation of the whole-part aggregation of ResourceInformation elements.



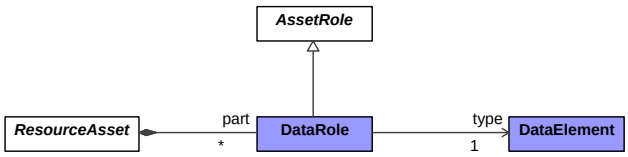


Figure 9:132 - ResourceInformationRole

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Commented [KG472]: UAF12-33

Commented [KG473]: UAF12-33

Commented [KG474]: UAF12-33

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Domain MetaModel::Security::Processes

~~EnhancedSecurityControl~~

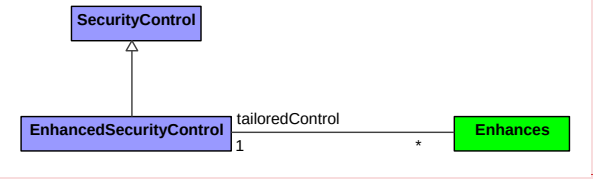
~~**Package:** Processes~~

~~isAbstract: No~~

~~**Generalization:** SecurityControl~~

~~Description~~

~~Statement of security capability to: (i) build in additional but related, functionality to a basic control; and/or (ii)increase the strength of a basic control.~~



~~Figure 9:151 - EnhancedSecurityControl~~

~~Enhances~~

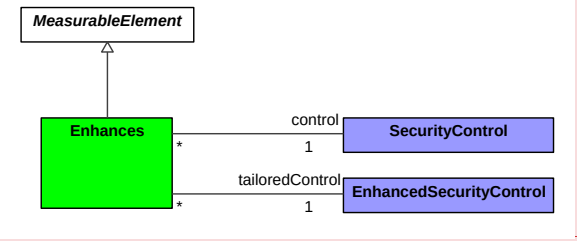
~~**Package:** Processes~~

~~isAbstract: No~~

~~**Generalization:** MeasurableElement~~

~~Description~~

~~A tuple relating the EnhancedSecurityControl to a SecurityControl.~~



~~Figure 9:152 - Enhances~~

~~Protects~~

~~**Package:** Processes~~

~~isAbstract: No~~

~~**Generalization:** MeasurableElement~~

~~Description~~

~~A tuple that asserts that a SecurityControl is required to protect an Asset.~~

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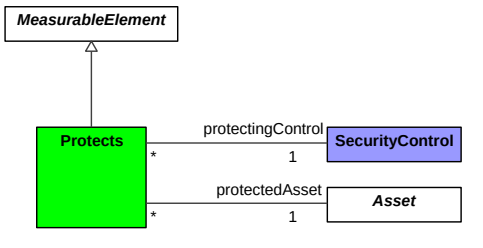

~~Figure 9:153 - Protects~~

~~ProtectsInContext~~

~~**Package:** Processes~~

~~isAbstract: No~~

~~**Generalization:** MeasurableElement~~

~~Description~~

~~A tuple that relates a SecurityControlAction to a OperationalRole, or a ResourceRole. It indicates that SecurityControl is required to protect an Asset in a specific context or configuration.~~

~~Figure 9:154 - ProtectsInContext~~

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SecurityProcess

Package: Processes

isAbstract: No

Generalization: OperationalActivity, Function, SubjectOfSecurityConstraint

Description

The security-related procedure that satisfies the security control requirement.

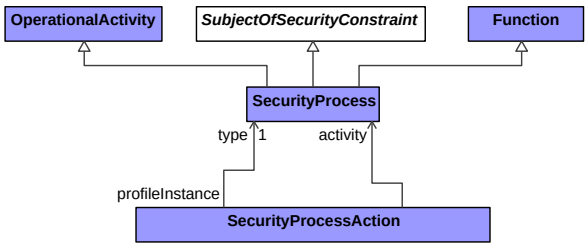


Figure 9:155 - SecurityProcess

SecurityProcessAction

Package: Processes

isAbstract: No

Generalization: OperationalActivityAction, FunctionAction

Description

A call of a SecurityProcess in the context of another SecurityProcess.

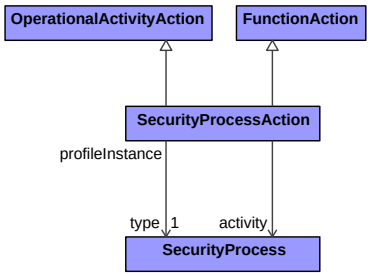


Figure 9:156 - SecurityProcessAction

Domain MetaModel::Security::Constraints

~~ActualRisk~~

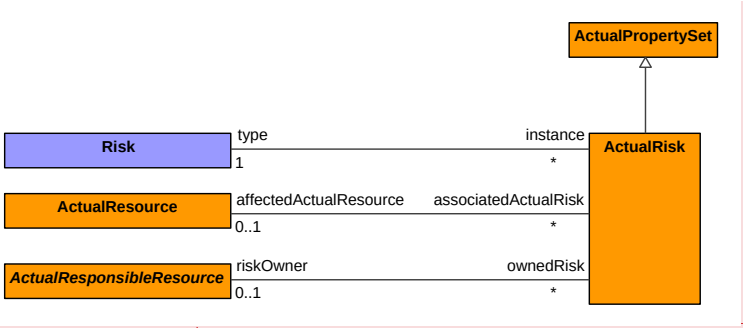
~~**Package:** Constraints~~

~~isAbstract: No~~

~~**Generalization:** ActualPropertySet~~

~~Description~~

~~An instance of a Risk. A value holder for Risk Measurements.~~



~~**Figure 9:157 - ActualRisk**~~

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Caveat

Package: Constraints

isAbstract: No

Generalization: SecurityConstraint

Description

A statement that details alternate conditions under which the rule is not valid.

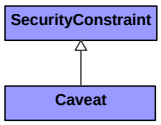


Figure 9:158 - Caveat

~~**Risk**~~

Commented [KG477]: UAF12-51

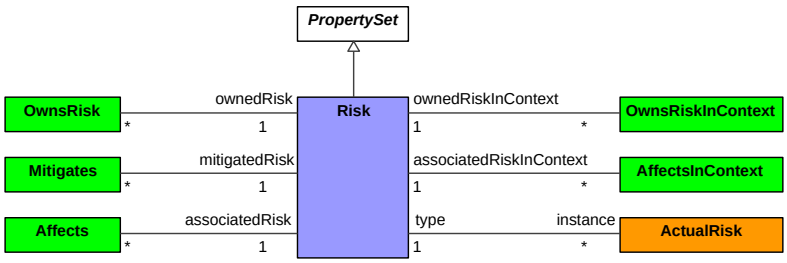
~~**Package:** Constraints~~

~~isAbstract: No~~

~~**Generalization:** PropertySet~~

~~Description~~

~~A statement of the impact of an event on Assets. It represents a constraint on an Asset in terms of adverse effects, with an associated measure. The measure is used to capture the extent to which an entity is threatened by a potential circumstance or event. Risk is typically a function of: (i) the adverse impacts that would arise if the circumstance or event occurs; and (ii) the likelihood of occurrence.~~



~~Figure 9:159 - Risk~~

SecurityAvailability

Package: Constraints

isAbstract: No

Generalization: SecurityMeasurement

Description

Details the potential impact on organization or individuals if the information is not available to those who need to access it.

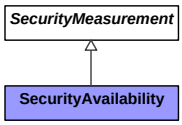


Figure 9:160 - SecurityAvailability

SecurityCategory

Package: Constraints

isAbstract: No

Generalization: MeasurementSet

Description

The security categories that have been determined for each type of information processed, stored, or transmitted by those information systems. The generalized format for expressing the security category (SC) of an information system is: SC information system = {(confidentiality, impact), (integrity, impact), (availability, impact)}.

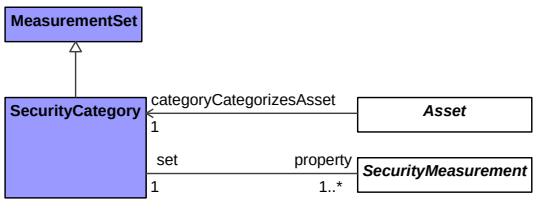


Figure 9:161 - SecurityCategory

SecurityClassification

Package: Constraints

isAbstract: No

Generalization: SecurityMeasurement

Description

Details a classification for the exchange.

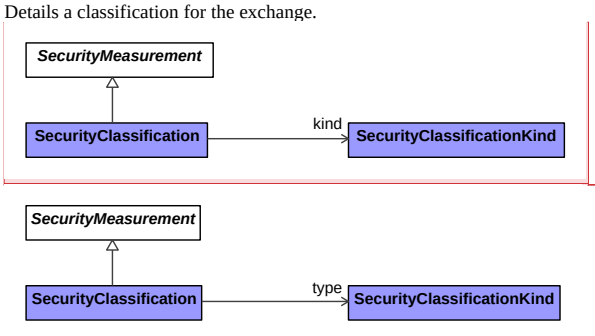


Figure 9:162 - SecurityClassification

SecurityClassificationKind

Package: Constraints

isAbstract: No

Generalization: MeasurableElement

Description

A type that defines acceptable values for the security category (SC) of an information system, where the acceptable values for potential impact are low, moderate, or high.

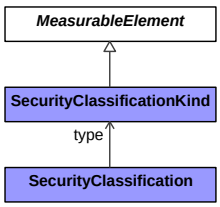


Figure 9:163 - SecurityClassificationKind

SecurityConstraint

Package: Constraints

isAbstract: No

Generalization: Rule

Description

A type of rule that captures a formal statement to define access control policy language.

Commented [KG478]: UAF12-28

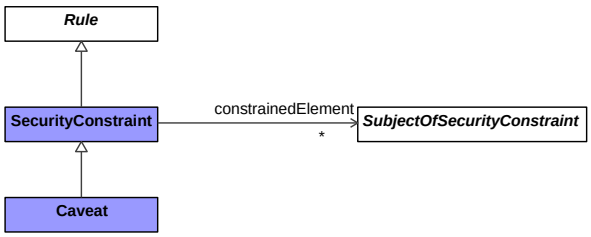


Figure 9:164 - SecurityConstraint

~~SecurityControl~~

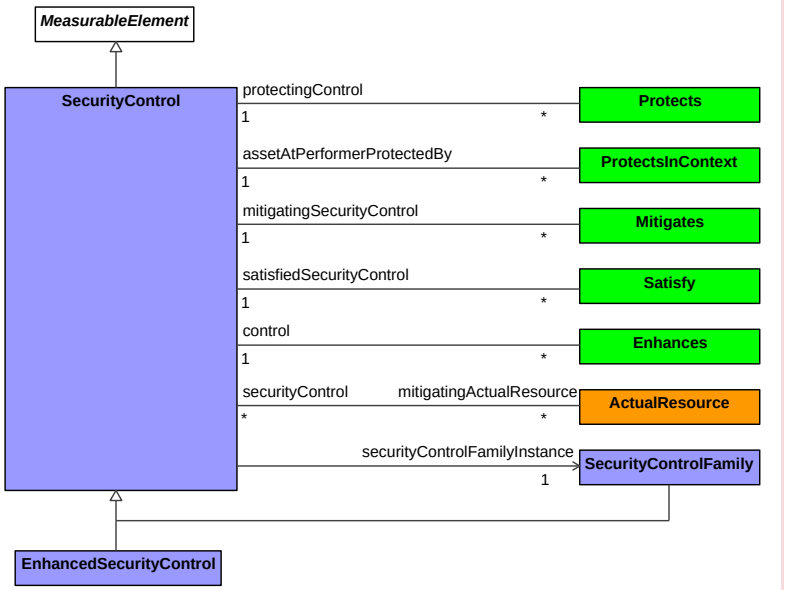
~~**Package:** Constraints~~

~~isAbstract: No~~

~~**Generalization:** MeasurableElement~~

~~Description~~

~~The management, operational, and technical control (i.e., safeguard or countermeasure) prescribed for an information system to protect the confidentiality, integrity, and availability of the system and its information [NIST SP 800-53].~~



~~**Figure 9:165 – SecurityControl**~~

Commented [KG479]: UAF12-50 Moved to the motivation Aspect

SecurityIntegrity

Package: Constraints

isAbstract: No

Generalization: SecurityMeasurement
Description

Details the potential impact on organization or individuals due to modification or destruction of information, and includes ensuring information non-repudiation and authenticity.

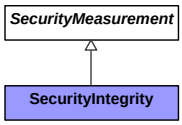


Figure 9:167 - SecurityIntegrity

SecurityMeasurement

Package: Constraints

isAbstract: Yes

Generalization: Measurement
Description

An abstract type grouping all types of security measurements (e.g. SecurityIntegrity, SecurityAvailability).

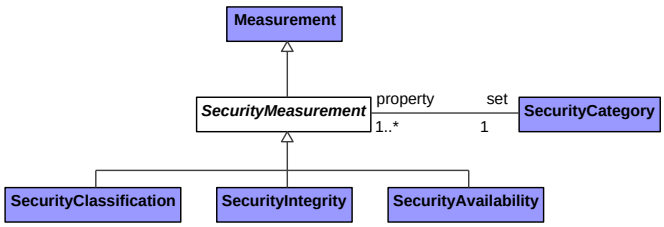


Figure 9:168 - SecurityMeasurement

SubjectOfSecurityConstraint

Package: Constraints

isAbstract: Yes

Generalization: UAFElement
Description

An abstract type grouping elements that can be the subject of a SecurityConstraint.

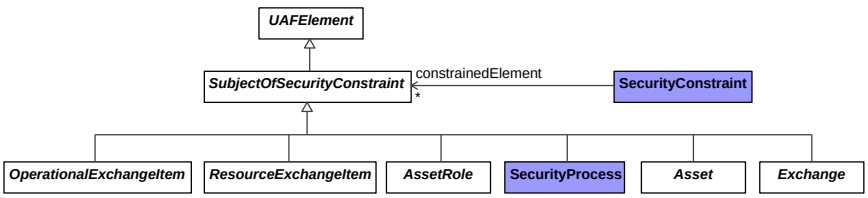


Figure 9:169 - SubjectOfSecurityConstraint

Domain MetaModel::Security::Traceability

Commented [KG480]: UAF12-51 Elements moved to the Parameters section

Affects

Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that asserts that a Risk is applicable to an Asset.

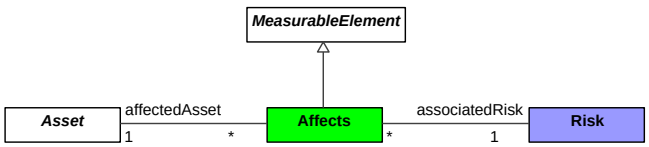


Figure 9:170 - Affects

AffectsInContext

Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that asserts that a Risk is applicable to an AssetRole in the specific context or configuration.

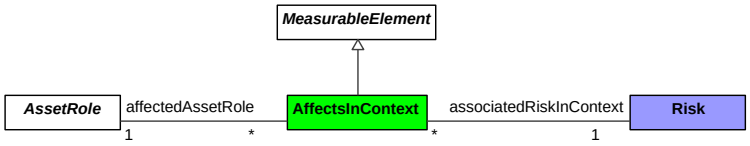


Figure 9:171 - AffectsInContext

Mitigates

Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple relating a Security Control to a Risk. Mitigation is established to manage risk and could be represented as an overall strategy or through techniques (mitigation configurations) and procedures (SecurityProcesses).

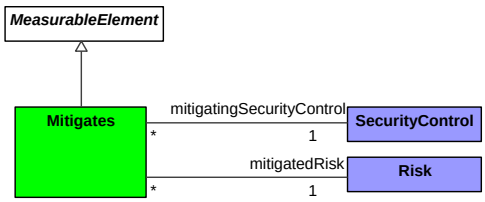


Figure 9:172 - Mitigates

OwnsRisk

Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple relating a Risk to an organizational resource that is responsible for executing the risk mitigation.

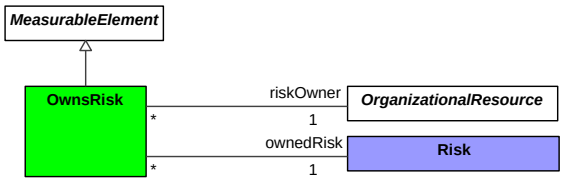


Figure 9:173 - OwnsRisk

OwnsRiskInContext

Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple relating a Risk to an organizational role that is responsible for executing the risk mitigation in the specific context or configuration.

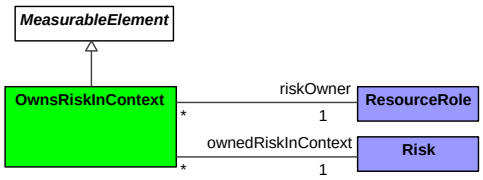


Figure 9:174 - OwnsRiskInContext

~~15.1.50~~9.1.9 Domain MetaModel::Projects

Domain MetaModel::Projects::Taxonomy

Project

Package: Taxonomy

isAbstract: No

Generalization: OrganizationalResource

Description

A type that represents a planned endeavor executed by an ActualOrganization responsible for developing, deploying or decommissioning ResourcePerformers in accordance with ActualProjectMilestones~~A type that describes types of time-limited endeavors that are required to meet one or more Capability needs~~.

Commented [AM481]: UAF12-58

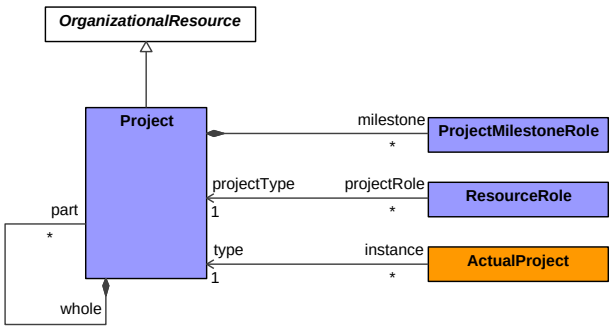


Figure 9:175 - Project

ProjectMilestone

Package: Taxonomy

isAbstract: No

Generalization: PropertySet

Description

A type of event in a Project by which progress is measured.

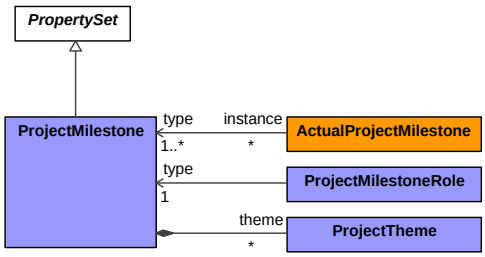


Figure 9:176 - ProjectMilestone

Domain MetaModel::Projects::Structure

ActualProjectMilestoneRole

Package: Structure

isAbstract: No

Generalization: ActualState

Description

An ActualProjectMilestone that is applied to a ProjectMilestoneRole.

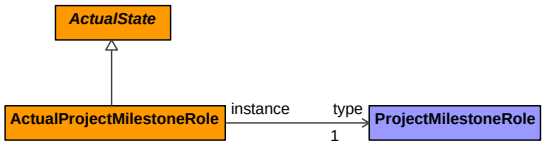


Figure 9:177 - ActualProjectMilestoneRole

ProjectMilestoneRole

Package: Structure

isAbstract: No

Generalization: MeasurableElement

Description

The role played by a ProjectMilestone in the context of a Project.

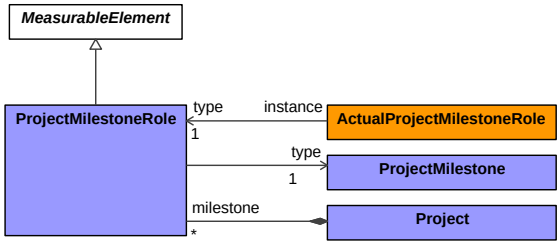


Figure 9:178 - ProjectMilestoneRole

ProjectStatus

Package: Structure

isAbstract: No

Generalization: ActualState

Description

The status (i.e. level of progress) of a ProjectTheme for an ActualProject at the time of the ActualProjectMilestone.

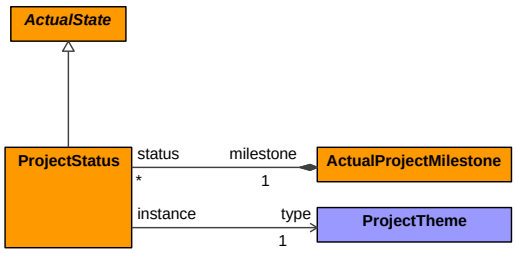


Figure 9:179 - ProjectStatus

ProjectTheme

Package: Structure

isAbstract: No

Generalization: MeasurableElement

Description

A property of a ProjectMilestone that captures an aspect by which the progress of ActualProjects may be measured.

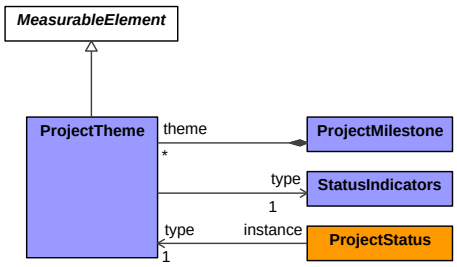


Figure 9:180 - ProjectTheme

StatusIndicators

Package: Structure

isAbstract: No

Generalization: MeasurableElement

Description

An enumerated type that specifies a status for a ProjectTheme.

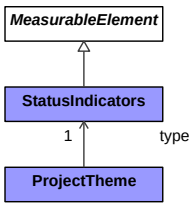


Figure 9:181 - StatusIndicators

Domain MetaModel::Projects::Connectivity

MilestoneDependency

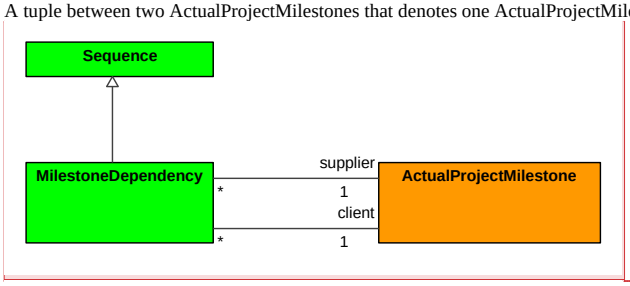
Package: Connectivity

isAbstract: No

Generalization: SequenceMeasurableElement

Description

A tuple between two ActualProjectMilestones that denotes one ActualProjectMilestone follows from another.



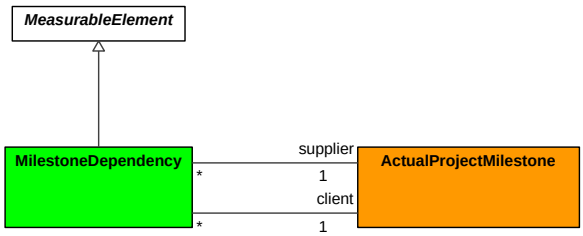


Figure 9:182 - MilestoneDependency

ProjectSequence

Package: Connectivity

isAbstract: No

Generalization: SequenceDescription

A tuple between two ActualProjects that denotes one ActualProject cannot start before the previous ActualProject is finished.

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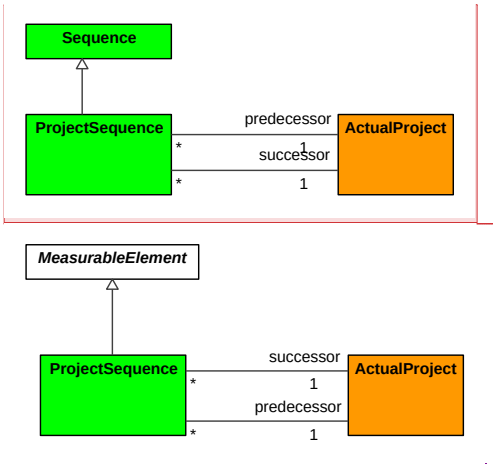

Commented [KG486]: UAF12-117

Figure 9:185 - ProjectSequence

Domain MetaModel::Projects::Processes

ProjectActivity

Package: Processes

isAbstract: No

Generalization: Function, Process

Description

An activity carried out during a project.

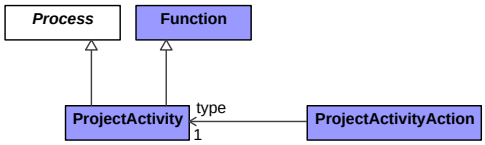

Figure 9:183 - ProjectActivity

ProjectActivityAction

Package: Processes

isAbstract: No

Generalization: FunctionAction

Description

The ProjectActivityAction is defined as a call behavior action that invokes the activity that needs to be preformed.

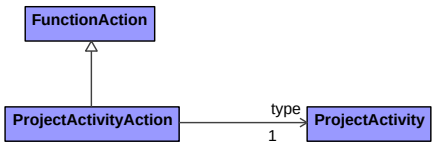

Figure 9:184 - ProjectActivityAction

~~Domain MetaModel::Projects::Interaction Scenarios~~

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Domain MetaModel::Projects::Roadmap

ActualProject

Package: Roadmap

isAbstract: No

Generalization: ActualOrganizationalResource, Achiever

Description

A time-limited planned endeavor executed by an ActualOrganization responsible for developing, deploying or decommissioning ResourcePerformers in accordance with ActualProjectMilestones.

~~A time-limited endeavor to provide a specific set of ActualResources that meet specific Capability needs.~~

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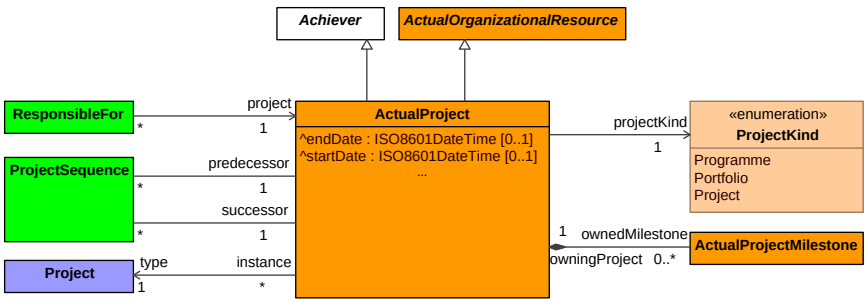

Figure 9:186 - ActualProject

ActualProjectMilestone

Package: Roadmap

isAbstract: No

Generalization: ActualPropertySet

Description

An event with a start date in a ActualProject from which progress is measured.

Figure 9:187 - ActualProjectMilestone
Constraints
[1] unnamed1 startTime=endTime

Domain MetaModel::Projects::Traceability

ResponsibleFor

Package: Traceability
isAbstract: No
Generalization: MeasurableElement
Description
A tuple between an ActualResponsibleResource and an ActualResponsibility or ActualProject. It defines the duties that the ActualResponsibleResource is ResponsibleFor.

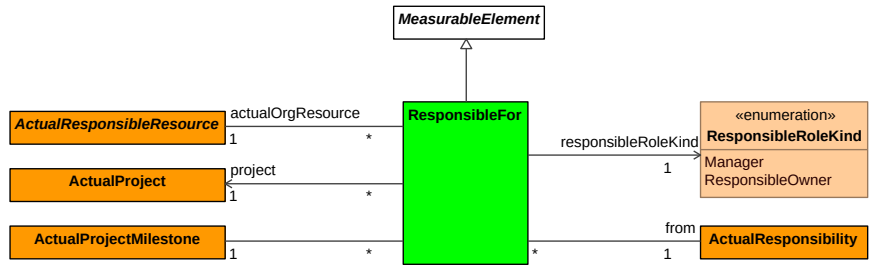

Figure 9:188 - ResponsibleFor

~~15.1.51~~9.1.10 Domain MetaModel::Standards

Stakeholders: Solution Providers, Systems Engineers, Software Engineers, Systems Architects, Business Architects.
Concerns: technical and non-technical Standards applicable to the architecture.
Definition: shows the technical, operational, and business Standards applicable to the architecture. Defines the underlying current and expected Standards.

Domain MetaModel::Standards::Taxonomy

Protocol

Package: Taxonomy

isAbstract: No

Generalization: Standard

Description

A Standard for communication over a network. Protocols may be composite, represented as a ProtocolStack made up of ProtocolLayers.

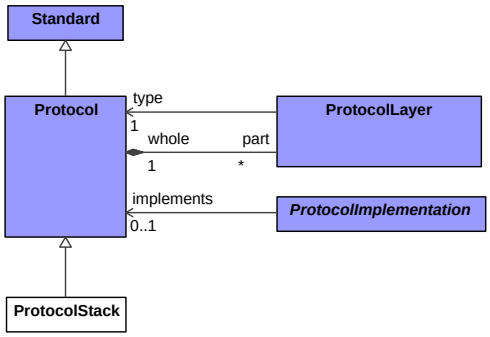

Figure 9:189 - Protocol

ProtocolStack

Package: Taxonomy

isAbstract: No

Generalization: Protocol

Description

A sub type of Protocol that contains the ProtocolLayers, defining a complete stack.

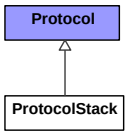

Figure 9:190 - ProtocolStack

Standard

Package: Taxonomy

isAbstract: No

Generalization: SubjectOfForecast, PropertySet

Description

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.

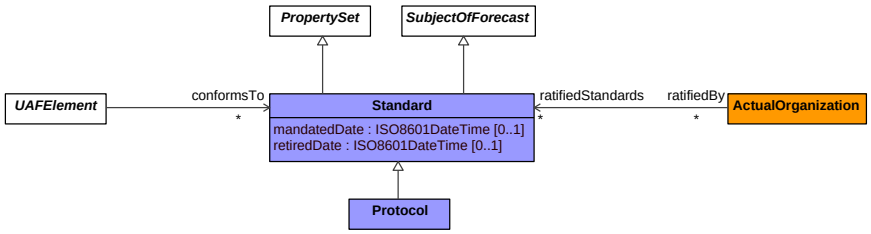

Figure 9:191 - Standard
Attributes

mandatedDate : ISO8601DateTime[0..1]	The date when this version of the Standard was published.
retiredDate : ISO8601DateTime[0..1]	The date when this version of the Standard was retired.

Domain MetaModel::Standards::Structure

ProtocolLayer

Package: Structure

isAbstract: No

Generalization: MeasurableElement
Description

Usage of a Protocol in the context of another Protocol. Creates a whole-part relationship.

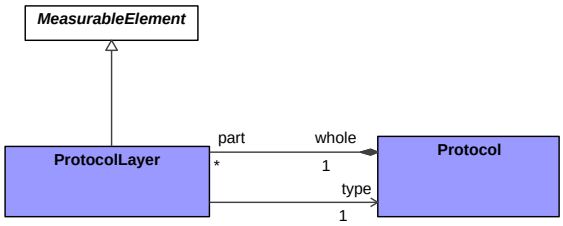

Figure 9:192 - ProtocolLayer

~~15.1.52~~9.1.11 Domain MetaModel::Actual Resources

Stakeholders: Solution Providers, Systems Engineers, Business Architects, Human Resources.
Concerns: the analysis.e.g. evaluation of different alternatives, what-if, trade-offs, V&V on the actual resource configurations.
Definition: illustrates the expected or achieved actual resource configurations and actual relationships between them.

Domain MetaModel::Actual Resources::Taxonomy

ActualOrganization

Package: Taxonomy

isAbstract: No

Generalization: ActualResponsibleResource

Description

An actual formal or informal organizational unit, e.g. "Driving and Vehicle Licensing Agency", "UAF team Alpha".

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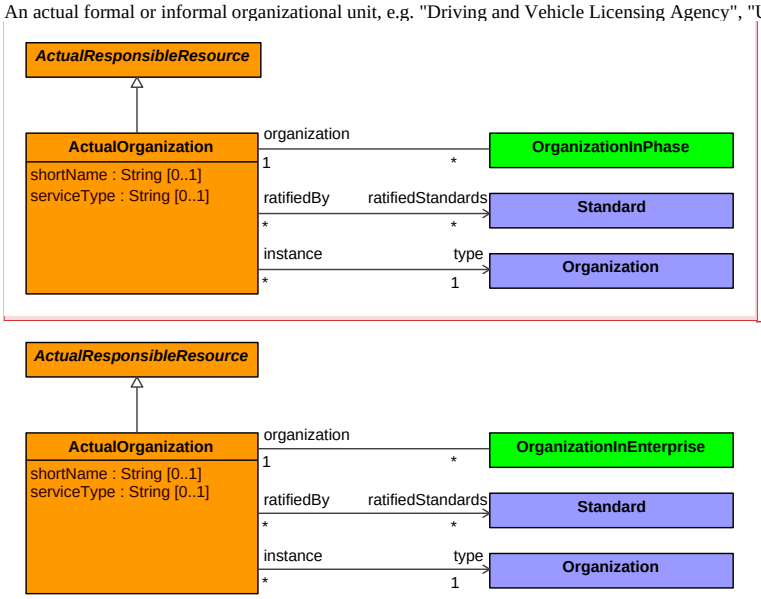


Figure 9:193 - ActualOrganization

Attributes

serviceType : String[0..1]	Service office code or symbol
shortName : String[0..1]	String providing a simplified means of identifying an ActualOrganization, i.e. SoftWareGroup could use SWG as the shortName.

ActualOrganizationalResource

Package: Taxonomy

isAbstract: Yes

Generalization: ActualResource, Stakeholder

Description

Abstract element for an ActualOrganization, ActualPerson or ActualPost.

Commented [KG490]: UAF12-117

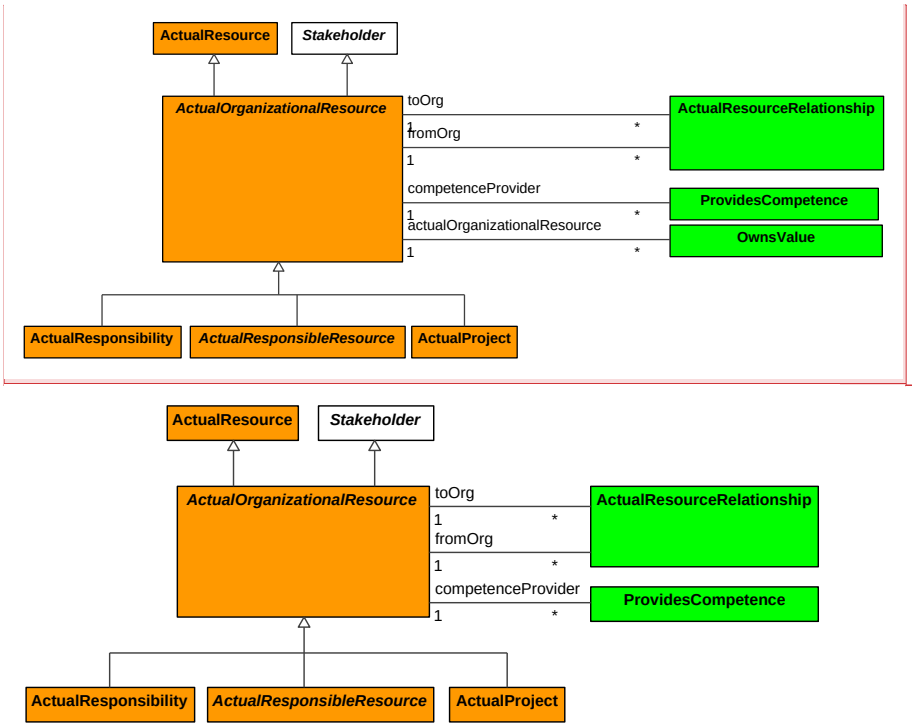


Figure 9:194 - ActualOrganizationalResource

ActualPerson

Package: Taxonomy

isAbstract: No

Generalization: ActualResponsibleResource

Description

An individual human being.

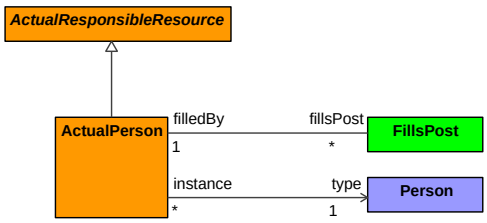


Figure 9:195 - ActualPerson

ActualPost

Package: Taxonomy

isAbstract: No

Generalization: ActualResponsibleResource

Description

An actual, specific post, an instance of a Post "type" - e.g., "President of the United States of America." where the Post would be president.

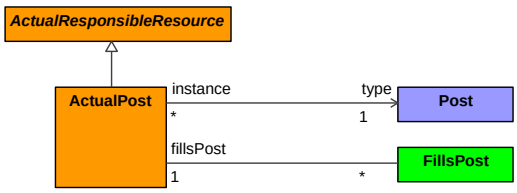


Figure 9:196 - ActualPost

ActualResource

Package: Taxonomy

isAbstract: No

Generalization: ActualPropertySet, SubjectOfResourceConstraint, Achiever, CapableElement

Description

An instance of a ResourcePerformer in the real world~~An individual, fully-realized ResourcePerformer~~.

Commented [AM491]: UAF12-58

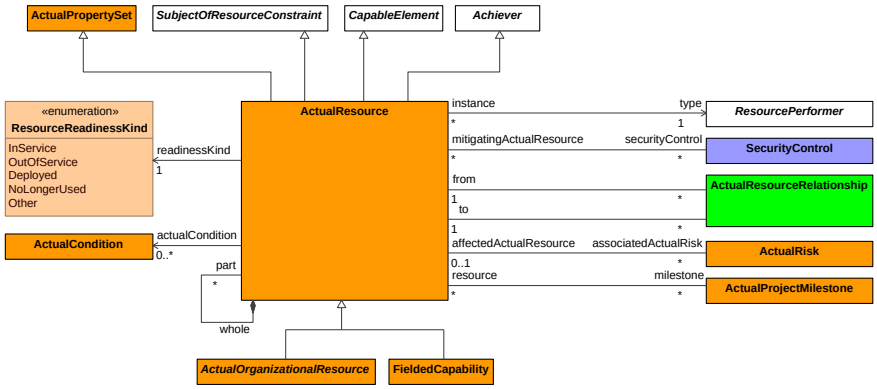


Figure 9:197 - ActualResource

ActualResourceRelationship

Package: Taxonomy

isAbstract: No

Generalization: UAFElement

Description

An actual resource flow existing between ActualResources (i.e. flow of data, people, materiel, or energy).

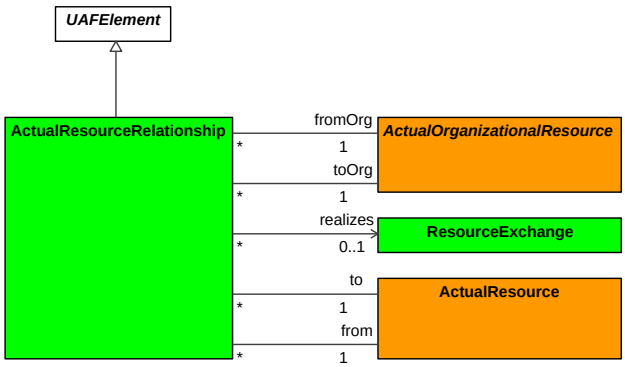


Figure 9:198 - ActualResourceRelationship

ActualResponsibility

Package: Taxonomy

isAbstract: No

Generalization: ActualOrganizationalResource

Description

An actual duty required of a Person or Organization.

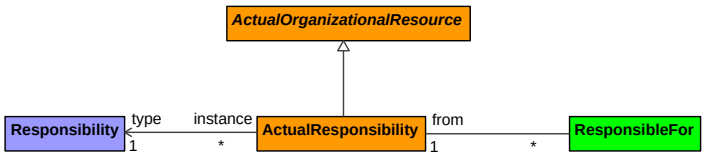


Figure 9:199 - ActualResponsibility

ActualResponsibleResource

Package: Taxonomy

isAbstract: Yes

Generalization: ActualOrganizationalResource

Description

An abstract type grouping responsible OrganizationalResources.

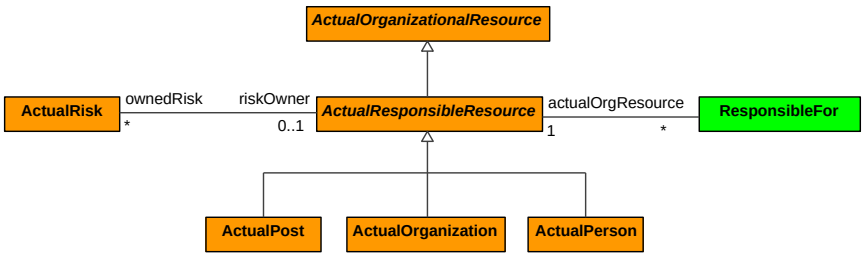


Figure 9:200 - ActualResponsibleResource

FieldedCapability

Package: Taxonomy

isAbstract: No

Generalization: ActualResource

Description

An individual, fully-realized capability.

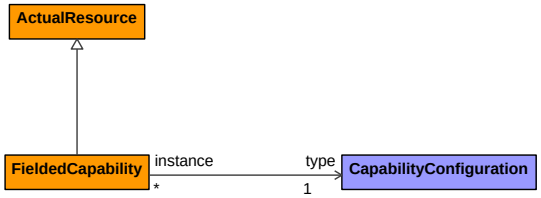


Figure 9:201 - FieldedCapability

Domain MetaModel::Actual Resources::Constraints

ActualService

Package: Constraints

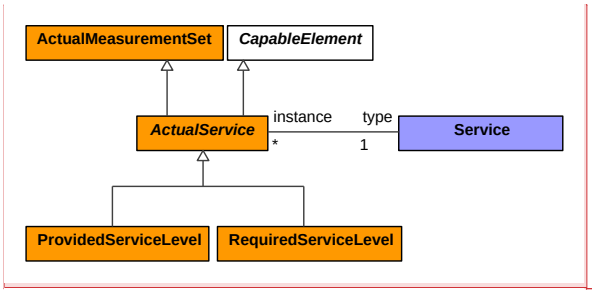
isAbstract: Yes

Generalization: ActualMeasurementSet, CapableElement

Description

An individual ServiceSpecification.

Commented [KG492]: UAF12-33



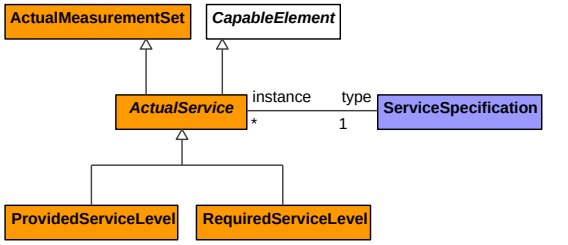


Figure 9:202 - ActualService

ProvidedServiceLevel

Package: Constraints

isAbstract: No

Generalization: ActualService

Description

A sub type of ActualService that details a specific service level delivered by the provider.

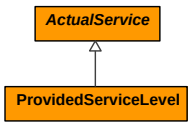


Figure 9:203 - ProvidedServiceLevel

ProvidesCompetence

Package: Constraints

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that asserts that an ActualOrganizationalResource provides a specific set of Competencies.

Commented [KG493]: UAF12-33

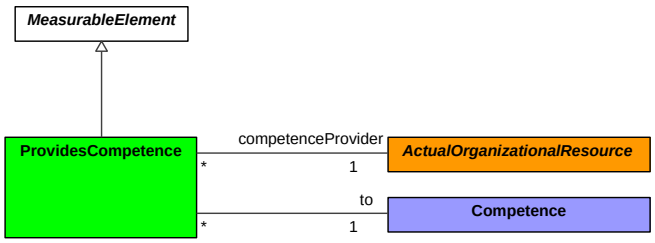


Figure 9:204 - ProvidesCompetence

RequiredServiceLevel

Package: Constraints

isAbstract: No

Generalization: ActualService

Description

A sub type of ActualService that details a specific service level required of the provider.

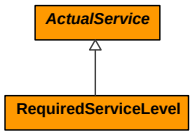


Figure 9:205 - RequiredServiceLevel

Domain MetaModel::Actual Resources::Traceability

OwnsProcess

Package: Traceability

isAbstract: No

Generalization: MeasurableElement

Description

A tuple denoting that an ActualOrganizationResource owns an OperationalActivity.

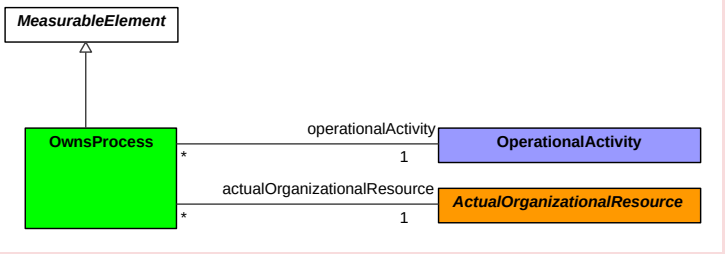


Figure 9:245 - OwnsProcess

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15.1.53 Domain MetaModel::Dictionary

Stakeholders: Architects, users of the architecture, Capability Owners, Systems Engineers, Solution Providers.

Concerns: Definitions for all the elements in the architecture, libraries of environments and measurements.

Definition: Presents all the elements used in an architecture. Can be used specifically to capture:

- a. elements and relationships that are involved in defining the environments applicable to capability, operational concept or set of systems.
- b. measurable properties that can be used to support analysis such as KPIs, MoEs, TPIs etc.

Recommended Implementation: Tabular format, SysML Block Definition Diagram.

Alias

Package: Dictionary

isAbstract: No

Generalization: MeasurableElement

Description

A metamodel Artifact used to define an alternative name for an element.

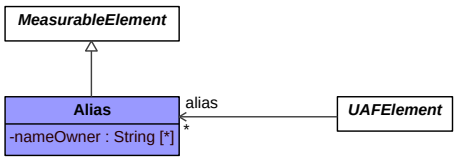


Figure 9:206 - Alias

Attributes

nameOwner : String[*]	Someone or something that uses this alternative name.

Definition

Package: Dictionary

isAbstract: No

Generalization: MeasurableElement

Description

A comment containing a description of an element in the architecture.

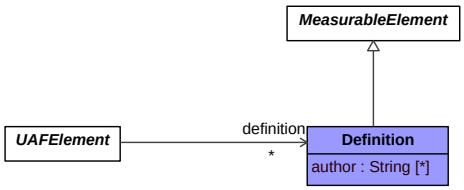


Figure 9:207 - Definition

Attributes

author : String[*]	The original or current person (architect) responsible for the Definition.

SameAs

Package: Dictionary

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that asserts that two elements refer to the same real-world thing.

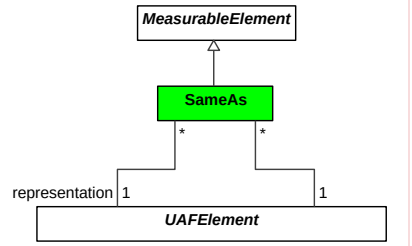


Figure 9:208 - SameAs

Commented [KG495]: UAF12-50 Move to 8.1.1 subsection Architecture Management: Information

Commented [KG496]: UAF12-50 Move to 8.1.2

15.1.92 Domain MetaModel::Summary & Overview

ArchitecturalDescription

Package: Summary & Overview

isAbstract: No

Generalization: MeasurableElement

Description

An Architecture Description is a work product used to express the Architecture of some System Of Interest.
It provides executive-level summary information about the architecture description in a consistent form to allow quick reference and comparison between architecture descriptions -- It includes assumptions, constraints, and limitations that may affect high-level decisions relating to an architecture-based work program.

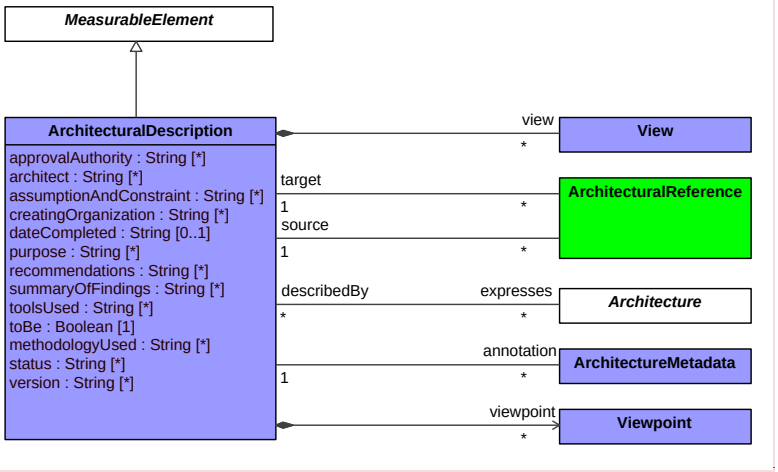


Figure 9:209 - ArchitecturalDescription

Attributes

approvalAuthority : String[*]	Someone or something that has the authority to approve the ArchitecturalDescription.
architect : String[*]	Someone responsible for the creation of ArchitecturalDescription.
assumptionAndConstraint : String[*]	Any assumptions, constraints, and limitations contained in the ArchitecturalDescription, including those affecting deployment, communications performance, information assurance environments, etc.
creatingOrganization : String[*]	The organization responsible for creating the ArchitecturalDescription.
dateCompleted : String[0..1]	Date that the ArchitecturalDescription was completed.
methodologyUsed : String[*]	The methodology used in developing the architecture.
purpose : String[*]	Explains the need for the Architecture, what it will demonstrate, the types of analyses that will be applied to it, who is expected to perform the analyses, what decisions are expected to be made on the basis of each form of analysis, who is expected to make those decisions, and what actions are expected to result.
recommendations : String[*]	States the recommendations that have been developed based on the architecture effort. Examples include recommended system implementations, and opportunities for technology insertion.
status : String[*]	Approval status of the architecture.
summaryOfFindings : String[*]	Summarizes the findings that have been developed so far. This may be updated several times during the development of the ArchitecturalDescription.
toBe : Boolean[1]	Indicates whether the ArchitecturalDescription represents an Architecture that exists or will exist in the future.
toolsUsed : String[*]	Identifies any tools used to develop the ArchitecturalDescription as well as file names and formats if appropriate.
version : String[*]	Version number of the architecture.

Architecture

Package: Summary & Overview

isAbstract: Yes

Generalization: UAFElement

Description

An abstract type that represents a generic architecture. Subtypes are OperationalArchitecture and PhysicalArchitecture.

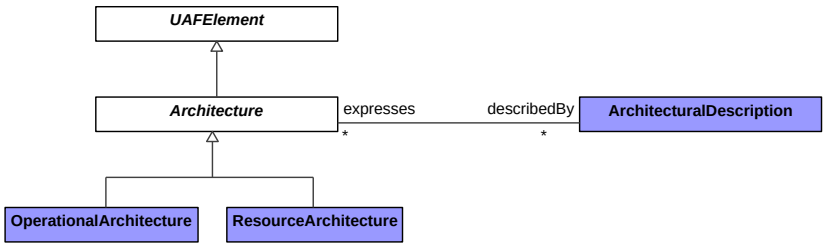


Figure 9:210 - Architecture

Concern

Package: Summary & Overview

isAbstract: No

Generalization: PropertySet

Description

Interest in an EnterprisePhase (EnterprisePhase is synonym for System in ISO 42010) relevant to one or more of its stakeholders.

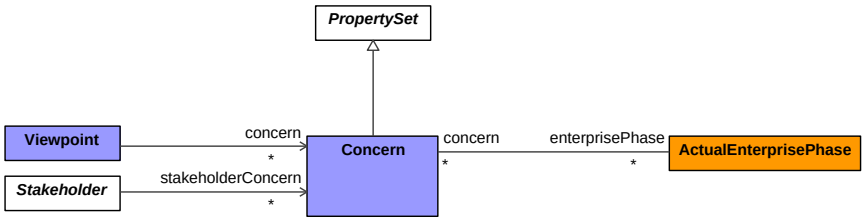


Figure 9:211 - Concern

Stakeholder

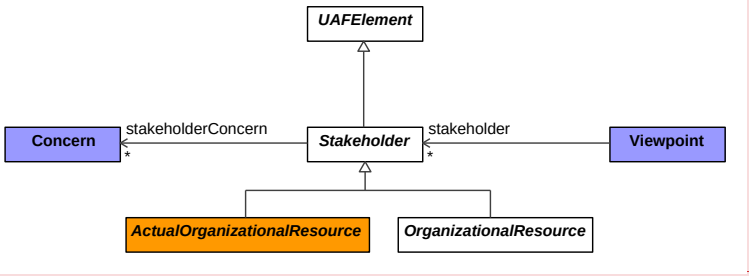
Package: Summary & Overview

isAbstract: Yes

Generalization: UAFElement

Description

Individual, team, organization, or classes thereof, having an interest in an EnterprisePhase [ISO/IEC/IEEE 42010:2011].



~~Figure 9:212 - Stakeholder~~

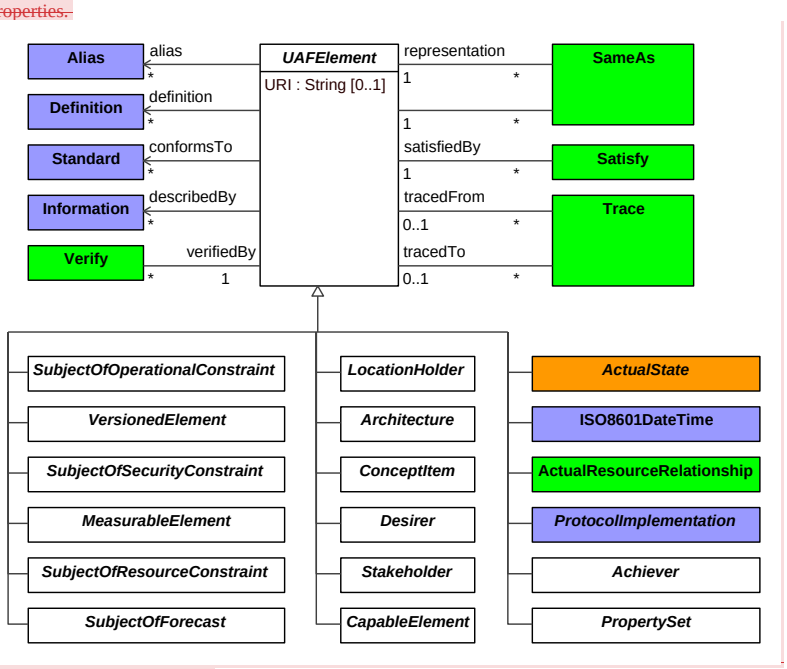
~~UAFElement~~

~~**Package:** Summary & Overview~~

~~isAbstract: Yes~~

~~Description~~

~~Abstract super type for all of the UAF elements. It provides a way for all of the UAF elements to have a common set of properties.~~



~~Figure 9:213 - UAFElement~~

~~Attributes~~

~~URI : String[0..1]~~ ~~Captures Unique identifier for the element.~~

View

Package: Summary & Overview

isAbstract: No

Generalization: PropertySet

Description

An architecture view expresses the architecture of the system-of-interest in accordance with an architecture viewpoint (or simply, viewpoint). [ISO/IEC/IEEE 42010:2011(E)].

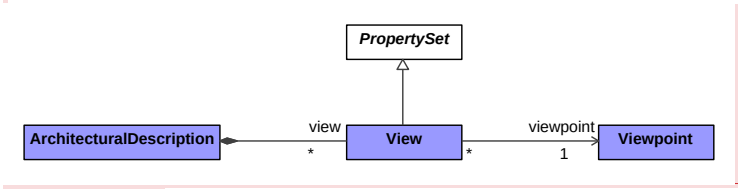


Figure 9:214 - View

Viewpoint

Package: Summary & Overview

isAbstract: No

Generalization: PropertySet

Description

An architecture viewpoint frames (to formulate or construct in a particular style or language) one or more concerns. A concern can be framed by more than one viewpoint. [ISO/IEC/IEEE 42010:2011(E)].

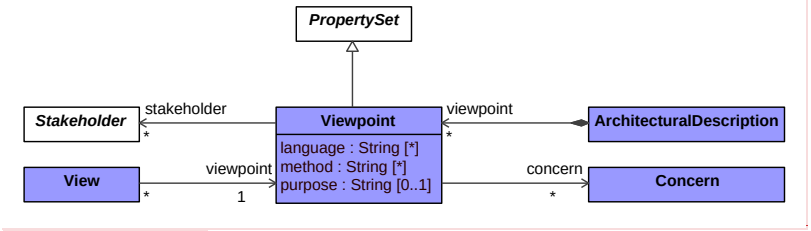


Figure 9:215 - Viewpoint

Attributes

language : String[*]	The languages used to express the Viewpoint.
method : String[*]	The methods employed in the development of the Viewpoint.
purpose : String[0..1]	The purpose of the Viewpoint.

15.1.2029.1.12 Domain MetaModel::Information

DataModel

Package: Information

isAbstract: No

Generalization: SubjectOfOperationalConstraint, SubjectOfResourceConstraint

Description

A structural specification of data types, showing relationships between them. The type of data captured in the DataModel is described using the enumeration DataModelKind (Conceptual,Logical and Physical).

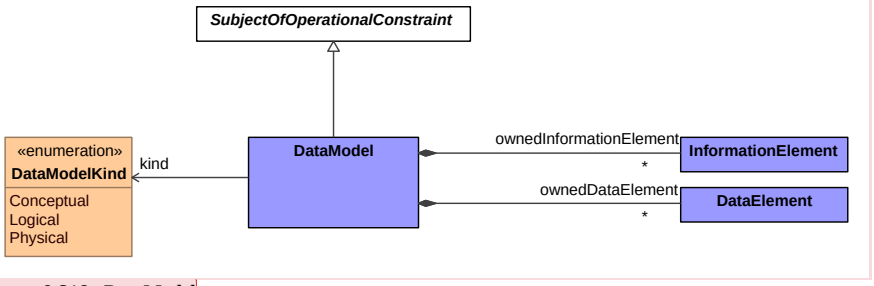


Figure 9:216 - DataModel

Commented [KG497]: UAF12-52

~~15.1.203~~9.1.13 Domain MetaModel::Parameters

ActualCondition

Package: Parameters

isAbstract: No

Generalization: ActualPropertySet

Description

An individual describing an actual situation with respect to circumstances under which an OperationalActivity, Function or ServiceFunction can be performed.

Commented [KG498]: UAF12-48

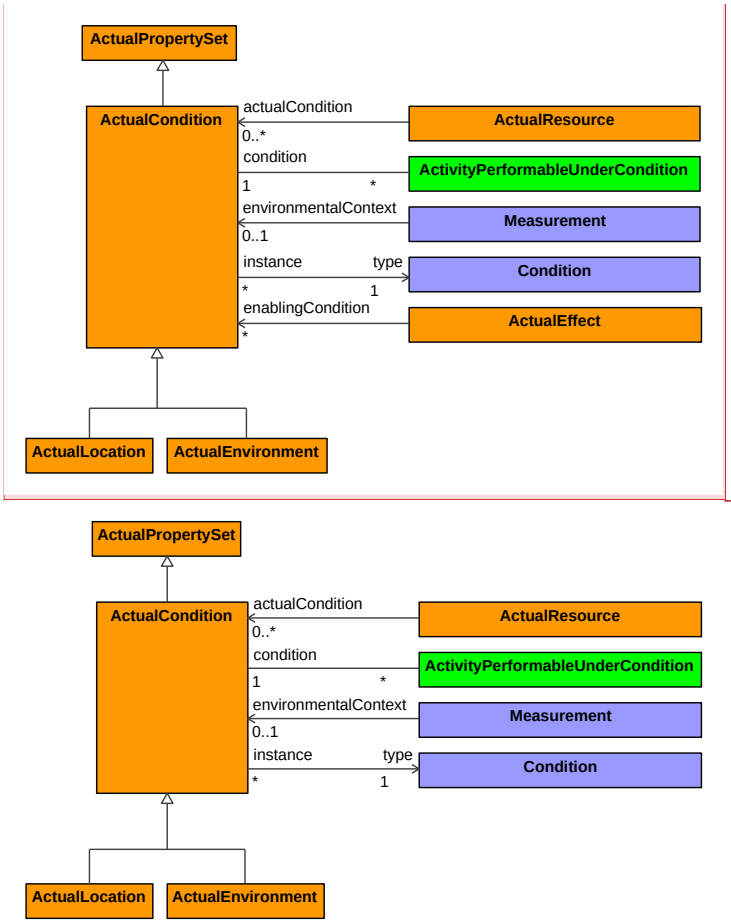


Figure 9:217 - ActualCondition

ActualEnvironment

Package: Parameters

isAbstract: No

Generalization: ActualCondition

Description

An individual that describes the circumstances of an Environment.

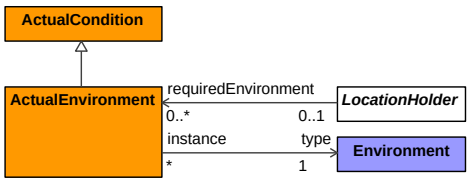


Figure 9:218 - ActualEnvironment

ActualLocation

Package: Parameters

isAbstract: No

Generalization: ActualCondition

Description

An individual that describes a physical location, for example using text to provide an address, Geo-coordinates, etc.

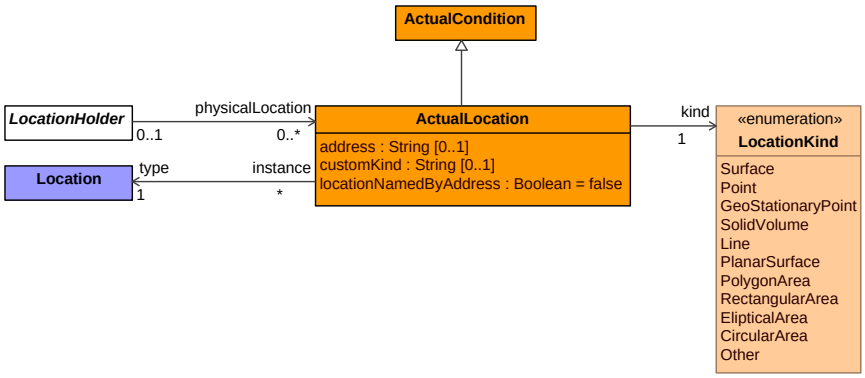


Figure 9:219 - ActualLocation

Attributes

address : String[0..1]	String describing the address of the ActualLocation, i.e. "1600 Pennsylvania avenue", "The White House"
customKind : String[0..1]	String describing a location kind that is not in the LocationKind enumerated list
locationNamedByAddress : Boolean[]	Boolean that indicates if the ActualLocation address is embedded in the ActualLocation name. By default = false.

ActualMeasurement

Package: Parameters

isAbstract: No

Generalization: ActualState

Description

An actual value that is applied to a Measurement.

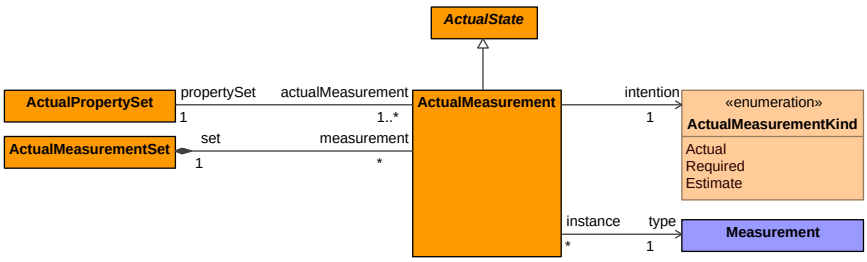


Figure 9:220 - ActualMeasurement

ActualMeasurementSet

Package: Parameters

isAbstract: No

Generalization: ActualPropertySet

Description

A set of ActualMeasurements.

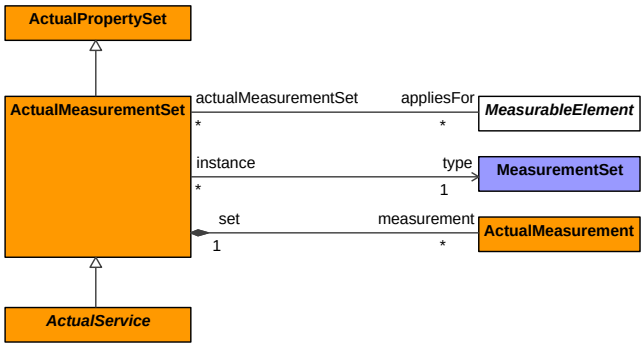


Figure 9:221 - ActualMeasurementSet

ActualPropertySet

Package: Parameters

isAbstract: No

Generalization: ActualState

Description

A set or collection of Actual properties.

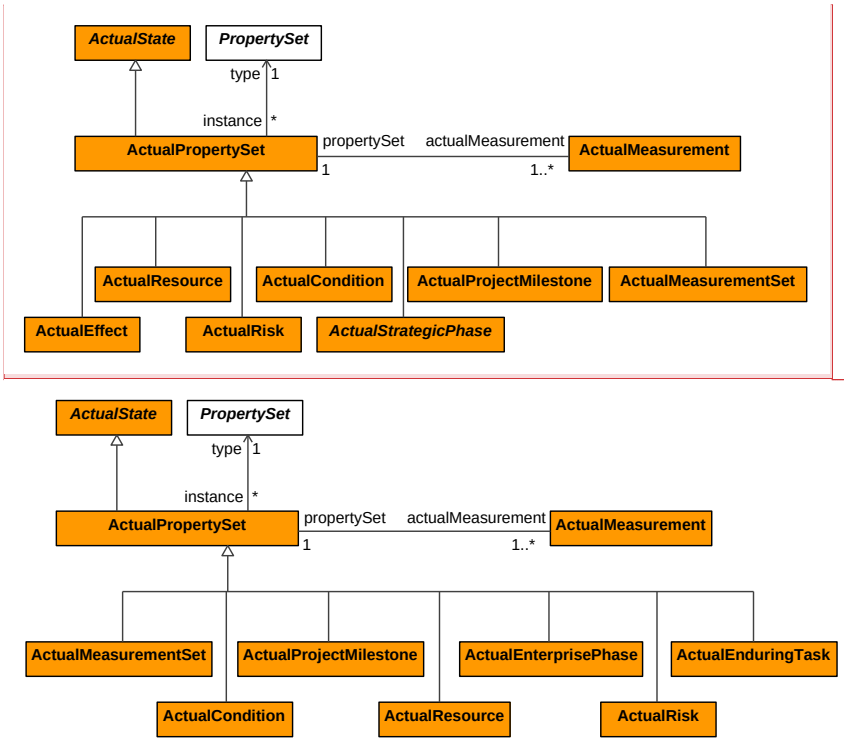


Figure 9:222 - ActualPropertySet

ActualRisk

Package: Parameters~~Constraints~~

isAbstract: No

Generalization: ActualPropertySet

Description

An instance of a Risk. A value holder for Risk Measurements.

Commented [KG499]: UAF12-15

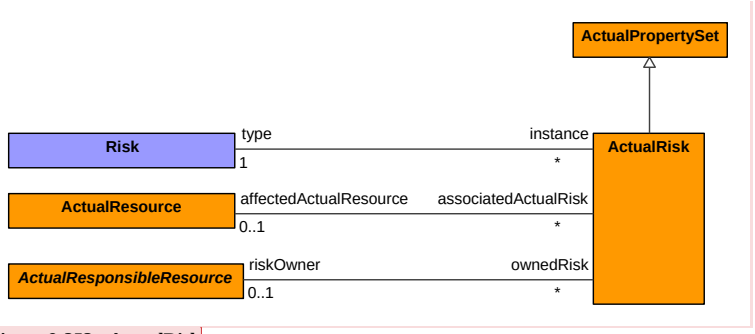


Figure 9:252 - ActualRisk

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~~ActualState~~

Commented [KG501]: UAF12-54 moved to Architecture Mnagements Section

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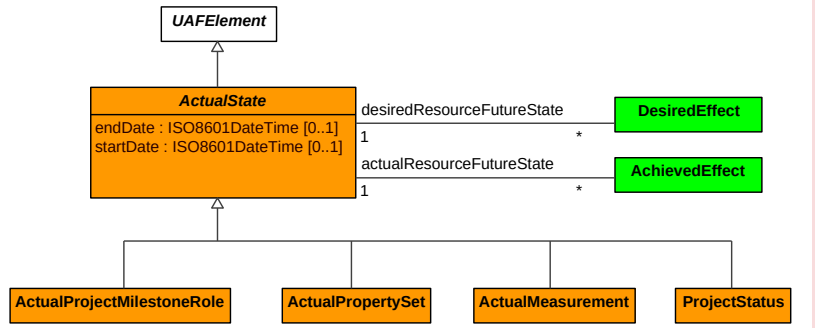
~~**Package:** Parameters~~

~~isAbstract: Yes~~

~~**Generalization:** UAFElement~~

~~Description~~

~~Abstract element that applies temporal extent to a set of elements realized as Instance Specifications.~~



~~**Figure 9:223 - ActualState**~~

~~Attributes~~

~~endDate : ISO8601DateTime[0..1]~~	~~End time for all individual elements.~~
~~startDate : ISO8601DateTime[0..1]~~	~~Start time for all individual elements.~~

AffectableElement

Package: Parameters

isAbstract: Yes

Generalization: UAFElement

Description

An abstract grouping of elements that can be affected by Risk.

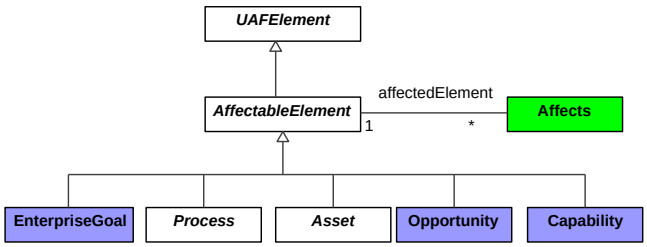


Figure 9:254 - AffectableElement

Affects

Package: Parameters

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that asserts that a Risk is applicable to an Asset.

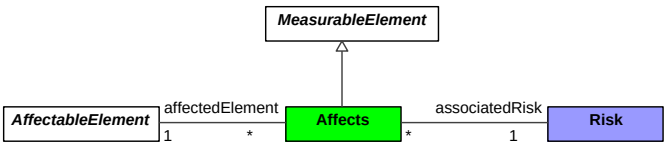


Figure 9:255 - Affects

AffectsInContext

Package: Parameters

isAbstract: No

Generalization: MeasurableElement

Description

A tuple that asserts that a Risk is applicable to an AssetRole in the specific context or configuration.

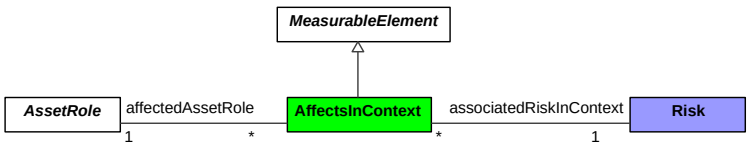


Figure 9:256 - AffectsInContext

Condition

Package: Parameters

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Commented [KG503]: UAF12-51

Commented [KG504]: UAF12-51
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isAbstract: No

Generalization: PropertySet

Description

A type that defines the Location, Environment and/or GeoPoliticalExtent.

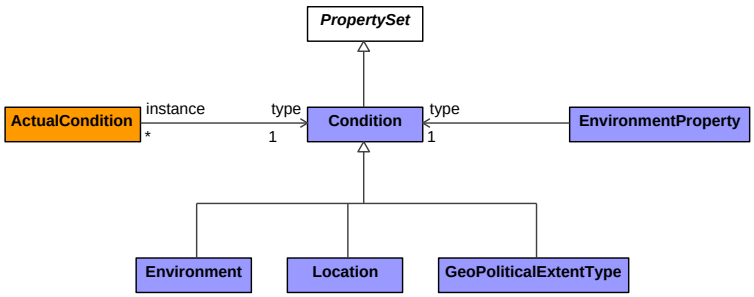


Figure 9:224 - Condition

Environment

Package: Parameters

isAbstract: No

Generalization: Condition

Description

A definition of the environmental factors in which something exists or functions. The definition of an Environment element can be further defined using EnvironmentKind.

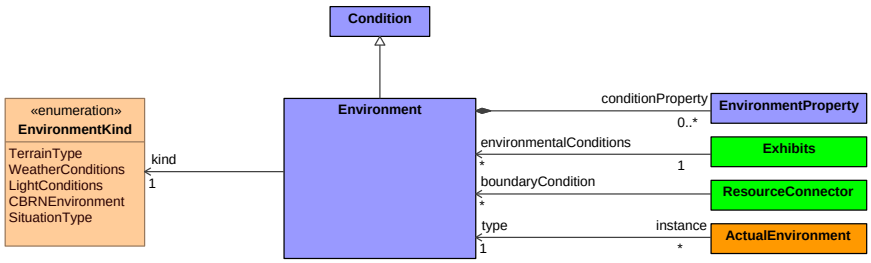


Figure 9:225 - Environment

EnvironmentProperty

Package: Structure

isAbstract: No

Generalization: MeasurableElement

Description

A property of an Environment that is typed by a Condition. The kinds of Condition that can be represented are Location, GeoPoliticalExtentType and Environment.

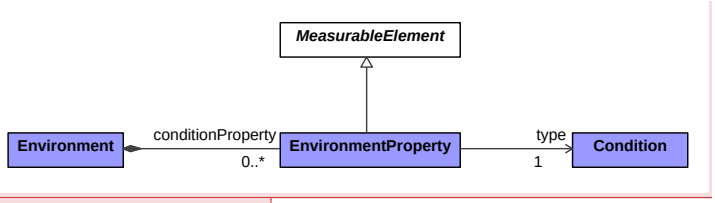


Figure 9:7 - EnvironmentProperty

Commented [KG505]: UAF12-54

GeoPoliticalExtentType

Package: Parameters

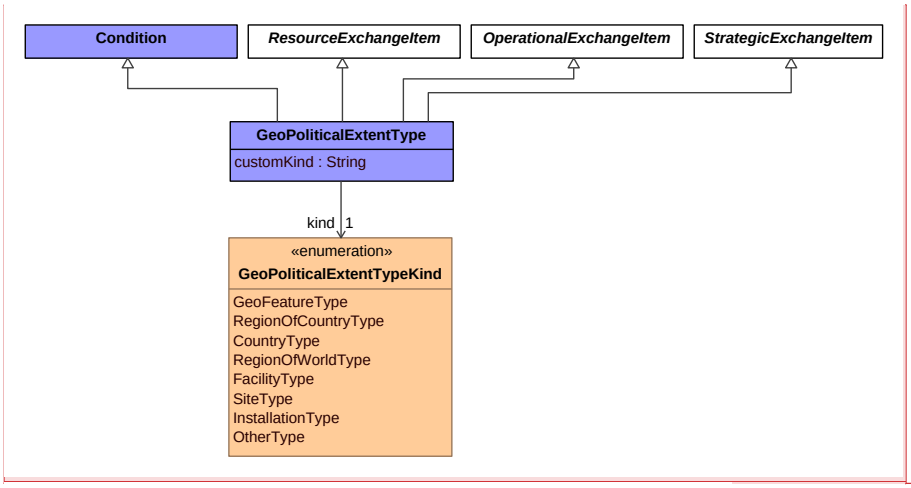
isAbstract: No

Generalization: Condition, OperationalExchangeItem, ResourceExchangeItem, StrategicExchangeItem

Commented [KG506]: UAF12-52

Description

A type of geospatial extent whose boundaries are defined by declaration or agreement by political parties.



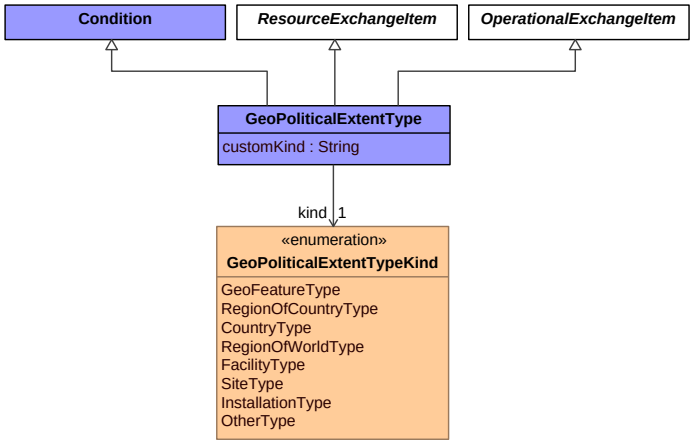


Figure 9:226 - GeoPoliticalExtentType

Attributes

customKind : String[] Captures the kind of GeopoliticalExtentType.

~~**ISO8601DateTime**~~

~~**Package:** Parameters~~

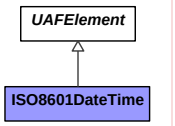
~~isAbstract: No~~

~~**Generalization:** UAFElement~~

~~Description~~

~~A date and time specified in the ISO8601 date-time format including timezone designator (TZD): YYYY-MM-DDThh:mm:ssTZD.~~

Commented [KG507]: UAF12-52



~~Figure 9:227 - ISO8601DateTime~~

Commented [KG508]: UAF12-52
Move to 9.1.1

Location

Package: Parameters

isAbstract: No

Generalization: ConceptItem, Condition

Description

A specification of the generic area in which a LocationHolder is required to be located.

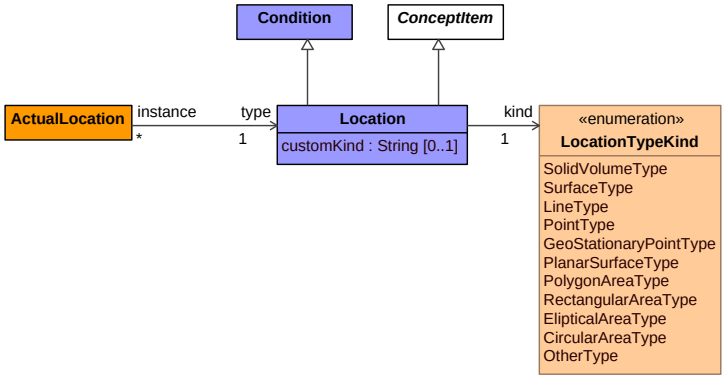


Figure 9:228 - Location

Attributes

customKind : String[0..1] Captures the kind of Location if the LocationTypeKind has been set to "OtherType".

LocationHolder

Package: Parameters

isAbstract: Yes

Generalization: UAFElement

Description

Abstract type, used to group elements that are allowed to be associated with a Location.

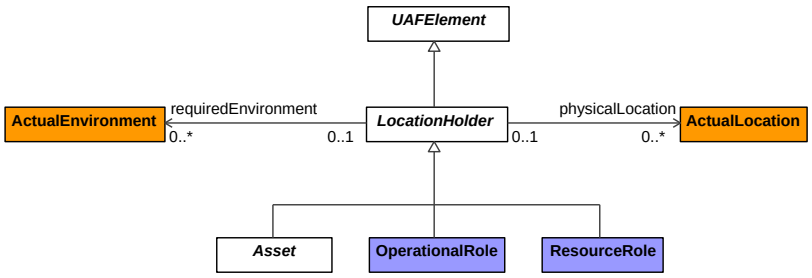


Figure 9:229 - LocationHolder

MeasurableElement

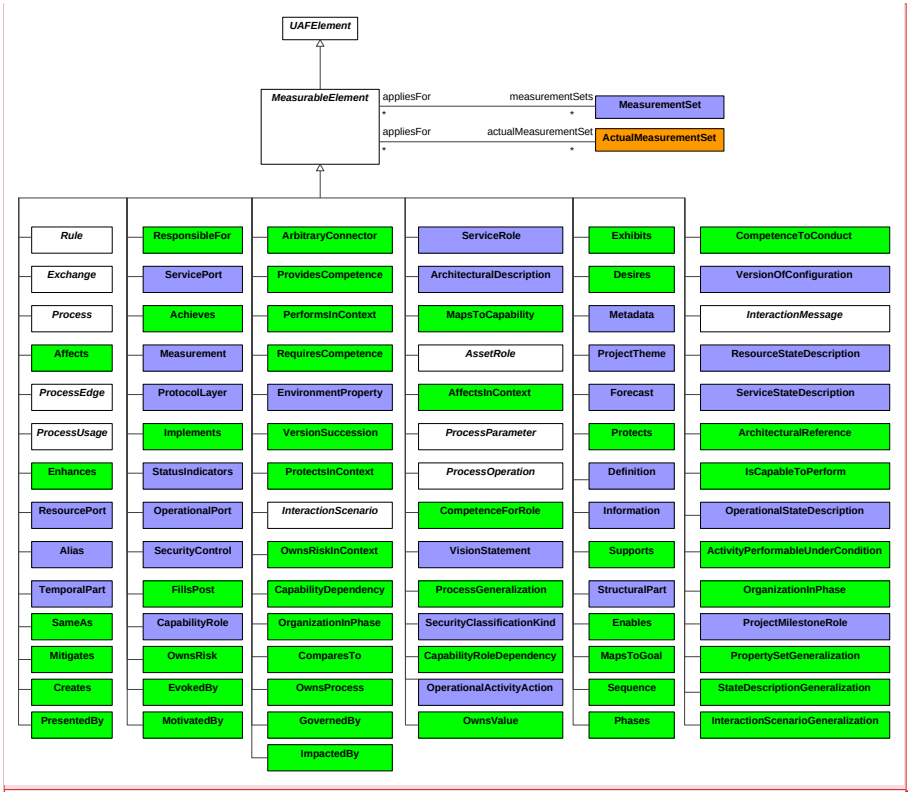
Package: Parameters

isAbstract: Yes

Generalization: UAFElement

Description

Abstract type, grouping elements that can be measured by applying MeasurementSets to them.



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UAF12-50
UAF12-52
UAF12-48
UAF12-33
UAF12-15
UAF12-51
UAF12-117
UAF12-11

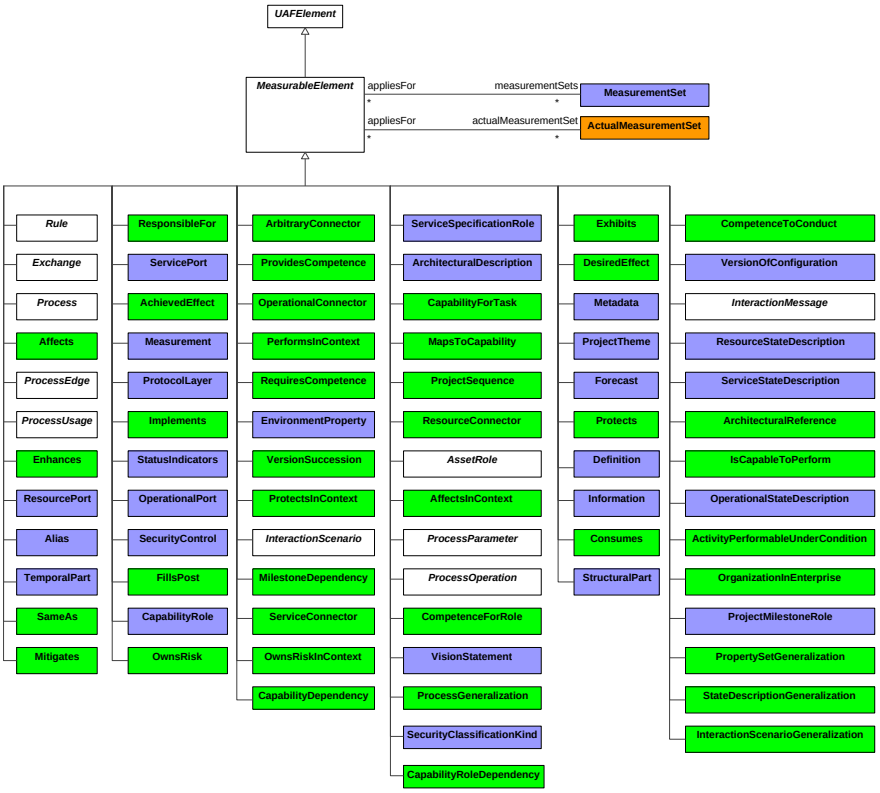

Figure 9:230 - MeasurableElement

Measurement

Package: Parameters

isAbstract: No

Generalization: MeasurableElement

Description

A property of an element representing something in the physical world, expressed in amounts of a unit of measure.

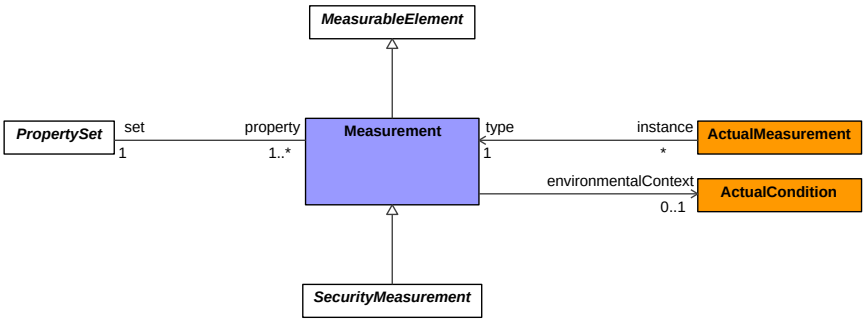

Figure 9:231 - Measurement

MeasurementSet

Package: Parameters

isAbstract: No

Generalization: PropertySet

Description

A collection of Measurements.

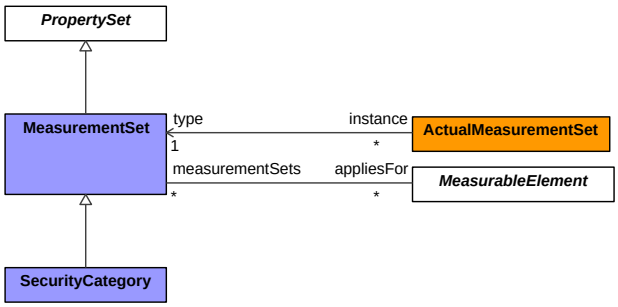

Figure 9:232 - MeasurementSet

Mitigates

Package: ParametersTraceability

Commented [KG510]: UAF12-51

isAbstract: No

Generalization: MeasurableElement

Description

A tuple relating a Security Control to a Risk. Mitigation is established to manage risk and could be represented as an overall strategy or through techniques (mitigation configurations) and procedures (SecurityProcesses).

Figure 9:266 - Mitigates

OwnsRisk

Package: ParametersTraceability

Commented [KG511]: UAF12-51

isAbstract: No

Generalization: MeasurableElement

Description

A tuple relating a Risk to an organizational resource that is responsible for executing the risk mitigation.

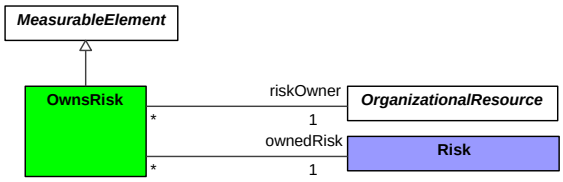

Figure 9:267 - OwnsRisk

OwnsRiskInContext

Package: ParametersTraceability

Commented [KG512]: UAF12-51

isAbstract: No

Generalization: MeasurableElement

Description

A tuple relating a Risk to an organizational role that is responsible for executing the risk mitigation in the specific context or configuration.

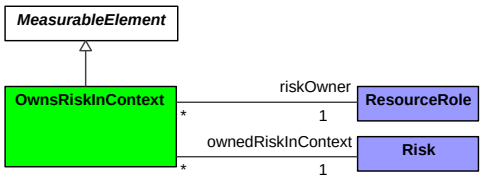

Figure 9:268 - OwnsRiskInContext

PropertySet

Package: Parameters

isAbstract: Yes

Generalization: UAFElement

Description

An abstract type grouping architectural elements that can own Measurements.

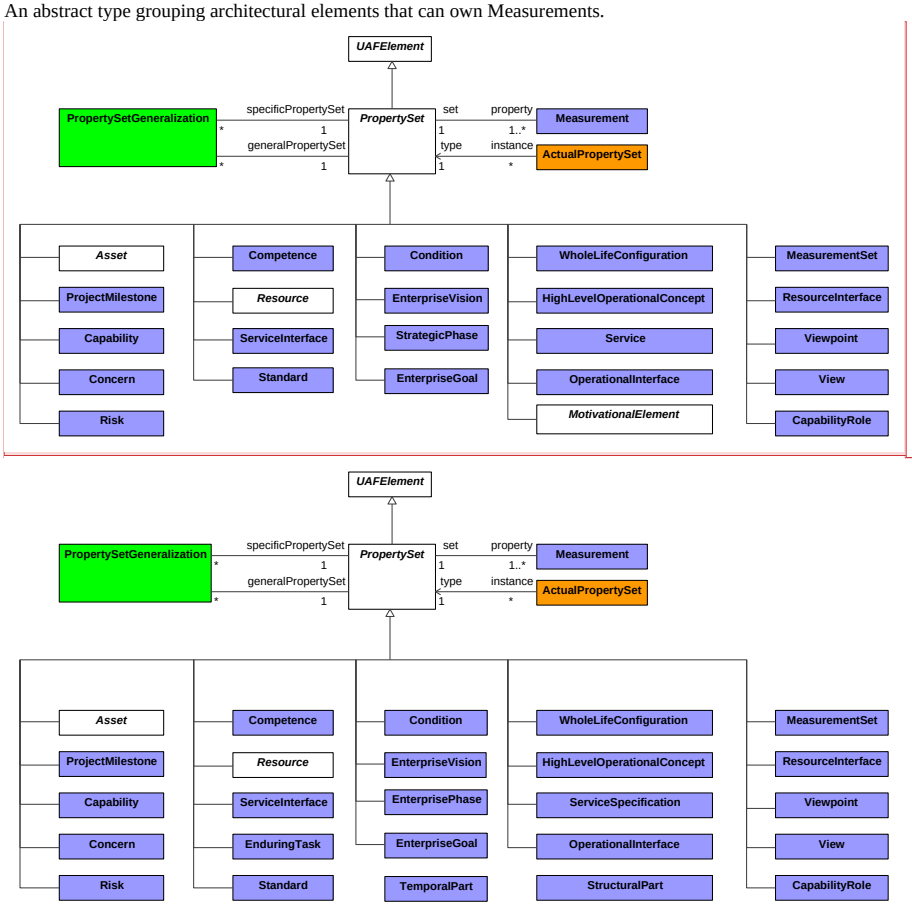

Figure 9:233 - PropertySet

Risk

Package: ParametersConstraints

isAbstract: No

Commented [KG513]: UAF12-15
UAF12-50
UAF12-33

Commented [KG514]: UAF12-51

Generalization: PropertySet

Description

A type that represents a situation involving exposure to danger of AffectableElements (e.g. Assets, Processes, Capabilities, Opportunities, or Enterprise Goals) where the effects of such exposure can be characterized in terms of the likelihood of occurrence of a given threat and the potential adverse consequences of that threat's occurrence.

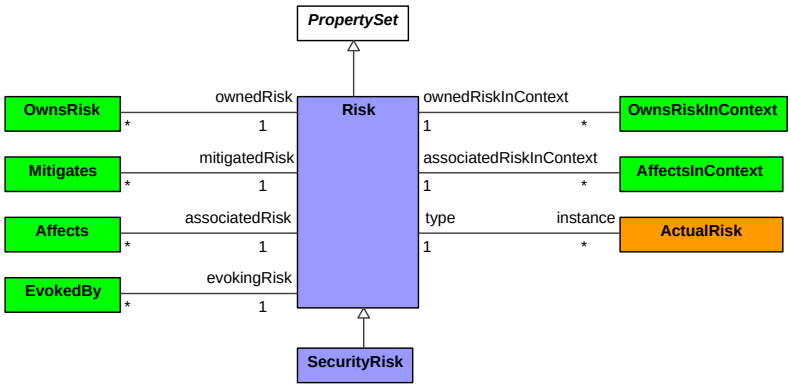

Figure 9:270 - Risk

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