Model for Performance-Driven Government (MPG)

Beta1

OMG Adopted Specification

_____

OMG Document Number: dtc/2010-05-25

Standard document URL: http://www.omg.org/spec/MPG/Beta1

Associated Schema File(s)*:

> **http://www.omg.org/spec/MPG/20100301**
>
> **http://www.omg.org/spec/MPG/20100302**

_____

* original files: gov/2010-03-02 (XMI), gov/2010-03-05 (XSD)

This OMG document replaces the submission document (gov/2010-03-01, Alpha). It is an OMG Adopted Beta specification and is currently in the finalization phase. Comments on the content of this document are welcome, and should be directed to issues@omg.org by December 3, 2010.

You may view the pending issues for this specification from the OMG revision issues web page http://www.omg.org/issues/.

The FTF Recommendation and Report for this specification will be published on April 1, 2011. If you are reading this after that date, please download the available specification from the OMG Specifications Catalog.

DISCLAIMER OF WARRANTY

RESTRICTED RIGHTS LEGEND

TRADEMARKS

COMPLIANCE

Management Group, Inc., software developed using this specification may claim compliance or conformance with the specification only if the software satisfactorily completes the testing suites.

OMG's Issue Reporting Procedure

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://www.omg.org/technology/agreement.)

Table of Contents

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. A Specifications Catalog is available from the OMG website at:

http://www.omg.org/technology/documents/spec_catalog.htm

Specifications within the Catalog are organized by the following categories:

OMG Modeling Specifications

- UML
- MOF
- XMI
- CWM
- Profile specifications

OMG Middleware Specifications

- CORBA/IIOP
- IDL/Language Mappings
- Specialized CORBA specifications
- CORBA Component Model (CCM)

Platform Specific Model and Interface Specifications

- CORBAservices
- CORBAfacilities
- OMG Domain specifications
- OMG Embedded Intelligence specifications
- OMG 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
140 Kendrick Street
Building A, Suite 300
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.

1 Scope

The Model for Performance-Driven Government (MPG) specifies a model that provides a uniform basis for agencies within the U.S. Federal Government to represent, analyze, and report on their enterprise-level transformation activities. It specifies how key transformation elements such as segment architecture, performance architecture, and investment planning model content are to be represented. It supports repository maintenance of that content and the fundamental information required to meet transparency and accountability goals.

2 Conformance

Full compliance with this specification requires the ability to instantiate a Federal Segment Architecture model based on the MPG concepts described in Section 2.7 and to represent that model using the XML schema referenced in Section 2.8.

3 Normative References

The normative references are:

- This specification document (OMG document gov/2010-03-01[BDI]), and

- The machine-readable files corresponding to the XML schema document (platform-specific model) found in gov/2010-03-03

The following normative documents contain provisions that, through reference in this text, constitute provisions of this specification. Subsequent amendments to, or revisions of, any of these publications do not apply.

- Business Motivation Model (BMM)

4 Terms and Definitions

See Annex A: MPG-Specific Glossary.

5 Symbols

Modeled class color conventions:
- This specification augments the classes defined by the Federal Enterprise Architecture Performance Reference Model, as published by the U.S. Office of Management and Budget. In the class diagrams associated with the Federal Enterprise Architecture Performance Reference Model, the classes that have been added are highlighted by having their shapes filled in yellow.

6 Additional Information

6.1 Specification Overview

The *Model for Performance-Driven Government* (MPG) has as its objective the specification of a uniform means for agencies in the U.S. Federal Government to represent and maintain concepts related to their transformation. The business transformation activities are driven through identification of needed performance improvements within specific functional business areas, termed *segments*. Additionally, by conforming to such uniformity, the resulting information sets provide a common basis for information sharing and (comparative) analysis across government, furthering the goals of the both the U.S. Office of Management and Budget (OMB) and the *Open Government Directive* (http://www.whitehouse.gov/open/documents/open-government-directive). Collaboration with the OMB was key to the production of this specification.

To meet the objective, this specification specifically addresses modeling of transformation concerns including representation of:

- Segments and related segment architectures as described in the *Federal Segment Architecture Methodology (FSAM)*,

- Capital planning and investment control of segment transformation,

- The *Federal Enterprise Architecture Consolidated Reference Model*

    o Business Reference Model (BRM)

    o Service Component Reference Model (SRM)

    o Technical Reference Model (TRM)

    o Performance Reference Model (PRM)

    o Data reference Model (DRM)

    as well as their integration into the overall agency business context, and

- *Federal Transition Framework* integration.

The resulting model is organized into two packages having content specific to this specification, *MPG* and *FEA CRM*. The *FEA CRM* provides the model details for the *Federal Enterprise Architecture Consolidated Reference Model*. This separation was made to facilitate change management in the future, since updates to the elements in the different packages are anticipated to occur at different intervals.

To support representation of the business context in which transformation occurs, the *Business Motivation Metamodel (BMM)* has been incorporated into this specification by reference and, in some cases, concepts from it specialized as classes within the MPG itself.

The MPG was created as a platform independent UML model (gov/2010-03-04). From that model, two additional specification artifacts were created:

- An XML Metadata Interchange (XMI) file (gov/2010-03-02), and

- A platform specific model (PSM), produced as an XML Schema (gov/2010-03-03).

6.2 Acknowledgments

The submitters thank the following supporting organizations and individuals who contributed to the development of this specification:

Contributors from the submitter organizations not otherwise listed above include:

Organization	Individual
Computer Sciences Corporation (CSC)	John Dodd
	James O'Dell
IBM	Lou Varvaris
	John Jessup
	John Sweigart
Troux Technologies	Bob Daniel
	Jason Lilleboe

7 Model for Performance-Driven Architecture (MPG) Specification

This section presents the normative specification for the Model for Performance-Driven Government (MPG). It begins with an overview of the metamodel structure followed by a description of each sub-package.

7.1 Package Structure

There are two main packages that comprise MPG:

- The Federal Enterprise Architecture Consolidated Reference Model (FEA CRM) Package, and
- The Model for Performance-Driven Government (MPG) Package.

The MPG Package has a dependency on the FEA CRM Package.

The MPG Package has an additional dependency to the OMG Business Motivation Metamodel (BMM), which is defined external to this specification.

The structure of the MPG package set is described in Figure 1.

pkg MPG Diagrams

Name: MPG Diagrams
Package: MPG Diagrams
Version: 1.0
Author: bdaniel

MPG

+ MPGElement
+ CPIC
+ Enterprise Architecture
+ Organization
+ Performance Management
+ Program Management
+ Project Management
+ Strategic Planning
+ CPIC

(from MPG)

FEA CRM

+ CRMElement
+ Business Reference Model
+ Service Component Reference Model
+ Technical Reference Model
+ Performance Reference Model
+ Data Reference Model

(from MPG)

BMM

+ Assessment
+ AssessmentCategory
+ Asset
+ BusinessPolicy
+ BusinessProcess
+ BusinessRule
+ CourseOfAction
+ DesiredResult
+ Directive
+ End
+ ExternalInfluencer
+ FixedAsset
+ Goal
+ Influencer
+ InfluencerCategory
+ InfluencingOrganization
+ InternalInfluencer
+ Liability
+ Means
+ Mission
+ MotivationElement
+ Objective
+ Offering
+ OrganizationCategory
+ OrganizationUnit
+ PotentialImpact
+ PotentialReward
+ Regulation
+ Resource
+ Risk
+ Strategy
+ Tactic
+ Vision

(from BMM RTF 081216)

Figure 1 - MPG Package Structure

7.2 Federal Enterprise Architecture Consolidated Reference Model (FEA CRM Package)

Type: **Package**
Package: MPG
Package that describes the types associated with the Federal Enterprise Architecture Consolidated Reference Models.

FEA CRM - *(Logical diagram)*

See Figure 2

Description

This diagram provides a complete view of the Federal Enterprise Architecture Consolidated Reference Model classes defined in the MPG. Each of the Reference Models: Performance (PRM), Business (BRM), Service (SRM), Technical (TRM), Data (DRM) are depicted based on the Reference Model descriptions as provided by the United States Office of Management and Budget. (Refer to "FEA_CRM_v23_Final_Oct_2007_Revised.pdf" and "DRM_2_0_Final.pdf" available at http://www.whitehouse.gov/omb/e-gov/fea/).

This complete CRM view is provided here for electronic viewing and printing at greater than 100% scaling. Sub-views of the diagram describing each reference model follows in subsequent diagrams.

The three class objects that are shaded in yellow in the lower left of the diagram indicate that these are an interpretation of the CRM document that extends the PRM in order to elaborate the "PRM Performance Measurement Indicator" concept through association with instantiated measurements.
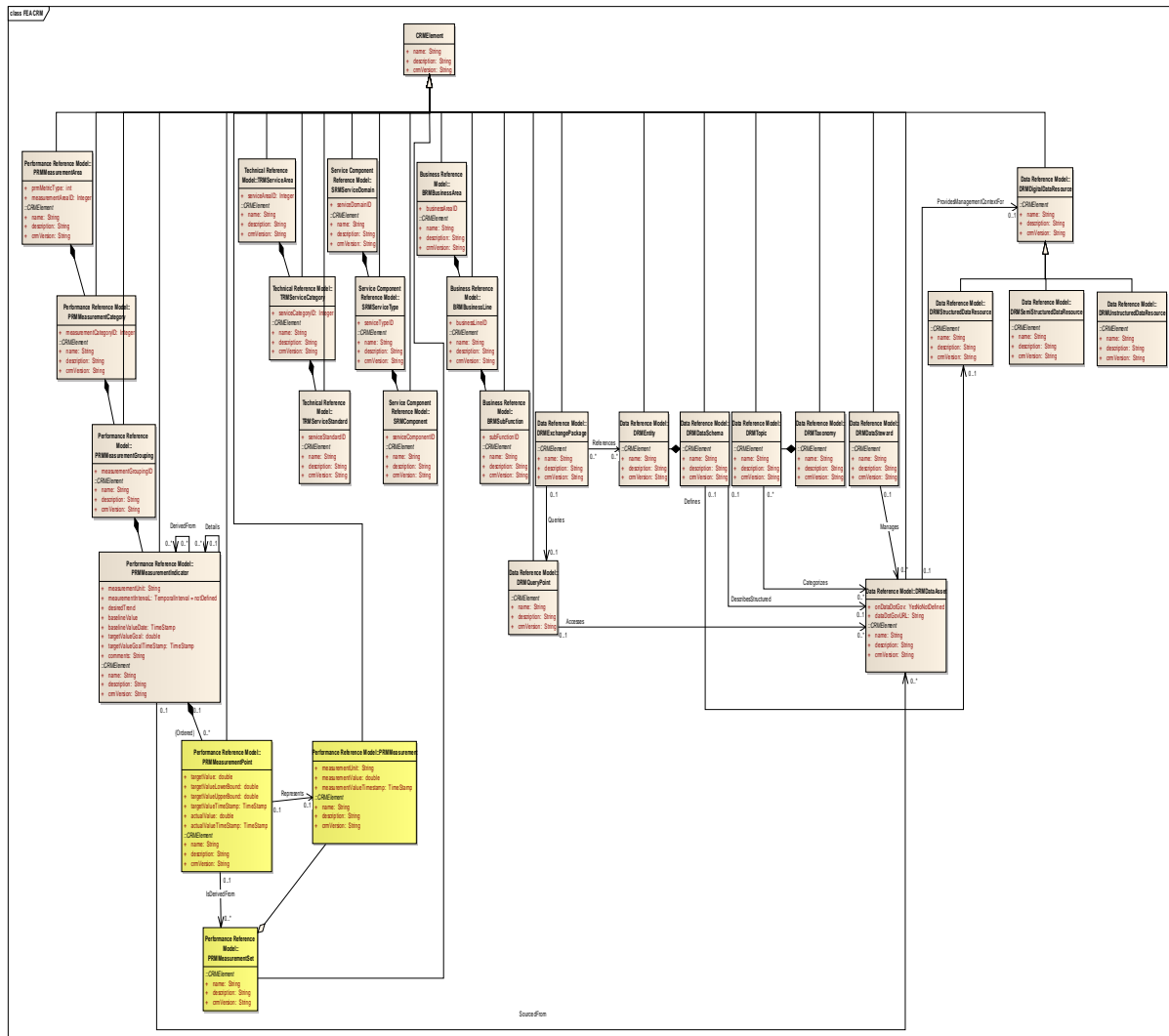
Figure 2 - FEA CRM

FEA CRM Packages - *(Logical diagram)*

See Figure 3

Description

This diagram describes the package structure used to represent each of the Federal Enterprise Architecture Reference Models: Performance (PRM), Business (BRM), Service Component (SRM), Technical (TRM), and Data (DRM). Each is depicted based on the Federal Enterprise Architecture Reference Model descriptions as provided by the United States Office of Management and Budget.

The three class objects that are shaded in yellow indicate that these elements have been added, as an interpretation of the CRM document, to extend the PRM. This was done in order to elaborate the "PRM Performance Measurement Indicator" concept through association with instantiated measurements.
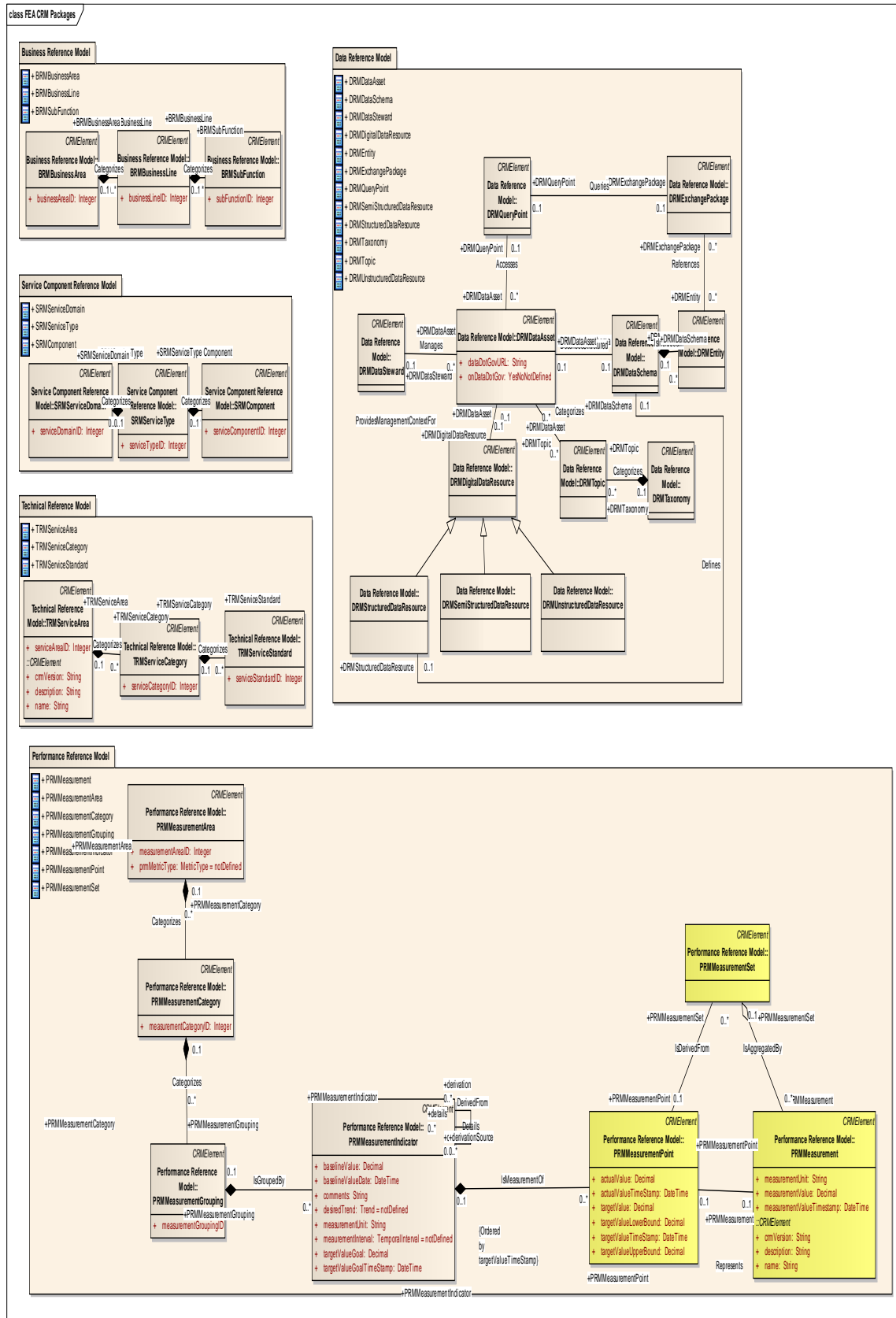
Figure 3 - FEA CRM Packages

7.2.1 CRMElement

Type: **Class**
Specialization of: n/a
Abstract
Parent Package: FEA CRM

Description

Abstract type from which all Consolidated Reference model types are derived.

Attributes

Attribute	Type	Description
name	String	The name of the CRMElement-derived object.
description	String	The description of the CRMElement-derived object.
crmVersion	String	Version of the CRM by which the CRMElement-derived object is defined, e.g., 2.3.

7.2.2 Business Reference Model

Type: **Package**
Parent Package: FEA CRM

The Business Reference Model (BRM) provides a taxonomy for classifying business processes. The first level of classification is provided by instances of BRMBusinessArea. The second level of classification is provided by instances of BRMBusinessLine, which represent refinements of the BRMBusinessArea classification categories. The third level of classification is provided by instances of BRMSubFunction, which represent refinements of the BRMBusinessLine classification categories.

The instantiation of the Business Reference Model is provided in the Consolidated Reference Model. [http://www.whitehouse.gov/omb/assets/fea_docs/FEA_CRM_v23_Final_Oct_2007_Revised.pdf and http://www.whitehouse.gov/omb/asset.aspx?AssetId=472 (in XML)].

Business Reference Model - *(Package diagram)*

See Figure 4

Description

This diagram depicts the Business Reference Model as sub-elements of the FEA CRM. The Business Reference Model package provides the means for modeling a tiered hierarchy of business function categories that can be used to categorize business processes. Refer to the OMB CRM document (FEA_CRM_v23_Final_Oct_2007_Revised.pdf) for additional description.
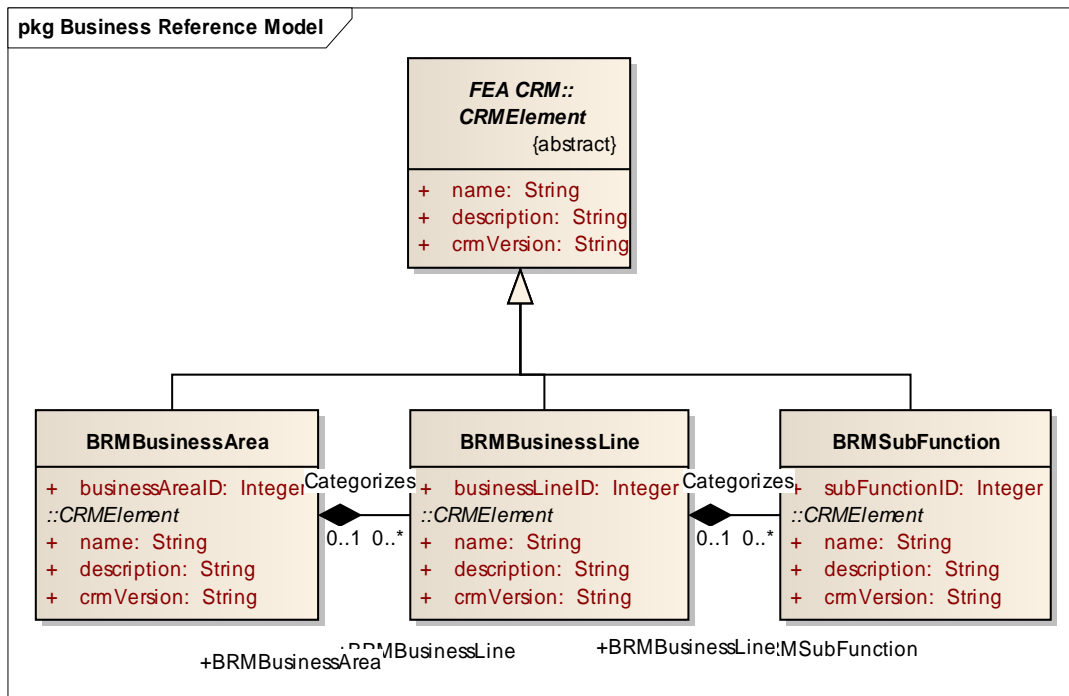
Figure 4 - Business Reference Model

BRMBusinessArea

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Business Reference Model

Description

Instances of BRMBusinessArea provide the highest-level categorization of the business processes and functions performed by the enterprise. These are further sub-classified (refined) by instances of BRMBusinessLine.

Attributes

Attribute	Type	Description
businessAreaID	Integer	The numeric identifier for a BRMBusinessArea object.

Relationships

Name	Description	Source	Target
Categorizes (Aggregation)	BRMBusinessLine categorizes BRMBusinessArea.	**BRMBusinessLine** Role: BRMBusinessLine Role Description: BRMBusinessLine categorizing BRMBusinessArea. Cardinality: 0..*	BRMBusinessArea Role: BRMBusinessArea Role Description: BRMBusinessArea categorized by the BRMBusinessLine. Cardinality: 0..1

BRMBusinessLine

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Business Reference Model

Description

Instances of BRMBusinessLine sub-classify (refine) an instance of BRMBusinessArea classification. These are further sub-classified (refined) by instances of BRMSubFunction.

Attributes

Attribute	Type	Description
businessLineID	Integer	The numeric identifier for a BRMBusinessLine object.

Relationships

Name	Description	Source	Target
Categorizes (Aggregation)	BRMSubFunction categorizes BRMBusinessLine.	**BRMSubFunction** Role: BRMSubFunction Role Description: BRMSubFunction that categorizes the BRMBusinessLine. Cardinality: 0..*	BRMBusinessLine Role: BRMBusinessLine Role Description: BRMBusinessLine categorized by the BRMSubFunction. Cardinality: 0..1
Categorizes (Aggregation)	BRMBusinessLine categorizes BRMBusinessArea.	**BRMBusinessLine** Role: BRMBusinessLine Role Description: BRMBusinessLine categorizing BRMBusinessArea. Cardinality: 0..*	BRMBusinessArea Role: BRMBusinessArea Role Description: BRMBusinessArea categorized by the BRMBusinessLine. Cardinality: 0..1

BRMSubFunction

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Business Reference Model

Description

Instances of BRMSubFunction sub-classify (refine) an instance of BRMBusinessLine classification and are used to associate agency business processes.

Attributes

Attribute	Type	Description
subFunctionID	Integer	The numeric identifier for a BRMSubFunction object.

Relationships

Name	Description	Source	Target
Aligns (Association)	BRMSubFunction Aligns BusinessProcess.	**BRMSubFunction** Role: brmSubFunction Role Description: The brmSubFunction category that aligns the BusinessProcess. Cardinality: 0..*	BusinessProcess Role: businessProcess Role Description: The BusinessProcess aligned by the BRMSubFunction category. Cardinality: 0..*
Categorizes (Aggregation)	BRMSubFunction categorizes BRMBusinessLine.	**BRMSubFunction** Role: BRMSubFunction Role Description: BRMSubFunction that categorizes the BRMBusinessLine. Cardinality: 0..*	BRMBusinessLine Role: BRMBusinessLine Role Description: BRMBusinessLine categorized by the BRMSubFunction. Cardinality: 0..1
Aligns (Association)	BRMSubFunction Aligns CommonBusinessProcess.	**BRMSubFunction** Role: brmSubFunction Role Description: The BRMSubFunction category that aligns the CommonBusinessProcess. Cardinality: 0..*	CommonBusinessProcess Role: commonBusinessProcess Role Description: The CommonBusinessProcess that is aligned by the BRMSubFunction category. Cardinality: 0..*
AlignsSecondaryBRM (Association)	Investment secondary alignment to the BRM.	**Investment** Role: secondaryInvestment Role Description: A secondary investment for a BRM subfunction. Cardinality: 0..*	BRMSubFunction Role: secondaryBrmSubfunction Role Description: The BRM Subfunction for the investment. Cardinality: 0..1
AlignsPrimaryBRM (Association)	Investment primary alignment to the BRM.	**Investment** Role: primaryInvestment Role Description: A primary investment that falls into the subfunction. Cardinality: 0..*	BRMSubFunction Role: primaryBrmSubFunction Role Description: The BRM Subfunction for the investment. Cardinality: 0..1

7.2.3 Data Reference Model

Type: **Package**
Parent Package: FEA CRM

A flexible and standards-based framework to enable information sharing and reuse across the federal government via the standard description and discovery of common data and the promotion of uniform data management practices.

Data Reference Model - *(Package diagram)*

See Figure 5

Description

This diagram depicts the Federal Enterprise Architecture Data Reference Model sub-elements of the FEA CRM. This view is based on an interpretation of the DRM as provided by the United States Office of Management and Budget. (Refer to the "DRM_2_0_Final.pdf", available at http://www.whitehouse.gov/omb/e-gov/fea/).
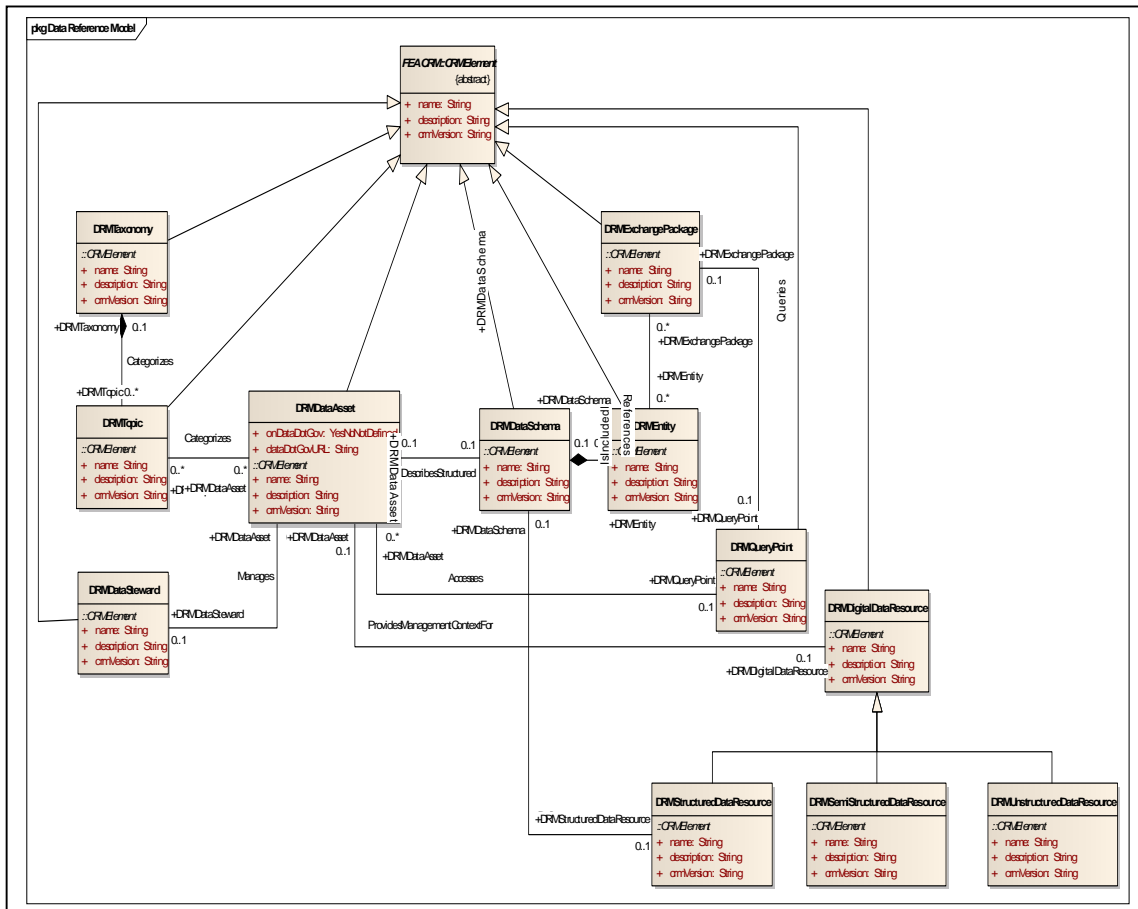
Figure 5 - Data Reference Model

DRMDataAsset

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Data Reference Model

Description

A managed container for data. In many cases, this will be a relational database; however, a Data Asset may also be a Web site, a document repository, directory or data service.

Attributes

Attribute	Type	Description
onDataDotGov	YesNoNotDefined	Whether the data asset is available on data.gov.
	String	The URL for the data asset reference on data.gov

Relationships

Name	Description	Source	Target
Manages (Association)	DRMDataSteward manages DRMDataAsset	**DRMDataSteward** Role: DRMDataSteward Role Description: Cardinality: 0..1	DRMDataAsset Role: DRMDataAsset Role Description: Cardinality: 0..*
IsSourcedFrom (Association)	PRMMeasurementIndicator is sourced from DRMDataAsset	**PRMMeasurementIndicator** Role: PRMMeasurementIndicator Role Description: The PRMMeasurementIndicator that is sourced from the DRMDataAsset. Cardinality: 0..1	DRMDataAsset Role: DRMDataAsset Role Description: The DRMDataAsset that sources the PRMMeasurementIndicator. Cardinality: 0..*
Categorizes (Association)	DRMDataAsset catagorizes DRMTopic	**DRMTopic** Role: DRMTopic Role Description: The DRMTopic that categorizes the DRMDataAsset. Cardinality: 0..*	DRMDataAsset Role: DRMDataAsset Role Description: The DRMDataAsset categorized by the DRMTopic. Cardinality: 0..*

		DRMDataAsset	DRMDigitalDataResource
ProvidesManagement ContextFor (Association)	DRMDataAsset provides management context for DRMDigitalDataResource	Role: DRMDataAsset Role Description: Cardinality: 0..1	Role: DRMDigitalDataResource Role Description: Cardinality: 0..1
DescribesStructured (Association)	DRMDataSchema describes structured DRMDataAsset	**DRMDataSchema** Role: DRMDataSchema Role Description: Cardinality: 0..1	DRMDataAsset Role: DRMDataAsset Role Description: Cardinality: 0..1
Accesses (Association)	DRMQueryPoint accesses DRMQueryPoint	**DRMQueryPoint** Role: DRMQueryPoint Role Description: The DRMQueryPoint accessing the DRMDataAsset. Cardinality: 0..1	DRMDataAsset Role: DRMDataAsset Role Description: The DRMDataAsset queried by the DRMQieryPoint. Cardinality: 0..*

DRMDataSchema

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Data Reference Model

Description

A representation of metadata, often in the form of data artifacts such as logical data models or conceptual data models. The Data Schema concept is actually a concept group, which is an aggregation of related concepts. The Data Schema concept group is comprised of those concepts pertaining to the representation of structured data.

Relationships

Name	Description	Source	Target
Defines (Association)	DRMDataSchema defines DRMStructuredDataResource.	**DRMDataSchema** Role: DRMDataSchema Role Description: The DRMDataSchema that defines the DRMStructuredDataResource. Cardinality: 0..1	DRMStructuredDataResource Role: DRMStructuredDataResource Role Description: The DRMStructuredDataResource defined by the DRMDataSchema. Cardinality: 0..1

| IsIncludedIn (Aggregation) | DRMEntity is included in DRMDataSchema. | **DRMEntity** Role: DRMEntity Role Description: The DRMEntity included in the DRMDataSchema. Cardinality: 0..* | DRMDataSchema Role: DRMDataSchema Role Description: The DRMDataSchema including the DRMDataEntity. Cardinality: 0..1 |
| DescribesStructured (Association) | DRMDataSchema describes structured DRMDataAsset | **DRMDataSchema** Role: DRMDataSchema Role Description: Cardinality: 0..1 | DRMDataAsset Role: DRMDataAsset Role Description: Cardinality: 0..1 |

DRMDataSteward

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Data Reference Model

Description

A person responsible for managing a Data Asset.

Relationships

Name	Description	Source	Target
Manages (Association)	DRMDataSteward manages DRMDataAsset	**DRMDataSteward** Role: DRMDataSteward Role Description: Cardinality: 0..1	DRMDataAsset Role: DRMDataAsset Role Description: Cardinality: 0..*

DRMDigitalDataResource

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Data Reference Model

Description

A digital container for information, which may be stored in structured, semi-structured, or unstructured forms. This type is further subtyped into Structured, Semi-Structured and Unstructured Data Resource, as per the DRM 2.0.

Name	Description	Source	Target
ProvidesManagement ContextFor (Association)	DRMDataAsset provides management context for DRMDigitalDataResource	**DRMDataAsset** Role: DRMDataAsset Role Description: Cardinality: 0..1	DRMDigitalDataResource Role: DRMDigitalDataResource Role Description: Cardinality: 0..1

DRMEntity

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Data Reference Model

Description

An abstraction for a person, place, object, event, or concept described (or characterized) by common Attributes. For example, "Person" and "Agency" are Entities. An instance of an Entity represents one particular occurrence of the Entity, such as a specific person or a specific agency.

Relationships

Name	Description	Source	Target
References (Association)	DRMExchangePackage references DRMEntity	**DRMExchangePackage** Role: DRMExchangePackage Role Description: The DRMExchangePackage that references the DRMEntity. Cardinality: 0..*	DRMEntity Role: DRMEntity Role Description: The DRMEntity referenced by the DRMExchangePackage. Cardinality: 0..*
IsStewardFor (Association)	Organization that is the steward for the DRMEntity.	**Organization** Role: steward Role Description: The organization responsible for guiding the development of a particular DRM Entity. Cardinality: 0..*	DRMEntity Role: drmEntity Role Description: A DRM Entity for which an organization is the steward. Cardinality: 0..*

IsIncludedIn (Aggregation)	DRMEntity is included in DRMDataSchema.	**DRMEntity** Role: DRMEntity Role Description: The DRMEntity included in the DRMDataSchema. Cardinality: 0..*	DRMDataSchema Role: DRMDataSchema Role Description: The DRMDataSchema including the DRMDataEntity. Cardinality: 0..1

DRMExchangePackage

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Data Reference Model

Description

A description of a specific recurring data exchange between a supplier and a consumer. An Exchange Package contains information (metadata) relating to the exchange (such as Supplier ID, Consumer ID, validity period for data, etc.), as well as a reference to the Payload (message content) for the exchange. An Exchange Package can also be used to define the result format for a query accepted and processed by a Query Point in a data sharing scenario.

Relationships

Name	Description	Source	Target
References (Association)	DRMExchangePackage references DRMEntity	**DRMExchangePackage** Role: DRMExchangePackage Role Description: The DRMExchangePackage that references the DRMEntity. Cardinality: 0..*	DRMEntity Role: DRMEntity Role Description: The DRMEntity referenced by the DRMExchangePackage. Cardinality: 0..*
Consumes (Association)	SystemServiceInterface Consumes DRMExchangePackage.	**SystemServiceInterface** Role: consumingSystemServiceInterface Role Description: The SystemServiceInterface that consumes the DRMExchangePackage. Cardinality: 0..*	DRMExchangePackage Role: consumedDRMExchangePackage Role Description: The DRMExchangePackage that the SystemServiceInterface consumes. Cardinality: 0..*

Supplies (Association)	SystemServiceInterface Supplies DRMExchangePackage.	**SystemServiceInterface** Role: supplyingSystemServiceInterface Role Description: The SystemServiceInterface that supplies the DRMExchangePackage. Cardinality: 0..*	DRMExchangePackage Role: suppliedDRMExchangePackage Role Description: The DRMExchangePackage that the SystemServiceInterface supplies. Cardinality: 0..*
Owns (Association)	The organization that owns the DRMExchangePackage.	**Organization** Role: owner Role Description: The organizatin that owns a particular DRM Exchange Package. Cardinality: 0..*	DRMExchangePackage Role: ownedDrmExchangePackage Role Description: a DRM Exchange Package owned by an Organization. Cardinality: 0..*
Uses (Association)	CommonBusinessProcess uses DRMExchangePackage.	**CommonBusinessProcess** Role: usingCommonBusinessProcess Role Description: The CommonBusinessProcess that uses the DRMExchangePackage. Cardinality: 0..*	DRMExchangePackage Role: usedDRMExchangePackage Role Description: The DRMExchangePackage used by the CommonBusinessProcess. Cardinality: 0..*
Queries (Association)	DRMExchangePackage queries DRMQueryPoint	**DRMExchangePackage** Role: DRMExchangePackage Role Description: The DRMExchangePackage that queries the DRMQueryPoint. Cardinality: 0..1	DRMQueryPoint Role: DRMQueryPoint Role Description: The DRMQueryPoint queried by the DRMExchangePackage. Cardinality: 0..1
Exchanges (Association)	SharedService Exchanges DRMExchangePackage.	**SharedService** Role: sharedService Role Description: The SharedService that exchanges the DRMExchangePackage. Cardinality: 0..*	DRMExchangePackage Role: drmExchangePackage Role Description: The DRMExchangePackage that the SharedService exchanges. Cardinality: 0..*

DRMQueryPoint

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Data Reference Model

Description

An endpoint providing an interface for accessing and querying a Data Asset. A concrete representation of a Query Point may be a specific URL at which a query Web Service may be invoked. A Query Point returns a result set specified in an Exchange Package.

Relationships

Name	Description	Source	Target
Queries (Association)	DRMExchangePackage queries DRMQueryPoint	**DRMExchangePackage** Role: DRMExchangePackage Role Description: The DRMExchangePackage that queries the DRMQueryPoint. Cardinality: 0..1	DRMQueryPoint Role: DRMQueryPoint Role Description: The DRMQueryPoint queried by the DRMExchangePackage. Cardinality: 0..1
Accesses (Association)	DRMQueryPoint accesses DRMQueryPoint	**DRMQueryPoint** Role: DRMQueryPoint Role Description: The DRMQueryPoint accessing the DRMDataAsset. Cardinality: 0..1	DRMDataAsset Role: DRMDataAsset Role Description: The DRMDataAsset queried by the DRMQieryPoint. Cardinality: 0..*

DRMSemiStructuredDataResource

Type: **Class**
Specialization of: **DRMDigitalDataResource**
Parent Package: Data Reference Model

Description

A Digital Data Resource containing semi-structured data.

DRMStructuredDataResource

Type: **Class**
Specialization of: **DRMDigitalDataResource**
Parent Package: Data Reference Model

Description

A Digital Data Resource containing structured data.

Name	Description	Source	Target
Defines (<u>Association</u>)	DRMDataSchema defines DRMStructuredDataResource.	**DRMDataSchema** Role: DRMDataSchema Role Description: The DRMDataSchema that defines the DRMStructuredDataResource. Cardinality: 0..1	DRMStructuredDataResource Role: DRMStructuredDataResource Role Description: The DRMStructuredDataResource defined by the DRMDataSchema. Cardinality: 0..1

DRMTaxonomy

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Data Reference Model

Description

A collection of controlled vocabulary terms organized into a hierarchical structure. Taxonomies provide a means for categorizing or classifying information within a reasonably well-defined associative structure. Each term in a taxonomy is in one or more parent/child (broader/narrower) relationships to other terms.

Relationships

Name	Description	Source	Target
Categorizes (<u>Aggregation</u>)	DRMTopic categorizes DRMTaxonomy.	**DRMTopic** Role: DRMTopic Role Description: The DRMTopic that categorizes the DRMTaxonomy. Cardinality: 0..*	DRMTaxonomy Role: DRMTaxonomy Role Description: The DRMTaxonomy that the DRMTopic categorizes. Cardinality: 0..1

DRMTopic

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Data Reference Model

Description

A category within a Taxonomy. A Topic is the central concept for applying context to data. For example, an agency may have a Taxonomy representing their organizational structure. In such a Taxonomy, each role in the organizational structure (e.g., CIO) represents a Topic. Topic is often synonymous with "node."

Relationships

Name	Description	Source	Target
Categorizes (Aggregation)	DRMTopic categorizes DRMTaxonomy.	**DRMTopic** Role: DRMTopic Role Description: The DRMTopic that categorizes the DRMTaxonomy. Cardinality: 0..*	DRMTaxonomy Role: DRMTaxonomy Role Description: The DRMTaxonomy that the DRMTopic categorizes. Cardinality: 0..1
Categorizes (Association)	DRMDataAsset catagorizes DRMTopic	**DRMTopic** Role: DRMTopic Role Description: The DRMTopic that categorizes the DRMDataAsset. Cardinality: 0..*	DRMDataAsset Role: DRMDataAsset Role Description: The DRMDataAsset categorized by the DRMTopic. Cardinality: 0..*

DRMUnstructuredDataResource

Type: **Class**
Specialization of: **DRMDigitalDataResource**
Parent Package: Data Reference Model

Description

A Digital Data Resource containing unstructured data.

7.2.4 Performance Reference Model

Type: **Package**
Package: FEA CRM

The Performance Reference Model (PRM) provides both a taxonomy for classifying metrics used by agencies to evaluate performance and a means for defining specific metrics, as well as capture data related to those metrics.

The PRM taxonomy is instantiated through the use of the PRMMeasurementArea, PRMMeasurementCategory, and PRMMeasurementGrouping types. That instantiation is provided in the Consolidated Reference Model. [http://www.whitehouse.gov/omb/assets/fea_docs/FEA_CRM_v23_Final_Oct_2007_Revised.pdf and http://www.whitehouse.gov/omb/asset.aspx?AssetId=472 (in XML)].

The PRMMeasurementIndicator type is used to define specific metrics, with the PRMMeasurementPoint type used to capture the related metric data.

<u>Performance Reference Model</u> - *(Package diagram)*

See Figure 6

<u>Description</u>

This diagram depicts the Federal Enterprise Architecture Performance Reference Model sub-elements of the FEA CRM. This view is based on an interpretation of the PRM as provided by the United States Office of Management and Budget (OMB). (Refer to the "DRM_2_0_Final.pdf," available at http://www.whitehouse.gov/omb/e-gov/fea/).

The three class objects that are shaded in yellow indicate that these elements have been added, as an interpretation of the CRM document, to extend the PRM. This was done in order to allow association of the "PRM Performance Measurement Indicator" class with related instantiated measurements, as well as represent the details of the data sets upon which those measurements are based.
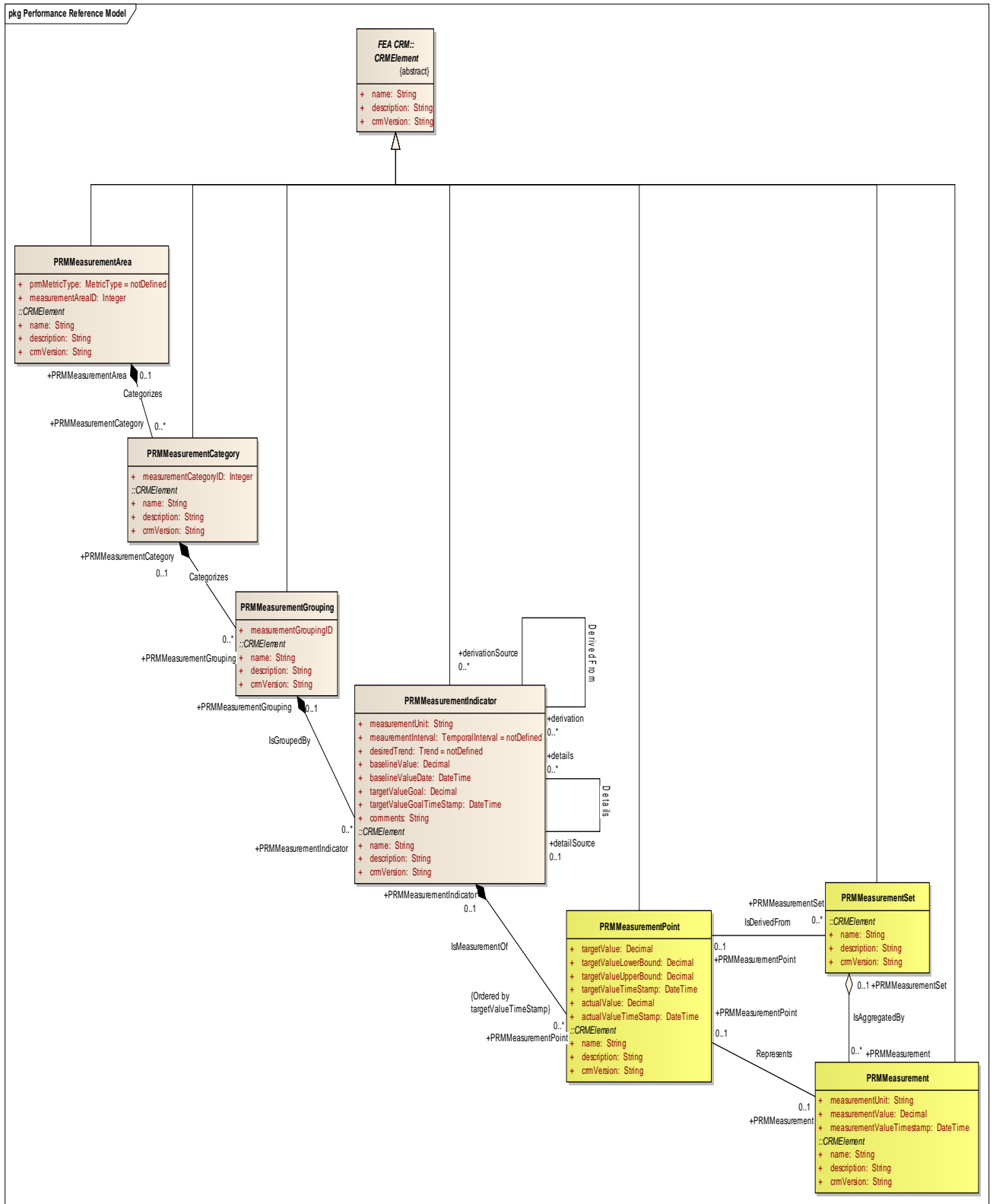
Figure 6 - Performance Reference Model

Performance Reference Model Context - *(Logical diagram)*

See Figure 7

Description

This diagram depicts the use of the Performance Reference Model in the context of key entities with which it has associations. The association with the BMM Assessment class supports performance analysis. The association with the DRMDataAsset class allows identification of where detailed performance indicator data can be found, i.e., on the data.gov web site.
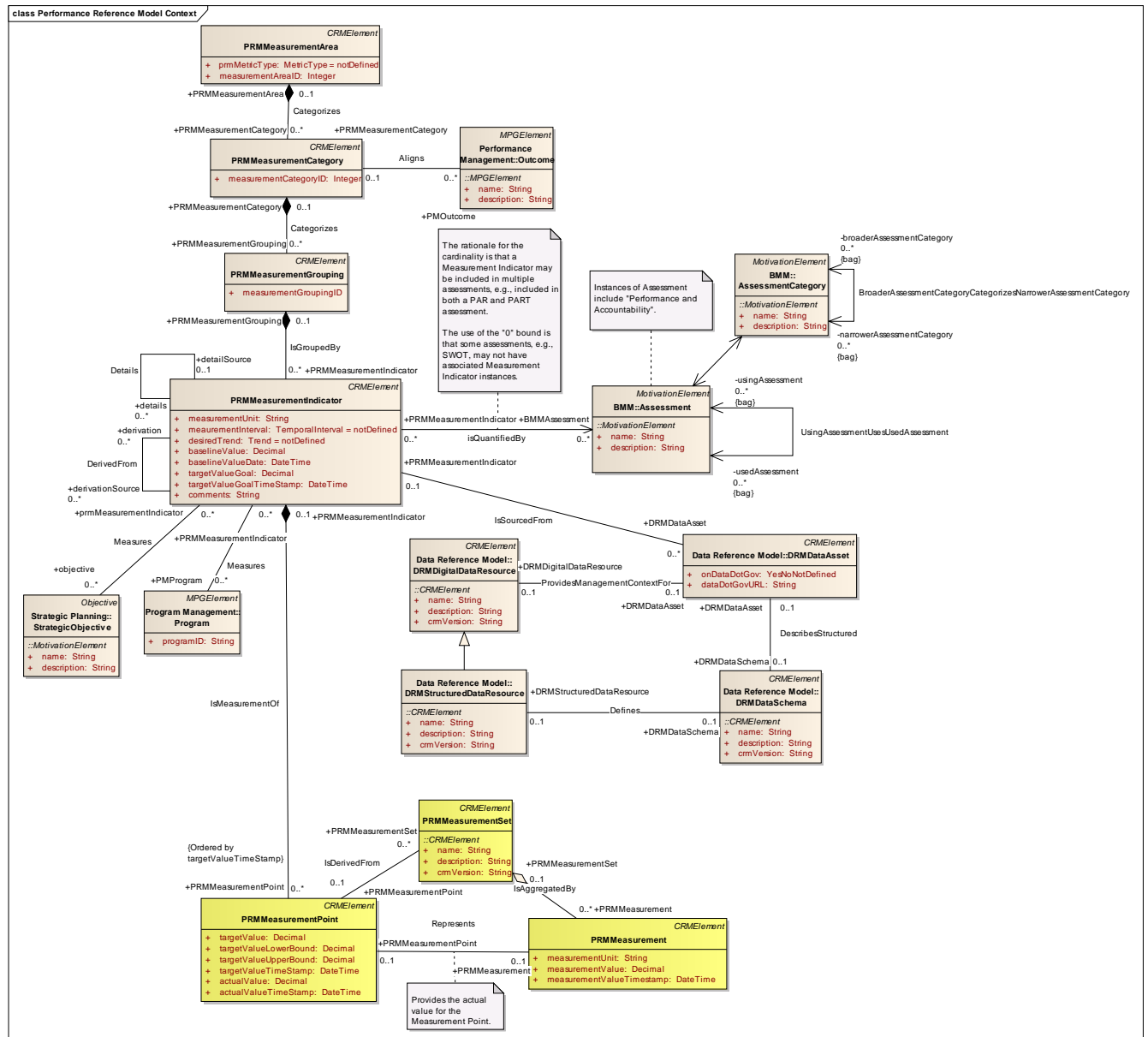
Figure 7 - Performance Reference Model Context

PRMMeasurement

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Performance Reference Model

Description

Quantitative description of a phenomenon (or phenomena) using standard units, potentially across multiple dimensions of measure, and made at a specific point in time.

Attributes

Attribute	Type	Description
measurementUnit	String	The unit of measure.
measurementValue	Decimal	The numeric value of the measurement.
measurementValueTimestamp	DateTime	The date and time at which the measurement was taken or for which derived.

Relationships

Name	Description	Source	Target
IsAggregatedBy (Aggregation)	PRMMeasurement is aggregated by PRMMeasurementSet.	**PRMMeasurement** Role: PRMMeasurement Role Description: A PRMMeasurement that is a member of a PRMMeasurementSet. Cardinality: 0..*	PRMMeasurementSet Role: PRMMeasurementSet Role Description: The PRMMeasurementSet of which the PRMMeasurement is a member. Cardinality: 0..1
Represents (Association)	PRMMeasurementPoint represents PRMMeasurement	**PRMMeasurementPoint** Role: PRMMeasurementPoint Role Description: The PRMMeasurementPoint representing the PRMMeasurement. Cardinality: 0..1	PRMMeasurement Role: PRMMeasurement Role Description: The PRMMeasurement represented by the PRMMeasurement Point. Cardinality: 0..1

PRMMeasurementArea

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Performance Reference Model

Description

Instances of PRMMeasurementArea provide the highest-level categorization of the metrics (PRMMeasurementIndicator instances) used to evaluate agency performance, in the dimensions of input, output, and outcome measures. These are further sub-classified (refined) by instances of PRMMeasurementCategory.

Attributes

Attribute	Type	Description
prmMetricType	MetricType	The type of metric: Input, Output, or Outcome.
measurementAreaID	Integer	Numeric identifier for the measurement area.

Relationships

Name	Description	Source	Target
Categorizes (Aggregation)	PRMMeasurementCategory categorizes PRMMeasurementArea.	**PRMMeasurementCategory** Role: PRMMeasurementCategory Role Description: PRMMeasurementCategory that categorizes thePRMMeasurementArea. Cardinality: 0..*	PRMMeasurementArea Role: PRMMeasurementArea Role Description: PRMMeasurementArea categorized by the PRMMeasurementCategory. Cardinality: 0..1

PRMMeasurementCategory

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Performance Reference Model

Description

Instances of PRMMeasurementCategory sub-classify (refine) an instance of PRMMeasurementArea classification. These are further sub-classified (refined) by instances of PRMMeasurementGrouping.

Attributes

Attribute	Type	Description
measurementCategoryID	Integer	Numeric identifier for the measurement category.

Name	Description	Source	Target
Categorizes (<u>Aggregation</u>)	PRMMeasurementGrouping categorizes PRMMeasurementCategory.	**PRMMeasurementGrouping** Role: PRMMeasurementGrouping Role Description: PRMMeasurementGrouping that categorizes the PRMMeasurementCategory. Cardinality: 0..*	PRMMeasurementCategory Role: PRMMeasurementCategory Role Description: PRMMeasurementCategory that is categorized by the PRMMeasurementGrouping. Cardinality: 0..1
Categorizes (<u>Aggregation</u>)	PRMMeasurementCategory categorizes PRMMeasurementArea.	**PRMMeasurementCategory** Role: PRMMeasurementCategory Role Description: PRMMeasurementCategory that categorizes the PRMMeasurementArea. Cardinality: 0..*	PRMMeasurementArea Role: PRMMeasurementArea Role Description: PRMMeasurementArea categorized by the PRMMeasurementCategory. Cardinality: 0..1
Aligns (<u>Association</u>)	PRMMeasurementCategory aligns PMOutcome	**PRMMeasurementCategory** Role: PRMMeasurementCategory Role Description: Cardinality: 0..1	Outcome Role: PMOutcome Role Description: Cardinality: 0..*

PRMMeasurementGrouping

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Performance Reference Model

Description

Instances of PRMMeasurementGrouping sub-classify (refine) an instance of PRMMeasurementCategory classification and are used to classify agency metrics represented by instances of PRMMeasurementIndicator.

Attributes

Attribute	Type	Description
measurementGroupingID		The numeric identifier for the Measurement Grouping.

Name	Description	Source	Target
IsGroupedBy (Aggregation)	PRMMeasurementIndicator is grouped by PRMMeasurementGrouping.	**PRMMeasurementIndicator** Role: PRMMeasurementIndicator Role Description: PRMMeasurementIndicator grouped by the PRMMeasurementGrouping. Cardinality: 0..*	PRMMeasurementGrouping Role: PRMMeasurementGrouping Role Description: PRMMeasurementGrouping that groups the PRMMeasurementIndicator. Cardinality: 0..1
Categorizes (Aggregation)	PRMMeasurementGrouping categorizes PRMMeasurementCategory.	**PRMMeasurementGrouping** Role: PRMMeasurementGrouping Role Description: PRMMeasurementGrouping that categorizes the PRMMeasurementCategory. Cardinality: 0..*	PRMMeasurementCategory Role: PRMMeasurementCategory Role Description: PRMMeasurementCategory that is categorized by the PRMMeasurementGrouping. Cardinality: 0..1

PRMMeasurementIndicator

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Performance Reference Model

Description

Instances of PRMMeasurementIndicator describe specific metrics used to evaluate agency performance. They are defined by the agency. Such measures of agency performance may be defined across broad areas of concern--from those used to monitor programs and projects to detailed measures related to the performance of processes or systems. Each metric defined should support quantitative analysis, including description of units of measure, baseline (starting point) and target values, the strategic planning horizon for which the target values are specified (valid), and the time interval between discrete measurement values being taken.

Instances of PRMMeasurementIndicator are classified by PRMMeasurementGrouping instances.

Attributes

Attribute	Type	Description
measurementUnit	String	The unit of measure.
meaurementInterval	TemporalInterval	The duration of the inter-measurement period.
desiredTrend	Trend	The desired direction of measurement value trend: Increasing, Decreasing, or Steady State.
baselineValue	Decimal	The starting point value of the measurement indicator.
baselineValueDate	DateTime	Date the performance indicator baseline value was set.
targetValueGoal	Decimal	The desired value of the measurement indicator.

Attribute	Type	Description
targetValueGoalTimeStamp	DateTime	The point in time at which the desired value for the measurement indicator is intended to be reached.
comments	String	A comment that may provide further explanation of the measurement indicator.

Relationships

Name	Description	Source	Target
isQuantifiedBy (Association)	BMMAssessment isQuantifiedBy PRMMeasurementIndicator	**Assessment** Role: BMMAssessment Role Description: The Assessment quantified by the PRMMeasureIndicator. Cardinality: 0..*	PRMMeasurementIndicator Role: PRMMeasurementIndicator Role Description: The PRMMeasurementIndicator that quantifies the Assessment. Cardinality: 0..*
IsGroupedBy (Aggregation)	PRMMeasurementIndicator is grouped by PRMMeasurementGrouping.	**PRMMeasurementIndicator** Role: PRMMeasurementIndicator Role Description: PRMMeasurementIndicator grouped by the PRMMeasurementGrouping. Cardinality: 0..*	PRMMeasurementGrouping Role: PRMMeasurementGrouping Role Description: PRMMeasurementGrouping that groups the PRMMeasurementIndicator. Cardinality: 0..1
Measures (Association)	PRMMeasurementIndicator measures StrategicObjective.	**PRMMeasurementIndicator** Role: prmMeasurementIndicator Role Description: A PRM measurement indicator for an objective. Cardinality: 0..*	StrategicObjective Role: objective Role Description: The objective measured by the indicator. Cardinality: 0..*
IsMeasurementOf (Aggregation)	PRMMeasurementPoint is measurement of PRMMeasurementIndicator.	**PRMMeasurementPoint** Role: PRMMeasurementPoint Role Description: PRMMeasurementPoint is measure of PRMMeasurementIndicator. Cardinality: 0..*	PRMMeasurementIndicator Role: PRMMeasurementIndicator Role Description: PRMMeasurementIndicator has measurement PRMMeasurementPoint. Cardinality: 0..1
Details (Association)	Case in which the same measure is being made but at a different measurement interval.	**PRMMeasurementIndicator** Role: detailSource Role Description: The detailed PRMMeasurementIndicator. Cardinality: 0..1	PRMMeasurementIndicator Role: details Role Description: The PRMMeasurementIndicator that provides the detail. Cardinality: 0..*

IsSourcedFrom (Association)	PRMMeasurementIndicator is sourced from DRMDataAsset	**PRMMeasurementIndicator** Role: PRMMeasurementIndicator Role Description: The PRMMeasurementIndicator that is sourced from the DRMDataAsset. Cardinality: 0..1	DRMDataAsset Role: DRMDataAsset Role Description: The DRMDataAsset that sources the PRMMeasurementIndicator. Cardinality: 0..*
DerivedFrom (Association)	PRMMeasurementIndicator derived from PRMMeasurementIndicator.	**PRMMeasurementIndicator** Role: derivation Role Description: The derived PRMMeasurementIndicator. Cardinality: 0..*	PRMMeasurementIndicator Role: derivationSource Role Description: The PRMMeasurementIndicator on which the derived PRMMEasurementIndicator is based. Cardinality: 0..*
Measures (Association)	PRMMeasurementIndicator measures PMProgram.	**PRMMeasurementIndicator** Role: PRMMeasurementIndicator Role Description: The PRMMeasurementIndicator that measures the performance of the Program. Cardinality: 0..*	Program Role: PMProgram Role Description: The Program about which the PRMMeasurementIndicator measures performance. Cardinality: 0..*

PRMMeasurementPoint

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Performance Reference Model

Description

An instance of PRMMeasurementPoint describes a measurement sample taken of an associated PRMMeasurementIndicator instance at a specific point in time. PRMMeasurementIndicator instances should be instantiated consistent with the measurement interval specified by the associated instance of PRMMeasurementIndicator. Each PRMMeasurementPoint instance can capture both the actual measured value for that interval and an intended target value, i.e., defined *a priori*, for that interval. This supports the specification of a set of (future) target values for a measurement indicator against which actual values can be compared.

Attributes

Attribute	Type	Description
targetValue	Decimal	The target value for the Measurement Point.
targetValueLowerBound	Decimal	The lower bound of the target value for the Measurement Point.

Attribute	Type	Description
targetValueUpperBound	Decimal	The upper bound of the target value for the Measurement Point.
targetValueTimeStamp	DateTime	The date and time at which the target value is to be achieved.
actualValue	Decimal	The actual measured value for the Measurement Point.
actualValueTimeStamp	DateTime	The date and time at which the actual value measurement was taken.

Relationships

Name	Description	Source	Target
IsDerivedFrom (<u>Association</u>)	PRMMeasurementPoint is derived from PRMMeasurementSet.	**PRMMeasurementPoint** Role: PRMMeasurementPoint Role Description: The PRMMeasurementPoint derived from the the PRMMeasurementSet. Cardinality: 0..1	PRMMeasurementSet Role: PRMMeasurementSet Role Description: The PRMMeasurementSet that provides the basis of the PRMMeasurementPoint. Cardinality: 0..*
Represents (<u>Association</u>)	PRMMeasurementPoint represents PRMMeasurement	**PRMMeasurementPoint** Role: PRMMeasurementPoint Role Description: The PRMMeasurementPoint representing the PRMMeasurement. Cardinality: 0..1	PRMMeasurement Role: PRMMeasurement Role Description: The PRMMeasurement represented by the PRMMeasurement Point. Cardinality: 0..1
IsMeasurementOf (<u>Aggregation</u>)	PRMMeasurementPoint is measurement of PRMMeasurementIndicator.	**PRMMeasurementPoint** Role: PRMMeasurementPoint Role Description: PRMMeasurementPoint is measure of PRMMeasurementIndicator. Cardinality: 0..*	PRMMeasurementIndicator Role: PRMMeasurementIndicator Role Description: PRMMeasurementIndicator has measurement PRMMeasurementPoint. Cardinality: 0..1

PRMMeasurementSet

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Performance Reference Model

Description

A collection of Measurement instances.

Relationships

Name	Description	Source	Target
IsDerivedFrom (Association)	PRMMeasurementPoint is derived from PRMMeasurementSet.	**PRMMeasurementPoint** Role: PRMMeasurementPoint Role Description: The PRMMeasurementPoint derived from the the PRMMeasurementSet. Cardinality: 0..1	PRMMeasurementSet Role: PRMMeasurementSet Role Description: The PRMMeasurementSet that provides the basis of the PRMMeasurementPoint. Cardinality: 0..*
IsAggregatedBy (Aggregation)	PRMMeasurement is aggregated by PRMMeasurementSet.	**PRMMeasurement** Role: PRMMeasurement Role Description: A PRMMeasurement that is a member of a PRMMeasurementSet. Cardinality: 0..*	PRMMeasurementSet Role: PRMMeasurementSet Role Description: The PRMMeasurementSet of which the PRMMeasurement is a member. Cardinality: 0..1

7.2.5 Service Component Reference Model

Type: **Package**
Package: FEA CRM

The Service Component Reference Model (SRM) provides a taxonomy for classifying service components. The first level of classification is provided by instances of SRMServiceDomain. The second level of classification is provided by instances of SRMServiceType, which represent refinements of the SRMServiceDomain classification categories. The third level of classification is provided by instances of SRMComponent, which represent refinements of the SRMServiceType classification categories.

The instantiation of the Service Component Reference Model is provided in the Consolidated Reference Model. [http://www.whitehouse.gov/omb/assets/fea_docs/FEA_CRM_v23_Final_Oct_2007_Revised.pdf and http://www.whitehouse.gov/omb/asset.aspx?AssetId=472 (in XML)].

Service Component Reference Model - *(Package diagram)*

See Figure 8

Description

This diagram depicts the Service Component Reference Model sub-elements of the FEA CRM. The Service Component Reference Model package provides the means to model the tiered hierarchy representing service categories as published by OMB. It serves to identify and classify horizontal and vertical Service Components supporting enterprise and their IT investments and assets. Refer to the OMB CRM document (FEA_CRM_v23_Final_Oct_2007_Revised.pdf) for additional description.
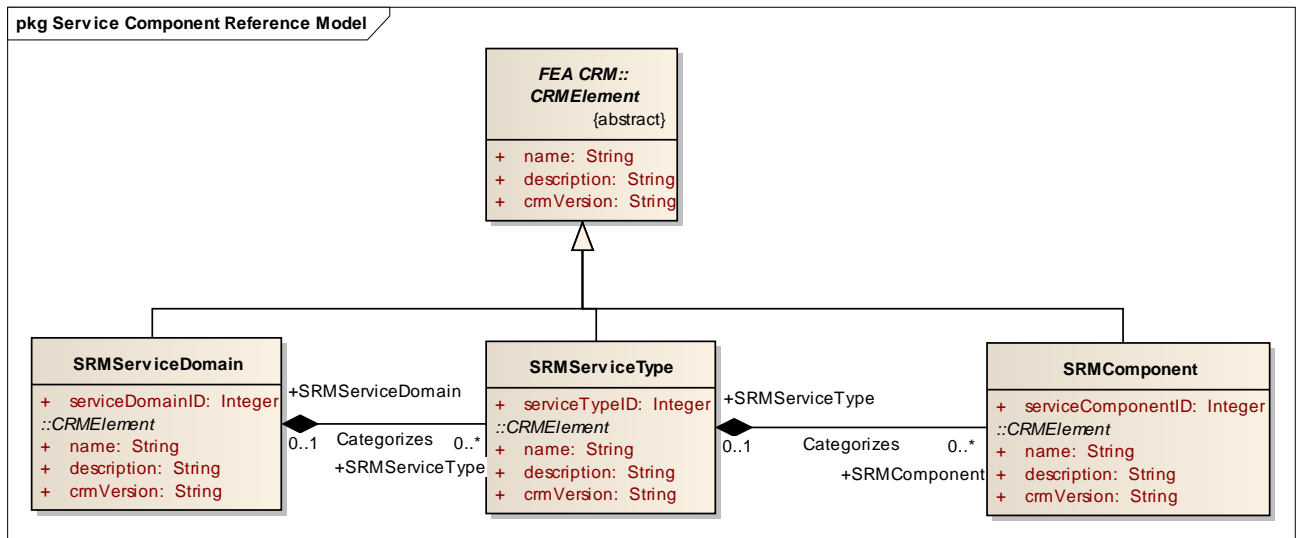
Figure 8 - Service Component Reference Model

SRMServiceDomain

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Service Component Reference Model

Description

Instances of SRMServiceDomain provide the highest-level categorization of the services and capabilities that support the enterprise's organizational processes and applications. These are further sub-classified (refined) by instances of SRMServiceType.

Attributes

Attribute	Type	Description
serviceDomainID	Integer	The numeric identifier for the SRMServiceDomain.

Relationships

Name	Description	Source	Target
Categorizes (Aggregation)	SRMServiceType categorizes SRMServiceDomain.	**SRMServiceType** Role: SRMServiceType Role Description: SRMServiceType that categorizes the SRMServiceDomain. Cardinality: 0..*	SRMServiceDomain Role: SRMServiceDomain Role Description: The SRMServiceDomain categorized by the SRMServiceType. Cardinality: 0..1

SRMServiceType

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Service Component Reference Model

Description

Instances of SRMServiceType sub-classify (refine) an instance of SRMServiceDomain classification. These are further sub-classified (refined) by instances of SRMComponent.

Attributes

Attribute	Type	Description
serviceTypeID	Integer	The numeric identifier for the SRMServiceType.

Relationships

Name	Description	Source	Target
Categorizes (Aggregation)	SRMServiceType categorizes SRMServiceDomain.	**SRMServiceType** Role: SRMServiceType Role Description: SRMServiceType that categorizes the SRMServiceDomain. Cardinality: 0..*	SRMServiceDomain Role: SRMServiceDomain Role Description: The SRMServiceDomain categorized by the SRMServiceType. Cardinality: 0..1
Categorizes (Aggregation)	SRMComponent categorizes SRMServiceType.	**SRMComponent** Role: SRMComponent Role Description: SRMComponent that categorizes the SRMServiceType. Cardinality: 0..*	SRMServiceType Role: SRMServiceType Role Description: SRMServiceType the SRMComponent categorizes. Cardinality: 0..1
Aligns (Association)	SRMServiceType Aligns SharedService.	**SRMServiceType** Role: srmServiceType Role Description: The SRMServiceType that aligns a SharedService. Cardinality: 0..*	SharedService Role: sharedService Role Description: The SharedService that the SRMServiceType aligns. Cardinality: 0..*

SRMComponent

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Service Component Reference Model

Description

Instances of SRMComponent sub-classify (refine) an instance of SRMServiceType classification and are used to associate agency service component instances. A single agency service component instance may be associated with mutiple instances of SRMComponent.

Attributes

Attribute	Type	Description
serviceComponentID	Integer	The numeric identifier for the SRMComponent.

Relationships

Name	Description	Source	Target
Aligns (Association)	SRMComponent Aligns SoftwareTechnologyProductVersion.	**SRMComponent** Role: srmComponent Role Description: An SRMComponent that aligns a SoftwareTechnologyProduct Version. Cardinality: 0..*	SoftwareTechnologyProduct Version Role: softwareTechnologyProduct Version Role Description: A SoftwareTechnologyProduct Version that an SRMComponent aligns. Cardinality: 0..*
Categorizes (Aggregation)	SRMComponent categorizes SRMServiceType.	**SRMComponent** Role: SRMComponent Role Description: SRMComponent that categorizes the SRMServiceType. Cardinality: 0..*	SRMServiceType Role: SRMServiceType Role Description: SRMServiceType the SRMComponent categorizes. Cardinality: 0..1
Aligns (Association)	SRMComponent Aligns SharedComponent.	**SRMComponent** Role: srmComponent Role Description: The SRMComponent that aligns a SharedComponent. Cardinality: 0..*	SharedComponent Role: sharedComponent Role Description: The SharedComponent an SRMComponent aligns. Cardinality: 0..*

AlignsSecondarySRM (Association)	Investment aligns secondary SRMComponent.	**Investment** Role: secondaryInvestment Role Description: Investment secondarily aligned to the SRM Component. Cardinality: 0..*	SRMComponent Role: secondarySRMComponent Role Description: The secondary SRMComponent alignment for the Investment. Cardinality: 0..1
AlignsPrimarySRM (Association)	Investment primary alignment SRMComponent.	**Investment** Role: primaryInvestment Role Description: Investment primarily aligned to the SRM Component. Cardinality: 0..*	SRMComponent Role: primarySrmComponent Role Description: The primary SRMComponent alignment for the Investment. Cardinality: 0..1

7.2.6 Technical Reference Model

Type: **Package**
Parent Package: FEA CRM

The Technical Reference Model (TRM) provides a taxonomy for classifying c. It provides a means for identifying commonalities in technology usage among agencies, thereby supporting the advancement of technology and service component reuse and standardization government-wide.

The first level of TRM classification is provided by instances of TRMServiceArea. The second level of classification is provided by instances of TRMServiceCategory, which represent refinements of the TRMServiceArea classification categories. The third level of classification is provided by instances of TRMServiceStandard, which represent refinements of the TRMServiceCategory classification categories.

The instantiation of the Technical Reference Model is provided in the Consolidated Reference Model. [http://www.whitehouse.gov/omb/assets/fea_docs/FEA_CRM_v23_Final_Oct_2007_Revised.pdf and http://www.whitehouse.gov/omb/asset.aspx?AssetId=472 (in XML)].

Technical Reference Model - *(Package diagram)*

See Figure 9

Description

This diagram depicts the Technical Reference Model sub-elements of the FEA CRM. The Technical Reference Model package provides the means to model the tiered hierarchy representing the technology and standard categories as published by the OMB. It is intended to provide a foundation to advance the reuse and standardization of technology from an enterprise-wide perspective. Refer to the OMB CRM document (FEA_CRM_v23_Final_Oct_2007_Revised.pdf) for additional description.
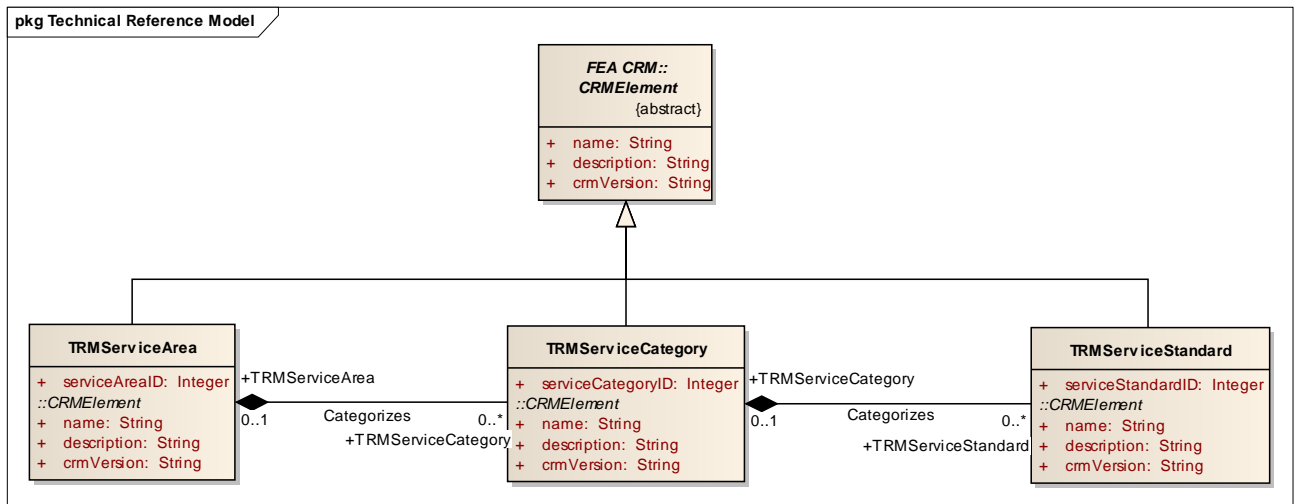
Figure 9 - Technical Reference Model

TRMServiceArea

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Technical Reference Model

Description

Instances of TRMServiceArea provide the highest-level categorization of the technologies and related standards used to implement agency service components and capabilities. These are further sub-classified (refined) by instances of TRMServiceCategory.

Attributes

Attribute	Type	Description
serviceAreaID	Integer	Numeric identifier for the service area.

Relationships

Name	Description	Source	Target
Categorizes (Aggregation)	TRMServiceCategory categorizes TRMServiceArea.	**TRMServiceCategory** Role: TRMServiceCategory Role Description: TRMServiceCategory that categorizes the TRMServiceArea. Cardinality: 0..*	TRMServiceArea Role: TRMServiceArea Role Description: TRMServiceArea that the TRMServiceCategory categorizes. Cardinality: 0..1

TRMServiceCategory

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Technical Reference Model

Description

Instances of TRMServiceCategory sub-classify (refine) an instance of TRMServiceArea classification. These are further sub-classified (refined) by instances of TRMServiceStandard.

Attributes

Attribute	Type	Description
serviceCategoryID	Integer	Numeric identifier for the service category.

Relationships

Name	Description	Source	Target
Categorizes (Aggregation)	TRMServiceStandard categorizes TRMServiceCategory.	**TRMServiceStandard** Role: TRMServiceStandard Role Description: TRMServiceStandard that categorizes the TRMServiceCategory. Cardinality: 0..*	TRMServiceCategory Role: TRMServiceCategory Role Description: TRMServiceCategory that the TRMServiceStandard categorizes. Cardinality: 0..1
Categorizes (Aggregation)	TRMServiceCategory categorizes TRMServiceArea.	**TRMServiceCategory** Role: TRMServiceCategory Role Description: TRMServiceCategory that categorizes the TRMServiceArea. Cardinality: 0..*	TRMServiceArea Role: TRMServiceArea Role Description: TRMServiceArea that the TRMServiceCategory categorizes. Cardinality: 0..1

TRMServiceStandard

Type: **Class**
Specialization of: **CRMElement**
Parent Package: Technical Reference Model

Description

Instances of TRMServiceStandard sub-classify (refine) an instance of TRMServiceCategory classification and are used to associate technologies (and related standards) used to implement agency service component and capability instances.

Attribute	Type	Description
serviceStandardID	Integer	The numeric identifier for the TRMServiceStandard.

Relationships

Name	Description	Source	Target
Categorizes (Aggregation)	TRMServiceStandard categorizes TRMServiceCategory.	**TRMServiceStandard** Role: TRMServiceStandard Role Description: TRMServiceStandard that categorizes the TRMServiceCategory. Cardinality: 0..*	TRMServiceCategory Role: TRMServiceCategory Role Description: TRMServiceCategory that the TRMServiceStandard categorizes. Cardinality: 0..1
Aligns (Association)	TRMServiceStandard Aligns SoftwareTechnologyProductVersion.	**TRMServiceStandard** Role: trmServiceStandard Role Description: A TRMServiceStandard that aligns a SoftwareTechnologyProduct Version. Cardinality: 0..*	SoftwareTechnologyProduct Version Role: softwareTechnologyProduct Version Role Description: A SoftwareTechnologyProduct Version that a TRMServiceStandard aligns. Cardinality: 0..*
Aligns (Association)	TRMServiceStandard Aligns TechnologyStandard.	**TRMServiceStandard** Role: trmServiceStandard Role Description: A TRMServiceStandard that aligns a TechnologyStandard. Cardinality: 0..*	TechnologyStandard Role: technologyStandard Role Description: A TechnologyStandard that a TRMServiceStandard aligns. Cardinality: 0..*
AlignsPrimaryTRM (Association)	Investment AlignsPrimaryTRM TRMServiceStandard.	**Investment** Role: investment Role Description: An Investment with a primary alignment to an TRMServiceStandard. Cardinality: 0..*	TRMServiceStandard Role: trmServiceStandard Role Description: A TRMServiceStandard that has a primary alignment to an Investment. Cardinality: 0..1

Aligns (Association)	TRMServiceStandard Aligns HardwareTechnologyProductModel.	**TRMServiceStandard** Role: trmServiceStandard Role Description: A TRMServiceStandard that aligns a HardwareTechnologyProduct Model. Cardinality: 0..*	HardwareTechnologyProduct Model Role: hardwareTechnologyProduct Model Role Description: A HardwareTechnologyProduct Model that a TRMServiceStandard aligns. Cardinality: 0..*

7.3   MPG

Type: **Package**
Parent Package: MPG

Package that describes the types specific to the Model for Performance-Driven Architecture.

MPG Packages - *(Package diagram)*

See Figure 10

Description

This diagram depicts/lists the sub-packages and class elements that, along with the elements from the FEA CRM and the BMM, comprise the MPG. The package CPIC contains those elements that relate to the Capital Planning and Investment Control of the Investment Budget cycle. The source information for these elements can be found in the OMB guidelines for budget preparation.

The Enterprise Architecture package contains sub-packages with class elements that serve to provide for architecture descriptions in terms of Business Processes, Business Services, and the Applications and Systems that are used in the enterprise. These package elements along with the Segment Architecture class elements provide structure in support of use of the Federal Segment Architecture Methodology (FSAM).

The Organization package provides class elements required to support ownership for responsibility and accountability purposes.

The remaining packages provide elements to establish relationships to the FEA CRM and the BMM in support of Architecture analysis and reporting.
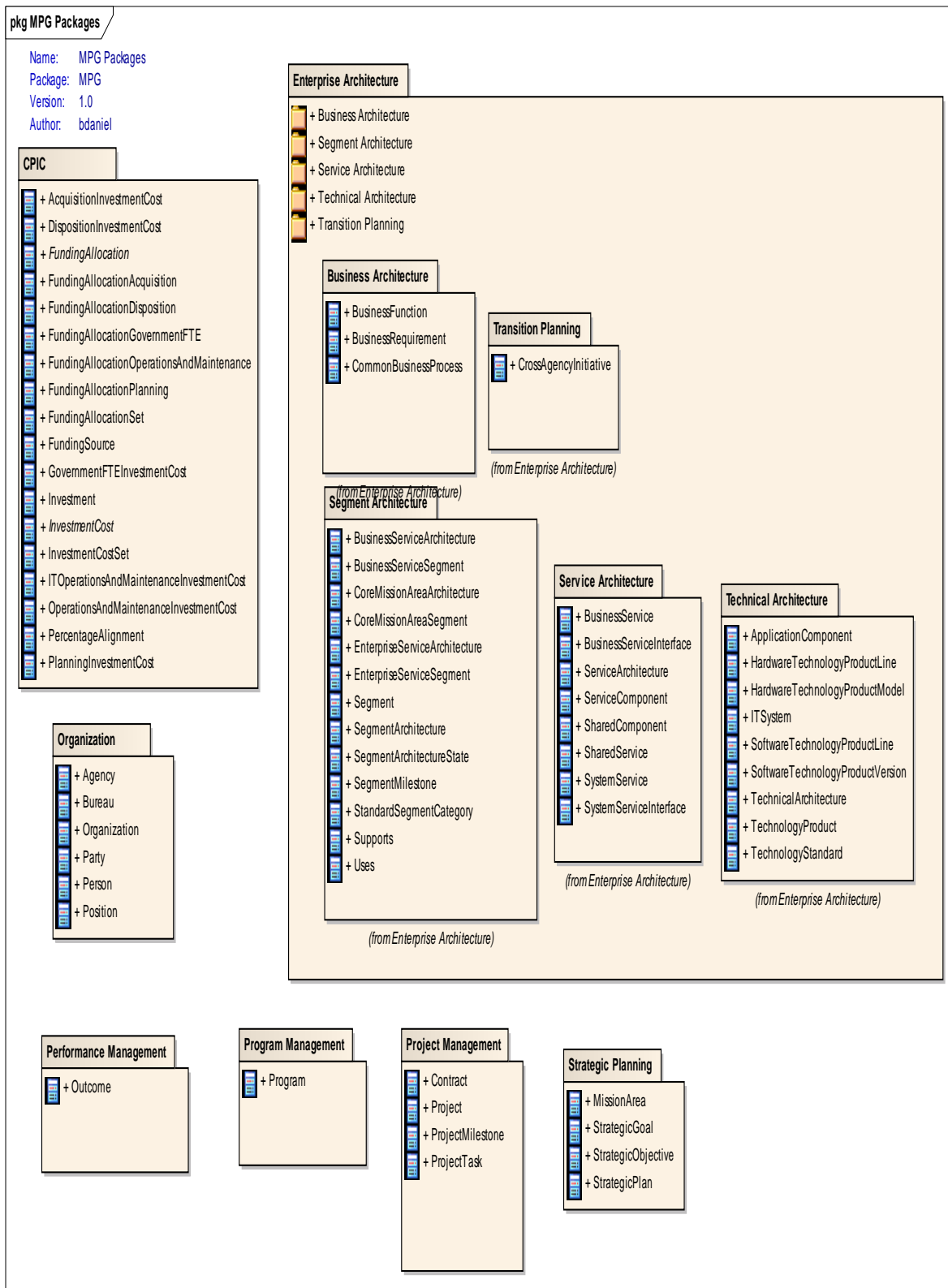
Figure 10 - MPG Packages

7.3.1 MPGElement

Type: **Class**
Specialization of: n/a
Abstract
Parent Package: MPG

Description

The abstract object type from which all Model for Performance-Driven Government object types are derived.

Attributes

Attribute	Type	Description
name	String	The name assigned to an MPGElement-derived object.
description	String	The description assigned to an MPGElement-derived object.

7.3.2 CPIC

Type: **Package**
Parent Package: MPG

This package contains the set of types related to modeling Capital Planning and Investment Control concepts.

CPIC - *(Package diagram)*

See Figure 11

Description

This diagram depicts the Capital Planning and Investment Control (CPIC) class elements that provide the means to describe Investment and cost information relating to those investments. These class elements have been established as an interpretation of the Capital Planning guidance that is published by the OMB. Refer to the document, "CIRCULAR NO. A–11, PREPARATION, SUBMISSION, ANDEXECUTION OF THE BUDGET," published annually by the OMB.
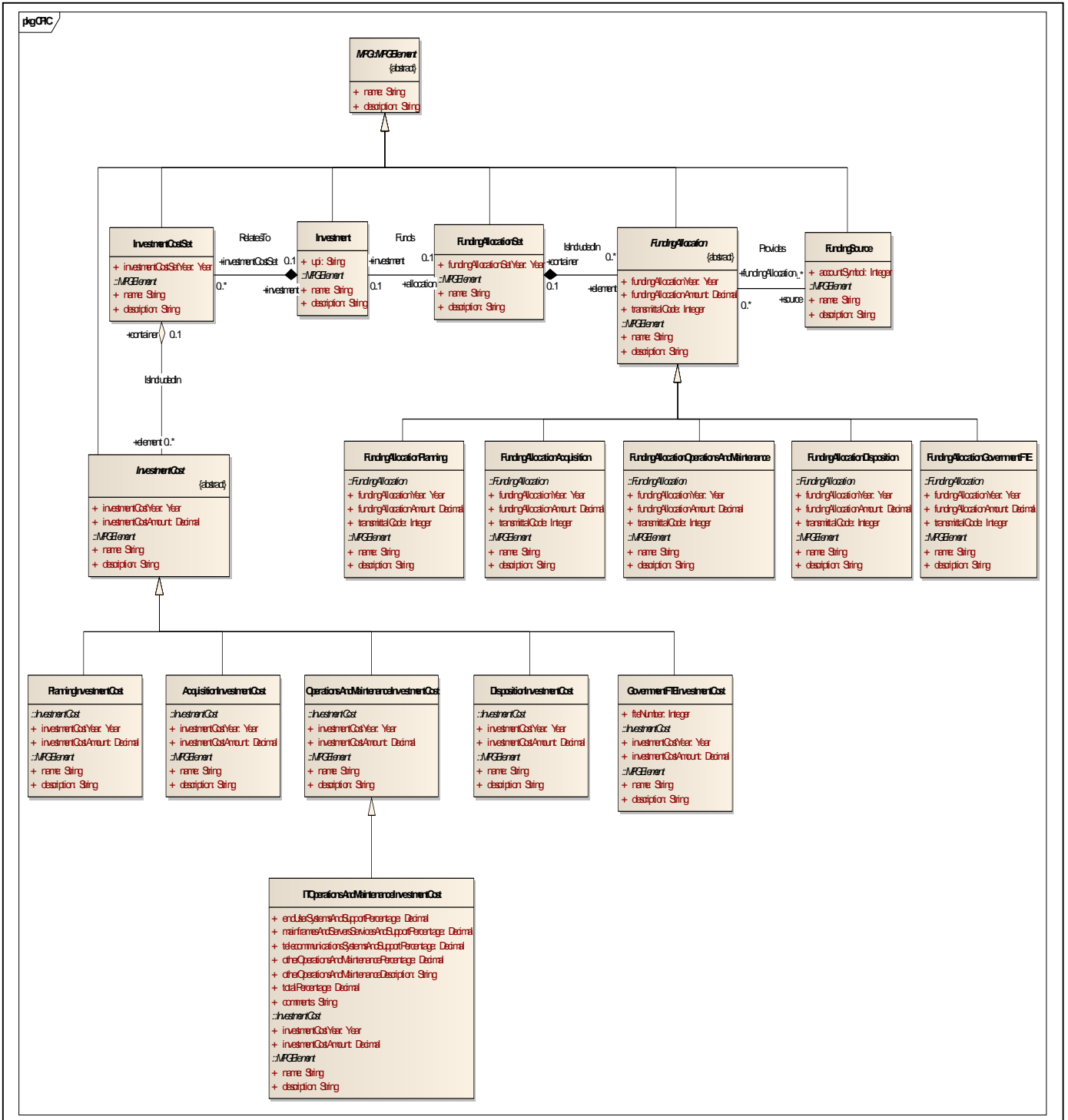
Figure 11 – CPIC

CPIC Context - *(Logical diagram)*

See Figure 12

Description

This diagram places the Investment class element and its related elements from the CPIC package in relation to key class elements that it relates to from other MPG class elements and the FEA CRM. This provides for the structure whereby the Segment architecture is related to specific investments that support specific business functions and service components. These relationships support analysis that may identify other investments supporting similar business functions or services. Through additional relationships, not shown on this diagram but inherent in the full MPG and detailed in subsequent diagrams, the system and applications that the investments fund can be analyzed for gaps and overlaps in funding application.
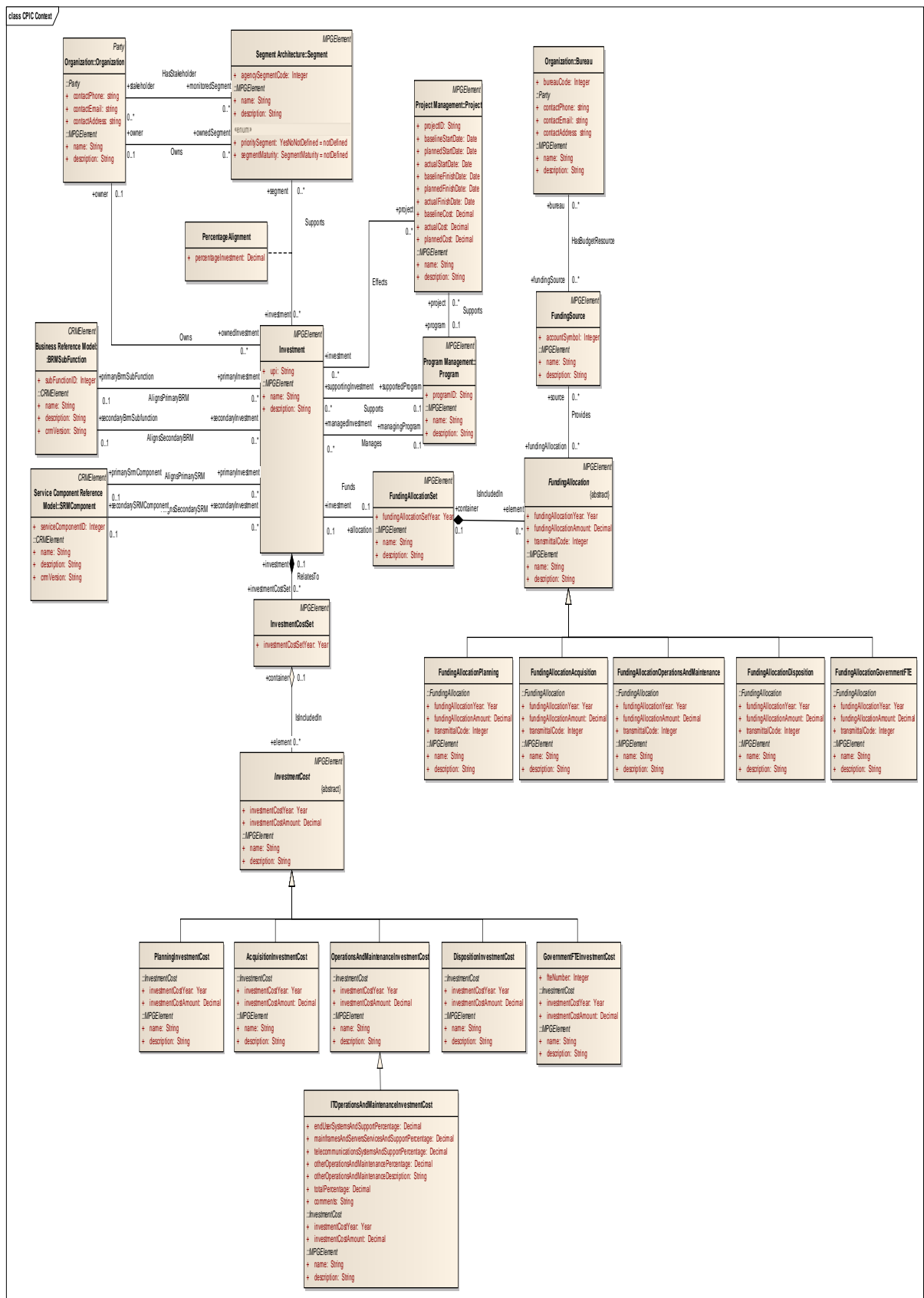
Figure 12 - CPIC Context

AcquisitionInvestmentCost

Type: **Class**
Specialization of: **InvestmentCost**
Parent Package: CPIC

Description

A cost incurred after receiving funding from Congress for a segment, module or the entire asset and ends when the asset is delivered and fully operational.

DispositionInvestmentCost

Type: **Class**
Specialization of: **InvestmentCost**
Parent Package: CPIC

Description

The cost in the referenced fiscal year related to the disposition of a segment, module, or entire asset and/or related means in which an investment was previously made.

FundingAllocation

Type: **Class**
Specialization of: **MPGElement**
Abstract
Parent Package: CPIC

Description

A distribution of funds to be applied toward the overall funding requirements of an Investment.

Attributes

Attribute	Type	Description
fundingAllocationYear	Year	Fiscal year for which the funding allocation is valid.
fundingAllocationAmount	Decimal	The amount of funding allocation in $M.
transmittalCode	Integer	The one-digit code associated with the account in MAX and identifies the nature or timing of the associated schedules: 0-Regular budget schedules. 1 - Supplemental proposal. Use only for requesting supplemental CY amounts. 2 - Legislative proposal, not subject to PAYGO. 3 - Appropriations language to be transmitted later. 4 - Legislative proposal, subject to PAYGO. 5 - Rescission proposal. 9 - Reserved for OMB use.

Name	Description	Source	Target
IsIncludedIn (<u>Aggregation</u>)	FundingAllocation is included in FundingAllocationSet.	**FundingAllocation** Role: element Role Description: FundingAllocation include in the FundingAllocationSet. Cardinality: 0..*	FundingAllocationSet Role: container Role Description: The FundingAllocationSet that includes the FundingAllocation. Cardinality: 0..1
Provides (<u>Association</u>)	FundingSource provides FundingAllocation.	**FundingSource** Role: source Role Description: FundingSource that provides the FundingAllocation. Cardinality: 0..*	FundingAllocation Role: fundingAllocation Role Description: The FundingAllocation provided by the FundingSource. Cardinality: 0..*

FundingAllocationAcquisition

Type: **Class**
Specialization of: **FundingAllocation**
Parent Package: CPIC

Description

Funding allocated for acquisition for the referenced fiscal year.

FundingAllocationDisposition

Type: **Class**
Specialization of: **FundingAllocation**
Parent Package: CPIC

Description

Funding allocation for disposition in the referenced fiscal year.

FundingAllocationGovernmentFTE

Type: **Class**
Specialization of: **FundingAllocation**
Parent Package: CPIC

Description

Funding allocated for government full time equivalent (FTE) personnel resources for the referenced fiscal year.

FundingAllocationOperationsAndMaintenance

Type: **Class**
Specialization of: **FundingAllocation**
Parent Package: CPIC

Description

Funding allocated for operations and maintenenace for the referenced fiscal year.

FundingAllocationPlanning

Type: **Class**
Specialization of: **FundingAllocation**
Parent Package: CPIC

Description

Funding allocated for planning for the referenced fiscal year.

FundingAllocationSet

Type: **Class**
Specialization of: **MPGElement**
Parent Package: CPIC

Description

A collection of Funding Allocation instances.

Attributes

Attribute	Type	Description
fundingAllocationSetYear	Year	The fiscal year for which the funding allocation set applies.

Relationships

Name	Description	Source	Target
IsIncludedIn (Aggregation)	FundingAllocation is included in FundingAllocationSet.	**FundingAllocation** Role: element Role Description: FundingAllocation include in the FundingAllocationSet. Cardinality: 0..*	FundingAllocationSet Role: container Role Description: The FundingAllocationSet that includes the FundingAllocation. Cardinality: 0..1

Funds (Association)	FundingAllocationSet funds Investment.	**FundingAllocationSet** Role: allocation Role Description: The FundingAllocationSet that provides the Investment funding. Cardinality: 0..1	Investment Role: investment Role Description: The Investment funded by the FundingAllocationSet. Cardinality: 0..1

FundingSource

Type: **Class**
Specialization of: **MPGElement**
Parent Package: CPIC

Description

The direct appropriation or other budgetary resources an agency receives.

Attributes

Attribute	Type	Description
accountSymbol	Integer	The assigned identification code for the Funding Source. The account symbol value is based on the fund type. 0000–3899 General fund 5000–5999 Special fund 4000–4499 Public enterprise revolving fund 4500–4999 Intragovernmental revolving fund 3900–3999 Management fund 8000–8399 and 8500–8999 Trust non-revolving fund 8400–8499 Trust revolving fund 6000–6999 Deposit funds

Relationships

Name	Description	Source	Target
HasBudgetResource (Association)	Bureau has budget resource FundingSource.	**Bureau** Role: bureau Role Description: Bureau with a particular budget source. Cardinality: 0..*	FundingSource Role: fundingSource Role Description: A source of funding for a bureau. Cardinality: 0..*

Provides (Association)	FundingSource provides FundingAllocation.	**FundingSource** Role: source Role Description: FundingSource that provides the FundingAllocation. Cardinality: 0..*	FundingAllocation Role: fundingAllocation Role Description: The FundingAllocation provided by the FundingSource. Cardinality: 0..*

GovernmentFTEInvestmentCost

Type: **Class**
Specialization of: **InvestmentCost**
Parent Package: CPIC

Description

An Investment Cost that is based on the cost of full time equivalent government personnel for the referenced fiscal year.

Attributes

Attribute	Type	Description
fteNumber	Integer	Number of Full Time Equivalent government personnel being funded.

ITOperationsAndMaintenanceInvestmentCost

Type: **Class**
Specialization of: **OperationsAndMaintenanceInvestmentCost**
Parent Package: CPIC

Description

An IT Investment Cost that is incurred due to the maintenance of an existing capital asset.

Attributes

Attribute	Type	Description
endUserSystemsAndSupportPercentage	Decimal	Percentage of investment cost for operations and maintenance of end user systems.
mainframesAndServersServicesAnd SupportPercentage	Decimal	Investment cost percentage for operations and maintenance of mainframe and server computing resources.
telecommunicationsSystemsAndSupportPercentage	Decimal	Investment cost percentage related to the operations and maintenance of telecommunications systems.
otherOperationsAndMaintenance Percentage	Decimal	Investment cost percentage related to operations and maintenance costs not otherwise defined.
otherOperationsAndMaintenance Description	String	Description of "other" operations and maintenance investment cost area.

Attribute	Type	Description
totalPercentage	Decimal	Total percentage of operations and maintenance investment cost for the referenced fiscal year related to end user systems; mainframes and servers; telecommunications systems; and other identified elements.
comments	String	Further explanatory information regarding the investment cost.

Investment

Type: **Class**
Specialization of: **MPGElement**
Parent Package: CPIC

Description

The application of capital in expectation of derived benefit or other return.

Attributes

Attribute	Type	Description
upi	String	The unique project identifier assigned to the investment.

Relationships

Name	Description	Source	Target
Supports (AssociationClass)	Investment supports Segment.	**Investment** Role: investment Role Description: Investment that supports the Segment. Cardinality: 0..*	Segment Role: segment Role Description: The Segment supported by the Investment. Cardinality: 0..*
Supports (Association)	Investment supports StrategicGoal.	**Investment** Role: investment Role Description: The Investment that supports the StrategicGoal. Cardinality: 0..*	StrategicGoal Role: investmentGoal Role Description: The StrategicGoal supported by the Investment. Cardinality: 0..*
RelatesTo (Aggregation)	InvestmentCostSet relates to Investment.	**InvestmentCostSet** Role: investmentCostSet Role Description: IinvestmentCostSet that is related to the Investment. Cardinality: 0..*	Investment Role: investment Role Description: Investment that has the related InvestmentCostSet. Cardinality: 0..1

Supports (Association)	Investment supports Contract.	**Investment** Role: supportingInvestment Role Description: An investment that supports a contract. Cardinality: 0..*	Contract Role: supportedContract Role Description: A contract supported by an investment. Cardinality: 0..*
Owns (Association)	Organization owns Investment.	**Organization** Role: owner Role Description: The organization that owns the ownedInvestment. Cardinality: 0..1	Investment Role: ownedInvestment Role Description: This investment is owned by the organization playing the owner role. Cardinality: 0..*
AlignsPrimaryTRM (Association)	Investment AlignsPrimaryTRM TRMServiceStandard.	**Investment** Role: investment Role Description: An Investment with a primiary alignment to an TRMServiceStandard. Cardinality: 0..*	TRMServiceStandard Role: trmServiceStandard Role Description: A TRMServiceStandard that has a primary alignment to an Investment. Cardinality: 0..1
Effects (Association)	Project effects Investment.	**Project** Role: project Role Description: The Project that effects the objectives of the Investment. Cardinality: 0..*	Investment Role: investment Role Description: The Investment that has its objectives effected by the Project. Cardinality: 0..*
Funds (Association)	FundingAllocationSet funds Investment.	**FundingAllocationSet** Role: allocation Role Description: The FundingAllocationSet that provides the Investment funding. Cardinality: 0..1	Investment Role: investment Role Description: The Investment funded by the FundingAllocationSet. Cardinality: 0..1
AlignsSecondarySRM (Association)	Investment aligns secondary SRMComponent.	**Investment** Role: secondaryInvestment Role Description: Investment secondarily aligned to the SRM Component. Cardinality: 0..*	SRMComponent Role: secondarySRMComponent Role Description: The secondary SRMComponent alignment for the Investment. Cardinality: 0..1

AlignsSecondaryBRM (<u>Association</u>)	Investment secondary alignment to the BRM.	**Investment** Role: secondaryInvestment Role Description: A secondary investment for a BRM subfunction. Cardinality: 0..*	BRMSubFunction Role: secondaryBrmSubfunction Role Description: The BRM Subfunction for the investment. Cardinality: 0..1
Supports (<u>Association</u>)	Investment supports Program.	**Investment** Role: supportingInvestment Role Description: An investment that supports a program. Cardinality: 0..*	Program Role: supportedProgram Role Description: A program supported by an investment Cardinality: 0..1
Manages (<u>Association</u>)	Program manages Investment.	**Program** Role: managingProgram Role Description: Program that manages the investment. Cardinality: 0..1	Investment Role: managedInvestment Role Description: Investment managed by a program. Cardinality: 0..*
Funds (<u>Association</u>)	Investment Funds ITSystem.	**Investment** Role: investment Role Description: The Investment that funds the ITSystem Cardinality: 0..*	ITSystem Role: itSystem Role Description: The ITSystem that is funded by the Investment. Cardinality: 0..*
AlignsPrimaryBRM (<u>Association</u>)	Investment primary alignment to the BRM.	**Investment** Role: primaryInvestment Role Description: A primary investment that falls into the subfunction. Cardinality: 0..*	BRMSubFunction Role: primaryBrmSubFunction Role Description: The BRM Subfunction for the investment. Cardinality: 0..1
AlignsPrimarySRM (<u>Association</u>)	Investment primary alignment SRMComponent.	**Investment** Role: primaryInvestment Role Description: Investment primarily aligned to the SRM Component. Cardinality: 0..*	SRMComponent Role: primarySrmComponent Role Description: The primary SRMComponent alignment for the Investment. Cardinality: 0..1

InvestmentCost

Type: **Class**
Specialization of: **MPGElement**
Abstract
Parent Package: CPIC

Description

A discrete Investment Cost element.

Attributes

Attribute	Type	Description
investmentCostYear	Year	Fiscal Year in which the investment cost applies.
investmentCostAmount	Decimal	Investment cost for referenced fiscal year in $M.

Relationships

Name	Description	Source	Target
IsIncludedIn (Aggregation)	InvestmentCost is included in InvestmentCostSet.	**InvestmentCost** Role: element Role Description: InvestmentCost included in the InvestmentCostSet. Cardinality: 0..*	InvestmentCostSet Role: container Role Description: InvestmentCostSet that includes the InvestmentCost. Cardinality: 0..1

InvestmentCostSet

Type: **Class**
Specialization of: **MPGElement**
Parent Package: CPIC

Description

A collection of Investment Cost instances.

Attributes

Attribute	Type	Description
investmentCostSetYear	Year	The fiscal year for the investment cost set.

Name	Description	Source	Target
RelatesTo (Aggregation)	InvestmentCostSet relates to Investment.	**InvestmentCostSet** Role: investmentCostSet Role Description: IinvestmentCostSet that is related to the Investment. Cardinality: 0..*	Investment Role: investment Role Description: Investment that has the related InvestmentCostSet. Cardinality: 0..1
IsIncludedIn (Aggregation)	InvestmentCost is included in InvestmentCostSet.	**InvestmentCost** Role: element Role Description: InvestmentCost included in the InvestmentCostSet. Cardinality: 0..*	InvestmentCostSet Role: container Role Description: InvestmentCostSet that includes the InvestmentCost. Cardinality: 0..1

OperationsAndMaintenanceInvestmentCost

Type: **Class**
Specialization of: **InvestmentCost**
Parent Package: CPIC

Description

An Investment Cost for the referenced fiscal year related to the operations and maintenance of an asset and/or related means.

PercentageAlignment

Type: **AssociationClass**
Specialization of: n/a
Parent Package: CPIC

Description
The percentage of the Investment aligned to support the Segment.

Attributes

Attribute	Type	Description
percentageInvestment	Decimal	The percentage of the associated investment being applied to the segment.

PlanningInvestmentCost

Type: **Class**
Specialization of: **InvestmentCost**
Parent Package: CPIC

An Investment Cost that is to be incurred as part of the planning of the investment.

7.3.3 Enterprise Architecture

Type: **Package**
Parent Package: MPG

This package contains the set of types related to modeling Enterprise Architecture concepts.

Enterprise Architecture Domains - *(Package diagram)*

See Figure 13

Description

This diagram depicts the Enterprise Architecture package and its sub-packages, with class elements, that serve to provide for architecture descriptions in terms of Business Processes, Business Services, and the Applications and Systems that are used in the enterprise. These package elements along with the Segment Architecture class elements provide structure in support of use of the Federal Segment Architecture Methodology (FSAM).
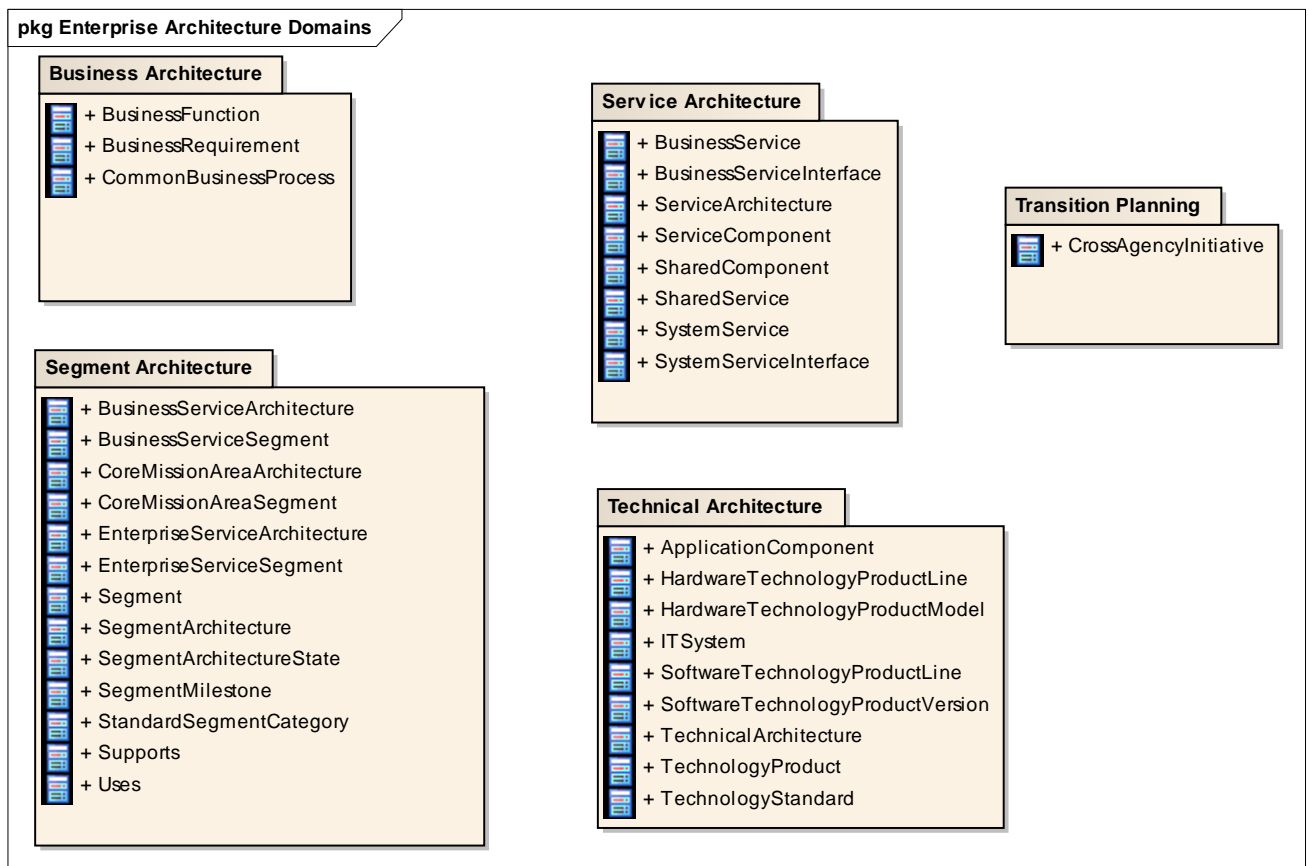
Figure 13 - Enterprise Architecture Domains

Business Architecture

Type: **Package**
Parent Package: Enterprise Architecture

This package contains the set of types related to modeling Business Architecture concepts.

Business Architecture - *(Package diagram)*

See Figure 14

Description

This diagram depicts the classes that support the definition of business processes in the enterprise. Refer to the next diagram that places these class elements in the context of other class elements used to describe the enterprise.
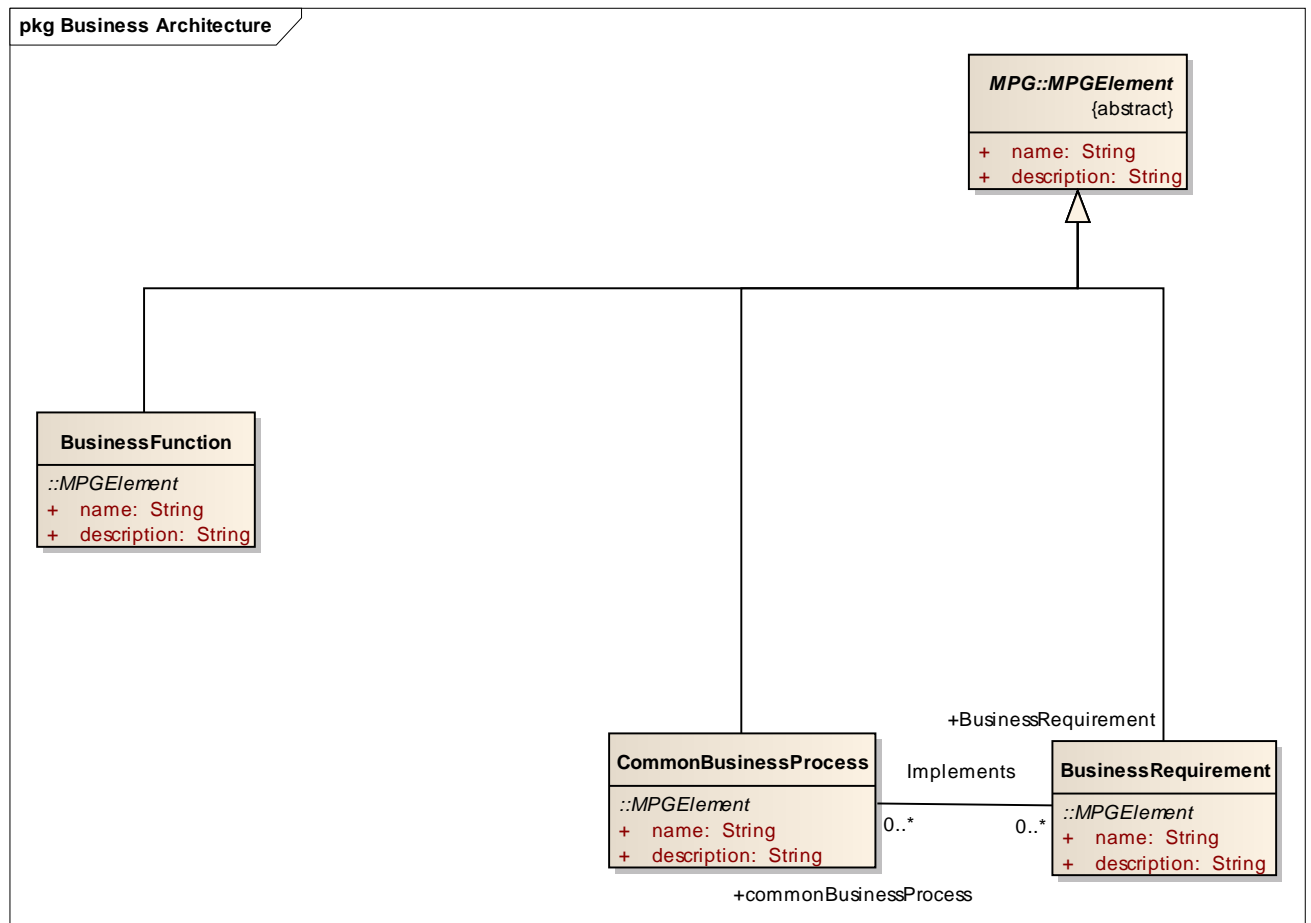
Figure 14 - Business Architecture

Business Architecture Context - *(Logical diagram)*

See Figure 15

Description

This diagram provides the MPG Business Architecture class elements in context with the class elements from the FEA CRM and the MPG packages Segment Architecture and Service Architecture. The enterprise Business Processes (central to the diagram) are mapped to the BRM Sub-functions, the lowest level of the BRM. It is through this relationship that

the Service Components, System Service Interfaces, Business Services and Business Service Interfaces can be consolidated under the BRM Sub-Function for gap analysis. Note that the BusinessProcess class has been adopted from the Business Motivation Metamodel (BMM).

Moving up from Business Process, the Business Function class element provides for documentation of the enterprises business functions separate from the BRM and links up to the overall Mission Area that is being supported. The Core Mission Area Segment relationship to Business Function provides for categorization of the Architecture into a segment approach.

The lower left part of the diagram shows the relationship to two class elements that are legacy from the Federal Transition Framework (FTF). These provide for the cataloging of Common Business Processes that support the BRM Sub-Function and satisfy a Business Requirement.
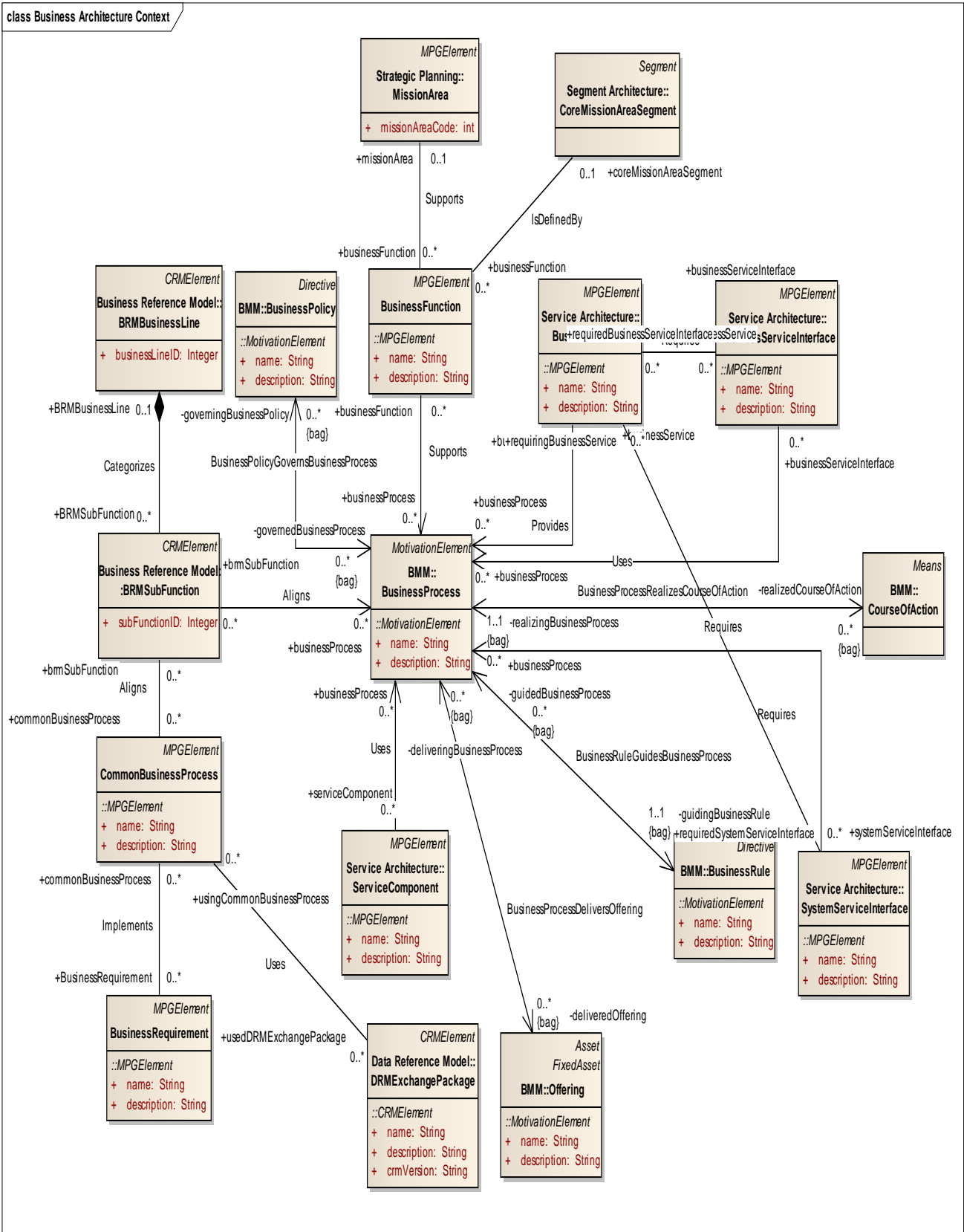
Figure 15 - Business Architecture Context

BusinessFunction

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Business Architecture

Description

A business function is a collection of similar business activities that use common resources such as Purchasing, Receiving, or Quality Assurance. A business function is generally associated with a particular set of competencies and it not time bounded. This is in contrast to business process, which is concerned with a particular result is time bounded.

Relationships

Name	Description	Source	Target
Supports (Association)	Business Process supports Business Function	**BusinessProcess** Role: businessProcess Role Description: The Business Process supporting the Business Function. Cardinality: 0..*	BusinessFunction Role: businessFunction Role Description: The Business Function being supported by the Business Process. Cardinality: 0..*
IsDefinedBy (Association)	CoreMissionAreaSegment is defined by BusinessFunction.	**CoreMissionAreaSegment** Role: coreMissionAreaSegment Role Description: The CoreMissionAreaSegment that is defined by BusinessFunction. Cardinality: 0..1	BusinessFunction Role: businessFunction Role Description: The BusinessFunction that the CoreMissionAreaSegment is defined by. Cardinality: 0..*
Supports (Association)	BusinessFunction supports MissionArea.	**BusinessFunction** Role: businessFunction Role Description: A business function that supports a mission area. Cardinality: 0..*	MissionArea Role: missionArea Role Description: The mission area of a supporting business function. Cardinality: 0..1

BusinessRequirement

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Business Architecture

Description

Specific agency requirement for compliance with this initiative that derives from a Mandate (see Mandate). A Requirement describes a specific, measurable expectation for agency conformance. (From FTF v.2)

Name	Description	Source	Target
Produces (Association)	BusinessRequirement produces Outcome.	**BusinessRequirement** Role: BusinessRequirement Role Description: The Business Requirement that when satisfied produces the Outcome. Cardinality: 0..*	Outcome Role: Outcome Role Description: The Outcome desired to be produced through satisfaction of the BusinessRequirement. Cardinality: 0..*
Establishes (Association)	CrossAgencyInitiative Establishes BusinessRequirement.	**CrossAgencyInitiative** Role: crossAgencyInitiative Role Description: The CrossAgencyInitiative that establishes the BusinessRequirement. Cardinality: 0..*	BusinessRequirement Role: businessRequirement Role Description: The BusinessRequirement that the CrossAgencyInitative establishes. Cardinality: 0..*
Implements (Association)	CommonBusinessProcess Implements Business Requirement	**CommonBusinessProcess** Role: commonBusinessProcess Role Description: The CommonBusiness Process that implements the Business Requirement. Cardinality: 0..*	BusinessRequirement Role: BusinessRequirement Role Description: The BusinessRequirement implmented by the CommonBusinessProcess. Cardinality: 0..*

CommonBusinessProcess

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Business Architecture

Description

A business process is an activity performed by agencies that yields a result of measurable value to one or more stakeholders. Each BRM Business Subfunction can be further decomposed into multiple business processes. (From FTF)

Name	Description	Source	Target
Automates (<u>Association</u>)	SharedService Automates CommonBusinessProcess.	**SharedService** Role: sharedService Role Description: The SharedService that automates the CommonBusinessProcess. Cardinality: 0..*	CommonBusinessProcess Role: commonBusinessProcess Role Description: The CommonBusinessProcess that the SharedService automates. Cardinality: 0..*
Aligns (<u>Association</u>)	BRMSubFunction Aligns CommonBusinessProcess.	**BRMSubFunction** Role: brmSubFunction Role Description: The BRMSubFunction category that aligns the CommonBusinessProcess. Cardinality: 0..*	CommonBusinessProcess Role: commonBusinessProcess Role Description: The CommonBusinessProcess that is aligned by the BRMSubFunction category. Cardinality: 0..*
Implements (<u>Association</u>)	CommonBusinessProcess Implements Business Requirement	**CommonBusinessProcess** Role: commonBusinessProcess Role Description: The CommonBusiness Process that implements the Business Requirement. Cardinality: 0..*	BusinessRequirement Role: BusinessRequirement Role Description: The BusinessRequirement implmented by the CommonBusinessProcess. Cardinality: 0..*
Uses (<u>Association</u>)	CommonBusinessProcess uses DRMExchangePackage.	**CommonBusinessProcess** Role: usingCommonBusinessProcess Role Description: The CommonBusinessProcess that uses the DRMExchangePackage. Cardinality: 0..*	DRMExchangePackage Role: usedDRMExchangePackage Role Description: The DRMExchangePackage used by the CommonBusinessProcess. Cardinality: 0..*

Segment Architecture

Type: **Package**
Parent Package: Enterprise Architecture

This package contains the set of types related to modeling Segment Architecture concepts.

Segment Architecture - *(Package diagram)*

See Figure 16

Description

This diagram depicts the fundamental entities related to the Segment Architecture concept. Subsequent diagrams detail the three types of Segments: Core Mission, Business, and Enterprise Service. These segment types are discussed in detail in the OMB's document "FEA_Practice_Guidance_Nov_2007.pdf" available at http://www.whitehouse.gov/omb/e-gov/fea/.
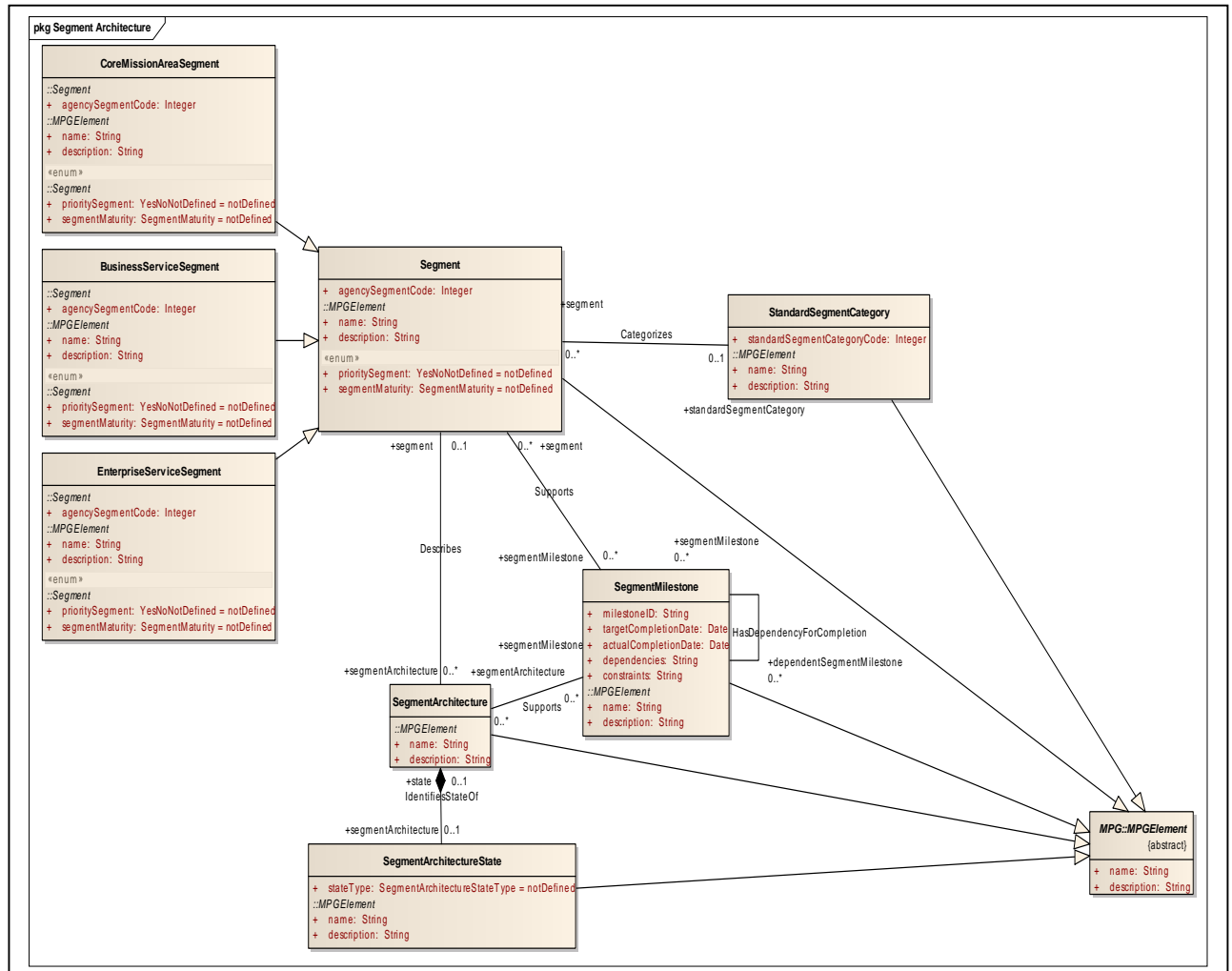
Figure 16 – Segment Architecture

Core Mission Area Architecture - *(Logical diagram)*

See Figure 17

Description

This diagram shows the basic relationships of the Segment of the type "Core Mission Area" and that this type of Segment can have a "Core Mission Area Segment Architecture". Refer to the "Segment Architecture Context " diagram later in this specification to see this structure in context with the other two types of Segments.

Note 1: Refer to the "Business Architecture Context" diagram to see the unique relationship of the "Core Mission Area Segment" class element to the Business Function.

Note 2: See that the only the "Service Architecture" class element is shown as an association to the Segment Architecture parent class element. Compare this to the Enterprise Service Architecture diagram where both the "Technical Architecture" and "Service Architecture" class elements are shown.

Further discussion of why this was done will be presented in subsequent diagrams.
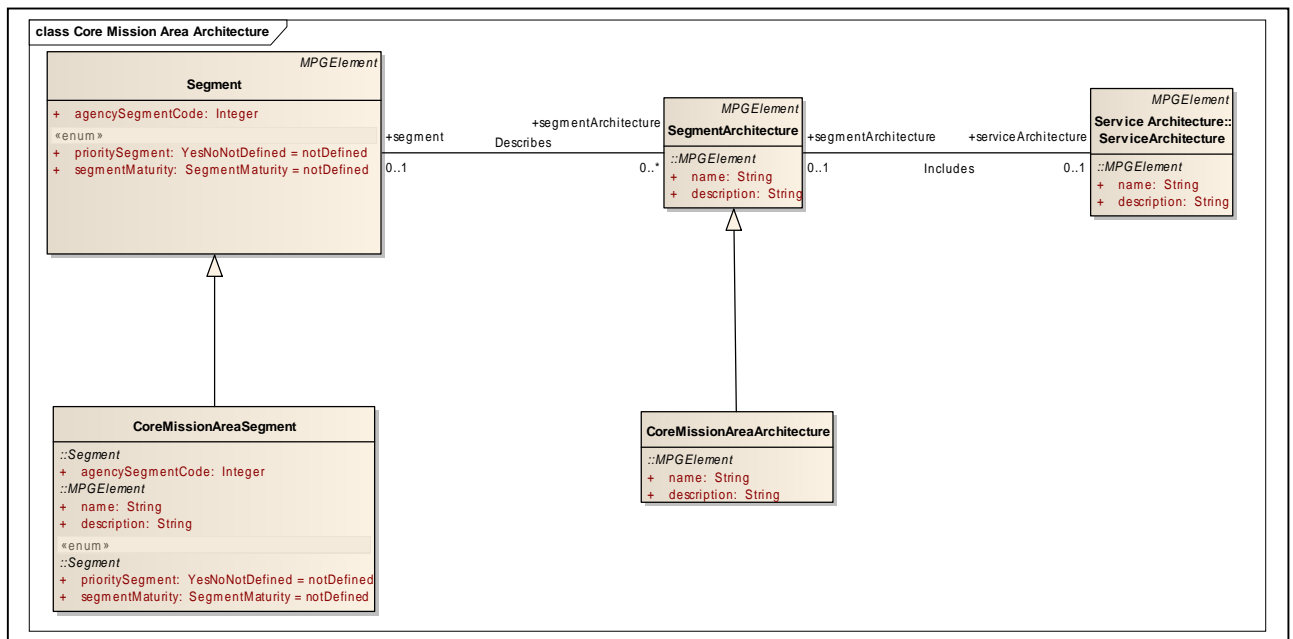
Figure 17 - Core Mission Area Architecture

Business Service Architecture - *(Logical diagram)*

See Figure 18

Description

This diagram shows the basic relationships of the Segment of the type "Business Service" and that this type of Segment can have a "Business Service Segment Architecture". Refer to the "Segment Architecture Context" diagram, later in this specification, to see this structure in context with the other two types of Segments.

Note : See that the only the "Service Architecture" class element is shown as an association to the Segment Architecture parent class element. Compare this to the next diagram, "Enterprise Service Architecture", where both the "Technical Architecture" and "Service Architecture" class elements are shown.

Further discussion of why this was done will be presented in subsequent diagrams.
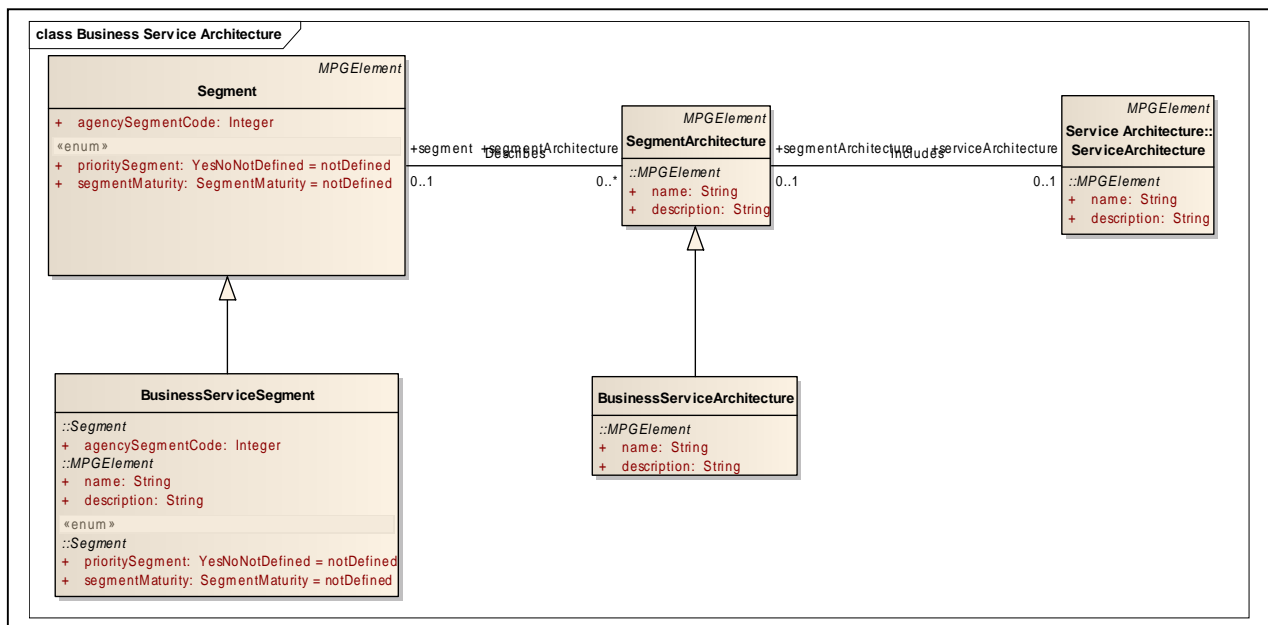
Figure 18 - Business Service Architecture

Enterprise Service Architecture - *(Logical diagram)*

See Figure 19

Description

This diagram shows the basic structure of the Segment of the type "Enterprise Service" and that this type of Segment can have a Enterprise Service Segment Architecture. Refer to the "*Segment Architecture Context* " diagram, later in this specification, to see this structure in context with the other two types of Segments.
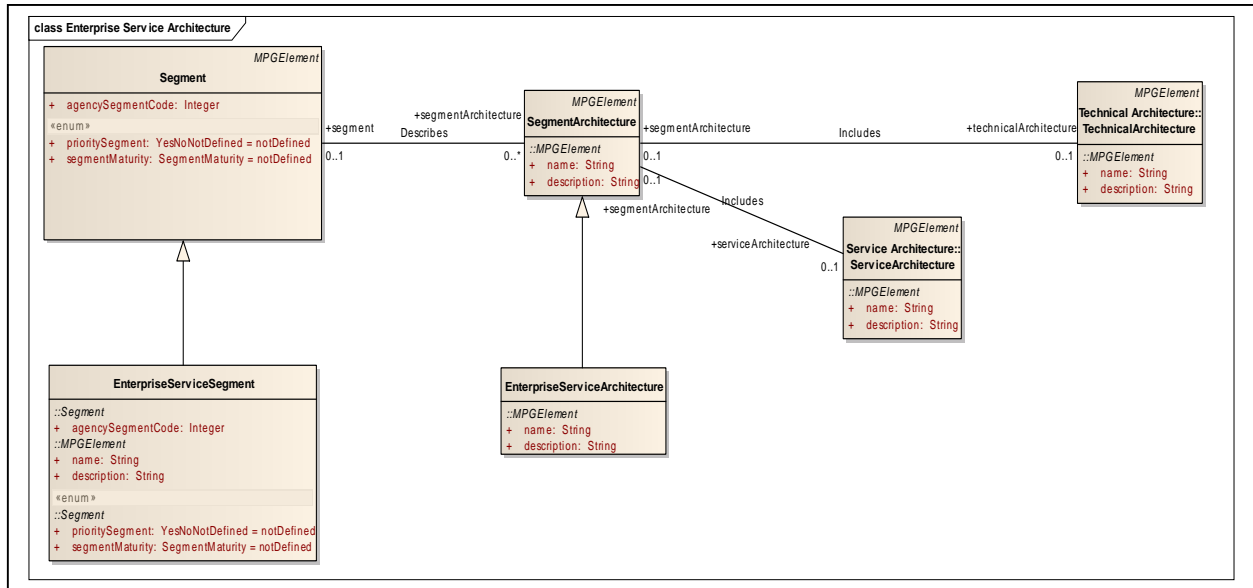
Figure 19 - Enterprise Service Architecture

Segment Architecture Context - *(Logical diagram)*

See Figure 20

Description

This diagram shows the three different types of Segments as derived from the Segment class element and, correspondingly, the three types of Segment Architectures.

The Standard Segment Category class element provides for the categorization of segments as standard as established by the OMB. A placeholder for the representation of a "Standard Segment Reference Architecture" has been established in the case where OMB establishes a standard reference architecture.
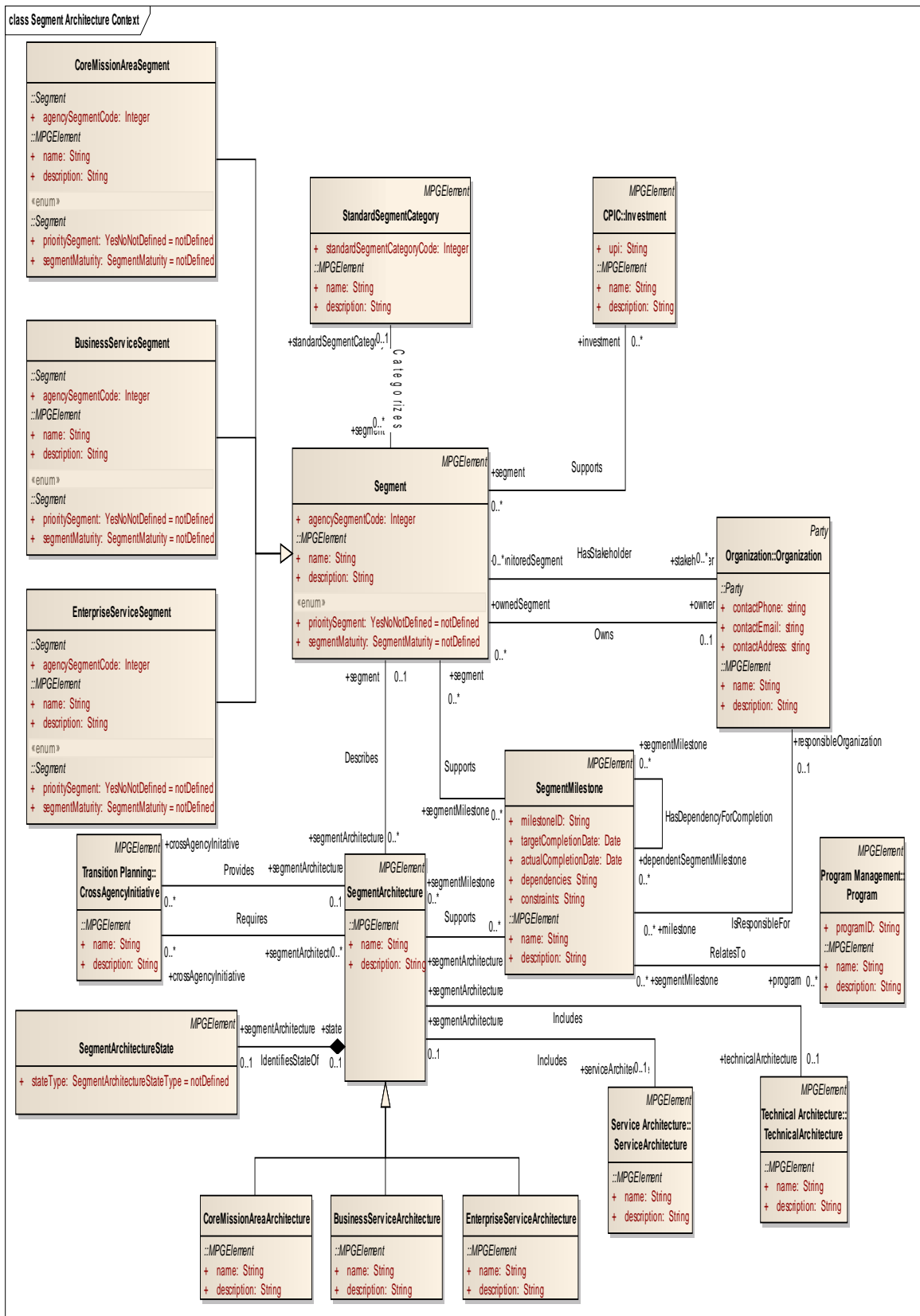
Figure 20 - Segment Architecture Context

BusinessServiceArchitecture

Type: **Class**
Specialization of: **SegmentArchitecture**
Parent Package: Segment Architecture

Description

An architectural perspective based on the representation of the business and enterprise services comprising the Business Service Segment.BusinessServiceSegment

Type: **Class**
Specialization of: **Segment**
Parent Package: Segment Architecture

Description

A Business Service segment includes common or shared business services supporting the core mission areas. Business services are defined by the agency business model, and include the foundational mechanisms and back office services used to achieve the purpose of the agency (e.g., inspections and auditing, program monitoring, human resource management, and financial management). IT investments that serve a common business function, for example - financial management or human resources management, should be included in a Business Service segment regardless of whether they serve multiple business units or are limited to a single business unit.

Relationships

Name	Description	Source	Target
IsDefinedBy (Association)	BusinessServiceSegment IsDefinedBy BusinessService.	**BusinessServiceSegment** Role: businessServiceSegment Role Description: The BusinessServiceSegment that the BusinessService defines. Cardinality: 0..1	BusinessService Role: businessService Role Description: The BusinessService that defines the BusinessServiceSegment. Cardinality: 0..*

CoreMissionAreaArchitecture

Type: **Class**
Specialization of: **SegmentArchitecture**
Parent Package: Segment Architecture

Description

An architectural perspective based on the representation of the business and enterprise services comprising the Core Mission Area Segment.

CoreMissionAreaSegment
Type: **Class**
Specialization of: **Segment**
Parent Package: Segment Architecture

Description

A Core Mission Area segment represents a unique service area defining the mission or purpose of the agency. Core mission areas are defined by the agency business model (e.g., tactical defense, air transportation, energy supply, pollution prevention and control, and emergency response). Only IT investments for applications that cannot be used outside of a unique mission area should be included in a Core Mission segment.

Name	Description	Source	Target
Addresses (Association)	CoreMissionAreaSegment addresses MissionArea.	**CoreMissionAreaSegment** Role: cmaSegment Role Description: The segment that addresses a mission area. Cardinality: 0..*	MissionArea Role: addressedMissionArea Role Description: The MissionArea addressed by the CoreMissionAreaSegment. Cardinality: 0..1
IsDefinedBy (Association)	CoreMissionAreaSegment is defined by BusinessFunction.	**CoreMissionAreaSegment** Role: coreMissionAreaSegment Role Description: The CoreMissionAreaSegment that is defined by BusinessFunction. Cardinality: 0..1	BusinessFunction Role: businessFunction Role Description: The BusinessFunction that the CoreMissionAreaSegment is defined by. Cardinality: 0..*

EnterpriseServiceArchitecture

Type: **Class**
Specialization of: **SegmentArchitecture**
Parent Package: Segment Architecture

Description

Enterprise Service Architecture is a type of Segment Architecture addressing the Enterprise Services. Enterprise Services are common or shared IT services that support core mission areas and business services. Enterprise services are defined by the agency service component model and include the applications and service components used to achieve the purpose of the agency (e.g., knowledge management, records management, mapping/GIS, business intelligence, and reporting).

EnterpriseServiceSegment

Type: **Class**
Specialization of: **Segment**
Parent Package: Segment Architecture

Description

An Enterprise segment includes common policies, frameworks, requirements, or standards developed to be applied enterprise-wide. Few actual IT investments should be mapped to an enterprise segment. Most investments that serve an enterprise-wide purpose should be mapped to a business service segment.

Name	Description	Source	Target
IsDefinedBy (Association)	EnterpriseServiceSegment is defined by SystemService	**EnterpriseServiceSegment** Role: Role Description: EnterpriseServiceSegment the SystemService defines. Cardinality: 0..1	SystemService Role: Role Description: The SystemService defining the EnterpriseServiceSegment. Cardinality: 0..*

Segment

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Segment Architecture

Description

Individual elements of the enterprise describing core mission areas and common or shared business services and enterprise services. Segments are defined by the enterprise architecture. (From OMB FEA Practice Guidance, November 2007)

Attributes

Attribute	Type	Description
agencySegmentCode	Integer	The numeric identifier for the agency.
prioritySegment	YesNoNotDefined	Whether the segment is a priority segment.
segmentMaturity	SegmentMaturity	The maturity of the segment: notional, planned, in progress, or complete.

Relationships

Name	Description	Source	Target
Supports (AssociationClass)	Investment supports Segment.	**Investment** Role: investment Role Description: Investment that supports the Segment. Cardinality: 0..*	Segment Role: segment Role Description: The Segment supported by the Investment. Cardinality: 0..*

HasStakeholder (Association)	Segment has stakeholder Organization.	**Segment** Role: monitoredSegment Role Description: This segment is of interest to the stakeholder. Cardinality: 0..*	Organization Role: stakeholder Role Description: This organization has a stake in the definition of the segment. Cardinality: 0..*
Supports (Association)	SegmentMilestone Supports Segment.	**SegmentMilestone** Role: segmentMilestone Role Description: The SegmentMilestone that supports the Segment. Cardinality: 0..*	Segment Role: segment Role Description: The Segment that the SegmentMilestone supports. Cardinality: 0..*
Describes (Association)	SegmentArchitecture Describes Segment.	**SegmentArchitecture** Role: segmentArchitecture Role Description: A SegmentArchitecture that describes a Segment. Cardinality: 0..*	Segment Role: segment Role Description: The Segment that the SegmentArchitecture describes. Cardinality: 0..1
Owns (Association)	Organization owns Segment.	**Organization** Role: owner Role Description: Organization that owns the segment. Cardinality: 0..1	Segment Role: ownedSegment Role Description: A segment that is owned by the organization that plays the owner role. Cardinality: 0..*
Categorizes (Association)	StandardSegmentCategory Categorizes Segment.	**StandardSegmentCategory** Role: standardSegmentCategory Role Description: The StandardSegmentCategory that categorizes a Segment. Cardinality: 0..1	Segment Role: segment Role Description: The Segment that the StandardSegmentCategory categorizes. Cardinality: 0..*

SegmentArchitecture

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Segment Architecture

Description

A detailed, results-oriented architecture (baseline and target) and a transition strategy for a portion (or segment) of the enterprise. Segment architecture is driven by business management and delivers products that improve the delivery of services to citizens and agency staff. (From OMB FEA Practice Guidance, November 2007)

Relationships

Name	Description	Source	Target
Provides (AssociationClass)	SegmentArchitecture Provides CrossAgencyInitiative.	**SegmentArchitecture** Role: segmentArchitecture Role Description: The SegmentArchitecture that provides a sharable service (or other entity) to a CrossAgencyInitiative. Cardinality: 0..1	CrossAgencyInitiative Role: crossAgencyInitative Role Description: The CrossAgencyInitiative to which the SegmentArchitecture provides a shared service (or other entity). Cardinality: 0..*
IdentifiesStateOf (Aggregation)	SegmentArchitectureState identifies state of SegmentArchitecture.	**SegmentArchitectureState** Role: segmentArchitecture Role Description: SegmentArchitectureState that identifies the state described by the SegmentArchitecture. Cardinality: 0..1	SegmentArchitecture Role: state Role Description: The state of the SegmentArchitecture that the SegmentArchitectureState identifies. Cardinality: 0..1
Supports (Association)	SegmentMilestone supports SegmentArchitecture.	**SegmentMilestone** Role: segmentMilestone Role Description: The SegmentMilestone that supports the SegmentArchitecture. Cardinality: 0..*	SegmentArchitecture Role: segmentArchitecture Role Description: The SegmentArchitecture that the SegmentMilestone supports. Cardinality: 0..*
Requires (AssociationClass)	SegmentArchitecture Requires CrossAgencyInitative.	**SegmentArchitecture** Role: segmentArchitecture Role Description: The SegmentArchitecture that requires some entity provided by a CrossAgencyInitiative. Cardinality: 0..*	CrossAgencyInitiative Role: crossAgencyInitiative Role Description: A CrossAgencyInitiative that provides an entity required by the SegmentArchitecture. Cardinality: 0..*

Includes (Association)	SegmentArchitecture Includes TechnicalArchitecture.	**SegmentArchitecture** Role: segmentArchitecture Role Description: The SegmentArchitecture that includes the TechnicalArchitecture. Cardinality: 0..1	TechnicalArchitecture Role: technicalArchitecture Role Description: The TechnicalArchitecture the SegmentArchitecture includes. Cardinality: 0..1
Includes (Association)	SegmentArchitecture includes ServiceArchitecture.	**SegmentArchitecture** Role: segmentArchitecture Role Description: The SegmentArchitecture that includes a ServiceArchitecture. Cardinality: 0..1	ServiceArchitecture Role: serviceArchitecture Role Description: The ServiceArchitecture the SegmentArchitecture includes. Cardinality: 0..1
Describes (Association)	SegmentArchitecture Describes Segment.	**SegmentArchitecture** Role: segmentArchitecture Role Description: A SegmentArchitecture that describes a Segment. Cardinality: 0..*	Segment Role: segment Role Description: The Segment that the SegmentArchitecture describes. Cardinality: 0..1

SegmentArchitectureState

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Segment Architecture

Description

A designation of the (abstract) point in time at which the associated segment architecture configuration is, or is intended to be, valid (e.g., current state, interim state, target state).

Attributes

Attribute	Type	Description
stateType	SegmentArchitectureStateType	Whether the segment architecture represents the current architecture of the segment, the target architecture for the segment, or an intermediate architecture for the segment (between current and target state).

Name	Description	Source	Target
IdentifiesStateOf (<u>Aggregation</u>)	SegmentArchitectureState identifies state of SegmentArchitecture.	**SegmentArchitectureState** Role: segmentArchitecture Role Description: SegmentArchitectureState that identifies the state described by the SegmentArchitecture. Cardinality: 0..1	SegmentArchitecture Role: state Role Description: The state of the SegmentArchitecture that the SegmentArchitectureState identifies. Cardinality: 0..1

SegmentMilestone

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Segment Architecture

Description

A significant point or event in the development of a Segment.

Attribute	Type	Description
milestoneID	String	Agency-defined identifier for the Milestone.
targetCompletionDate	Date	The target date for completion of the segment milestone.
actualCompletionDate	Date	The actual date of completion for the segment milestone.
dependencies	String	Description of any dependencies for segment milestone completion.
constraints	String	Description of any constraints on segment milestone completion.

Relationships

Name	Description	Source	Target
HasDependencyFor Completion (Association)	SegmentMilestone HasDependencyForCompletion SegmentMilestone.	**SegmentMilestone** Role: dependentSegmentMilestone Role Description: The SegmentMilestone that has the dependency. Cardinality: 0..*	SegmentMilestone Role: segmentMilestone Role Description: The SegmentMilestone that supports the dependency. Cardinality: 0..*
Supports (Association)	SegmentMilestone supports SegmentArchitecture.	**SegmentMilestone** Role: segmentMilestone Role Description: The SegmentMilestone that supports the SegmentArchitecture. Cardinality: 0..*	SegmentArchitecture Role: segmentArchitecture Role Description: The SegmentArchitecture that the SegmentMilestone supports. Cardinality: 0..*
Supports (Association)	SegmentMilestone Supports Segment.	**SegmentMilestone** Role: segmentMilestone Role Description: The SegmentMilestone that supports the Segment. Cardinality: 0..*	Segment Role: segment Role Description: The Segment that the SegmentMilestone supports. Cardinality: 0..*
IsResponsibleFor (Association)	Orgnization is responsible for SegmentMilestone.	**Organization** Role: responsibleOrganization Role Description: The organization responsible for meeting the milestone. Cardinality: 0..1	SegmentMilestone Role: milestone Role Description: A milestone in the lifecycle of the segment. Cardinality: 0..*
RelatesTo (Association)	Program relates to SegmentMilestone.	**Program** Role: program Role Description: The Program related to the SegmentMilestone. Cardinality: 0..*	SegmentMilestone Role: segmentMilestone Role Description: The SegmentMilestone to which the Program relates. Cardinality: 0..*

StandardSegmentCategory

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Segment Architecture

Description

Defines a category to which a segment is aligned, e.g., Health: Access to Care. A set of standard segments create a taxonomy of such categories.

Each standard segment is assigned a three-digit code in addition to its name.

Attributes

Attribute	Type	Description
standardSegmentCategoryCode	Integer	Numeric identifier for the standard segment category.

Relationships

Name	Description	Source	Target
Categorizes (Association)	StandardSegmentCategory Categorizes Segment.	**StandardSegmentCategory** Role: standardSegmentCategory Role Description: The StandardSegmentCategory that categorizes a Segment. Cardinality: 0..1	Segment Role: segment Role Description: The Segment that the StandardSegmentCategory categorizes. Cardinality: 0..*

Supports

Type: **AssociationClass**
Specialization of: n/a
Parent Package: Segment Architecture

Attributes

Attribute	Type	Description
segmentSupportsFTFInitaitve	YesNoNotDefined	Whether the segment supports a Federal Transition Framework cross-agency initiative.

Uses

Type: **AssociationClass**
Specialization of: n/a
Parent Package: Segment Architecture

Attribute	Type	Description
segmentUsesFTFInitiative	YesNoNotDefined	Whether the segment uses (or reuses) some capability resulting from a Federal Transition Framework cross-agency initiative.
ifNotExplanation	String	If no Federal Transition Framework cross-agency initiative is used (or reused), an explanation of the reasons not.

Service Architecture

Type: **Package**
Parent Package: Enterprise Architecture

This package contains the set of types related to modeling Service Architecture concepts.

Service Architecture - *(Package diagram)*

See Figure 21

Description

This diagram shows the class elements from the MPG that are relevant to the Service Domain. Refer to the context diagrams that follow to see how these Service class elements are related to the architecture. Of special note is the distinction that is made between the "Business Service" and the "System Service.
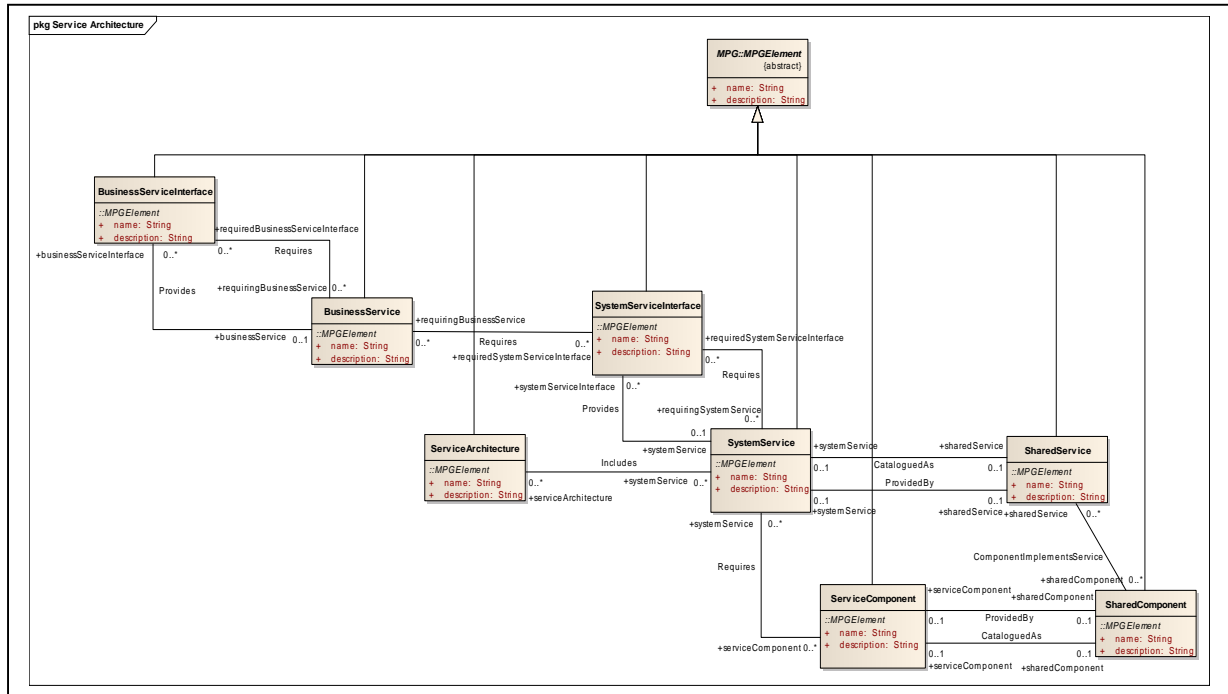
Figure 21 - Service Architecture

Service Architecture Context - *(Logical diagram)*

See Figure 22

Description

This diagram shows how Services are handled within the MPG. Note the distinction is made between what the "Business Service Segment" and the "Enterprise Service Segment" relate to.

A "Business Service Segment" is made up of a collection of "Business Services". An "Enterprise Service Segment" is made up of a collection of "System Services."

A "Business Process" provides a "Business Service" via "Service Component". "Service Components" are made available from "System Services" that define of the "Service Architecture."

In the lower left quadrant of the diagram, linkage is made to the Federal Enterprise Architecture Service Reference Model (FEA SRM) via the class elements of "Share Component" and "Shared Service."
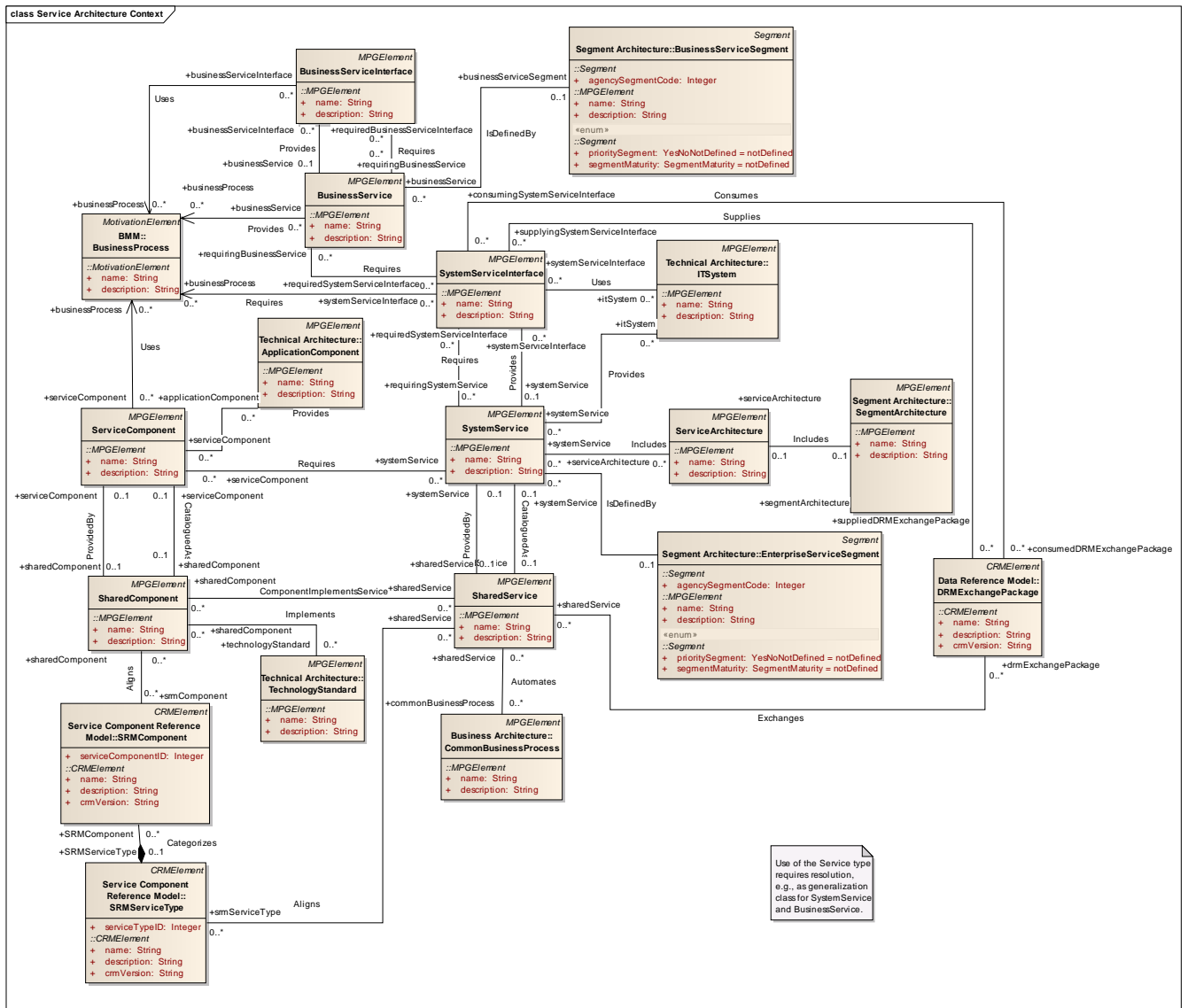
Figure 22 - Service Architecture Context

BusinessService

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Service Architecture

Description

Defined by the agency business model, business services include the foundational mechanisms and back-office services used to achieve the purpose of the agency, e.g., inspections and auditing, direct loans, program monitoring, and financial management.

Relationships

Name	Description	Source	Target
Provides (Association)	BusinessService Provides BusinessServiceInterface.	**BusinessService** Role: businessService Role Description: The BusinessService that provides a BusinessServiceInterface. Cardinality: 0..1	BusinessServiceInterface Role: businessServiceInterface Role Description: The BusinessServiceInterface that the BusinessService provides. Cardinality: 0..*
Provides (Association)	BusinessProcess Provides BusinessService.	**BusinessProcess** Role: businessProcess Role Description: The BusinessProcess that Provides the BusinessService. Cardinality: 0..*	BusinessService Role: businessService Role Description: The BusinessService the BusinessProcess provides. Cardinality: 0..*
IsDefinedBy (Association)	BusinessServiceSegment IsDefinedBy BusinessService.	**BusinessServiceSegment** Role: businessServiceSegment Role Description: The BusinessServiceSegment that the BusinessService defines. Cardinality: 0..1	BusinessService Role: businessService Role Description: The BusinessService that defines the BusinessServiceSegment. Cardinality: 0..*
Requires (Association)	BusinessService requires BusinessServiceInterface.	**BusinessService** Role: requiringBusinessService Role Description: The BusinessService that requires the BusinessServiceInterface. Cardinality: 0..*	BusinessServiceInterface Role: requiredBusinessServiceInterface Role Description: The BusinessServiceINterface required by the BusinessService. Cardinality: 0..*

Requires (Association)	BusinessService requires SystemServiceInterface.	**BusinessService** Role: requiringBusinessService Role Description: The BusinessService that requires the SystemServiceInterface. Cardinality: 0..*	SystemServiceInterface Role: requiredSystemServiceInterface Role Description: The SystemServiceInterface requried by the BusinessService. Cardinality: 0..*

BusinessServiceInterface

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Service Architecture

Description

A description of the point of interaction where the Business Service is provided and the paramaters required for the interface to occur.

The interface to a Business Service may or may not involve automation. The interface is the public view of the Business Service.

See "Business Service"

Compare to "System Service Interface"

Relationships

Name	Description	Source	Target
Provides (Association)	BusinessService Provides BusinessServiceInterface.	**BusinessService** Role: businessService Role Description: The BusinessService that provides a BusinessServiceInterface. Cardinality: 0..1	BusinessServiceInterface Role: businessServiceInterface Role Description: The BusinessServiceInterface that the BusinessService provides. Cardinality: 0..*
Uses (Association)	BusinessProcess Uses BusinessServiceInterface.	**BusinessProcess** Role: businessProcess Role Description: The BusinessProcess that uses the BusinessServiceInterface. Cardinality: 0..*	BusinessServiceInterface Role: businessServiceInterface Role Description: The BusinessServiceInterface that is used by the BusinessProcess. Cardinality: 0..*

Requires (Association)	BusinessService requires BusinessServiceInterface.	**BusinessService** Role: requiringBusinessService Role Description: The BusinessService that requires the BusinessServiceInterface. Cardinality: 0..*	BusinessServiceInterface Role: requiredBusinessServiceInterface Role Description: The BusinessServiceINterface required by the BusinessService. Cardinality: 0..*

ServiceArchitecture

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Service Architecture

Description

An architectural perspective based on the representation of the services comprising the architecture. Services may include those provided by automated, as well as human means.

Relationships

Name	Description	Source	Target
Includes (Association)	SegmentArchitecture includes ServiceArchitecture.	**SegmentArchitecture** Role: segmentArchitecture Role Description: The SegmentArchitecture that includes a ServiceArchitecture. Cardinality: 0..1	ServiceArchitecture Role: serviceArchitecture Role Description: The ServiceArchitecture the SegmentArchitecture includes. Cardinality: 0..1
Includes (Association)	ServiceArchitecture Includes SystemService.	**ServiceArchitecture** Role: serviceArchitecture Role Description: The ServiceArchitecture that includes a SystemService. Cardinality: 0..*	SystemService Role: systemService Role Description: A SystemService that the ServiceArchitecture includes. Cardinality: 0..*

ServiceComponent

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Service Architecture

Description

A constituent element (building block) of a service that implements some aspect of the service's functionality, potentially in conjunction with other service elements. Service components can be large or small, may be written by different

programmers using different development environments, and may be platform independent. Such components can be executed on standalone machines, or multiple computing elements connected via LAN, Intranet, or the Internet.

Relationships

Name	Description	Source	Target
CataloguedAs (Association)	ServiceComponent CataloguedAs SharedComponent.	**ServiceComponent** Role: serviceComponent Role Description: The ServiceComponent that is catalogued as the SharedComponent. Cardinality: 0..1	SharedComponent Role: sharedComponent Role Description: The SharedComponent that catalogs the ServiceComponent. Cardinality: 0..1
ProvidedBy (Association)	SharedComponent ProvidedBy ServiceComponent.	**SharedComponent** Role: sharedComponent Role Description: The SharedComponent that the ServiceComponent.provides. Cardinality: 0..1	ServiceComponent Role: serviceComponent Role Description: The ServiceComponent that provides the SharedComponent. Cardinality: 0..1
Uses (Association)	BusinessProcess Uses ServiceComponent.	**BusinessProcess** Role: businessProcess Role Description: The BusinessProcess that uses the ServiceComponent. Cardinality: 0..*	ServiceComponent Role: serviceComponent Role Description: The ServiceComponent that the BusinessProcess uses. Cardinality: 0..*
Provides (Association)	ApplicationComponent Provides ServiceComponent.	**ApplicationComponent** Role: applicationComponent Role Description: The ApplicationComponent that provides the ServiceComponent. Cardinality: 0..*	ServiceComponent Role: serviceComponent Role Description: The ServiceComponent the ApplicationComponent provides. Cardinality: 0..*
Requires (Association)	SystemService Requires ServiceComponent.	**SystemService** Role: systemService Role Description: The SystemService that requires the ServiceComponent. Cardinality: 0..*	ServiceComponent Role: serviceComponent Role Description: The ServiceComponent that the SystemService requires. Cardinality: 0..*

SharedComponent
Type: **Class**
Specialization of: **MPGElement**
Parent Package: Service Architecture

Description

A representation of a service component that is used to identify and catalog the service component as one being made available for reuse.

Relationships

Name	Description	Source	Target
CataloguedAs (Association)	ServiceComponent CataloguedAs SharedComponent.	**ServiceComponent** Role: serviceComponent Role Description: The ServiceComponent that is catalogued as the SharedComponent. Cardinality: 0..1	SharedComponent Role: sharedComponent Role Description: The SharedComponent that catalogs the ServiceComponent. Cardinality: 0..1
ComponentImplementsService (Association)	SharedComponent ComponentImplementsService SharedService.	**SharedComponent** Role: sharedComponent Role Description: The SharedComponent that implements the SharedService. Cardinality: 0..*	SharedService Role: sharedService Role Description: The SharedService that the SharedComponent implements. Cardinality: 0..*
ProvidedBy (Association)	SharedComponent ProvidedBy ServiceComponent.	**SharedComponent** Role: sharedComponent Role Description: The SharedComponent that the ServiceComponent.provides. Cardinality: 0..1	ServiceComponent Role: serviceComponent Role Description: The ServiceComponent that provides the SharedComponent. Cardinality: 0..1
Implements (Association)	SharedComponent Implements Technology Standard.	**SharedComponent** Role: sharedComponent Role Description: The SharedComponent that implements the TechnologyStandard. Cardinality: 0..*	TechnologyStandard Role: technologyStandard Role Description: The technologyStandard that the SharedComponent implements. Cardinality: 0..*

Aligns (<u>Association</u>)	SRMComponent Aligns SharedComponent.	**SRMComponent** Role: srmComponent Role Description: The SRMComponent that aligns a SharedComponent. Cardinality: 0..*	SharedComponent Role: sharedComponent Role Description: The SharedComponent an SRMComponent aligns. Cardinality: 0..*

SharedService

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Service Architecture

Description

A representation of a service that is used to identify and catalog the service as one being made available for reuse.

Relationships

Name	Description	Source	Target
ComponentImplementsSer vice (<u>Association</u>)	SharedComponent ComponentImplementsService SharedService.	**SharedComponent** Role: sharedComponent Role Description: The SharedComponent that implements the SharedService. Cardinality: 0..*	SharedService Role: sharedService Role Description: The SharedService that the SharedComponent implements. Cardinality: 0..*
CataloguedAs (<u>Association</u>)	SystemService CataloguedAs SharedService.	**SystemService** Role: systemService Role Description: The SystemService that is catalogued as a SharedService. Cardinality: 0..1	SharedService Role: sharedService Role Description: The SharedService that catalogs the SystemService. Cardinality: 0..1
ProvidedBy (<u>Association</u>)	SharedService ProvidedBy SystemService.	**SharedService** Role: sharedService Role Description: The SharedService that the SystemService provides. Cardinality: 0..1	SystemService Role: systemService Role Description: The SystemService that provides the SharedService. Cardinality: 0..1

Automates (Association)	SharedService Automates CommonBusinessProcess.	**SharedService** Role: sharedService Role Description: The SharedService that automates the CommonBusinessProcess. Cardinality: 0..*	CommonBusinessProcess Role: commonBusinessProcess Role Description: The CommonBusinessProcess that the SharedService automates. Cardinality: 0..*
Aligns (Association)	SRMServiceType Aligns SharedService.	**SRMServiceType** Role: srmServiceType Role Description: The SRMServiceType that aligns a SharedService. Cardinality: 0..*	SharedService Role: sharedService Role Description: The SharedService that the SRMServiceType aligns. Cardinality: 0..*
Exchanges (Association)	SharedService Exchanges DRMExchangePackage.	**SharedService** Role: sharedService Role Description: The SharedService that exchanges the DRMExchangePackage. Cardinality: 0..*	DRMExchangePackage Role: drmExchangePackage Role Description: The DRMExchangePackage that the SharedService exchanges. Cardinality: 0..*

SystemService

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Service Architecture

Description

A System Service is an entirely automated self contained construct that is available for re-use via a System Service Interface. The description conveys what is accomplished when the System Service is invoked and the conditions for using the service.

Relationships

Name	Description	Source	Target
Provides (Association)	SystemService Provides SystemServiceInterface.	**SystemService** Role: systemService Role Description: The SystemService that provides the SystemServiceInterface. Cardinality: 0..1	SystemServiceInterface Role: systemServiceInterface Role Description: The SystemServiceInterface that the SystemService provides. Cardinality: 0..*
Provides (Association)	ITSystem Provides SystemService.	**ITSystem** Role: itSystem Role Description: The ITSystem that provides a SystemService. Cardinality: 0..*	SystemService Role: systemService Role Description: The SystemService the ITSystem provides. Cardinality: 0..*
CataloguedAs (Association)	SystemService CataloguedAs SharedService.	**SystemService** Role: systemService Role Description: The SystemService that is catalogued as a SharedService. Cardinality: 0..1	SharedService Role: sharedService Role Description: The SharedService that catalogs the SystemService. Cardinality: 0..1
ProvidedBy (Association)	SharedService ProvidedBy SystemService.	**SharedService** Role: sharedService Role Description: The SharedService that the SystemService provides. Cardinality: 0..1	SystemService Role: systemService Role Description: The SystemService that provides the SharedService. Cardinality: 0..1
IsDefinedBy (Association)	EnterpriseServiceSegment is defined by SystemService	**EnterpriseServiceSegment** Role: Role Description: EnterpriseServiceSegment the SystemService defines. Cardinality: 0..1	SystemService Role: Role Description: The SystemService defining the EnterpriseServiceSegment. Cardinality: 0..*

Requires (Association)	SystemService requires SystemServiceInterface.	**SystemService** Role: requiringSystemService Role Description: The SystemService that requires the SystemServiceInterface. Cardinality: 0..*	SystemServiceInterface Role: requiredSystemServiceInterf ace Role Description: The SystemServiceInterface required by the SystemService. Cardinality: 0..*
Includes (Association)	ServiceArchitecture Includes SystemService.	**ServiceArchitecture** Role: serviceArchitecture Role Description: The ServiceArchitecture that includes a SystemService. Cardinality: 0..*	SystemService Role: systemService Role Description: A SystemService that the ServiceArchitecture includes. Cardinality: 0..*
Requires (Association)	SystemService Requires ServiceComponent.	**SystemService** Role: systemService Role Description: The SystemService that requires the ServiceComponent. Cardinality: 0..*	ServiceComponent Role: serviceComponent Role Description: The ServiceComponent that the SystemService requires. Cardinality: 0..*

SystemServiceInterface

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Service Architecture

Description

1) Information necessary to interact with the service in such terms as the service inputs, outputs, and associated semantics. The service description also conveys what is accomplished when the service is invoked and the conditions for using the service.

2) A description of the point of interaction where the System Service is provided and the paramaters required for the interface to occur.

The interface to a System Service is entirely automated. The interface is the public view of the System Service.

See "System Service"

Compare to "Business Service Interface"

Name	Description	Source	Target
Provides (Association)	SystemService Provides SystemServiceInterface.	**SystemService** Role: systemService Role Description: The SystemService that provides the SystemServiceInterface. Cardinality: 0..1	SystemServiceInterface Role: systemServiceInterface Role Description: The SystemServiceInterface that the SystemService provides. Cardinality: 0..*
Consumes (Association)	SystemServiceInterface Consumes DRMExchangePackage.	**SystemServiceInterface** Role: consumingSystemServiceInterface Role Description: The SystemServiceInterface that consumes the DRMExchangePackage. Cardinality: 0..*	DRMExchangePackage Role: consumedDRMExchangePackage Role Description: The DRMExchangePackage that the SystemServiceInterface consumes. Cardinality: 0..*
Supplies (Association)	SystemServiceInterface Supplies DRMExchangePackage.	**SystemServiceInterface** Role: supplyingSystemServiceInterface Role Description: The SystemServiceInterface that supplies the DRMExchangePackage. Cardinality: 0..*	DRMExchangePackage Role: suppliedDRMExchangePackage Role Description: The DRMExchangePackage that the SystemServiceInterface supplies. Cardinality: 0..*
Uses (Association)	ITSystem Uses SystemServiceInterface.	**ITSystem** Role: itSystem Role Description: The ITsystem that uses the SystemServiceInterface. Cardinality: 0..*	SystemServiceInterface Role: systemServiceInterface Role Description: The SystemServiceInterface that the ITSystem uses. Cardinality: 0..*

Requires (Association)	BusinessProcess Uses SystemServiceInterface.	**BusinessProcess** Role: businessProcess Role Description: The BusinessProcess that requires the SystemServiceInterface. Cardinality: 0..*	SystemServiceInterface Role: systemServiceInterface Role Description: The SystemServiceInterface that the Business Process requires. Cardinality: 0..*
Requires (Association)	SystemService requires SystemServiceInterface.	**SystemService** Role: requiringSystemService Role Description: The SystemService that requires the SystemServiceInterface. Cardinality: 0..*	SystemServiceInterface Role: requiredSystemServiceInterface Role Description: The SystemServiceInterface required by the SystemService. Cardinality: 0..*
Requires (Association)	BusinessService requires SystemServiceInterface.	**BusinessService** Role: requiringBusinessService Role Description: The BusinessService that requires the SystemServiceInterface. Cardinality: 0..*	SystemServiceInterface Role: requiredSystemServiceInterface Role Description: The SystemServiceInterface requried by the BusinessService. Cardinality: 0..*

Technical Architecture

Type: **Package**
Parent Package: Enterprise Architecture

This package contains the set of types related to modeling Technical Architecture concepts.

Technical Architecture - *(Package diagram)*

See Figure 23

Description

This diagram shows the basic derived MPG class elements that are used to capture the "Technical Architecture."

"Technology Products" are broken down into "Hardware" and "Software Product Lines" that can then be identified down to the "Model" and "Version" levels respectively. These can then be used to implement a "Technology Standard."

At the System and Application level, "Technical Architecture" is described the IT Systems it is made up which is an implementation of "Application Components."

The next figure places these constructs in context with the other domains of the MPG.
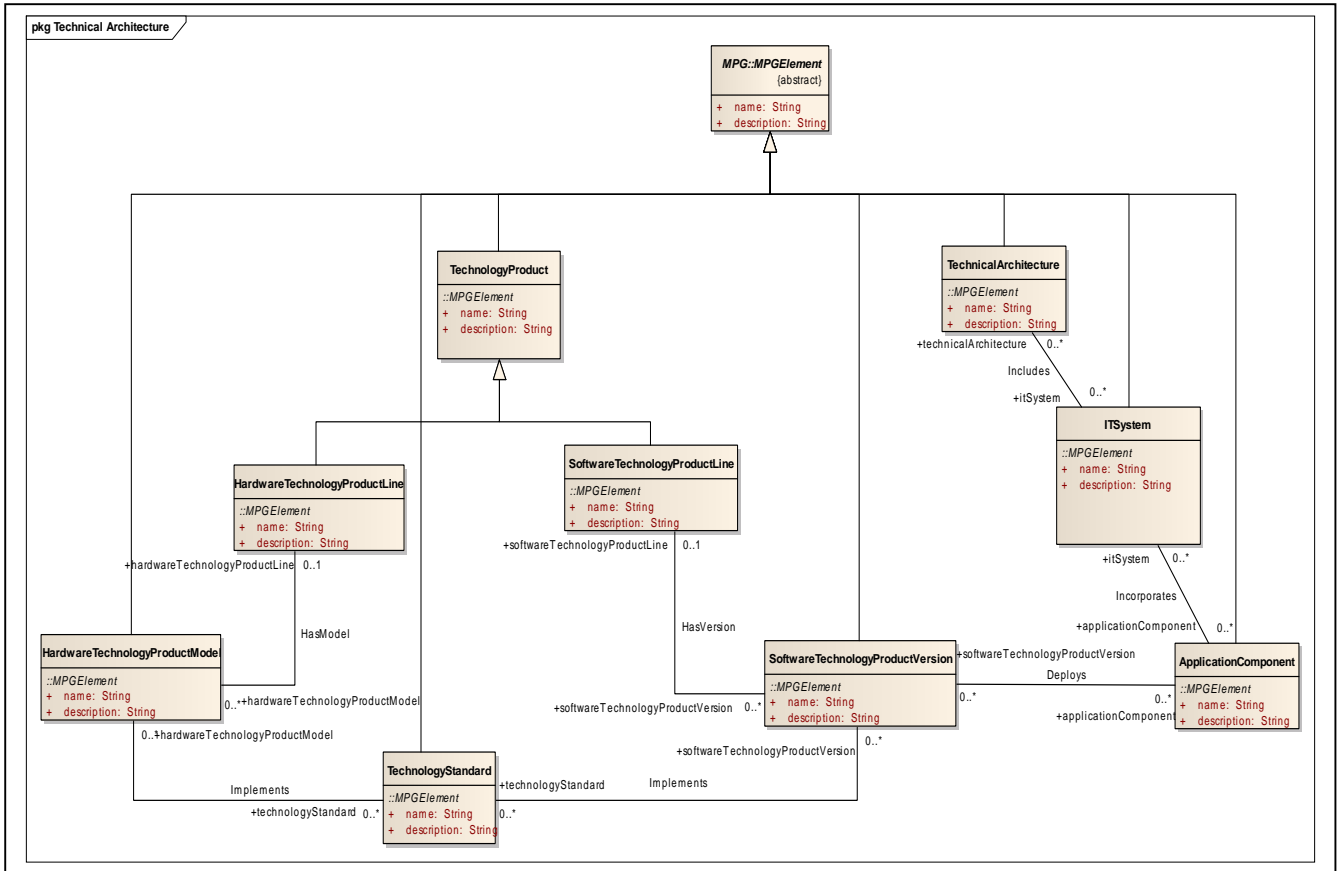
Figure 23 - Technical Architecture

<u>Technical Architecture Context</u> - *(Logical diagram)*

See Figure 24

<u>Description</u>

This diagram shows the use of the "Technical Architecture" constructs in terms of the Investments and the IT Systems that are funded.

The relationship of Technology to the Investment is afforded two levels of granularity. At the higher level of model granularity, the Investment is shown with mappings to the FEA CRM Technical Reference Model (TRM) and the Service Reference Model (SRM) at the "TRM Service Standard" and the "SRM Component" and SRM.   Both of these levels are provided by the OMB in its documentation of the Consolidated Reference Model (CRM).

A lower level of granularity affords this same mapping "up" to SRM and TRM via the Hardware and Software Products and the IT Systems that are to be implemented by the Investment.

With these two levels of granularity, the MPG provides for a high-level and low-level approach to the establishing the information that is required for cross Investment analysis.

Figure 24 - Technical Architecture Context

ApplicationComponent

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Technical Architecture

Description

A package or module of an application that is self contained.

Relationships

Name	Description	Source	Target
Incorporates (Association)	ITSystem Incorporates ApplicationComponent.	**ITSystem** Role: itSystem Role Description: An ITSystem that incorporates the ApplicationComponent. Cardinality: 0..*	ApplicationComponent Role: applicationComponent Role Description: An ApplicationComponent that the ITSystem incorporates. Cardinality: 0..*
Deploys (Association)	ApplicationComponent Deploys SoftwareTechnologyProductVersion.	**ApplicationComponent** Role: applicationComponent Role Description: An ApplicationComponent that deployes the SoftwareTechnologyProductVersion. Cardinality: 0..*	SoftwareTechnologyProduct Version Role: softwareTechnologyProduct Version Role Description: A SoftwareTechnologyProduct Version that the ApplicationComponent deploys. Cardinality: 0..*
Provides (Association)	ApplicationComponent Provides ServiceComponent.	**ApplicationComponent** Role: applicationComponent Role Description: The ApplicationComponent that provides the ServiceComponent. Cardinality: 0..*	ServiceComponent Role: serviceComponent Role Description: The ServiceComponent the ApplicationComponent provides. Cardinality: 0..*

HardwareTechnologyProductLine

Type: **Class**
Specialization of: **TechnologyProduct**
Parent Package: Technical Architecture

Description

A group of hardware products that are intended to support the same market and are closely related in terms of physical and manufacturing characteristics.

Name	Description	Source	Target
HasModel (Association)	HardwareTechnologyProductLine HasModel HardwareTechnologyProductModel.	**HardwareTechnology ProductLine** Role: hardwareTechnologyProductLine Role Description: The HardwareTechnologyProductLine that has the HardwareTechnologyProductModel. Cardinality: 0..1	HardwareTechnologyProduct Model Role: hardwareTechnologyProduct Model Role Description: A HardwareTechnologyProduct Model that the HardwareTechnologyProduct Line has. Cardinality: 0..*

HardwareTechnologyProductModel
Type: **Class**

Specialization of: **MPGElement**
Parent Package: Technical Architecture

Description

A specific configuration within a Hardware Technology Product Line and offered for sale.

Relationships

Name	Description	Source	Target
Aligns (Association)	TRMServiceStandard Aligns HardwareTechnologyProductModel.	**TRMServiceStandard** Role: trmServiceStandard Role Description: A TRMServiceStandard that aligns a HardwareTechnologyProductModel. Cardinality: 0..*	HardwareTechnologyProduct Model Role: hardwareTechnologyProduct Model Role Description: A HardwareTechnologyProduct Model that a TRMServiceStandard aligns. Cardinality: 0..*
Implements (Association)	HardwareTechnologyProductModel Implements TechnologyStandard.	**HardwareTechnologyProduct Model** Role: hardwareTechnologyProductModel Role Description: A HardwareTechnologyProductModel that implements a TechnologyStandard. Cardinality: 0..*	TechnologyStandard Role: technologyStandard Role Description: A TechnologyStandard that a HardwareTechnologyProduct Model implements. Cardinality: 0..*

		HardwareTechnologyProductLine	HardwareTechnologyProduct
HasModel (Association)	HardwareTechnologyProductLine HasModel HardwareTechnologyProductModel.	**HardwareTechnologyProductLine** Role: hardwareTechnologyProductLine Role Description: The HardwareTechnologyProductLine that has the HardwareTechnologyProductModel. Cardinality: 0..1	Model Role: hardwareTechnologyProductModel Role Description: A HardwareTechnologyProductModel that the HardwareTechnologyProductLine has. Cardinality: 0..*

ITSystem

Type: __Class__
Specialization of: __MPGElement__
Parent Package: Technical Architecture

Description

An IT system is a combination of hardware, software and documentation united and regulated by interaction or interdependence to accomplish a set of specific functions.

This is synonymous with the terms "Information System" and "Information Processing System."

Relationships

Name	Description	Source	Target
Incorporates (Association)	ITSystem Incorporates ApplicationComponent.	**ITSystem** Role: itSystem Role Description: An ITSystem that incorporates the ApplicationComponent. Cardinality: 0..*	ApplicationComponent Role: applicationComponent Role Description: An ApplicationComponent that the ITSystem incorporates. Cardinality: 0..*
Provides (Association)	ITSystem Provides SystemService.	**ITSystem** Role: itSystem Role Description: The ITSystem that provides a SystemService. Cardinality: 0..*	SystemService Role: systemService Role Description: The SystemService the ITSystem provides. Cardinality: 0..*

Uses (Association)	ITSystem Uses SystemServiceInterface.	**ITSystem** Role: itSystem Role Description: The ITsystem that uses the SystemServiceInterface. Cardinality: 0..*	SystemServiceInterface Role: systemServiceInterface Role Description: The SystemServiceInterface that the ITSystem uses. Cardinality: 0..*
Owns (Association)	Organization owns ITSystem	**Organization** Role: owner Role Description: The owner of the IT system. Cardinality: 0..1	ITSystem Role: itSystem Role Description: An IT system owned by an organization. Cardinality: 0..*
Includes (Association)	TechnicalArchitecture Includes ITSystem.	**TechnicalArchitecture** Role: technicalArchitecture Role Description: A TechnicalArchitecture that includes the ITSystem. Cardinality: 0..*	ITSystem Role: itSystem Role Description: An ITSystem that the TechnicalArchitecture includes. Cardinality: 0..*
Funds (Association)	Investment Funds ITSystem.	**Investment** Role: investment Role Description: The Investment that funds the ITSystem Cardinality: 0..*	ITSystem Role: itSystem Role Description: The ITSystem that is funded by the Investment. Cardinality: 0..*

SoftwareTechnologyProductLine
Type: **Class**
Specialization of: **TechnologyProduct**
Parent Package: Technical Architecture

Description

A group of software products that are intended to support the same market and are closely related in terms of functional, packaging or other characteristics.

Name	Description	Source	Target
HasVersion (Association)	SoftwareTechnologyProductLine HasVersion SoftwareTechnologyProductVersion .	**SoftwareTechnologyProductLine** Role: softwareTechnologyProductLine Role Description: The SoftwareTechnologyProductLine that has the SoftwareTechnologyProductVersion. Cardinality: 0..1	SoftwareTechnologyProduct Version Role: softwareTechnologyProduct Version Role Description: A SoftwareTechnologyProduct Version that a SoftwareTechnologyProduct Line has. Cardinality: 0..*

SoftwareTechnologyProductVersion

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Technical Architecture

Description

A specific configuration within a Software Technology Product Line and offered for sale.

Relationships

Name	Description	Source	Target
Aligns (Association)	SRMComponent Aligns SoftwareTechnologyProduct Version.	**SRMComponent** Role: srmComponent Role Description: An SRMComponent that aligns a SoftwareTechnologyProductVersion. Cardinality: 0..*	SoftwareTechnologyProduct Version Role: softwareTechnologyProduct Version Role Description: A SoftwareTechnologyProduct Version that an SRMComponent aligns. Cardinality: 0..*

Aligns (Association)	TRMServiceStandard Aligns SoftwareTechnologyProduct Version.	**TRMServiceStandard** Role: trmServiceStandard Role Description: A TRMServiceStandard that aligns a SoftwareTechnologyProductVersion. Cardinality: 0..*	SoftwareTechnologyProduct Version Role: softwareTechnologyProduct Version Role Description: A SoftwareTechnologyProduct Version that a TRMServiceStandard aligns. Cardinality: 0..*
Implements (Association)	SoftwareTechnologyProduct Version Implements TechnologyStandard.	**SoftwareTechnologyProductVersion** Role: softwareTechnologyProductVersion Role Description: A SoftwareTechnologyProductVersion that implements a TechnologyStandard. Cardinality: 0..*	TechnologyStandard Role: technologyStandard Role Description: A TechnologyStandard that a SoftwareTechnologyProductVersion implements. Cardinality: 0..*
HasVersion (Association)	SoftwareTechnologyProduct Line HasVersion SoftwareTechnologyProduct Version.	**SoftwareTechnologyProductLine** Role: softwareTechnologyProductLine Role Description: The SoftwareTechnologyProductLine that has the SoftwareTechnologyProductVersion. Cardinality: 0..1	SoftwareTechnologyProductVersion Role: softwareTechnologyProductVersion Role Description: A SoftwareTechnologyProductVersion that a SoftwareTechnologyProductLine has. Cardinality: 0..*
Deploys (Association)	ApplicationComponent Deploys SoftwareTechnologyProduct Version**.**	**ApplicationComponent** Role: applicationComponent Role Description: An ApplicationComponent that deployes the SoftwareTechnologyProductVersion. Cardinality: 0..*	SoftwareTechnologyProductVersion Role: softwareTechnologyProductVersion Role Description: A SoftwareTechnologyProductVersion that the ApplicationComponent deploys. Cardinality: 0..*

TechnicalArchitecture

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Technical Architecture

Description

An architectural perspective based on the representation of the technical elements comprising the architecture. Technical elements include hardware and software entities.

Relationships

Name	Description	Source	Target
Includes (Association)	SegmentArchitecture Includes TechnicalArchitecture.	**SegmentArchitecture** Role: segmentArchitecture Role Description: The SegmentArchitecture that includes the TechnicalArchitecture. Cardinality: 0..1	TechnicalArchitecture Role: technicalArchitecture Role Description: The TechnicalArchitecture the SegmentArchitecture includes. Cardinality: 0..1
Includes (Association)	TechnicalArchitecture Includes ITSystem.	**TechnicalArchitecture** Role: technicalArchitecture Role Description: A TechnicalArchitecture that includes the ITSystem. Cardinality: 0..*	ITSystem Role: itSystem Role Description: An ITSystem that the TechnicalArchitecture includes. Cardinality: 0..*

TechnologyProduct

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Technical Architecture

Description

An abstract type from which the Hardware Technology Product Line and Software Technology Product Line types are derived.

Relationships

Name	Description	Source	Target
Provides (Association)	Organization provides TechnologyProduct.	**Organization** Role: provider Role Description: An organization that provides a technology. Cardinality: 0..*	TechnologyProduct Role: providedTechnology Role Description: A technology product provided by an organization. Cardinality: 0..*

TechnologyStandard

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Technical Architecture

Description

A specification that establishes normative criteria regarding technology-related methods, processes, and practices.

Relationships

Name	Description	Source	Target
Implements (Association)	SoftwareTechnologyProductVersion Implements TechnologyStandard.	**SoftwareTechnologyProductVersion** Role: softwareTechnologyProductVersion Role Description: A SoftwareTechnologyProductVersion that implements a TechnologyStandard. Cardinality: 0..*	TechnologyStandard Role: technologyStandard Role Description: A TechnologyStandard that a SoftwareTechnologyProduct Version implements. Cardinality: 0..*
Implements (Association)	SharedComponent Implements Technology Standard.	**SharedComponent** Role: sharedComponent Role Description: The SharedComponent that implements the TechnologyStandard. Cardinality: 0..*	TechnologyStandard Role: technologyStandard Role Description: The technologyStandard that the SharedComponent implements. Cardinality: 0..*
Aligns (Association)	TRMServiceStandard Aligns TechnologyStandard.	**TRMServiceStandard** Role: trmServiceStandard Role Description: A TRMServiceStandard that aligns a TechnologyStandard. Cardinality: 0..*	TechnologyStandard Role: technologyStandard Role Description: A TechnologyStandard that a TRMServiceStandard aligns. Cardinality: 0..*
Implements (Association)	HardwareTechnologyProductModel Implements TechnologyStandard.	**HardwareTechnologyProductModel** Role: hardwareTechnologyProductModel Role Description: A HardwareTechnologyProductModel that implements a TechnologyStandard. Cardinality: 0..*	TechnologyStandard Role: technologyStandard Role Description: A TechnologyStandard that a HardwareTechnologyProduct Model implements. Cardinality: 0..*

Transition Planning

Type: **Package**
Parent Package: Enterprise Architecture

This package contains the set of types related to modeling Transition Planning concepts.

Transition Planning - *(Package diagram)*

See Figure 24

Description

This diagram shows the representation of the Cross Agency Initiative concept from the Federal Transition Framework as a member of the Transition Panning Domain.
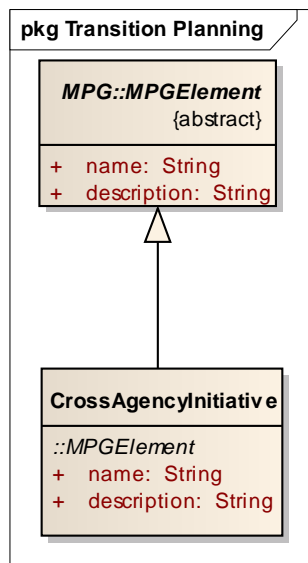
Figure 24 - Transition Planning

Transition Planning Context - *(Logical diagram)*

See Figure 25

Description

The diagram puts the CrossAgencyInitiative class into the context of the related Business Requirements being fulfilled by the Cross Agency Initiative. It also shows the high level approach used to associate Cross Agency Initiatives with the Segment Architectures that either provide capabilities as part of the Cross Agency Initiative or reuse (require) capabilities from existing Cross Agency Initiatives.
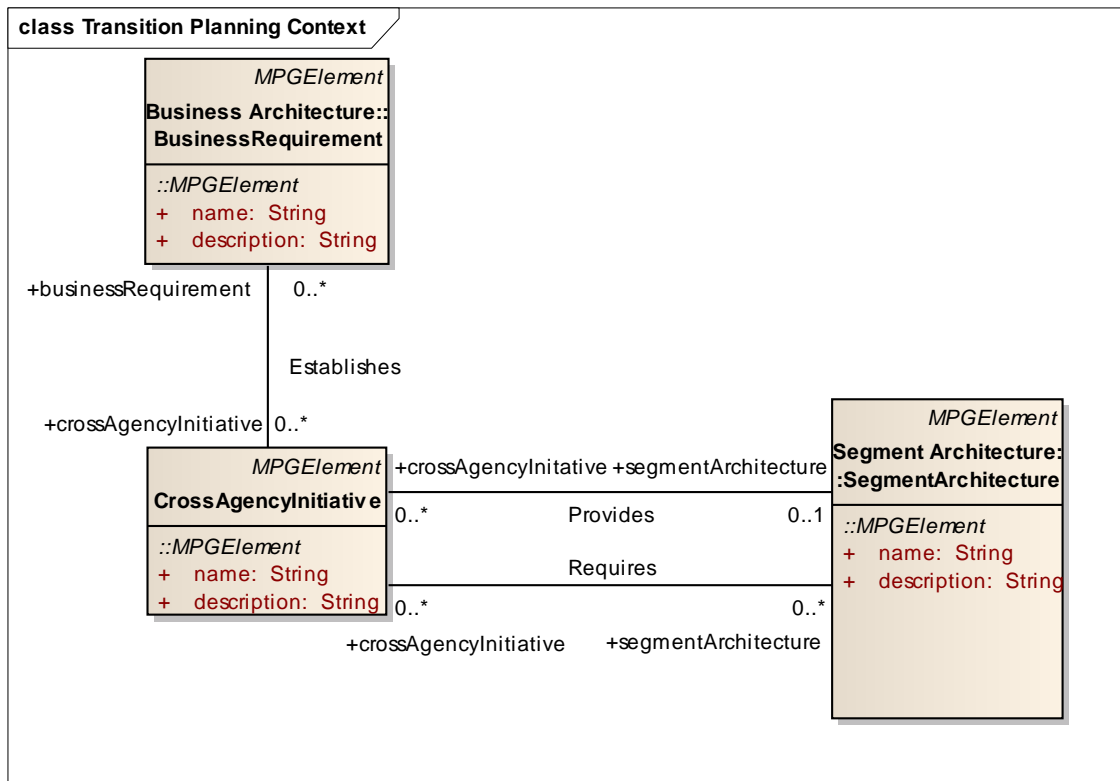
Figure 25 - Transition Planning Context

CrossAgencyInitiative

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Transition Planning

Description

OMB-sponsored initiatives such as E-Gov initiatives, Line of Business (LOB) initiatives, and other government-wide initiatives, such as Internet Protocol Version 6 (IPV6) and Homeland Security Presidential Directive 12 (HSPD-12).

Relationships

Name	Description	Source	Target
Provides (AssociationClass)	SegmentArchitecture Provides CrossAgencyInitiative.	**SegmentArchitecture** Role: segmentArchitecture Role Description: The SegmentArchitecture that provides a sharable service (or other entity) to a CrossAgencyInitiative. Cardinality: 0..1	CrossAgencyInitiative Role: crossAgencyInitative Role Description: The CrossAgencyInitiative to which the SegmentArchitecture provides a shared service (or other entity). Cardinality: 0..*

Requires (AssociationClass)	SegmentArchitecture Requires CrossAgencyInitative.	**SegmentArchitecture** Role: segmentArchitecture Role Description: The SegmentArchitecture that requires some entity provided by a CrossAgencyInitiative. Cardinality: 0..*	CrossAgencyInitiative Role: crossAgencyInitiative Role Description: A CrossAgencyInitiative that provides an entity required by the SegmentArchitecture. Cardinality: 0..*
Establishes (Association)	CrossAgencyInitiative Establishes BusinessRequirement.	**CrossAgencyInitiative** Role: crossAgencyInitiative Role Description: The CrossAgencyInitiative that establishes the BusinessRequirement. Cardinality: 0..*	BusinessRequirement Role: businessRequirement Role Description: The BusinessRequirement that the CrossAgencyInitative establishes. Cardinality: 0..*

7.3.4 Organization

Type: **Package**
Parent Package: MPG

This package contains the set of types related to modeling Organization concepts.

Organization - *(Package diagram)*

See Figure 26

Description

This diagram shows the basic derived MPG class elements that are used to capture the "Organizational Architecture" including both the aspects of the departmental structure of the organization as well as constructs for the human resource. These class elements are shown in context of the other MPG domains on the next diagram.
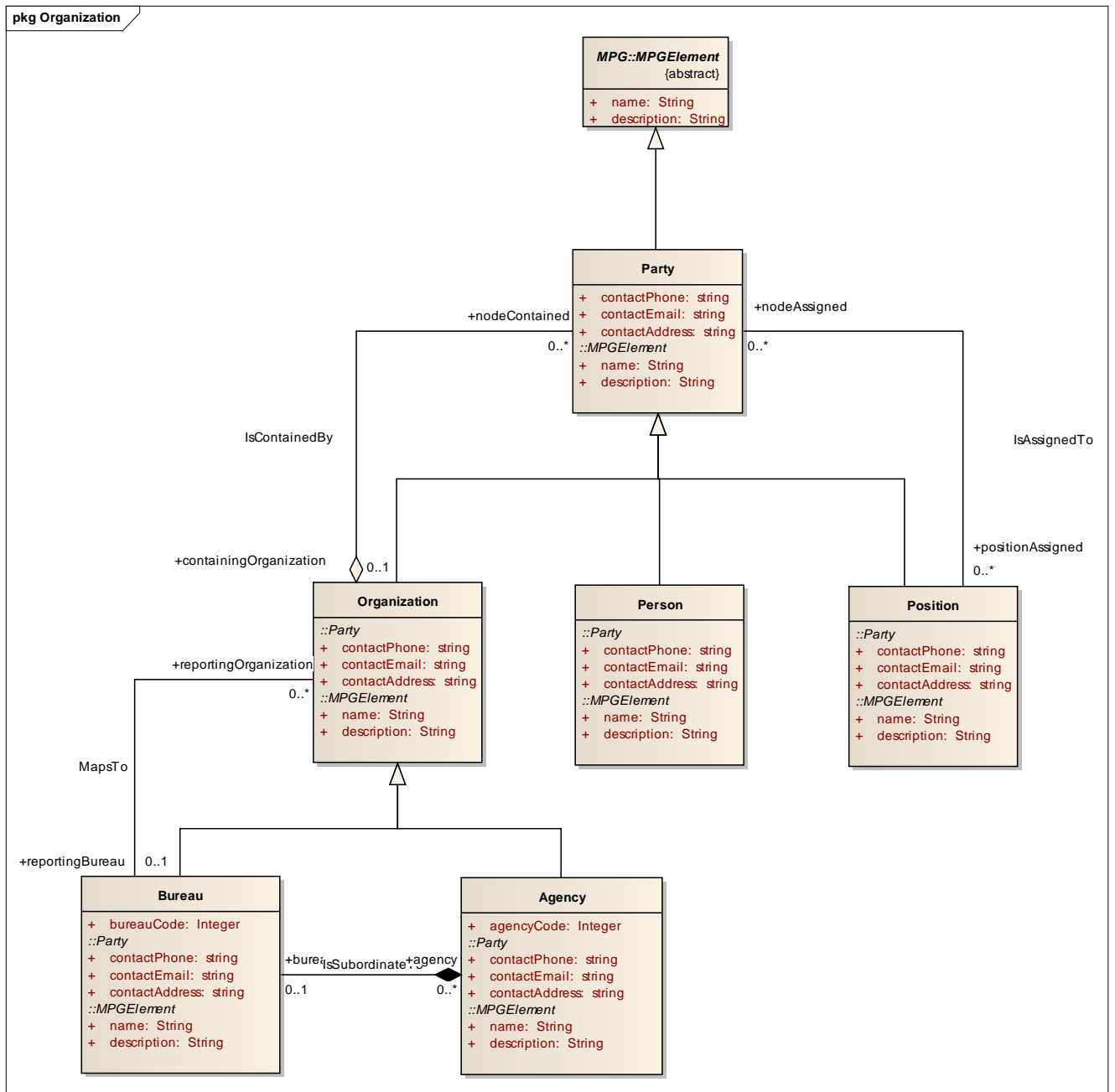
Figure 26 - Organization

<u>Organization Context</u> - *(Logical diagram)*

See Figure 27

<u>Description</u>

This diagram shows where organizational ownership is identified in the MPG. This ownership provides for reporting in terms of responsibility and accountability of Segments, Milestones of those Segments, Investments and IT Systems, Data, and the Technology (Hardware and Software) Products that are employed by the Enterprise.
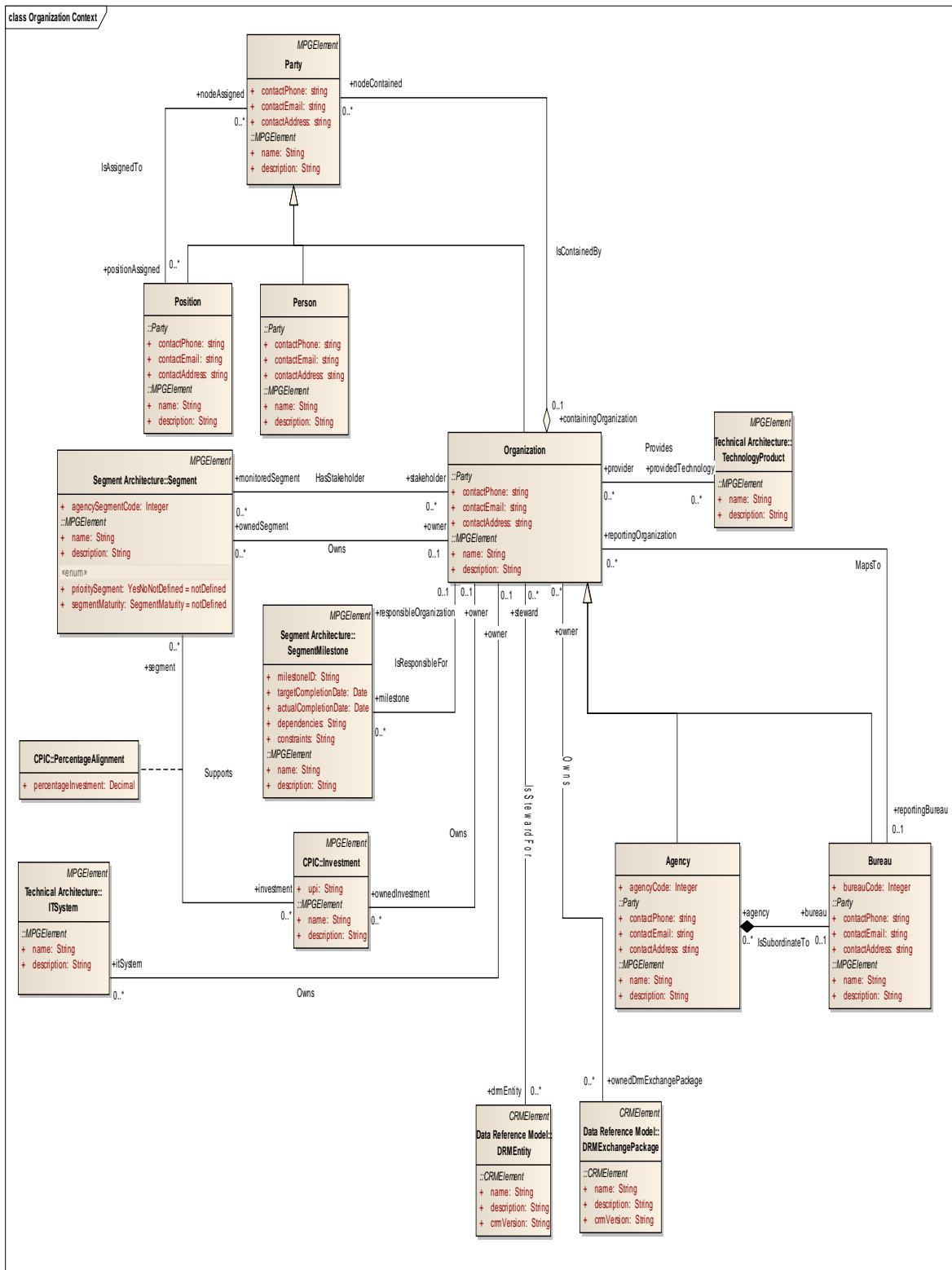
Figure 27 - Organization Context

Agency

Type: **Class**
Specialization of: **Organization**
Parent Package: Organization

<u>Description</u>

An administrative unit of the Executive Branch of the U.S. federal government.

<u>Attributes</u>

Attribute	Type	Description
agencyCode	Integer	The numeric code assigned to the agency for CPIC reporting purposes.

<u>Relationships</u>

Name	Description	Source	Target
IsSubordinateTo (<u>Aggregation</u>)	Bureau is subordinate to Agency.	**Bureau** Role: bureau Role Description: Bureau that is subordinate to the Agency. Cardinality: 0..1	Agency Role: agency Role Description: Agency to which the Bureau is subordinate. Cardinality: 0..*

Bureau

Type: **Class**
Specialization of: **Organization**
Parent Package: Organization

<u>Description</u>

A type of organization unit that is used in some government organizations as a way of managing the parent organization (agency) mission and workforce. For example, the agency Department of Interior is made up of a number of bureaus (e.g., Bureau of Land Management). In the context of A11 reporting, sub-organizations may be assigned a bureau code even though the organization is not officially a bureau.

<u>Attributes</u>

Attribute	Type	Description
bureauCode	Integer	The numeric code assigned to the bureau for CPIC reporting purposes.

Name	Description	Source	Target
MapsTo (<u>Association</u>)	For A-11 reporting purposes, used to identify the bureau that the organization reports through.	**Organization** Role: reportingOrganization Role Description: An organizatin that reports through the bureau. Cardinality: 0..*	Bureau Role: reportingBureau Role Description: The bureau through which an organization reports. Cardinality: 0..1
HasBudgetResource (<u>Association</u>)	Bureau has budget resource FundingSource.	**Bureau** Role: bureau Role Description: Bureau with a particular budget source. Cardinality: 0..*	FundingSource Role: fundingSource Role Description: A source of funding for a bureau. Cardinality: 0..*
IsSubordinateTo (<u>Aggregation</u>)	Bureau is subordinate to Agency.	**Bureau** Role: bureau Role Description: Bureau that is subordinate to the Agency. Cardinality: 0..1	Agency Role: agency Role Description: Agency to which the Bureau is subordinate. Cardinality: 0..*

Organization

Type: **Class**
Specialization of: **Party**
Parent Package: Organization

Description

Organization is used to represent the hierarchy of departments and the participants in each organization (Automaton's, Person's, Role's).

Relationships

Name	Description	Source	Target
IsContainedBy (<u>Aggregation</u>)	Organization is contained by Party.	**Party** Role: nodeContained Role Description: The Party contained by the Organization. Cardinality: 0..*	Organization Role: containingOrganization Role Description: The Organization that contains the Party. Cardinality: 0..1

HasStakeholder (Association)	Segment has stakeholder Organization.	**Segment** Role: monitoredSegment Role Description: This segment is of interest to the stakeholder. Cardinality: 0..*	Organization Role: stakeholder Role Description: This organization has a stake in the definition of the segment. Cardinality: 0..*
Owns (Association)	Organization owns Investment.	**Organization** Role: owner Role Description: The organization that owns the ownedInvestment. Cardinality: 0..1	Investment Role: ownedInvestment Role Description: This investment is owned by the organization playing the owner role. Cardinality: 0..*
Provides (Association)	Organization provides TechnologyProduct.	**Organization** Role: provider Role Description: An organization that provides a technology. Cardinality: 0..*	TechnologyProduct Role: providedTechnology Role Description: A technology product provided by an organization. Cardinality: 0..*
MapsTo (Association)	For A-11 reporting purposes, used to identify the bureau that the organization reports through.	**Organization** Role: reportingOrganization Role Description: An organizatin that reports through the bureau. Cardinality: 0..*	Bureau Role: reportingBureau Role Description: The bureau through which an organization reports. Cardinality: 0..1
Owns (Association)	The organization that owns the DRMExchangePackage.	**Organization** Role: owner Role Description: The organizatin that owns a particular DRM Exchange Package. Cardinality: 0..*	DRMExchangePackage Role: ownedDrmExchangePackage Role Description: a DRM Exchange Package owned by an Organization. Cardinality: 0..*

IsStewardFor (Association)	Organization that is the steward for the DRMEntity.	**Organization** Role: steward Role Description: The organization responsible for guiding the development of a particular DRM Entity. Cardinality: 0..*	DRMEntity Role: drmEntity Role Description: A DRM Entity for which an organization is the steward. Cardinality: 0..*
Owns (Association)	Organization owns ITSystem	**Organization** Role: owner Role Description: The owner of the IT system. Cardinality: 0..1	ITSystem Role: itSystem Role Description: An IT system owned by an organization. Cardinality: 0..*
IsResponsibleFor (Association)	Orgnization is responsible for SegmentMilestone.	**Organization** Role: responsibleOrganization Role Description: The organization responsible for meeting the milestone. Cardinality: 0..1	SegmentMilestone Role: milestone Role Description: A milestone in the lifecycle of the segment. Cardinality: 0..*
Owns (Association)	Organization owns Segment.	**Organization** Role: owner Role Description: Organization that owns the segment. Cardinality: 0..1	Segment Role: ownedSegment Role Description: A segment that is owned by the organization that plays the owner role. Cardinality: 0..*

Party

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Organization

Description

Party is the abstract supertype of all participants in the organization.

Attributes

Attribute	Type	Description
contactPhone	string	The phone number of the party.
contactEmail	string	The email address of the party.
contactAddress	string	The physical (mail) address of the party.

Relationships

Name	Description	Source	Target
IsAssignedTo (Association)	Party is assigned to Position.	**Party** Role: nodeAssigned Role Description: The Party assigned to the Position. Cardinality: 0..*	Position Role: positionAssigned Role Description: The Position to which the Party is assigned. Cardinality: 0..*
IsContainedBy (Aggregation)	Organization is contained by Party.	**Party** Role: nodeContained Role Description: The Party contained by the Organization. Cardinality: 0..*	Organization Role: containingOrganization Role Description: The Organization that contains the Party. Cardinality: 0..1

Person

Type: **Class**
Specialization of: **Party**
Parent Package: Organization

Description

A human being.

Position

Type: **Class**
Specialization of: **Party**
Parent Package: Organization

Description

A Position is a formal post inside an organization held by one or more persons.

Model for Performance-Driven Government (MPG), Beta 1

Name	Description	Source	Target
IsAssignedTo (Association)	Party is assigned to Position.	**Party** Role: nodeAssigned Role Description: The Party assigned to the Position. Cardinality: 0..*	Position Role: positionAssigned Role Description: The Position to which the Party is assigned. Cardinality: 0..*

7.3.5 Performance Management

Type: **Package**
Parent Package: MPG

This package contains the set of types related to modeling Performance Management concepts.

Performance Management - *(Package diagram)*

See Figure 28

Description

This diagram identifies the Outcome class as belonging to the Performance Management domain.
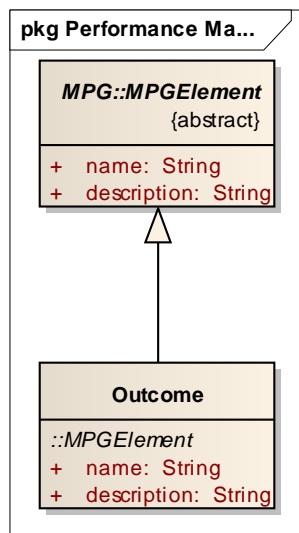

Figure 28 - Performance Management

Performance Management Context - *(Logical diagram)*

See Figure 29

<u>**Description**</u>

This diagram shows the association of Outcome to PRMMeasurementCateogry. The Outcome concept aligns to this level in the PRM. Also shown is the association to BusinessRequirement, used to identify how desired outcomes are tied to satisfaction of requirements.
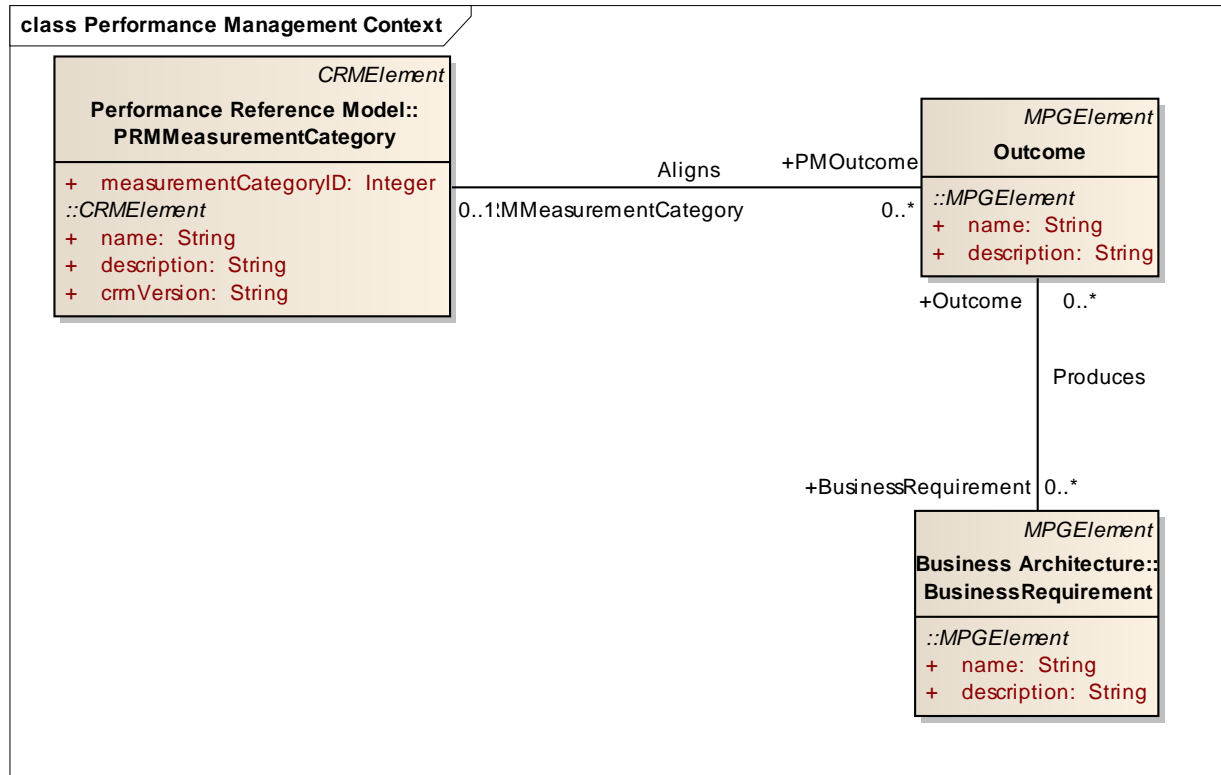
class Performance Management Context

	CRMElement
Performance Reference Model::	
PRMMeasurementCategory	
+ measurementCategoryID: Integer	
::*CRMElement*	
+ name: String	
+ description: String	
+ crmVersion: String	

Aligns   +PMOutcome

	MPGElement
	Outcome
::*MPGElement*	
+ name: String	
+ description: String	

0..1 :MMeasurementCategory   0..*

+Outcome   0..*

Produces

+BusinessRequirement 0..*

	MPGElement
Business Architecture::	
BusinessRequirement	
::*MPGElement*	
+ name: String	
+ description: String	

Figure 29 - Performance Management Context

Outcome

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Performance Management

<u>**Description**</u>

Describes the intended result of carrying out a program or activity. They define an event or condition that is external to the program or activity and that is of direct importance to the intended beneficiaries and/or the public. For a tornado warning system, outcomes could be the number of lives saved and property damage averted. While performance measures must distinguish between outcomes and outputs, there must be a reasonable connection between them, with outputs supporting (i.e., leading to) outcomes in a logical fashion. (From Circular No. A–11, Part 6, Section 200, August 2009)

Name	Description	Source	Target
Aligns (Association)	PRMMeasurementCategory aligns PMOutcome	**PRMMeasurementCategory** Role: PRMMeasurementCategory Role Description: Cardinality: 0..1	Outcome Role: PMOutcome Role Description: Cardinality: 0..*
Produces (Association)	BusinessRequirement produces Outcome.	**BusinessRequirement** Role: BusinessRequirement Role Description: The Business Requirement that when satisfied produces the Outcome. Cardinality: 0..*	Outcome Role: Outcome Role Description: The Outcome desired to be rpoduced through satisfaction of the BusinessRequirement. Cardinality: 0..*

7.3.6 Program Management

Type: **Package**
Parent Package: MPG
This package contains the set of types related to modeling Program Management concepts.

Program Management - *(Package diagram)*

See Figure 30

Description
This diagram shows that there is a single type of class object to address "Programs". The next diagram shows usage to "Programs" in the context of other class elements.
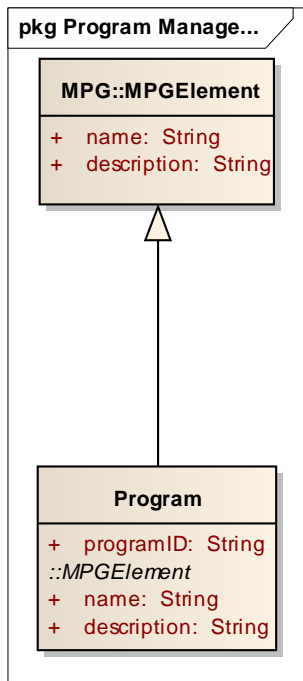
Figure 30 - Program Management

Program Management Context - *(Logical diagram)*

See Figure 31

Description

This diagram places the Program class into the overall context of program management concepts. As can be seen, program management has direct associations to concepts in project management, capital planning, and performance management, including aspects of strategic management.
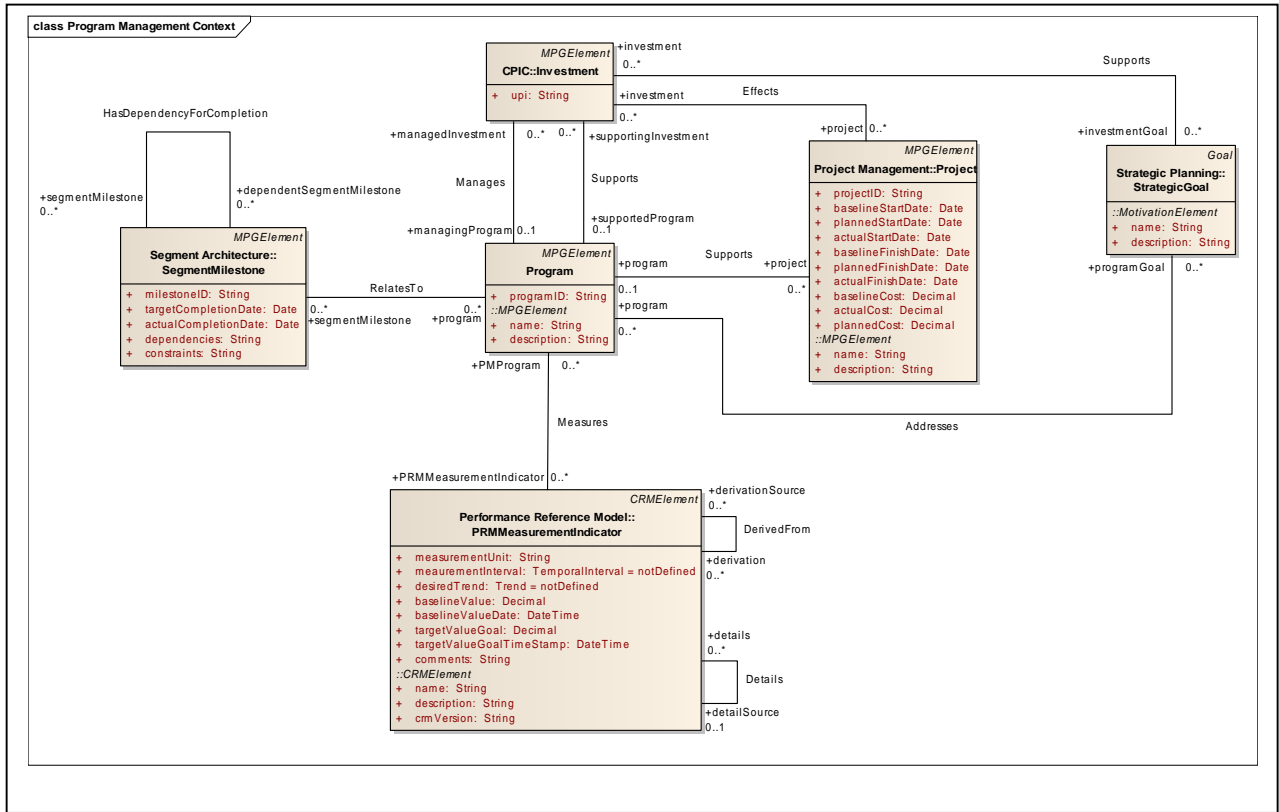
Figure 31 - Program Management Context

Program

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Program Management

Description

A group of related project managed in a coordinated way to obtain benefits and control not available from managing them individually. (From PMBOK)

Attributes

Attribute	Type	Description
programID	String	The identifier assigned to the program.

Name	Description	Source	Target
Supports (Association)	Project supports Program.	**Project** Role: project Role Description: Project suppoting the Program. Cardinality: 0..*	Program Role: program Role Description: Program supported by the Project. Cardinality: 0..1
Supports (Association)	Investment supports Program.	**Investment** Role: supportingInvestment Role Description: An investment that supports a program. Cardinality: 0..*	Program Role: supportedProgram Role Description: A program supported by an investment Cardinality: 0..1
Manages (Association)	Program manages Investment.	**Program** Role: managingProgram Role Description: Program that manages the investment. Cardinality: 0..1	Investment Role: managedInvestment Role Description: Investment managed by a program. Cardinality: 0..*
Measures (Association)	PRMMeasurementIndicator measures PMProgram.	**PRMMeasurementIndicator** Role: PRMMeasurementIndicator Role Description: The PRMMeasurementIndicator that measures the performance of the Program. Cardinality: 0..*	Program Role: PMProgram Role Description: The Program about which the PRMMeasurementIndicator measures performance. Cardinality: 0..*
RelatesTo (Association)	Program relates to SegmentMilestone.	**Program** Role: program Role Description: The Program related to the SegmentMilestone. Cardinality: 0..*	SegmentMilestone Role: segmentMilestone Role Description: The SegmentMilestone to which the Program relates. Cardinality: 0..*

Addresses (Association)	Program addresses StrategicGoal.	**Program** Role: program Role Description: A program that has goals. Cardinality: 0..*	StrategicGoal Role: programGoal Role Description: A goal of the program. Cardinality: 0..*

7.3.7 Project Management

Type: **Package**
Parent Package: MPG

This package contains the set of types related to modeling Program Management concepts.

Project Management - *(Package diagram)*

See Figure 32

Description

This diagram identifies the classes modeled in the project management domain. The concepts represented were derived from the Program Management Book of Knowledge (PMBOK).

Project Management - *(Package diagram)*
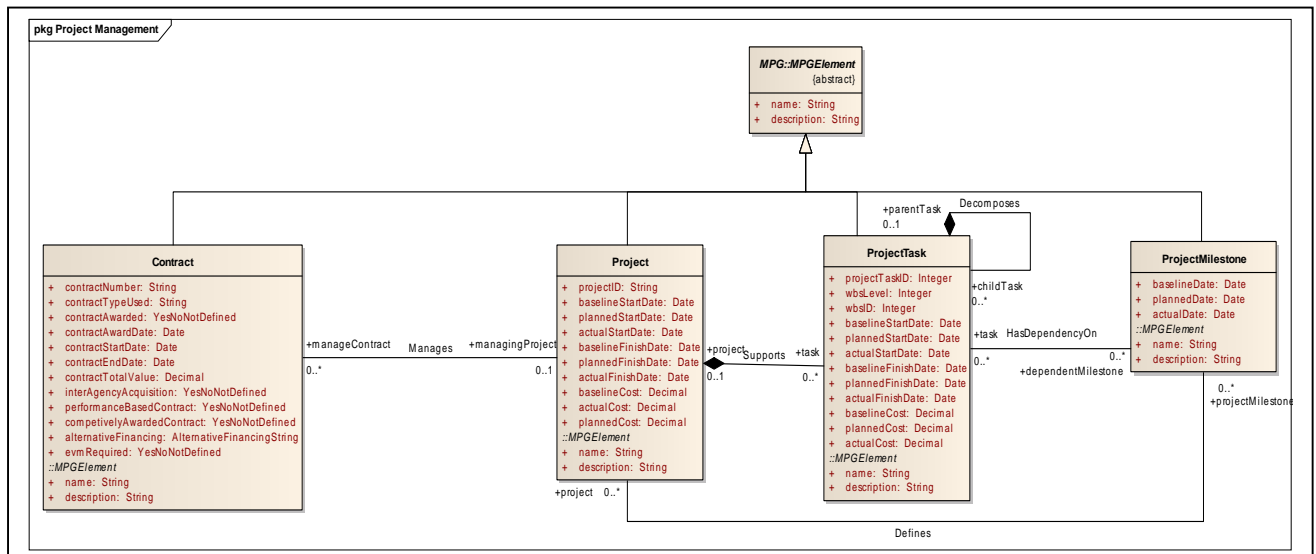
Figure 32 - Project Management

Project Management Context - *(Logical diagram)*

See Figure 33

Description

This diagram places the project management concepts into the overall context that includes consideration of costs (Investments), Contracts, and Programs.
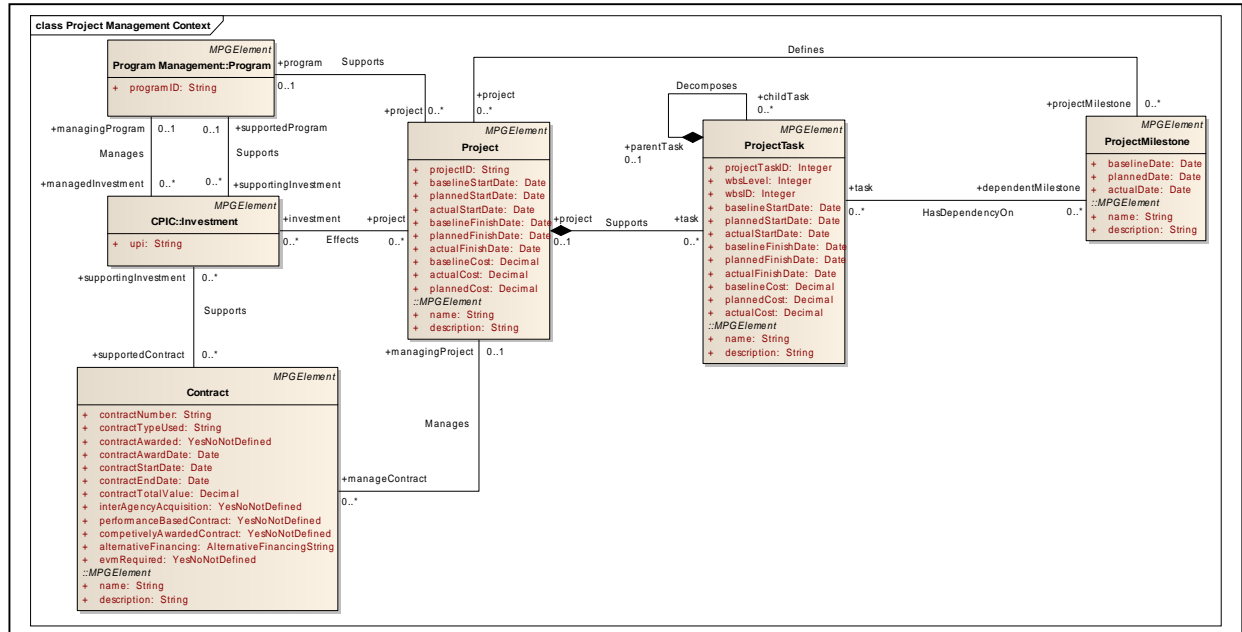
Figure 33 - Project Management Context

Contract

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Project Management

Description

A binding agreement between two or more parties, as in a business agreement for the delivery of goods or services at a specified price.

Attributes

Attribute	Type	Description
contractNumber	String	The numeric identifier assigned to the contract.
contractTypeUsed	String	The type of contract used.

Attribute	Type	Description
contractAwarded	YesNoNotDefined	Whether the contract has been awarded.
contractAwardDate	Date	The date on which the contract was awarded.
contractStartDate	Date	The date on which the contract was started.
contractEndDate	Date	The date on which the contract ended.
contractTotalValue	Decimal	The total value of the contract.
interAgencyAcquisition	YesNoNotDefined	Whether the contract was an inter-agency acquisition.
performanceBasedContract	YesNoNotDefined	Whether the contract is performance based.
competivelyAwardedContract	YesNoNotDefined	Whether the contract was competitively awarded.
alternativeFinancing	AlternativeFinancingString	The kind of alternative financing used.
evmRequired	YesNoNotDefined	Whether earned value management is required.

Relationships

Manages (Association)	Project manages Contract.	**Project** Role: managingProject Role Description: The project that manages a contract. Cardinality: 0..1	Contract Role: manageContract Role Description: A contract managed by a project. Cardinality: 0..*
Supports (Association)	Investment supports Contract.	**Investment** Role: supportingInvestment Role Description: An investment that supports a contract. Cardinality: 0..*	Contract Role: supportedContract Role Description: A contract supported by an investment. Cardinality: 0..*

Project

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Project Management

Description

A temporary endeavor undertaken to create a unique product, service, or result. (From PMBOK)

Attribute	Type	Description
projectID	String	The identifier for the project.
baselineStartDate	Date	Originally planned start date.
plannedStartDate	Date	Currently planned start date.
actualStartDate	Date	The date the project task actually started.
baselineFinishDate	Date	Originally planned completion date.
plannedFinishDate	Date	Currently planned completion date based on current project/task status.
actualFinishDate	Date	Date the project task actually was completed.
baselineCost	Decimal	Originally planned baseline (budgeted) cost in $M.
actualCost	Decimal	Actual cost of the completed task.
plannedCost	Decimal	Currently planned cost based on current project/task status in $M.

Relationships

Name	Description	Source	Target
Supports (Association)	Project supports Program.	**Project** Role: project Role Description: Project suppoting the Program. Cardinality: 0..*	Program Role: program Role Description: Program supported by the Project. Cardinality: 0..1
Manages (Association)	Project manages Contract.	**Project** Role: managingProject Role Description: The project that manages a contract. Cardinality: 0..1	Contract Role: manageContract Role Description: A contract managed by a project. Cardinality: 0..*

Supports (Aggregation)	ProjectTask supports Project.	**ProjectTask** Role: task Role Description: A task supporting a project. Cardinality: 0..*	Project Role: project Role Description: A project that is supported by a task. Cardinality: 0..1
Effects (Association)	Project effects Investment.	**Project** Role: project Role Description: The Project that effects the objectives of the Investment. Cardinality: 0..*	Investment Role: investment Role Description: The Investment that has its objectives effected by the Project. Cardinality: 0..*
Defines (Association)	Project defines ProjectMilestone.	**Project** Role: project Role Description: The project to which a milestone applies. Cardinality: 0..*	ProjectMilestone Role: projectMilestone Role Description: A milestone for a project. Cardinality: 0..*

ProjectMilestone

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Project Management

Description

A significant point or event in a project. (From PMBOK)

Attributes

Attribute	Type	Description
baselineDate	Date	Originally planned milestone date.
plannedDate	Date	Currently planned milestone date based on current project/task status.
actualDate	Date	Date the milestone was actually reached.

Name	Description	Source	Target
Defines (Association)	Project defines ProjectMilestone.	**Project** Role: project Role Description: The project to which a milestone applies. Cardinality: 0..*	ProjectMilestone Role: projectMilestone Role Description: A milestone for a project. Cardinality: 0..*
HasDependencyOn (Association)	ProjectMilestone has dependency on ProjectTask.	**ProjectMilestone** Role: dependentMilestone Role Description: A milestone that is dependent on a project task. Cardinality: 0..*	ProjectTask Role: task Role Description: A project task on which a milestone is dependent. Cardinality: 0..*

ProjectTask

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Project Management

Description

An activity with finite duration, requiring the application of resources, and delivering a concrete result, performed within the scope of a project.

Attributes

Attribute	Type	Description
projectTaskID	Integer	The numeric ID of the project task. Project task IDs are unique at each level of the work breakdown structure within the scope of the parent project task.
wbsLevel	Integer	The level of the project task in the work breakdown structure, expressed as an integer.
wbsID	Integer	Identifier for the task within the work breakdown structure.
baselineStartDate	Date	Originally planned start date.
plannedStartDate	Date	Currently planned start date.
actualStartDate	Date	The date the project task actually started.
baselineFinishDate	Date	Originally planned completion date.
plannedFinishDate	Date	Currently planned completion date based on current project/task status.
actualFinishDate	Date	Date the project task actually was completed.

Attribute	Type	Description
baselineCost	Decimal	Originally planned baseline (budgeted) cost in $M.
plannedCost	Decimal	Currently planned cost based on current project/task status in $M.
actualCost	Decimal	Actual cost of the completed task.

Relationships

Supports (Aggregation)	ProjectTask supports Project.	**ProjectTask** Role: task Role Description: A task supporting a project. Cardinality: 0..*	Project Role: project Role Description: A project that is supported by a task. Cardinality: 0..1
Decomposes (Aggregation)	ProjectTask decomposes ProjectTask.	**ProjectTask** Role: childTask Role Description: ProjectTask that decomposes the parent ProjectTask. Cardinality: 0..*	ProjectTask Role: parentTask Role Description: ProjectTask that the child ProjectTask decomposes. Cardinality: 0..1
HasDependencyOn (Association)	ProjectMilestone has dependency on ProjectTask.	**ProjectMilestone** Role: dependentMilestone Role Description: A milestone that is dependent on a project task. Cardinality: 0..*	ProjectTask Role: task Role Description: A project task on which a milestone is dependent. Cardinality: 0..*

7.3.8 Strategic Planning

Type: **Package**
Package: MPG

This package contains the set of types related to modeling Strategic Planning concepts.

Strategic Planning - *(Package diagram)*

See Figure 34

Description

This diagram shows the MPG class elements that provide for capture of strategic planning information. Objects with the BMM prefix come from the Business Motivation Model. Usage of these constructs is shown in the next context diagram.
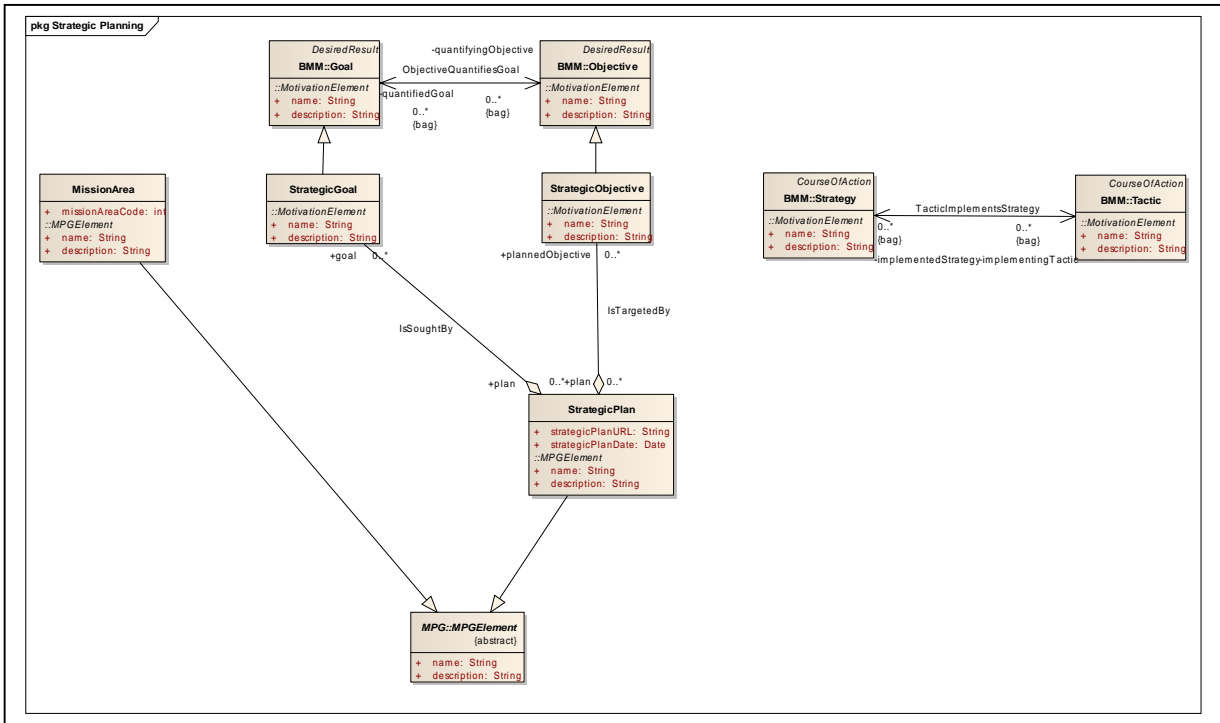
Figure 34 - Strategic Planning

<u>Strategic Planning Context</u> - *(Logical diagram)*

See Figure 35

<u>Description</u>

This diagram shows how the Strategic Planning class elements from the Business Motivation Model can be tied in to the management of "Investments." This is intended to establish the alignment between the IT Investments and the Strategic Goals and Objectives that are to be satisfied.

Figure 35 - Strategic Planning Context
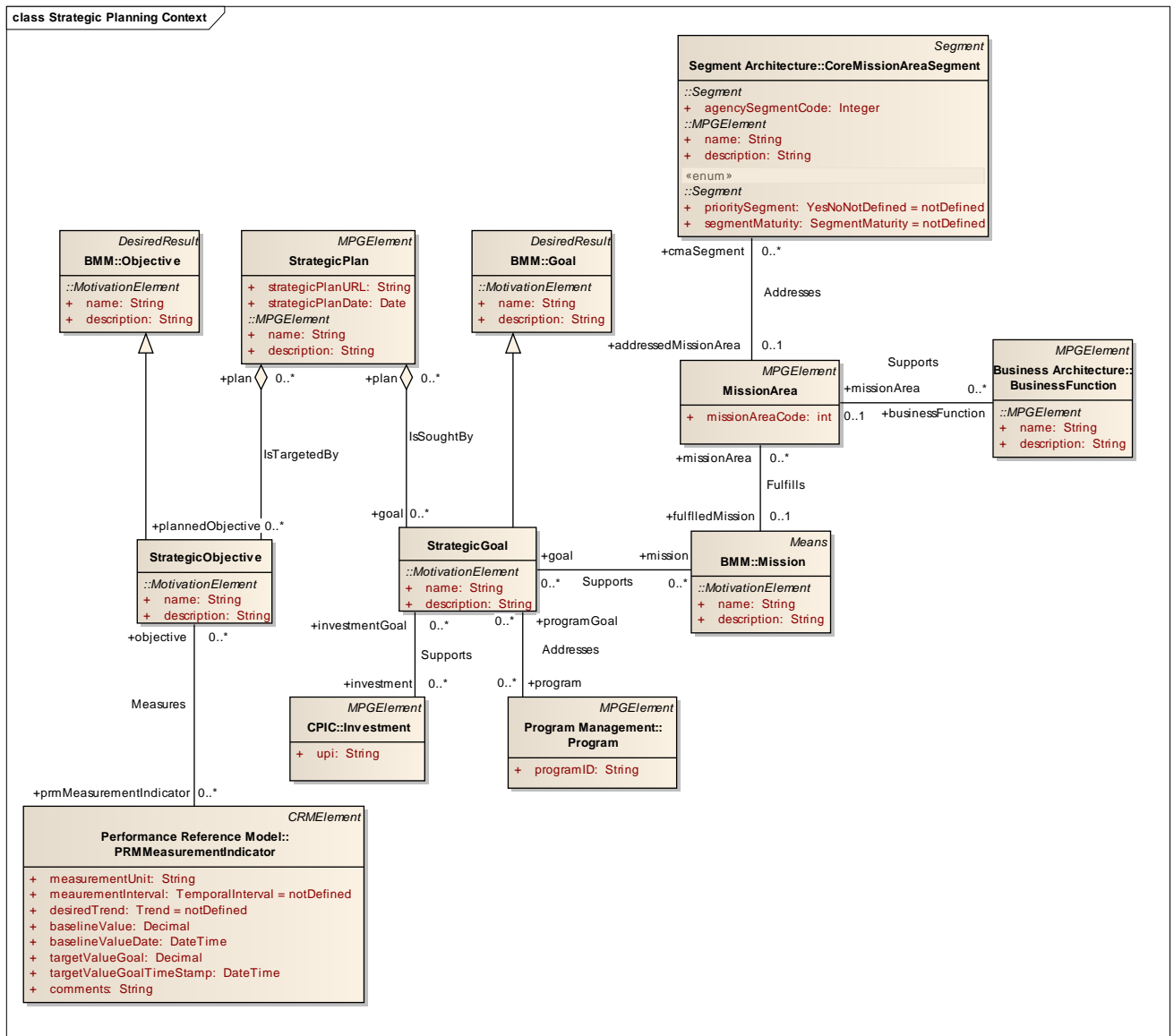
MissionArea

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Strategic Planning

Description

A mission area describes a functional capability that supports achievement of some aspect of a mission.

Attribute	Type	Description
missionAreaCode	Integer	Two digit code assigned to the Mission Area.

Relationships

Name	Description	Source	Target
Fulfills (Association)	MissionArea fulfills Mission.	**MissionArea** Role: missionArea Role Description: The MissionArea that fulfills the Mission. Cardinality: 0..*	Mission Role: fulflledMission Role Description: The Mission a MissionArea fulfills. Cardinality: 0..1
Addresses (Association)	CoreMissionAreaSegment addresses MissionArea.	**CoreMissionAreaSegment** Role: cmaSegment Role Description: The segment that addresses a mission area. Cardinality: 0..*	MissionArea Role: addressedMissionArea Role Description: The MissionArea addressed by the CoreMissionAreaSegment. Cardinality: 0..1
Supports (Association)	BusinessFunction supports MissionArea.	**BusinessFunction** Role: businessFunction Role Description: A business function that supports a mission area. Cardinality: 0..*	MissionArea Role: missionArea Role Description: The mission area of a supporting business function. Cardinality: 0..1

StrategicGoal

Type: **Class**
Specialization of: **Goal**
Parent Package: Strategic Planning

Description

Statements of aim or purpose that are set out in the agency strategic plan. Several agency programs may contribute to achievement of a strategic goal.

Name	Description	Source	Target
Supports (Association)	StrategicGoal supports Mission.	**StrategicGoal** Role: goal Role Description: StrategicGoal that supports a Mission. Cardinality: 0..*	Mission Role: mission Role Description: Mission that the StrategicGoal supports. Cardinality: 0..*
Supports (Association)	Investment supports StrategicGoal.	**Investment** Role: investment Role Description: The Investment that supports the StrategicGoal. Cardinality: 0..*	StrategicGoal Role: investmentGoal Role Description: The StrategicGoal supported by the Investment. Cardinality: 0..*
IsSoughtBy (Aggregation)	StrategicGoal is sought by StrategicPlan.	**StrategicGoal** Role: goal Role Description: A goal of a strategic plan. Cardinality: 0..*	StrategicPlan Role: plan Role Description: The strategic plan that has a goal. Cardinality: 0..*
Addresses (Association)	Program addresses StrategicGoal.	**Program** Role: program Role Description: A program that has goals. Cardinality: 0..*	StrategicGoal Role: programGoal Role Description: A goal of the program. Cardinality: 0..*

StrategicObjective

Type: **Class**
Specialization of: **Objective**
Parent Package: Strategic Planning

Description

For each strategic goal, there are usually several underlying strategic objectives or outcome goals. For each of the underlying outcome goals, there typically are several output goals.

Name	Description	Source	Target
Measures (Association)	PRMMeasurementIndicator measures StrategicObjective.	**PRMMeasurement Indicator** Role: prmMeasurementIndicator Role Description: A PRM measurement indicator for an objective. Cardinality: 0..*	StrategicObjective Role: objective Role Description: The objective measured by the indicator. Cardinality: 0..*
IsTargetedBy (Aggregation)	StrategicObjective is targeted by StrategicPlan.	**StrategicObjective** Role: plannedObjective Role Description: A specific objective of a strategic plan. Cardinality: 0..*	StrategicPlan Role: plan Role Description: A plan that includes the objective. Cardinality: 0..*

StrategicPlan

Type: **Class**
Specialization of: **MPGElement**
Parent Package: Strategic Planning

Description

An agency's strategic plan defines its missions, goals, and the means by which it will measure its progress in addressing specific national problems, needs, or challenges related to its mission over the course of at least five years. It appraises the agency's capabilities, assesses the operating environment, and provides for evaluation of the strategy. A strategic plan presents a commitment to perform by describing specific results the agency aims to achieve, what actions the agency will take to realize those planned results, and how the agency will deal with current and foreseeable internal and external challenges and risks that may hinder achieving those results.

Attributes

Attribute	Type	Description
strategicPlanURL	String	URL to publicly-available agency Strategic Plan.
strategicPlanDate	Date	The date at which the strategic plan was put into effect.

IsSoughtBy (Aggregation)	StrategicGoal is sought by StrategicPlan.	**StrategicGoal** Role: goal Role Description: A goal of a strategic plan. Cardinality: 0..*	StrategicPlan Role: plan Role Description: The strategic plan that has a goal. Cardinality: 0..*
IsTargetedBy (Aggregation)	StrategicObjective is targeted by StrategicPlan.	**StrategicObjective** Role: plannedObjective Role Description: A specific objective of a strategic plan. Cardinality: 0..*	StrategicPlan Role: plan Role Description: A plan that includes the objective. Cardinality: 0..*

7.4 Enumerated Types

Type: **Package**
Package: MPG

Package that describes the enumerated types used in the Model for Performance-Driven Architecture.

Enumerated Types - *(Package diagram)*

See Figure 36

Description

This diagram explicitly calls out certain enumerated types that are used by other class elements to provide standard selections of values.
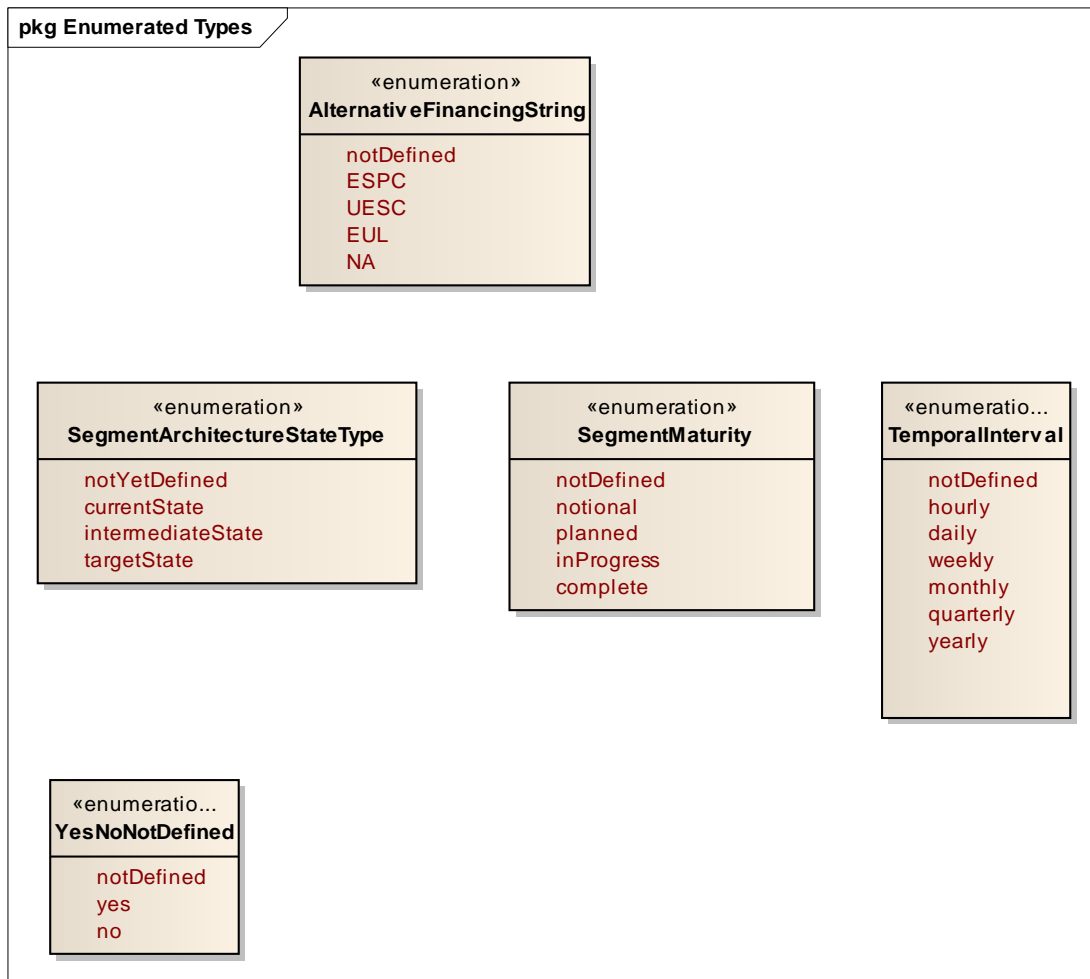
Figure 36 - Enumerated Types

7.5 Primitive Types

Type: **Package**
Package: MPG

7.5.1 Boolean
Type: **Class**
Package: Primitive Types

7.5.2 Date
Type: **Class**
Package: Primitive Types

7.5.3 Integer
Type: **Class**
Package: Primitive Types

7.5.4 String

Type: **<u>Class</u>**
Package: Primitive Types

7.5.5 TimeStamp

Type: **<u>Class</u>**
Package: Primitive Types

7.5.6 Year

Type: **<u>Class</u>**
Package: Primitive Types

8 Model for Performance-Driven Government XML Schema

See OMG document gov/2010-02-03.

9 Changes or Extensions to Existing OMG Specifications

None.

Annex A: MPG-Specific Glossary

(normative)

AcquisitionITInvestmentCost

A cost incurred, after receiving funding from Congress, to procure a segment, module or other IT asset. Acquisition costs no longer apply when the asset becomes fully operational.

Agency

An administrative unit of the Executive Branch of the U.S. federal government.

ApplicationComponent

A package or module of an application that is self contained.

BudgetYearITInvestmentCost

An IT Investment Cost that is to be incurred in the year for which the investment is currently being budgeted.

Bureau

A type of organization unit that is used in some government organizations as a way of managing the parent organization (agency) mission and workforce. For example, the agency Department of Interior is made up of a number of bureaus (eg. Bureau of Land Management). In the context of A11 reporting, sub-organizations may be assigned a bureau code even though the organization is not officially a bureau.

BusinessFunction

A business function is a collection of similar business activities that use common resources such as Purchasing, Receiving, or Quality Assurance. A business function is generally associated with a particular set of competencies and it not time bounded. This is in contrast to business process, which is concerned with a particular result that is time bounded.

BusinessRequirement

Specific agency requirement for compliance with this initiative that derives from a Mandate (see Mandate). A Requirement describes a specific, measurable expectation for agency conformance. (From FTF v.2)

BusinessService

Defined by the agency business model, business services include the foundational mechanisms and back-office services used to achieve the purpose of the agency, e.g., inspections and auditing, direct loans, program monitoring, and financial management.

BusinessServiceArchitecture

An architectural perspective based on the representation of the business and enterprise services comprising the Business Service Segment.

BusinessServiceInterface

A description of the point of interaction where the Business Service is provided and the parameters required for the interface to occur.

The interface to a Business Service may or may not involve automation. The interface is the public view of the Business Service.

See "Business Service"
Compare to "System Service Interface"

BusinessServiceSegment

A Business Service segment includes common or shared business services supporting the core mission areas. Business services are defined by the agency business model, and include the foundational mechanisms and back office services used to achieve the purpose of the agency (e.g., inspections and auditing, program monitoring, human resource management, and financial management). IT investments that serve a common business function, for example - financial management or human resources management, should be included in a Business Service segment regardless of whether they serve multiple business units or are limited to a single business unit.

CommonBusinessProcess

A business process is an activity performed by agencies that yields a result of measurable value to one or more stakeholders. Each BRM Business Subfunction can be further decomposed into multiple business processes. (From FTF v2).

Contract

A binding agreement between two or more parties, as in a business agreement for the delivery of goods or services at a specified price.

CoreMissionAreaArchitecture

An architectural perspective based on the representation of the business and enterprise services comprising the Core Mission Area Segment.

CoreMissionAreaSegment

A Core Mission Area segment represents a unique service area defining the mission or purpose of the agency. Core mission areas are defined by the agency business model (e.g., tactical defense, air transportation, energy supply, pollution prevention and control, and emergency response). Only IT investments for applications which cannot be used outside of a unique mission area should be included in a Core Mission segment.

CrossAgencyInitiative

OMB-sponsored initiatives such as E-Gov initiatives, Line of Business (LOB) initiatives, and other government-wide initiatives, such as Internet Protocol Version 6 (IPV6) and Homeland Security Presidential Directive 12 (HSPD-12).

CurrentYearITInvestmentCost

An IT Investment Cost that is to be incurred in the current fiscal year.

DispositionITInvestmentCost

An IT Investment Cost that is to be incurred in the year for which the investment is currently being budgeted.

EnterpriseServiceArchitecture

Enterprise Service Architecture is a type of Segment Architecture addressing the Enterprise Services. Enterprise Services are common or shared IT services that support core mission areas and business services. Enterprise services are defined by the agency service component model and include the applications and service components used to achieve the purpose of the agency (e.g., knowledge management, records management, mapping/GIS, business intelligence, and reporting).

EnterpriseServiceSegment

An Enterprise segment includes common policies, frameworks, requirements, or standards developed to be applied enterprise-wide. Few actual IT investments should be mapped to an enterprise segment. Most investments which serve an enterprise-wide purpose should be mapped to a business service segment.

FundingAllocation

A distribution of funds to be applied toward the overall funding requirements of an Investment.

FundingAllocationSet

A collection of Funding Allocation instances.

FundingSource

The direct appropriation or other budgetary resources an agency receives.

GovernmentFTEITInvestmentCost

An IT Investment Cost that is based on the cost of full time equivalent (FTE) government personnel.

HardwareTechnologyProductLine

A group of hardware products that are intended to support the same market and are closely related in terms of functional, physical and manufacturing characteristics.

HardwareTechnologyProductModel

A specific configuration within a Hardware Technology Product Line and offered for sale.

Investment

The application of capital in expectation of derived benefit or other return.

ITInvestmentCost

A discrete IT Investment Cost element.

InvestmentCostSet

A collection of Investment Cost instances.

ITProject

A temporary endeavor undertaken to create a unique IT product, service, or result. (Definition based on PMBOK)

ITProjectMilestone

A significant IT project event.

ITProjectTask

An activity performed within the scope of an IT project. IT Project Tasks may be hierarchically decomposed into sub-tasks.

ITSystem

An IT system is a combination of hardware, software and documentation united and regulated by interaction or interdependence to accomplish a set of specific functions.

This is synonymous with the terms "Information System" and "Information Processing System."

MaintenanceITInvestmentCost

An IT Investment Cost that is incurred due to the maintenance of an existing capital asset.

MissionArea

A mission area describes a functional capability that supports achievement of some aspect of a mission.

MPGElement

The abstract object type from which all Model for Performance-Driven Government object types are derived

Organization

Organization is used to represent the hierarchy of departments and the participants in each organization (Automatons, Persons, Roles).

Outcome

Describes the intended result of carrying out a program or activity. They define an event or condition that is external to the program or activity and that is of direct importance to the intended beneficiaries and/or the public. For a tornado warning system, outcomes could be the number of lives saved and property damage averted. While performance measures must distinguish between outcomes and outputs, there must be a reasonable connection between them, with

outputs supporting (i.e., leading to) outcomes in a logical fashion. (From Circular No. A–11, Part 6, Section 200, August 2009)

Party

Party is the abstract supertype of all participants in the organization.

Person

A human being.

PlanningITInvestmentCost

An IT Investment Cost that is to be incurred as part of the planning of the investment.

Position

A Position is a formal post inside an organization held by one or more persons.

PriorYearITInvestmentCost

An IT Investment Cost that was incurred in the fiscal year just prior to the current one.

Program

A group of related project managed in a coordinated way to obtain benefits and control not available from managing them individually. (Definition based on PMBOK)

Project

A temporary endeavor undertaken to create a unique product, service, or result. (Definition based on PMBOK)

ProjectMilestone

A significant point or event in a project. (Definition based on PMBOK)

ProjectTask

An activity with finite duration, requiring the application of resources, and delivering a concrete result, performed within the scope of a project.

Segment

Individual elements of the enterprise describing core mission areas and common or shared business services and enterprise services. Segments are defined by the enterprise architecture. (From OMB FEA Practice Guidance, November 2007)

SegmentArchitecture

A detailed, results-oriented architecture (baseline and target) and a transition strategy for a portion (or segment) of the enterprise. Segment architecture is driven by business management and delivers products that improve the delivery of services to citizens and agency staff. (From OMB FEA Practice Guidance, November 2007)

SegmentArchitectureState

A designation of the (abstract) point in time at which the associated segment architecture configuration is, or is intended to be, valid, e.g., current state, interim state, target state.

SegmentMilestone

A significant point or event in the development of a Segment.

ServiceArchitecture

An architectural perspective based on the representation of the services comprising the architecture. Services may include those provided by automated, as well as manual, means.

ServiceComponent

A constituent element (building block) of a service that implements some aspect of the service's functionality, potentially in conjunction with other service elements. Service components can be large or small, may be written by different programmers using different development environments, and may be platform independent. Such components can be executed on standalone machines, or multiple computing elements connected via LAN, Intranet, or the Internet.

SharedComponent

A representation of a service component that is used to identify and catalog the service component as one being made available for reuse.

SharedService

A representation of a service that is used to identify and catalog the service as one being made available for reuse.

SoftwareTechnologyProductLine

A group of software products that are intended to support the same market and are closely related in terms of functional capabilities, packaging, or other characteristics.

SoftwareTechnologyProductVersion

A specific configuration within a Software Technology Product Line and offered for sale.

StandardSegmentCategory

Defines a category to which a segment is aligned, e.g., Health: Access to Care. A set of standard segments create a taxonomy of such categories.

Each standard segment is assigned a three-digit code in addition to its name.

StrategicGoal

Statements of aim or purpose that are set out in the agency strategic plan. Several agency programs may contribute to achievement of a strategic goal.

StrategicObjective

For each strategic goal, there are usually several underlying strategic objectives or outcome goals. For each of the underlying outcome goals, there typically are several output goals.

StrategicPlan

An agency's strategic plan defines its missions, goals, and the means by which it will measure its progress in addressing specific national problems, needs, or challenges related to its mission over the course of at least five years. It appraises the agency's capabilities, assesses the operating environment, and provides for evaluation of the strategy. A strategic plan presents a commitment to perform by describing specific results the agency aims to achieve, what actions the agency will take to realize those planned results, and how the agency will deal with current and foreseeable internal and external challenges and risks that may hinder achieving those results.

SystemService

A System Service is an entirely automated self contained construct that is available for re-use via a System Service Interface. The description conveys what is accomplished when the System Service is invoked and the conditions for using the service.

SystemServiceInterface

1) Information necessary to interact with the service in such terms as the service inputs, outputs, and associated semantics. The service description also conveys what is accomplished when the service is invoked and the conditions for using the service.

2) A description of the point of interaction where the System Service is provided and the parameters required for the interface to occur.

The interface to a System Service is entirely automated. The interface is the public view of the System Service.

See "System Service"
Compare to "Business Service Interface"

TechnicalArchitecture

An architectural perspective based on the representation of the technical elements comprising the architecture. Technical elements include hardware and software entities.

TechnologyProduct

An abstract type from which the Hardware Technology Product Line and Software Technology Product Line types are derived.

TechnologyStandard

A specification that establishes normative criteria regarding technology-related methods, processes, and practices.