Shared Information/Data (SID) Model

Business View Concepts, Principles, and Domains

Release 7.5

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Executive Summary

The NGOSS knowledge base contains a number of elements, including

- Business processes
- Business process flows
- Business application contracts
- Shared data and information
- Reference code and interfaces

This guidebook focuses on the shared data and information elements of the NGOSS knowledge base. These two elements are commonly referred to as the Shared Information/Data (SID) model in this guidebook.

NGOSS knowledge elements can be viewed in many different ways as shown in the figure below. A business process analyst may be interested in a business view of the knowledge elements. For example, the definition of a business entity used by a process. From a systems point of view, a contract designer may desire to know the operations that act on a business entity. From an implementation point of view a component builder may be interested in a view of the realized information model.

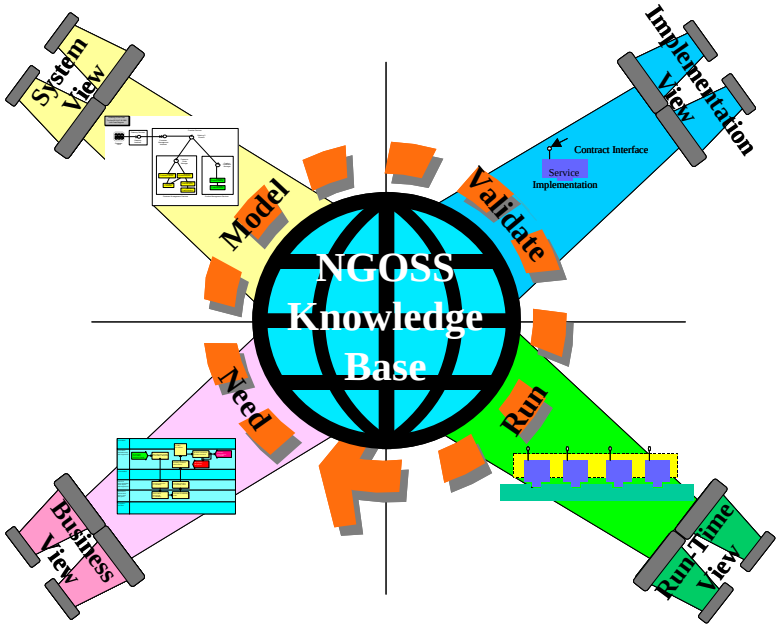


Figure 1 - Views of the NGOSS Knowledge Base

This document, Shared Information/Data Model, Concepts and Principles, and Domains covers the following topics:

- Concepts and definitions key to understanding SID business view content

- SID framework used to model and organize SID business view content

The detailed SID business view content can be found in the associated GB922 Addenda.

This guidebook provides an insight into the organizing framework for the contents of the SID model business view, one of the three views referred to above. A similar guidebook, GB926, has been developed to provide an insight into the SID model system view.

A similar guidebook for the implementation view has been deemed to be out of scope for this version of the SID deliverable.

The SID model not only satisfies the NGOSS information and data needs, but also satisfies another need – a mechanism to bring the business and IT communities into a closer understanding.

For many years the eTOM, and its predecessor the TOM, have provided a business process reference framework and common business process vocabulary. This framework and vocabulary have provided the communications and information industry enterprises an effective way to organize their business processes and communicate with each other.

The Shared Information/Data (SID) business view model can be viewed as a companion model to the eTOM, in that it provides an information/data reference model and a common information/data vocabulary from a business entity perspective. The business view model uses the concepts of domains and aggregate business entities (or sub-domains) to categorize business entities, so as to reduce duplication and overlap. Based on data affinity concepts, the categorization scheme is necessarily layered, with each layer identifying in more detail the "things" associated with the immediate parent layer. This partitioning of the SID business view model also allows distributed work teams to build out the model definitions while minimizing the flow-on impacts across the model.

Teamed with the eTOM, the SID model provides enterprises with not only a process view of their business but also an entity view. That is to say, the SID provides the definition of the 'things' that are to be affected by the business processes defined in the eTOM. The SID and eTOM in combination offer a way to explain 'how' things are intended to fit together to meet a given business need. It should be noted that while both the eTOM process framework and the SID business view model are layered, there is not necessarily a one-one relationship between the layers in each model, i.e., eTOM Level 3 process elements do not only have relationships assigned to SID Level 3 ABEs.

The relationship between the SID and the eTOM is outlined in more detail in Chapter 4. However, in brief, two sorts of relationships are identified – primary and secondary.

The primary relationship identifies the element of the eTOM process framework, which is responsible for creating instances of the SID business entity. The presumption is that only one primary relationship exists between any SID business entity and an eTOM process element. In other words an enterprise should only use one process to create and delete instances of a specific business entity, to reduce the risks of misaligned and/or non-unique information within the enterprise. This relationship underpins the concept of the single database of record or master database.

Secondary relationships are assigned between eTOM process elements that use the information contained in the instantiated SID business entities as part of their operation. There can be many secondary relationships identified, and this simply represents the reality that many enterprise processes rely on the same shared information, i.e. customer information is used by many business processes in different ways, but without changing the source information.

1. Introduction

1.1. SID Business View Overview

The SID business view addresses the information and communication service industry's need for shared information/data definitions and models. The definitions in the business view focus on business entity definitions and associated attribute definitions. A business entity is a thing of interest to the business, while it's attributes are facts that further describe the entity. Together the definitions provide a business-oriented perspective of the information and data. When combined with business oriented UML class models, the definitions provide the business view of the information and data.

The content in the SID Business View is organized using the SID Model Framework. The SID framework was developed by the application of data affinity concepts to an enterprise's processes and data to derive a non-redundant view of the enterprise's, shared information and data. The result of this analysis is a layered framework, which partitions the shared information and data.

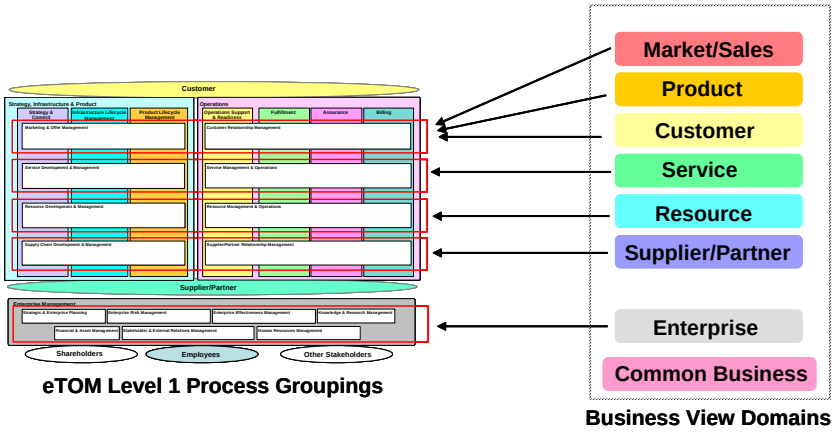


Figure 2 - SID Domains & eTOM Process Linkages

At the top layer, a set of domains is identified which are broadly aligned with the eTOM business process framework as shown in Figure 2. Within each domain there is a high degree of cohesion between the identified business entities, and loose coupling between different domains. This enables segmentation of the total business problem and allows resources to be focused on a particular domain of interest. It is envisioned that the use of the resultant business entity definitions within each domain, when used in conjunction with the eTOM business process framework, will provide a business view of the shared information and data.

Within each domain, further partitioning of the information is achieved through the identification of Aggregate Business Entities (ABE's). Figure 3 shows the currently identified Level 1 ABE's. As the SID business view is further expanded and defined, further partitioning of the ABE's occurs as more explicit business entities are identified.

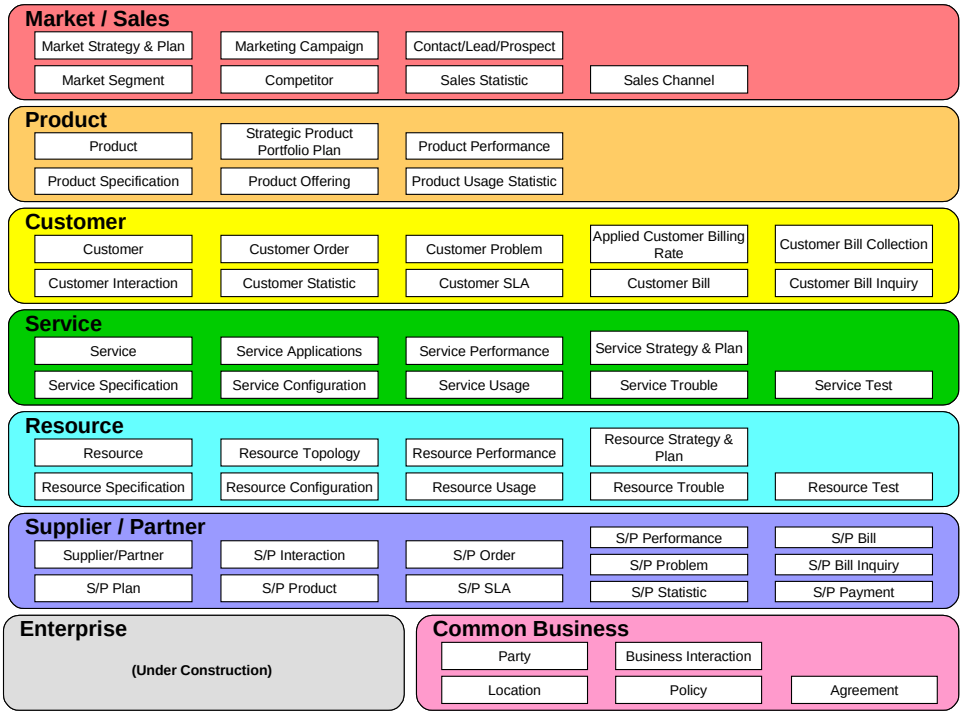


Figure 3 - SID Domains & Level1 ABEs

The business entities along with the attributes and relationships that characterize the entities provide a view of the model that is easily understood from a business perspective. The business entities, attributes, and relationships are presented progressively developed using textual descriptions in each SID addendum and in a consolidated Rational Rose UML-based model. The UML model provides an architecturally oriented business view of business entities, their attributes, and relationships to other business entities.

All domains are not yet covered in the SID model. As at the current revision of this document, only a subset of the identified domains has been defined. Domains included in this release are: Customer, Product (Product and Product Instance), Service, Resource (Physical and Logical), and Common Business Entities, such as Party, Location, Business Interaction, and Agreement that cross more than one domain. Domains not covered in this release include: Sales, Marketing, Supplier/Partner and Enterprise. Addenda to this document contain definitions of the business entities within each of these domains.

Domains and business entities contained in the SID model will expand as the SID project progresses. Within each domain, TM Forum project needs were used to help scope the business entities defined and modeled in this document. The other domains and further definition of the five included domains will be presented in subsequent versions of this document or in other SID documents.

The sources for the SID model include a variety of industry models, as well as models contributed by TM Forum member organizations. Where time permitted the contents of the SID model was mapped to the source models. Complete synthesis of the content of all models to find a common term for a concept was not possible. A best attempt was made to list cross-references to source models and synonyms for terms as part of the definition of the SID business entities.

1.2. Definitions

1.2.1. Domain

A **Domain** is a collection of Aggregate Business Entities associated with a specific management area. Domains that make up the SID Framework are consistent with eTOM level 0 concepts.

Domains are derived from an analysis of Process and Information Frameworks and have the following properties:

- Contain Business Entities that encapsulate both operations and corporate/enterprise information.
- Are relatively stable collections of corporate/enterprise data and associated operations (in comparison with processes)
- Provide for robustness of corporate/enterprise data formats.
- Provide clear responsibility and ownership.

1.2.2. Aggregate Business Entity

An **Aggregate Business Entity (ABE)** is a well-defined set of information and operations that characterize a highly cohesive, loosely coupled set of business entities.

1.2.3. Business Entity

A **Business Entity** represents something of interest to the business that may be tangible things (such as a Customer), active things (such as a Customer Order), or conceptual things (such as a Customer Account). Business entities are characterized by attributes and participate in relationships with other business entities. Business entity instances typically move through a well-defined life cycle.

1.2.4. Attribute

An **attribute** is a fact that describes a business entity.

1.2.5. Relationship

A **relationship** is an association of business interest between two business entities, or between a business entity and itself.

1.3. SID Documents

The SID business view model set of documents consists of the following documents:

Reference	Title	Included Aggregate Business Entities
GB922	**Business View Concepts, Principles, and Domains** (this document) describing the organizing structure of the SID Business View shared information/data, the relationship to other TMF deliverables, and views of the contents of the model.	
GB922 Addendum 1P	**Party**	Party
GB922 Addendum 1L	**Location**	Location
GB922 Addendum 1BI	**Business Interaction**	Business Interaction
GB922 Addendum 1A	**Agreement (including Service Level Agreement)**	Agreement
GB922 Addendum 1BT	**Base Types**	Base Types

GB922 Addendum 1T	**Calendar**	Calendar
GB922 Addendum 1J	**Project**	Project
GB922 Addendum 1POL	**Policy**	Policy
GB922 Addendum 1R	**Root Business Entities**	Root Business Entities
GB922 Addendum 2	**Customer**	Customer, Customer Order, Customer SLA
GB922 Addendum 3	**Product**	Product Specification, Product Offering, Product, Product Offering Price
GB922 Addendum 4SO	**Service**	Service Specification, Service
GB922 Addendum 4-QoS	**Service Quality of Service**	Quality of Service
GB922 Addendum 5PR	**Physical Resource**	Physical Resource
GB922 Addendum 5LR	**Logical Resource**	**Logical Resource**

1.4. Relationship to other TM Forum Documents

The relationships that the SID document has with a number of other TM Forum documents are shown below:

Document	Scope	Purpose
eTOM (GB921) (enhanced Telecom Operations Map)	Specifies service, network, element, and business management processes that are candidates for implementation using process flow components	Provides a high-level process framework describing typical transaction and data flows.

Figure 4- The relationship to other TM Forum documents

2. The SID Framework

2.1. Introduction

This chapter describes the SID Framework that is used to organize the SID model. The SID framework provides a high-level view into the SID entities as well as providing an organizing structure in which the SID business entities reside.

Figure 5 below shows how the domains contained within the SID Framework align with eTOM level one domains/concepts. Whether taking a process or information perspective, it is important to be viewing the same set of concepts. The alignment is also a necessary enabler when mapping eTOM processes to SID business entities.

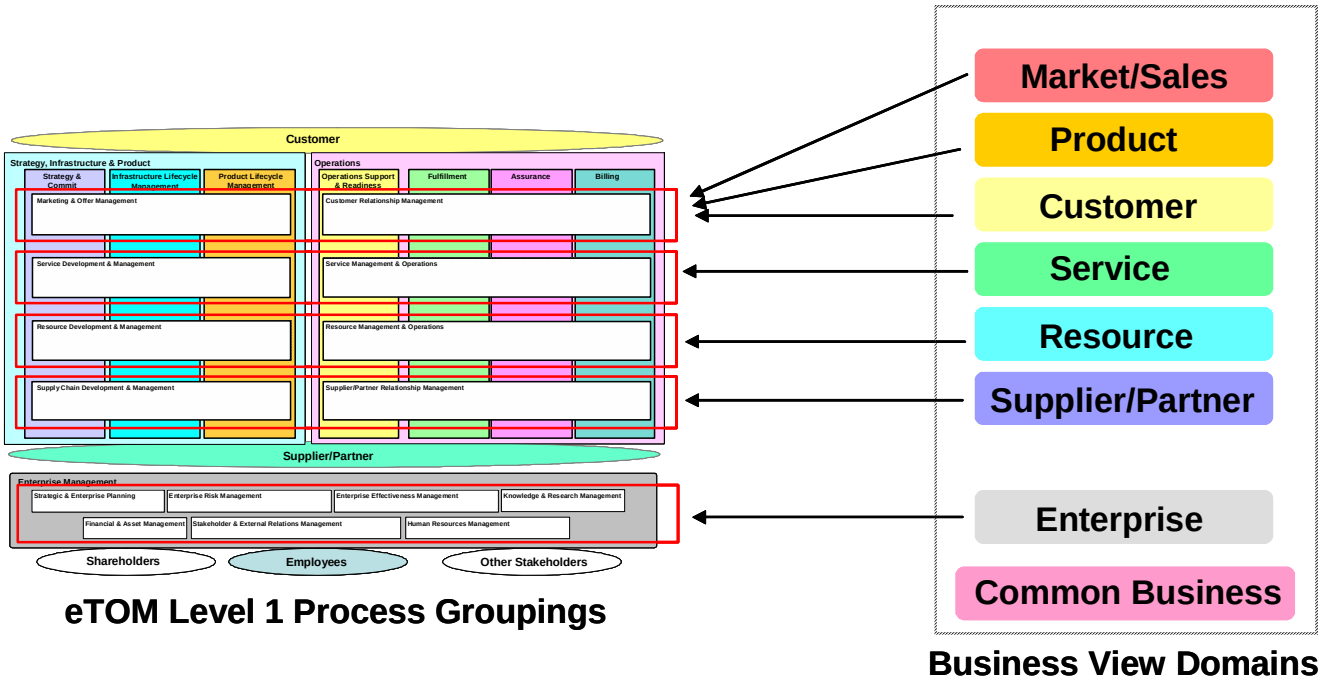


Figure 5- eTOM/SID Concepts/Domains

2.2. SID Framework – Level 1 ABEs

Figure 6 shows the SID Framework. The framework depicts the domains and level 1 aggregate business entities (ABE) contained within each domain.

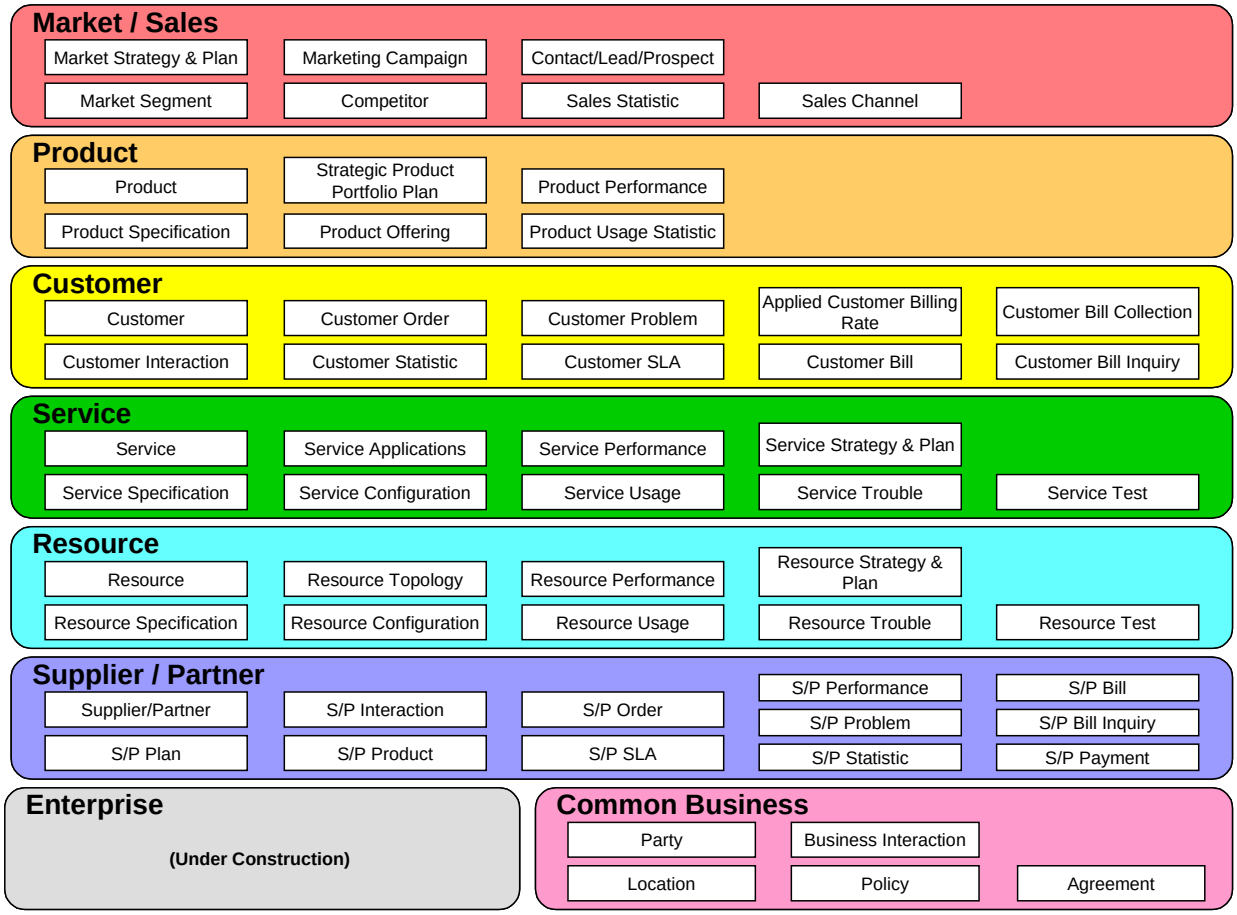


Figure 6 - SID Business View Framework

As the development of the SID model has progresed, subsequent levels of ABEs have been identified. As an example, Figure 7 below shows level 2 ABEs identified within the Service domain.

Service Domain Level 2

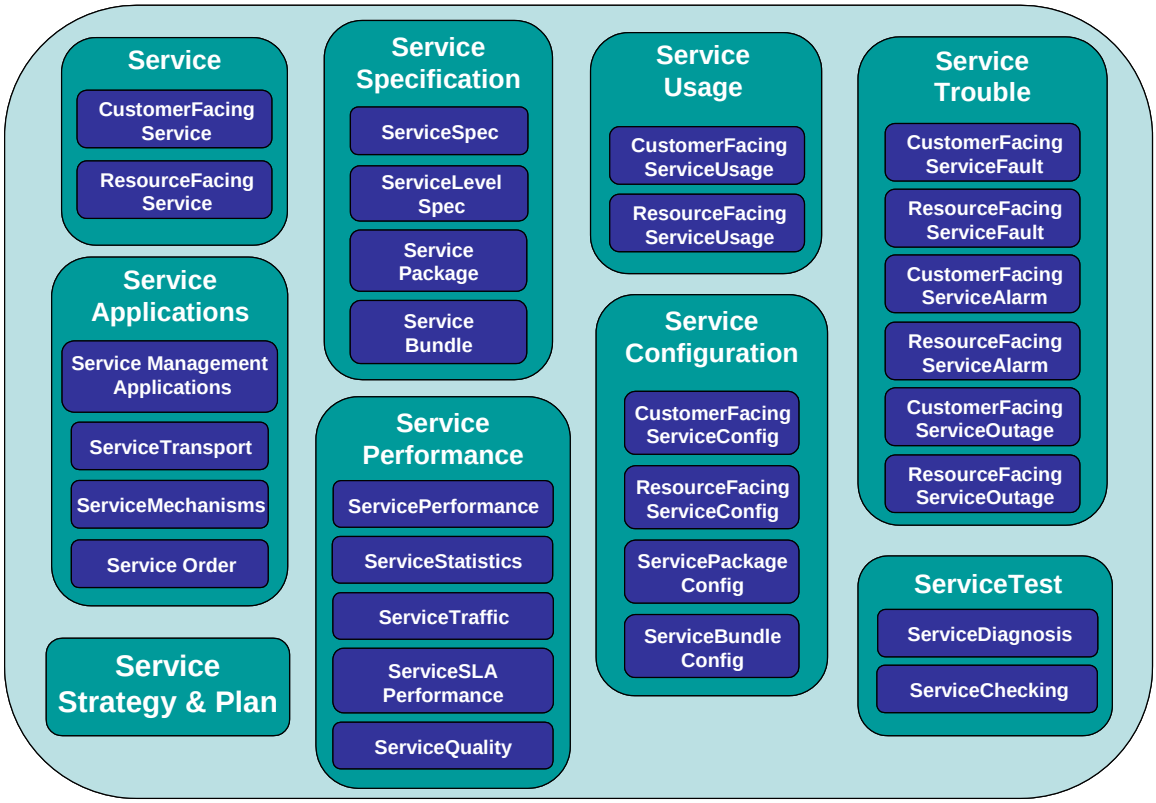


Figure 7 - Level Two ABEs identified in the Service Domain

Figure 8 and Figure 9 below provide an initial development view of level three ABEs with the Service domain.

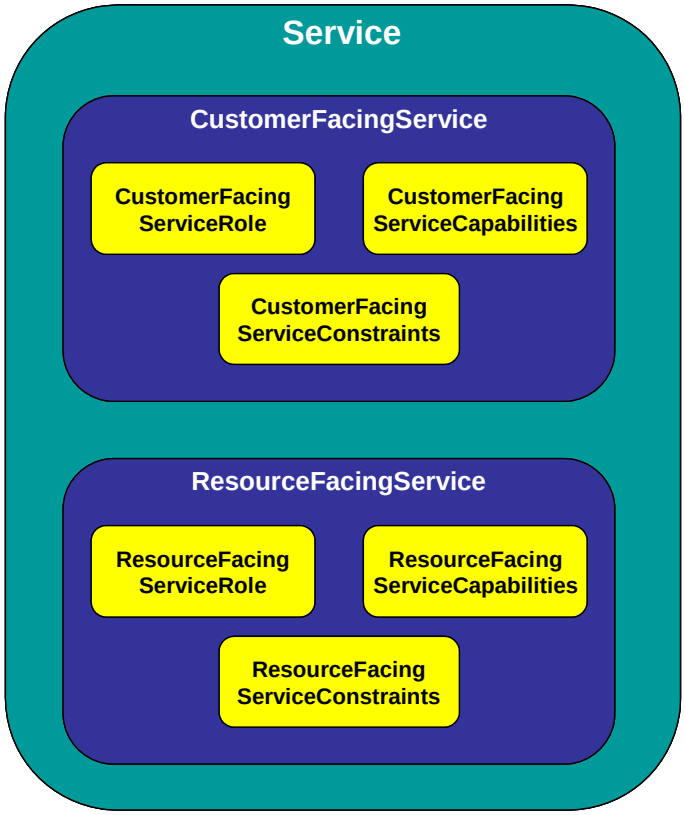


Figure 8 – Initial Level Three ABEs identified within the Service Level 1 ABE

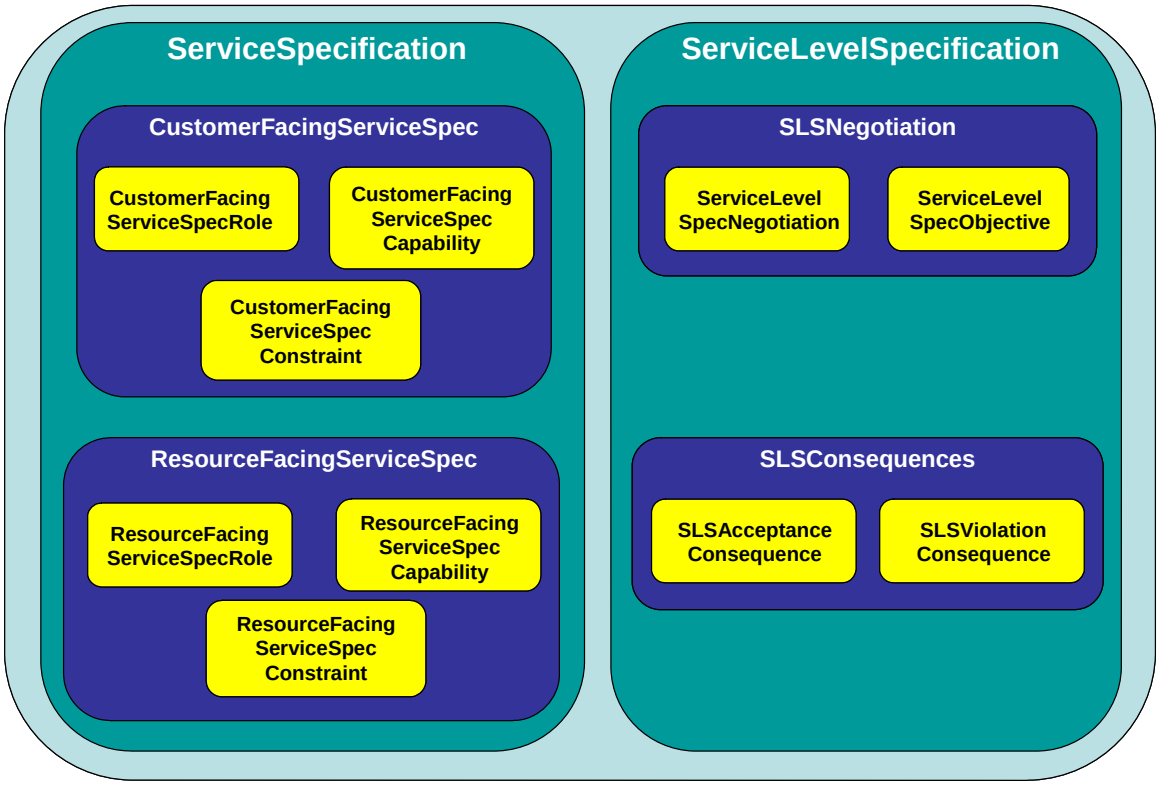


Figure 9 – Initial Service Level Three ABEs.

2.3. ABE Categorization

The ABE content and structure within each domain should be somewhat consistent. To ensure this, each ABE is aligned with a categorization pattern as described below. The pattern can also be used to confirm the completeness of each domain's ABE.

ABE categories include:

- Strategy and Plan
- Managed Entity
- Managed Entity Specification – A description of a ManagedEntity that might allow it to be built.
- Interaction – A communication with a ManagedEntity. This is a type of BusinessInteraction.
- Configuration – The internal structure of a ManagedEntity.

- Performance – The measure of ManagedEntity quality.
- Test – A means of interrogating a ManagedEntity in order to understand its state(s).
- Trouble – A problem associated with a ManagedEntity. Alarms, Outages and Faults are examples
- Price – The cost of a ManagedEntity.
- Usage – A period of time during which a ManagedEntity is in use.

Note: ABEs in Market/Sales and Common Business Domains have not yet been categorized.

	ABE Category									
	Managed Entity ABE			Management Entity ABE						
	Strategy and Plan	***Managed Entity***	***Managed Entity Specification***	***Interaction***	***Configuration***	***Performance***	***Test***	***Trouble***	***Financial***	***Usage***
Customer		Customer	Customer SLA	Customer Interaction, Customer Bill Inquiry	Customer Order	Customer Statistic,		Customer Problem	Customer Bill Collection, Applied Customer Billing Rate	Customer Bill
Product	Strategic Product Portfolio Plan	Product	Product Specification		Product Offering	Product Performance			Product Price (Product Offering Level 2)	Product Usage Statistic
Service	Service Strategy and Plan	Service, Service Application	Service Specification		Service Configuration	Service Performance	Service Test	Service Trouble		Service Usage
Resource	Resource Strategy and Plan	Resource	Resource Specification	Resource Communication	Resource Configuration, Resource Topology	Resource Performance	Resource Test	Resource Trouble		Resource Usage
Supplier/ Partner	Supplier / Partner Plan	Supplier / Partner, Supplier Partner Product	S/P SLA	Supplier / Partner Interaction, S/P Bill Inquiry	S/P Order	Supplier / Partner Performance, S/P Statistic		S/P Problem	S/P Payment	

Figure 10 - SID Framework Common Categories

Notes: 1. The absence of an ABE in a particular category means either that the domain does not exactly fit the pattern or that an ABE has not yet been identified for the category.

2. The Resource Communication ABE is currently under investigation for inclusion as a Resource domain ABE.

3. Relationship to eTOM Framework

3.4. Domain definitions, ABE Definitions, and Mapping to eTOM Level 2 Processes

3.4.1. Scope and Context

This section provides definitions for domains and ABEs, as well as a mapping of SID ABEs to eTOM Level 2 processes. It is based on the following sources:

- SID/eTOM Cross-referencing – Coupling of SID-components to eTOM level 2 processes, November 27, 2002, Roland Asztalos, Thomas Tenevall, Ki Consulting.
- SID eTOM Mapping (incomplete).xls, Wayne Sigley, Telstra.
- ABE Definitions for the Policy, Service, and Resource Domains, June 2003, John Strassner.
- Comments and input from core SID team, notably John Reilly and John Strassner.

3.4.2. Principles for Mapping

The following principles and delimitations are used for coupling SID ABEs to eTOM business processes.

- When possible, an ABE is coupled to only one level 2 eTOM process. This specific process is denoted as “primary”.
- Primary level 2 eTOM processes manage the complete life cycle of an ABE, by creating, reading, updating, and deleting (CRUD) entity instances contained within the ABE.
- Information is considered to flow both in the process layer as well as the systems (read ABE) layer
- If a one-to-one pairing is not attainable, an ABE is mapped to at most two level 2 eTOM processes. If an ABE is mapped to two level 2 eTOM processes, both level 2 processes are considered as primary.
- Processes requiring information feeds from ABEs or read an ABE’s entities to function properly are termed as “secondary”.

3.4.3. Regarding ABEs Supporting Two Level 2 eTOM Processes

Some ABEs are coupled to two or more level 2 eTOM processes. This occurs because of as the result of:

- *Duality phenomenon:* implies that an arbitrary ABE supports two primary level 2 eTOM processes, whereas the two primary processes belong to separate process areas. Thus, three combinations are available, [1] Operations & SIP, [2] Operations & EM or [3] SIP & EM. The duality phenomenon takes place because the ABE in question is regarded as unclear in terms of "core functionality", since it does not explicitly support only one primary level 2 eTOM process.
- *Ambiguity phenomenon:* is similar to the duality phenomenon, however, here an arbitrary ABE supports two primary level 2 eTOM processes which both belong to only one of the three available process areas.

These phenomena may have any number of causes, such as

- The ABE may be separated into two ABEs, each supporting a single level 2 eTOM process.
- There may be a missing ABE that supports one of the level 2 eTOM processes.
- There may be a missing eTOM level 2 process that aggregates the two processes.
- A mistake could have been made in the mapping.

The phenomena will be investigated and, if possible, resolved in subsequent phases of the SID project via the continued collaboration between the SID Model team and the eTOM team.

3.4.4. Market/Sales Domain

The **Market/Sales** Domain includes data and contract operations that support the sales and marketing activities needed to gain business from customers and potential customers. On the Sales side, this includes sales contacts/leads/prospects through to the sales-force and sales statistics. Market includes market strategy and plans, market segments, competitors and their products, through to campaign formulation.

Market/Sales ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
Market Segment Supports market segments, market statistics, and forecasts.	M&OM – SC	Market Strategy & Policy	Sales Development Product & Offer Portfolio Planning Product & Offer Development & Retirement Supply Chain Strategy & Planning

The **Market/Sales** Domain includes data and contract operations that support the sales and marketing activities needed to gain business from customers and potential customers. On the Sales side, this includes sales contacts/leads/prospects through to the sales-force and sales statistics. Market includes market strategy and plans, market segments, competitors and their products, through to campaign formulation.

Market/Sales ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
Market Strategy and Plan Supports the business plans and strategies on how to address the market with appropriate products and channels.	M&OM – SC	Market Strategy & Policy	Resource Strategy & Planning Supply Chain Strategy & Planning Product & Offer Portfolio Planning
Competitor Identifies other providers who compete in the same market segments, accumulates intelligence about the competitors, including products (price, Key Performance Indicators and so forth).	M&OM – SC	Market Strategy & Policy	Product & Offer Portfolio Planning Enterprise Performance Assessment
Marketing Campaign Supports marketing new or existing product offerings to identified target markets. For example, the launch of a pre-paid product with multiple promotions across distribution channels, market segments and so forth; a new campaign for an existing product; a re-launch of a campaign for an existing product.	M&OM – PLM	Product Marketing Communications & Promotion	CRM Support & Readiness Marketing Fulfillment Response Marketing Capability Delivery
Sales Statistics Maintains sales forecasts, new service requirements, customer needs, and customer education, as well as calcuating key performance indicators about Sales & Marketing revenue and sales channel performance.	CRM – OSR	CRM Support & Readiness	Market Strategy & Policy Product & Offer Portfolio Planning Sales Development
Sales Channel Keeps track of distribution channels and sales activities, sales quotas, sales contests, commission/bonus plans, commissions/bonuses, and maintains groups of individuals that make up the sales force.	M&OM – PLM	Sales Development	S/P Performance Management S/P Settlements & Billing Management Marketing Capability Delivery CRM Support & Readiness

The **Market/Sales** Domain includes data and contract operations that support the sales and marketing activities needed to gain business from customers and potential customers. On the Sales side, this includes sales contacts/leads/prospects through to the sales-force and sales statistics. Market includes market strategy and plans, market segments, competitors and their products, through to campaign formulation.

Market/Sales ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
Contact/Lead/Prospect Provides the ability to track sales leads through their life cycle up until the time the leads become customers, including lead and contact information, sales prospects, proposals made to potential customers, and the amount of potential revenue the leads represent in the form of a sales pipeline.	CRM – F	Marketing Fulfillment Response^ Selling^	

Notes:
^ Due to ABE ambiguity

3.4.5. Product Domain

The **Product** Domain is concerned with the lifecycle of products and information and contract operations related to products' lifecycle. The Domain contains Aggregate Business Entities that deal with the strategic portfolio plans, products offered, product performance, product usage statistics, as well as the product instances delivered to a customer.

Product ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
Strategic Product Portfolio Plan Is concerned with the plans of the product portfolio, which product offerings to make available to each market segment and the plans to development and deploy product offerings, as well as retirement of products.	M&OM – SC	Product & Offer Portfolio Planning	Market Strategy & Policy Product & Offer Development & Retirement
Product Specification Defines the functionality and characteristics of product offerings made available to the market.	M&OM – PLM	Product & Offer Development & Retirement	Product & Offer Capability Delivery Service Configuration & Activation SM&O Support & Readiness
Product Offering Represents tangible and intangible goods and services made available for a certain price to the market in the form of product catalogs. This ABE is also responsible for targeting market	M&OM – PLM	Product & Offer Development & Retirement	Marketing Fulfillment Response Product Marketing Communications & Promotion

The **Product** Domain is concerned with the lifecycle of products and information and contract operations related to products' lifecycle. The Domain contains Aggregate Business Entities that deal with the strategic portfolio plans, products offered, product performance, product usage statistics, as well as the product instances delivered to a customer.

Product ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
segments based on the appropriate market strategy.			Product & Offer Capability Delivery
			Selling
			Order Handling
Product Represents an instance of a product offering subscribed to by a party, such as a customer, the place where the product is in use, as well as configuration characteristics, such as assigned telephone numbers and internet addresses. The Product ABE also tracks the services and/or resources through which the product is realized.	CRM – F	Order Handling	Selling
			Service Configuration & Activation
			Problem Handling
			Customer QoS/SLA Management
			Billing & Collections Management
			Service Problem Management
			Service Quality Management
			Service & Specific Instance Rating
			SM&O Support & Readiness
Product Usage Statistic Represents usage trends of products associated with various demographics, such as market segment.	CRM – OSR	CRM Support & Readiness	Product & Offer Development & Retirement
			Problem Handling
			Customer QoS/SLA Management
			Enterprise Performance Assessment
Product Performance The Product Performance ABE handles product performance goals, the results of end-to-end product performance assessments, and the comparison of assessments against goals. The	CRM – OSR	CRM Support & Readiness	Product & Offer Development & Retirement
			Customer QoS/SLA Management

The **Product** Domain is concerned with the lifecycle of products and information and contract operations related to products' lifecycle. The Domain contains Aggregate Business Entities that deal with the strategic portfolio plans, products offered, product performance, product usage statistics, as well as the product instances delivered to a customer.			
Product ABEs	**Primary Vertical eTOM Process Groupings**	**Primary eTOM Level 2 Processes**	**Secondary eTOM Level 2 Processes**
results may include the identification of potential capacity issues.			Service Quality Management
			Resource Performance Management
			Enterprise Performance Assessment

3.4.6. Customer Domain

The **Customer** Domain includes all data and contract operations associated with individuals or organizations that obtain products from an enterprise, such as a service provider. It represents of all types of contact with the customer, the management of the relationship, and the administration of customer data. The Customer Domain also includes data and contract operations related to the customer bills for products, collection of payment, overdue accounts, and the billing inquiries and adjustments made as a result of inquiries.			
Customer ABEs	**Primary Vertical eTOM Process Groupings**	**Primary eTOM Level 2 Processes**	**Secondary eTOM Level 2 Processes**
Customer Is the focus for the Customer domain. Customer data is the enterprise's knowledge of the customer and accounts held by a customer.	CRM – F	Selling	Product Marketing Communications & Promotion
			Order Handling
			Problem Handling
			Customer QoS/SLA Management
			Billing & Collections Management
			Retention & Loyalty
			Customer Interface Management
Customer Interaction Represents communications with customers, and the translation of customer requests and inquiries into appropriate "events" such as the creation of an customer order, the creation of a	CRM – FAB	Customer Interface Management	Selling
			Order Handling
			Problem Handling

The **Customer** Domain includes all data and contract operations associated with individuals or organizations that obtain products from an enterprise, such as a service provider. It represents of all types of contact with the customer, the management of the relationship, and the administration of customer data. The Customer Domain also includes data and contract operations related to the customer bills for products, collection of payment, overdue accounts, and the billing inquiries and adjustments made as a result of inquiries.

Customer ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
customer bill inquiry, or the creation of a customer problem.			Customer QoS/SLA Management
			Billing & Collections Management
			Retention & Loyalty
Customer Statistic Represents the analysis of customer usage patterns, customer profitability statistics and churn and retention statistics.	CRM – FAB	Retention & Loyalty	CRM Support & Readiness
			Selling
			Order Handling
			Problem Handling
			Customer QoS/SLA Management
			Billing & Collections Management
Customer Problem Focuses on technical assistance and problem handling for customers.	CRM – A	Problem Handling	Retention & Loyalty
Customer SLA Is a special case of the Service Level Agreement ABE where an involved party in the agreement is a Customer. See the Agreement ABE in the Common Business Entity Domain for details.	CRM – A	Customer QoS/SLA Management	Selling
			Retention & Loyalty
			Billing & Collections Management
Customer Order Handles single customer orders and the various types thereof, such as regulated and non-regulated orders.	CRM – F	Order Handling	Retention & Loyalty
			Service Configuration & Activation
Customer Bill Handles real-time and non-real-time Call Detail Records (CDRs) and other sources of data that result in invoice items. The Customer Bill ABE also represents the format of a bill, schedule the production of bills, customer invoicing profiles, all the financial calculations necessary to deter-mine the total of the bill (except for rating and rating discounts), and credits and adjustments to bills.	CRM – B	Billing & Collections Management	Retention & Loyalty
			Service & Specific Instance Rating

The **Customer** Domain includes all data and contract operations associated with individuals or organizations that obtain products from an enterprise, such as a service provider. It represents of all types of contact with the customer, the management of the relationship, and the administration of customer data. The Customer Domain also includes data and contract operations related to the customer bills for products, collection of payment, overdue accounts, and the billing inquiries and adjustments made as a result of inquiries.

Customer ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
Applied Customer Billing Rates Deals with the correlation of related usage for subsequent rating, rates applied to the usage (both regulated and non-regulated), discounts to usage, and any taxes due on the rated usage.	SM&O – B	Service & Specific Instance Rating	Retention & Loyalty Billing & Collections Management
Customer Bill Collections Handles credit violations, actions for overdue debts, and facility billing audits.	CRM – B	Billing & Collections Management	Retention & Loyalty Financial Management
Customer Bill Inquiry Represents invoice inquiries associated with invoices sent to customers and handles disputes and adjustments on individual charges, invoices, and accounts.	CRM – B	Billing & Collections Management	Retention & Loyalty

3.4.7. Service Domain

The **Service** Domain consists of a set of layered ABEs that are used to manage the definition, development, and operational aspects of Services provided by an NGOSS system. Entities in this domain support various eTOM processes that deal with the definition, development and management of services offered by an enterprise. This includes agreement on Service levels to be offered, deployment and configuration of Services, management of problems in Service installation, deployment, usage, or performance, quality analysis, and rating. Finally, this domain also includes entities to perform planning for future offerings, service enhancement or retirement, and capacity.

Service ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
Service Specification The Service Specification ABE contains entities that define the invariant characteristics and behavior of both types of Service entities. This enables multiple instances to be derived from a single specification entity. In this derivation, each instance will use the invariant characteristics and behavior defined in its associated template. Entities in this ABE focus on adherence to	SD&M – PLM	Service Development & Retirement	Service Capability Delivery Service Configuration & Activation Service Problem Management Service Quality Management

The **Service** Domain consists of a set of layered ABEs that are used to manage the definition, development, and operational aspects of Services provided by an NGOSS system. Entities in this domain support various eTOM processes that deal with the definition, development and management of services offered by an enterprise. This includes agreement on Service levels to be offered, deployment and configuration of Services, management of problems in Service installation, deployment, usage, or performance, quality analysis, and rating. Finally, this domain also includes entities to perform planning for future offerings, service enhancement or retirement, and capacity.

Service ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
standards, distinguishing features of a Service, dependencies (both physical and logical, as well as on other services), quality, and cost. In general, entities in this ABE enable Services to be bound to Products and run using Resources.			Service & Specific Instance Rating
			SM&O Support & Readiness
Service The Service ABE contains entities that are used to represent both customer-facing and resource-facing types of services. Entities in this ABE provide different views to examine, analyze, configure, monitor and repair Services of all types. Entities in this ABE are derived from Service Specification entities.	SM&O – F	Service Configuration & Activation	Service Capability Delivery
			Service Problem Management
			Service Development & Retirement
			SM&O Support & Readiness
			Service Quality Management
			Service & Specific Instance Rating
Service Applications The Service Applications ABE contains entities that define different types of Services implemented as applications. There are at least three different types of entities in this domain, which form a hierarchy of applications. The simplest is a coordinated set of Service Mechanisms, such as the ability to fine-tune QoS. The next level of application is a type of transport, such as a VPN, that uses one or more Service Mechanisms to provide basic functionality to a PartyRole. The highest level of application is a management application that uses Transport(s) and Mechanisms to provide an end-to-end manageable application, such as distance learning or VoIP.	SM&O – F	Service Configuration & Activation	Service Problem Management
			Service Capability Delivery
			Service Development & Retirement
			Service Quality Management

The **Service** Domain consists of a set of layered ABEs that are used to manage the definition, development, and operational aspects of Services provided by an NGOSS system. Entities in this domain support various eTOM processes that deal with the definition, development and management of services offered by an enterprise. This includes agreement on Service levels to be offered, deployment and configuration of Services, management of problems in Service installation, deployment, usage, or performance, quality analysis, and rating. Finally, this domain also includes entities to perform planning for future offerings, service enhancement or retirement, and capacity.

Service ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
			Service & Specific Instance Rating
Service Configuration The Service Configuration ABE contains entities that are used to represent and manage configurations of CustomerFacingService and ResourceFacingService entities. This set of entities also provides details on how the configuration of each of these types of Services can be changed. The entities in this ABE depend on entities in the Resource Domain, which provide the physical and logical infrastructure for implementing a Service. They all define dependencies between a higher-level Service and any sub-Services that are used by the higher-level Service.	SM&O – F	Service Configuration & Activation	Service Capability Delivery
			SM&O Support & Readiness
			Resource Provisioning
Service Performance The Service Performance ABE collects, correlates, consolidates, and validates various performance statistics and other operational characteristics of customer and resource facing service entities. It provides a set of entities that can monitor and report on performance. Each of these entities also conducts network performance assessment against planned goals, performs various aspects of trend analysis, including error rate and cause analysis and Service degradation. Entities in this ABE also manage the traffic generated by a Service, as well as traffic trend analysis. This is important for newer technologies that separate data, control and management functions for a given Service.	SM&O – A	Service Quality Management	Service Problem Management
			SM&O Support & Readiness
			Service Development & Retirement
			Resource Performance Management
Service Test The Service Test ABE contains entities that are used to test customer and resource facing service entities. These entities are usually invoked during installation, as a part of trouble diagnosis, or after trouble repair has been completed.	SM&O – F	Service Configuration & Activation	Service Problem Management
			Service Quality Management

The **Service** Domain consists of a set of layered ABEs that are used to manage the definition, development, and operational aspects of Services provided by an NGOSS system. Entities in this domain support various eTOM processes that deal with the definition, development and management of services offered by an enterprise. This includes agreement on Service levels to be offered, deployment and configuration of Services, management of problems in Service installation, deployment, usage, or performance, quality analysis, and rating. Finally, this domain also includes entities to perform planning for future offerings, service enhancement or retirement, and capacity.

Service ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
Service Trouble The Service Trouble ABE manages faults, alarms, and outages from a Service point-of-view. This is then correlated to trouble tickets, regardless of whether the cause is physical or logical. Other entities in this ABE are used to direct the recovery from each of these three types of problems. They provide the ability to associate Resource faults and alarms to degradation and outages of Services that run on those Resources. These functions are independent of the Resources and technologies used to build the Service. A third set of entities in this ABE is used to differentiate between customer-reported problems and network-induced problems.	SM&O – A	Service Problem Management	SM&O Support & Readiness Problem Handling Service Quality Management Resource Trouble Management
Service Usage The Service Usage ABE collects Service consumption data, and generates Service usage records, for use by other business entities. The entities in this ABE provide physical, logical, and network usage information.	SM&O – B	Service & Specific Instance Rating	Resource Data Collection & Processing Service Quality Management Service Development & Retirement
Service Strategy & Plan The Service Strategy and Plan ABE contains entities that are used to address the need for enhanced or new Services, as well as the retirement of existing Services, by the enterprise. These entities have a strong dependency to both entities in the Resource and Product domains. Resulting efforts, such as deciding what Resources to use to host a Service, or what Services are used to support new Product Specifications, are also supported, as are service demand forecasts.	SD&M – SC	Service Strategy & Planning	Product & Offer Portfolio Planning Service Capability Delivery Service Development & Retirement Resource Strategy & Planning

3.4.8. Resource Domain

The **Resource** Domain consists of a set of layered ABEs that are used to manage the definition, development, and operational aspects of the information computing and processing infrastructure of an NGOSS system. It supports the eTOM processes that deal with the definition, development and management of the infrastructure of an enterprise. This includes the components of the infrastructure as well as Products and Services that use this infrastructure.

The Resource Domain has three important objectives. The first is to associate Resources to Products and Services, and provide a detailed enough set of Resource entities (organized as ABEs) to facilitate this association. The second is to ensure that Resources can support and deliver Services offered by the enterprise. Management of resources involves planning, configuration, and monitoring to capture performance, usage, and security information. This also includes the ability to reconfigure Resources in order to fine tune performance, respond to faults, and correct operational deficiencies in the infrastructure. Resources also provide usage information which is subsequently aggregated to the customer level for billing purposes. The final objective of the Resource domain is to enable strategy and planning processes to be defined. Entities in the Resource domain may be associated with processes that involve planning new and/or enhanced Services, or even the retirement of Services, offered by the Enterprise.

Resource ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
Resource Strategy & Plan The Resource Plan ABE is used to plan networks and resource elements both initially and for growth. It will coordinate both logical and physical resource growth. Inputs are budgets from business sources, service forecasts, current and projected network utilization, new technologies, and retiring technologies. It handles the lifecycle (installation, modification, removal, and retirement) for both logical and physical resources.	RD&M – SC	Resource Strategy & Planning	Resource Development & Retirement Service Strategy & Planning Resource Capability Delivery RM&O Support & Readiness
Resource Specification The Resource Specification ABE contains entities that define the invariant characteristics and behavior of each type of Resource entities. This enables multiple instances to be derived from a single specification entity. In this derivation, each instance will use the invariant characteristics and behavior defined in its associated template.	RD&M – PLM	Resource Development & Retirement	RM&O Support & Readiness Resource Provisioning Resource Capability Delivery Resource Trouble Management Resource Performance Management Resource Data Collection & Processing
Resource The Resource ABE contains entities that are used to represent the various aspects of a Resource. This includes four sets of entities that represent: the physical and logical aspects of a Resource; show how to aggregate such resources into aggregate entities that have physical and logical characteristics and behavior; and show how to	RM&O – F	Resource Provisioning	RM&O Support & Readiness Resource Trouble Management Resource Capability Delivery

The **Resource** Domain consists of a set of layered ABEs that are used to manage the definition, development, and operational aspects of the information computing and processing infrastructure of an NGOSS system. It supports the eTOM processes that deal with the definition, development and management of the infrastructure of an enterprise. This includes the components of the infrastructure as well as Products and Services that use this infrastructure.

The Resource Domain has three important objectives. The first is to associate Resources to Products and Services, and provide a detailed enough set of Resource entities (organized as ABEs) to facilitate this association. The second is to ensure that Resources can support and deliver Services offered by the enterprise. Management of resources involves planning, configuration, and monitoring to capture performance, usage, and security information. This also includes the ability to reconfigure Resources in order to fine tune performance, respond to faults, and correct operational deficiencies in the infrastructure. Resources also provide usage information which is subsequently aggregated to the customer level for billing purposes. The final objective of the Resource domain is to enable strategy and planning processes to be defined. Entities in the Resource domain may be associated with processes that involve planning new and/or enhanced Services, or even the retirement of Services, offered by the Enterprise.

Resource ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
represent networks, sub-networks, network components, and other related aspects of a network.			Resource Performance Management
			Resource Data Collection & Processing
Resource Topology The Resource Topology ABE contains entities that define physical, logical, and network topological information. This information is critical for assessing the current state of the network, as well as providing information on how to fix problems, tune performance, and in general work with the network (both as a whole and with its components). Each of these topological views provides its own physical, logical, or network related information that can be used to manage one or more layers in a layered network.	RD&M – ILM	Resource Capability Delivery	Resource Development & Retirement
			RM&O Support & Readiness
Resource Configuration The Resource Configuration ABE contains entities that are used to represent and manage configurations of PhysicalResource, LogicalResource, and CompoundResource entities. It should be noted that configurations themselves are managed entities. This set of entities also provides details on how the configuration of each of these types of resources is changed in order to meet product, service, and resource requirements, including activation, deactivation, and testing. Areas covered include verifying resource availability, reservation and allocation of resource instances, configuring and activating physical and logical resource instances, testing and updating of the resource inventory database.	RM&O – F	Resource Provisioning	Resource Capability Delivery
			RM&O Support & Readiness

The **Resource** Domain consists of a set of layered ABEs that are used to manage the definition, development, and operational aspects of the information computing and processing infrastructure of an NGOSS system. It supports the eTOM processes that deal with the definition, development and management of the infrastructure of an enterprise. This includes the components of the infrastructure as well as Products and Services that use this infrastructure.

The Resource Domain has three important objectives. The first is to associate Resources to Products and Services, and provide a detailed enough set of Resource entities (organized as ABEs) to facilitate this association. The second is to ensure that Resources can support and deliver Services offered by the enterprise. Management of resources involves planning, configuration, and monitoring to capture performance, usage, and security information. This also includes the ability to reconfigure Resources in order to fine tune performance, respond to faults, and correct operational deficiencies in the infrastructure. Resources also provide usage information which is subsequently aggregated to the customer level for billing purposes. The final objective of the Resource domain is to enable strategy and planning processes to be defined. Entities in the Resource domain may be associated with processes that involve planning new and/or enhanced Services, or even the retirement of Services, offered by the Enterprise.

Resource ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
Resource Trouble The Resource Trouble ABE manages problems found in allocated resource instances, regardless of whether the problem is physical or logical. Entities in this ABE detect these problems, act to determine their root cause, resolve these problems and maintain a history of the activities involved in diagnosing and solving the problem. Detecting problems can be done via software (e.g. responding to an alarm) and/or by hardware (e.g. a measurement or probe) and/or manually (e.g. visual inspection). This includes tracking, reporting, assigning people to fix the problem, testing and verification, and overall administration of repair activities.	RM&O – A	Resource Trouble Management	RM&O Support & Readiness Resource Performance Management Service Problem Management
Resource Test The Resource Test ABE contains entities that are used to test PhysicalResources, LogicalResources, CompoundResources, and Networks. These entities are usually invoked during installation, as a part of trouble diagnosis, or after trouble repair has been completed.	RM&O – F	Resource Provisioning	Resource Capability Delivery Resource Trouble Management Resource Performance Management
Resource Performance The Resource Performance ABE collects, correlates, consolidates, and validates various performance statistics and other operational	RM&O – AB	Resource Performance Management	RM&O Support & Readiness

The **Resource** Domain consists of a set of layered ABEs that are used to manage the definition, development, and operational aspects of the information computing and processing infrastructure of an NGOSS system. It supports the eTOM processes that deal with the definition, development and management of the infrastructure of an enterprise. This includes the components of the infrastructure as well as Products and Services that use this infrastructure.

The Resource Domain has three important objectives. The first is to associate Resources to Products and Services, and provide a detailed enough set of Resource entities (organized as ABEs) to facilitate this association. The second is to ensure that Resources can support and deliver Services offered by the enterprise. Management of resources involves planning, configuration, and monitoring to capture performance, usage, and security information. This also includes the ability to reconfigure Resources in order to fine tune performance, respond to faults, and correct operational deficiencies in the infrastructure. Resources also provide usage information which is subsequently aggregated to the customer level for billing purposes. The final objective of the Resource domain is to enable strategy and planning processes to be defined. Entities in the Resource domain may be associated with processes that involve planning new and/or enhanced Services, or even the retirement of Services, offered by the Enterprise.

Resource ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
characteristics of Resource entities. It provides a set of entities that can monitor and report on performance. The entities in this ABE provide physical, logical, and performance information. Each of these entities also conducts network performance assessment against planned goals, performs various aspects of trend analysis, including error rate and cause analysis and Resource degradation. Entities in this ABE also manage traffic in a Resource. This includes statistics defining Resource loading, and traffic trend analysis.			Resource Development & Retirement
			Resource Data Collection & Processing
Resource Usage The Resource Usage ABE collects Resource consumption data, and generates Resource usage records, for use by other business entities. The entities in this ABE provide physical, logical, and network usage information.	RM&O – B	Resource Data Collection & Processing	Billing & Collections Management
			Service & Specific Instance Rating

3.4.9. Supplier/Partner Domain

The **SupplierPartner** Domain includes all SupplierPartner-oriented data and contract operations associated with a SupplierPartner. Its scope encompasses, planning of strategies vs. SupplierPartners, handling of all types of contact with the SupplierPartner, the management of the relationship, and the administration of SupplierPartner data. The SupplierPartner Domain also includes data and contract operations related to the SupplierPartner Bills, disputes and inquiries.

SupplierPartner ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
SupplierPartner Plan The SupplierPartner Plan ABE handles the strategies and the planning of the business relation with the SupplierPartner with input from other ABEs, such as MarketSales, S/P Performance and Competitor Analysis.	SCD&M – SC	Supply Chain Strategy & Planning	Market Strategy & Policy
			Service Strategy & Planning
			Resource Strategy & Planning
			Sales Development
			Strategic Business Planning
			S/P Performance Management
			Business Development
			Enterprise Performance Assessment
SupplierPartner Is the focus for the SupplierPartner Domain. SupplierPartner represents the enterprise's knowledge of the SupplierPartner, their accounts and the relations the Enterprise has with the SupplierPartner. It also contains all Supplier Partner agreements and negotiations.	SCD&M – ILM and/or SCD&M – PLM and/or S/PRM –S&R	Supply Chain Capability Delivery^ *	Business Development
		Supply Chain Development & Change Management^ *	Service Configuration & Activation
		S/PRM Support & Readiness*	S/P Problem Reporting & Management
			S/P Settlements & Billing Management
SupplierPartner Interaction Represents communication with SupplierPartners, and translating SupplierPartner requests and inquiries into appropriate "events". *Initiated by the Service Provider as a Customer* such as the requisition for the Wholesale Service, the quotation order for	S/PRM – FAB	S/P Interface Management	Supply Chain Development & Change Management
			S/PRM Support & Readiness

The **SupplierPartner** Domain includes all SupplierPartner-oriented data and contract operations associated with a SupplierPartner. Its scope encompasses, planning of strategies vs. SupplierPartners, handling of all types of contact with the SupplierPartner, the management of the relationship, and the administration of SupplierPartner data. The SupplierPartner Domain also includes data and contract operations related to the SupplierPartner Bills, disputes and inquiries.

SupplierPartner ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
the End-Customer instance, the quotation update Confirmation, requisition for Service Instance Problem reporting or *Inititiated by the Supplier_Partner* such as the proposal for a Wholesale Service Purchase, the quotation proposal, the quotation update proposal, the requisition confirmation the order executed and the problem report answer.			S/P Requisition Management
			S/P Problem Reporting & Management
			S/P Settlements & Billing Management
SupplierPartner Product The SupplierPartner Product ABE represents the Service Provider's knowledge of the Products that the Service Provider may order from the SupplierPartner	SCD&M – ILM	Supply Chain Development & Change Management	S/P Requisition Management
			Product & Offer Development & Retirement
			Service Development & Retirement
			Resource Development & Retirement
			Supply Chain Capability Delivery
SupplierPartner Problem Deals with problem associated with the Supplier Partner such as a request for technical assistance, Bill disputes etc.	S/PRM – A	S/P Problem Reporting & Management	Problem Handling
			Service Problem Management
			S/PRM Support & Readiness
			S/P Performance Management
SupplierPartner SLA Manages SLA Specification that contain standard components used to negotiate and define SLAs with SupplierPartners both for the Wholesale Service SP-SP *and* the End-Customer instances within the Wholesale service. The SupplierPartner SLA ABE also supports the negotiation and establishment of SLA instances. It also measures performance against the SLAs, and handles inquiries (both internal & external) about SLAs and the performance of Supplier Partner service with respect to the Supplier Partner SLA. It also handles SLA violations and the notification of the appropriate parties regarding violations. The ABE also identifies discount reasons for SLA violations and notifies S/P Payment of the discount reasons. The ABE also reads	SCD&M – ILM and/or S/PRM – S&R	Supply Chain Capability Delivery*	S/P Problem Reporting & Management
		S/PRM Support & Readiness*	Supply Chain Capability Delivery
			S/P Requisition Management

The **SupplierPartner** Domain includes all SupplierPartner-oriented data and contract operations associated with a SupplierPartner. Its scope encompasses, planning of strategies vs. SupplierPartners, handling of all types of contact with the SupplierPartner, the management of the relationship, and the administration of SupplierPartner data. The SupplierPartner Domain also includes data and contract operations related to the SupplierPartner Bills, disputes and inquiries.

SupplierPartner ABEs	Primary Vertical eTOM Process Groupings	Primary eTOM Level 2 Processes	Secondary eTOM Level 2 Processes
the notifications from the SupplierPartner, analyse the data and identifies the rigth party to deal with the data and sends out a notification.			S/P Performance Management
SupplierPartner Performance Reads the SupplierPartners performance data for each End-Customer instance running in the infrastructure of the Service Provider and for which performance parameters are established by the Supplier/Partner SLA ABE. Only data that lies above the agreed tresholds and that may jeopardise the Service Providers service to the End Customer is sent by the SupplierPartner. The performance data from the SupplierPartner is analysed and redirected to the correct Service Mgmt process/actor for them to decide on appropriate actions. Based on SLA violation persistance of supplier/patners, their relation with the organizaton is terminated.	S/PRM – A	S/P Performance Management	Service Problem Management
			Service Quality Management
			S/PRM Operations Support & Readiness
			Supply Chain Development & Change Management
			S/P Problem Reporting & Management
SupplierPartner Order Handles single SupplierPartner orders and supervises various types thereof. This includes the quotation and order for the SupplierPartner Wholesale Service as well as the quotation and order for the EndCustomer instances within the Wholesale service.	CRM – F and/or S/PRM – F	Order Handling^	Supply Chain Development & Change Management
		S/P Requisition Management^	S/P Interface Management
			S/PRM Support & Readiness
SupplierPartner Bill Monitors the collection process and initiates different actions for overdue bills. It also handles credit violations. The ABE also provides the functionality to register disputes and adjustments on individual charges, invoices, and accounts.	S/PRM – B	S/P Settlements & Billing Management	S/P Performance Management
			Service & Specific Instance Rating
SupplierPartner Bill Inquiry The Supplier Partner Bill Inquiry ABE monitors the bill Disputes towards the Supplier Partner.	S/PRM – B	S/P Settlements & Billing Management	S/P Performance Management
			S/PRM Support & Readiness
Supplier Partner Payment	S/PRM – B	S/P Settlements	S/P Performance

The **SupplierPartner** Domain includes all SupplierPartner-oriented data and contract operations associated with a SupplierPartner. Its scope encompasses, planning of strategies vs. SupplierPartners, handling of all types of contact with the SupplierPartner, the management of the relationship, and the administration of SupplierPartner data. The SupplierPartner Domain also includes data and contract operations related to the SupplierPartner Bills, disputes and inquiries.			
SupplierPartner ABEs	**Primary Vertical eTOM Process Groupings**	**Primary eTOM Level 2 Processes**	**Secondary eTOM Level 2 Processes**
This ABE monitors the payment process versus the Supplier/Partner.		& Billing Management	Management
SupplierPartner Statistic The Supplier/Partner Statisitics ABE represents the usage analysis of services purchased from the SupplierPartner, SupplierPartner profitability statistics and the overall performance of the Supplier/partner.	S/PRM – A	S/P Performance Management	S/P Settlements & Billing Management S/PRM Support & Readiness
Notes: * Due to process duality ^ Due to ABE ambiguity			

3.4.10. Common Business Entities Domain

Common Business Entities were not mapped to eTOM processes since these entities use is spread across a number of eTOM processes.

Domain Name	**Common Business Entities**
Description	The **Common Business Entities Domain** represents business entities shared across two or more other domains. As such, these business entities are not "owned" by any particular domain. In some cases a common business entity represents a generic abstraction of other real-world business entities. For example, Business Interaction is an abstraction (super-class) of business entities such as Customer Order and Supplier/Partner SLA.
Aggregate Business Entity	**Party** The Party ABE represents the abstract concept of organization or individual that can play varying roles during interactions with an enterprise. Roles include customer, supplier/partner, employee, and so forth.
ABE	**Agreement** The Agreement ABE represents a contract or arrangement, either written or verbal and sometimes enforceable by law, such as a service level agreement or a customer price agreement. An agreement involves a number of other business entities, such as products, services, and resources and/or their specifications.
ABE	**Location** The Location ABE represents the site or position of something, such as a customer's address, the site of equipment where there is a fault and where is the nearest person who could repair the equipment, and so forth. Locations can take the form of coordinates and/or addresses and/or physical representations.
ABE	**Business Interaction** The Business Interaction ABE represents an arrangement, contract, or communication between an enterprise and one or more other entities such as individuals and

Domain Name	Common Business Entities
Description	The **Common Business Entities Domain** represents business entities shared across two or more other domains. As such, these business entities are not "owned" by any particular domain. In some cases a common business entity represents a generic abstraction of other real-world business entities. For example, Business Interaction is an abstraction (super-class) of business entities such as Customer Order and Supplier/Partner SLA.
	organizations (or parts of organizations). Interactions take on the form of requests, responses, and notifications.
ABE	**Policy** Policy consists of a set of layered ABEs that define specifications (for example, templates) and definitions of Policy entities that can be used in managing the behavior and definition of entities in other Domains. Policy takes three primary forms. The first is the definition of how policy is used to manage the definition, change, and configuration of other entities. The second is the definition of how policy itself is managed. The third is how applications use policies to manage entities.
ABE	**Project** The Project ABE represents the tools used by project managers to ensure that enterprise objectives of quality, cost, and time are achieved by planning and scheduling work. It uses common industry definitions of Project, Work Breakdown Structure and Activity to provide support to project managers.
ABE	**Time** The Time ABE represents Entities used to provide time related functions. This includes scheduling, time conflicts and time based presentation support. Currently the Calendar model is the only part of the Time ABE.

4. SID Snapshot

4.1. Introduction

This chapter provides a summary of the key SID business entities representative of Aggregate Business Entities (ABEs) contained within each domain. Also shown in the figures are the entities' associations with key entities associated with ABEs in other domains. This demonstrates that, while ABEs are groups of closely related entities, the entities contained within a domain and an ABE within a domain are naturally related to entities in other domains and their respective ABEs. Each diagram shown in this chapter was taken from SID addenda.

The figures include

- Party
- Location (Place)
- Interaction
- Agreement
- Calendar
- Project
- Policy
- Customer
- Customer Order

- Product, Service, Resource
- Product Offering
- Product
- Service
- Resource

The associations depicted in the diagrams in this chapter are those currently identified by SID Model development to date. As the SID model evolves further, additional associations may be found and current associations may be modified.

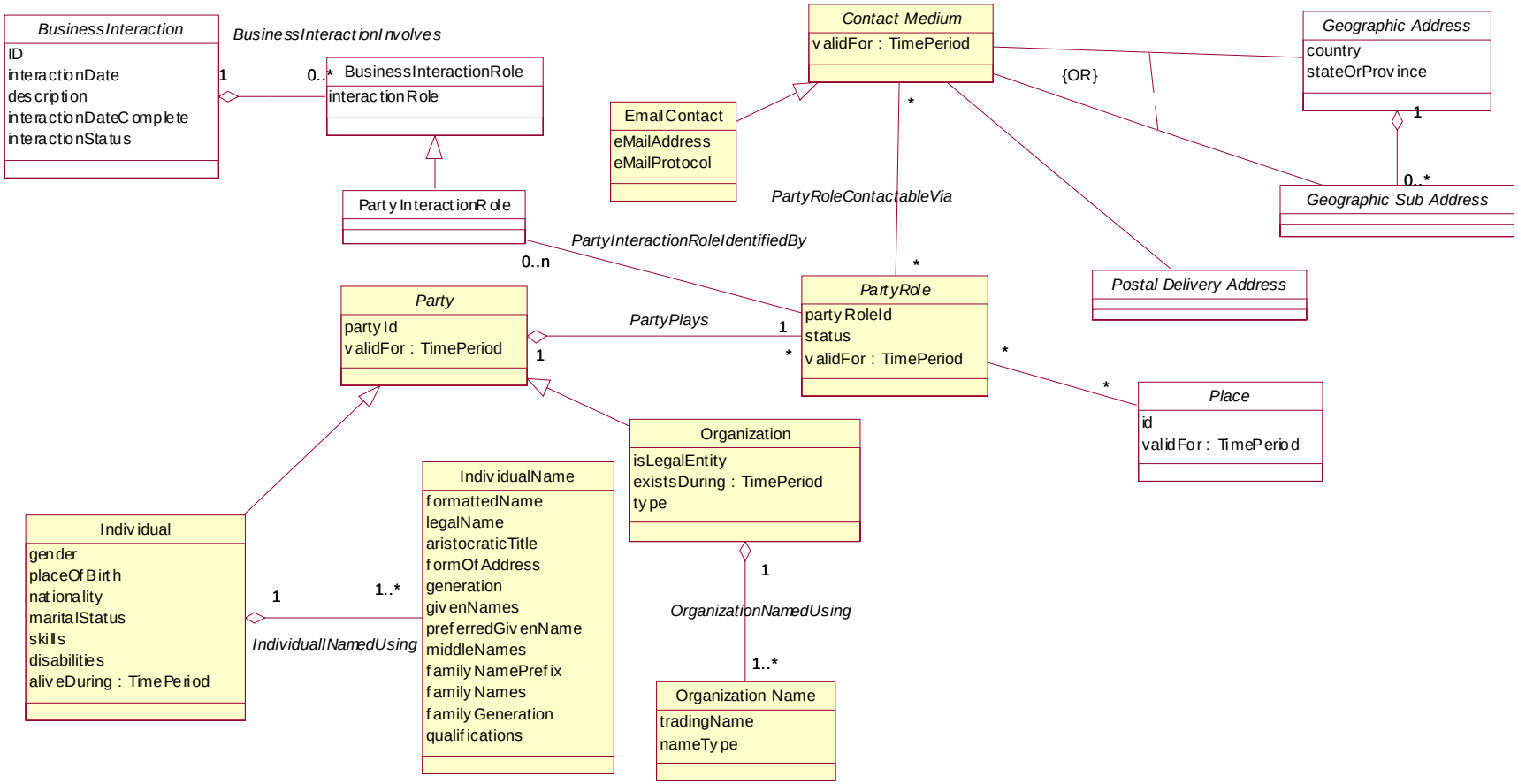


Figure 11 - Party and Related Entities

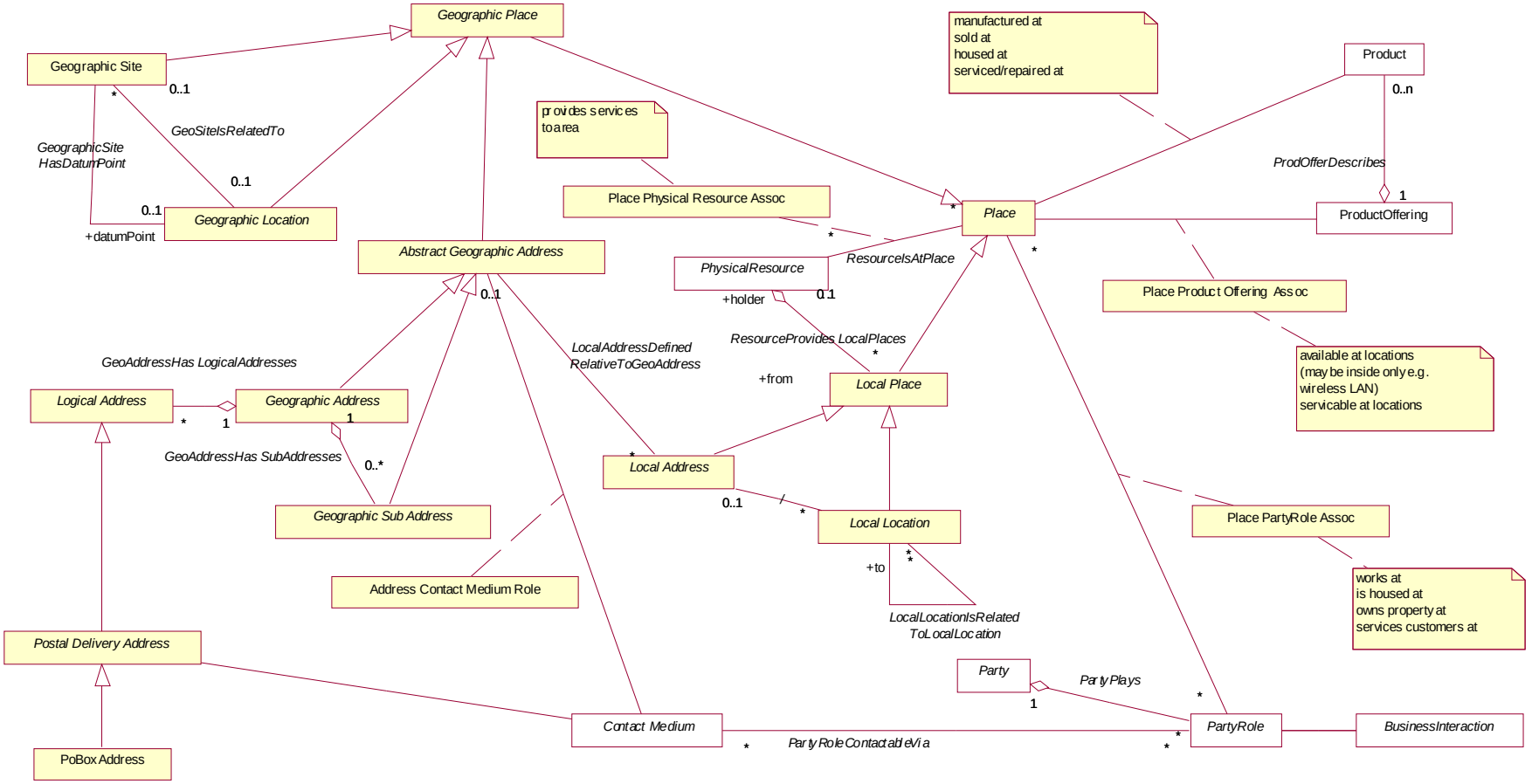


Figure 12 – Location (Place) and Related Entities

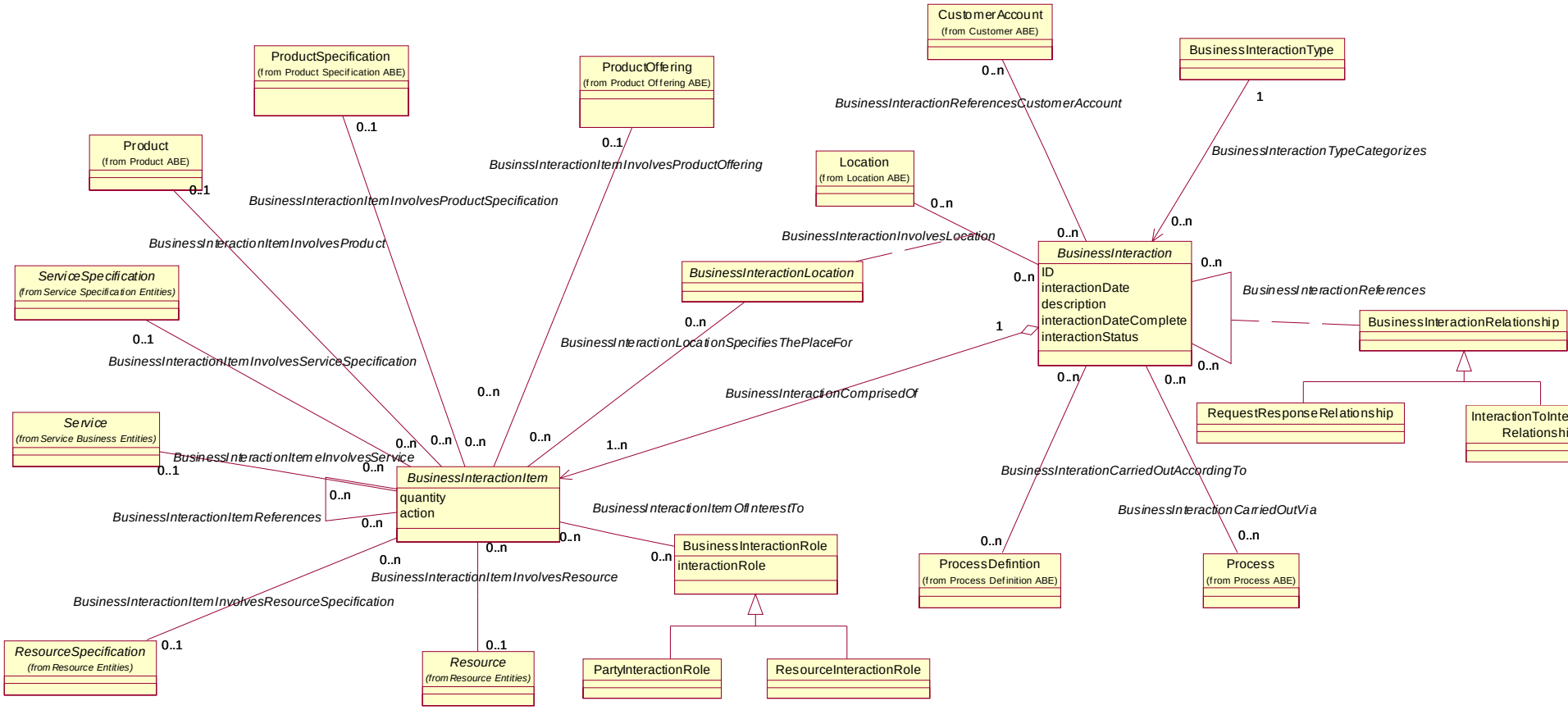


Figure 13 – Business Interaction and Related Entities

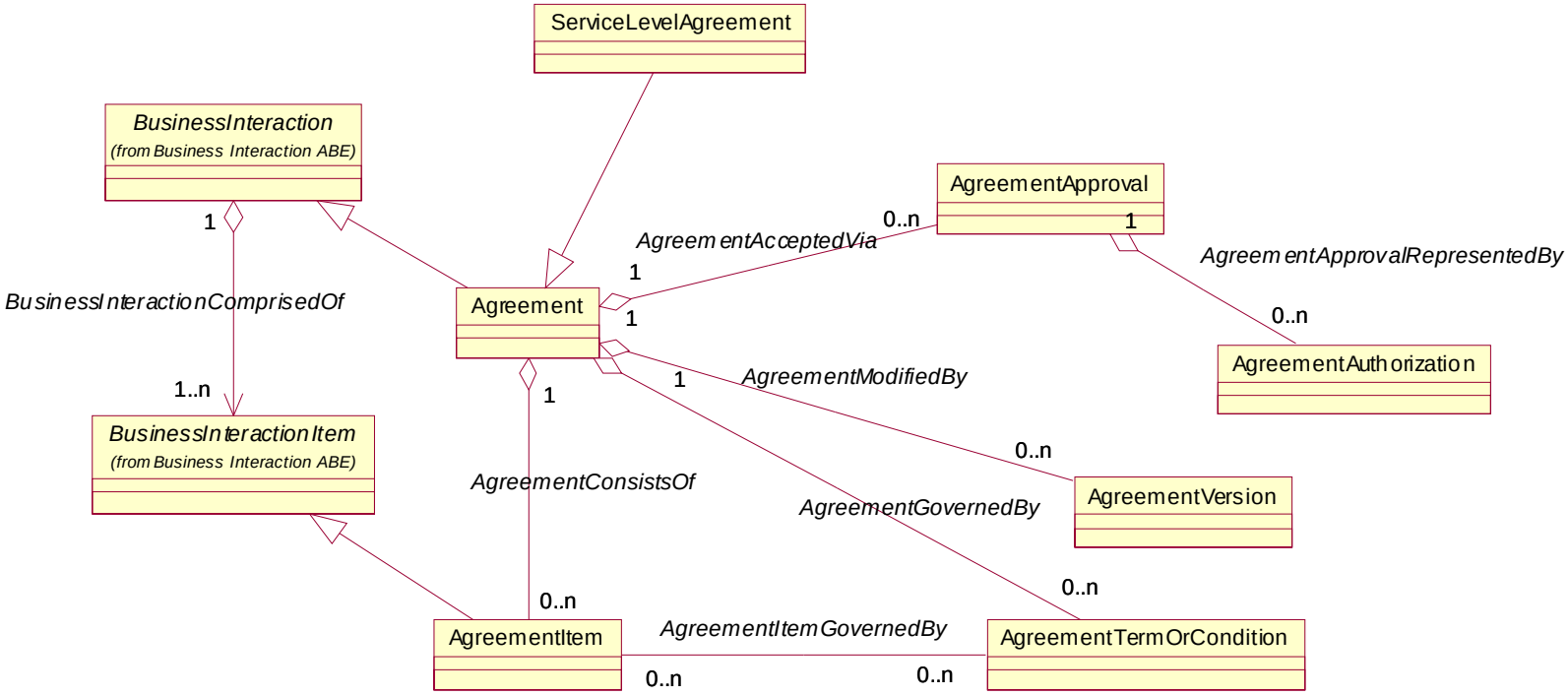


Figure 14 – Agreement and Related Entities

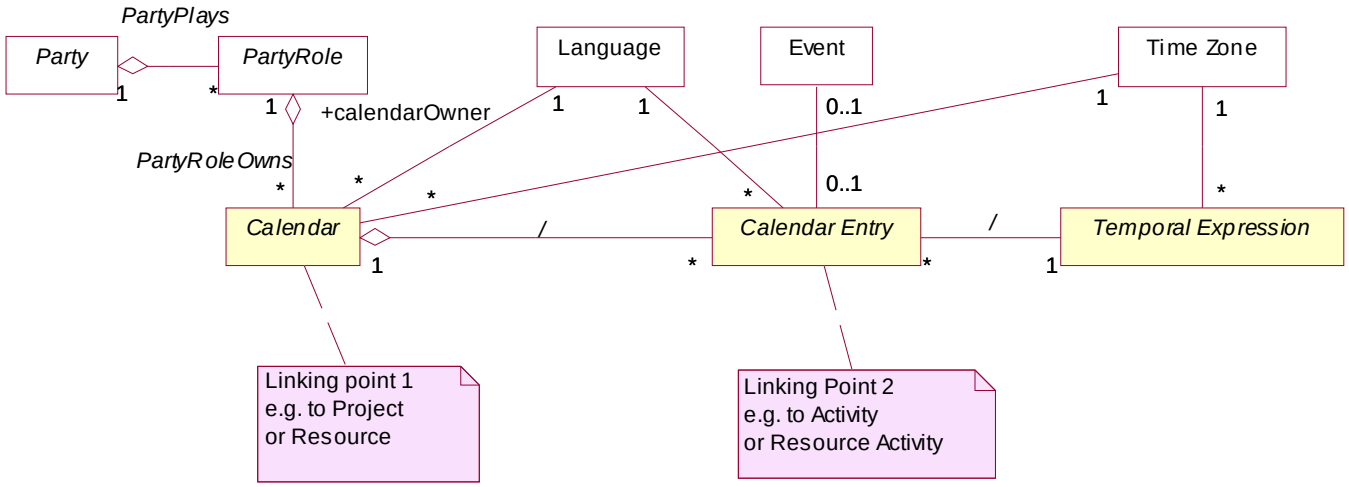


Figure 15 - Calendar and Related Entities

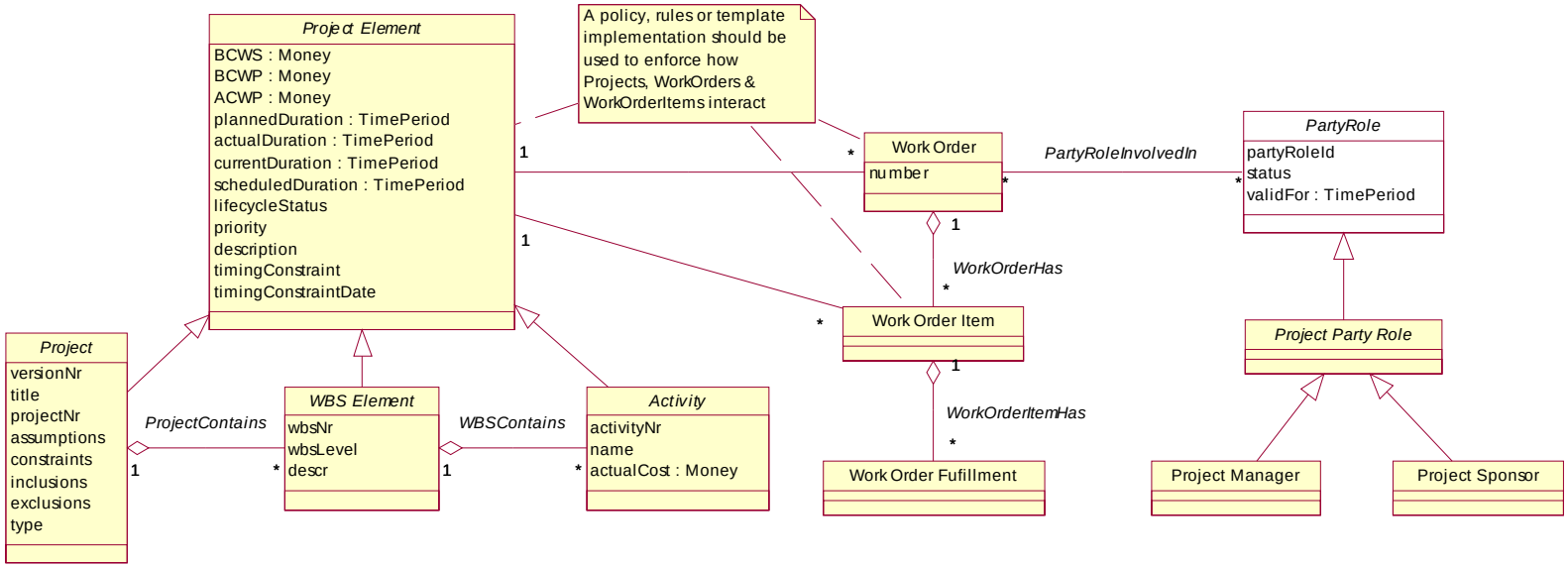


Figure 16 – Project and Related Entities

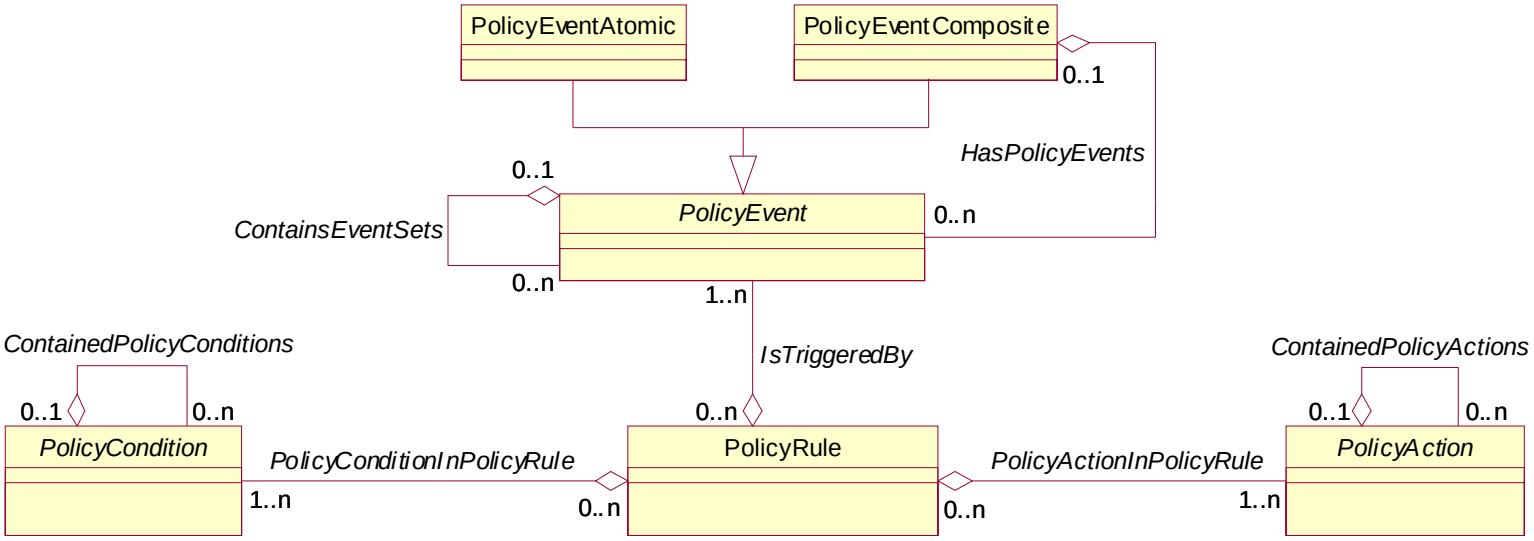


Figure 17 – Policy and Related Entities

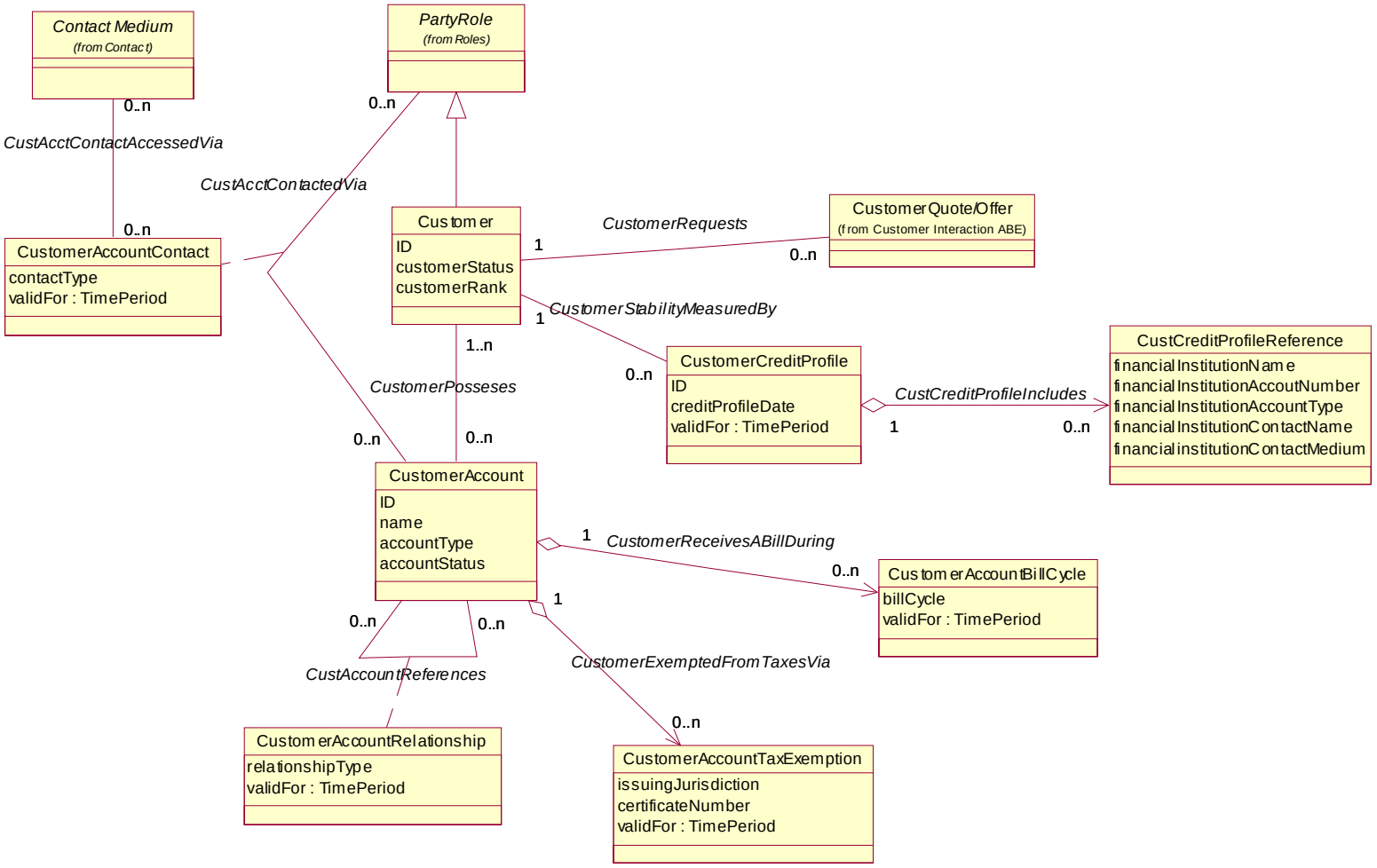


Figure 18 – Customer and Related Entities

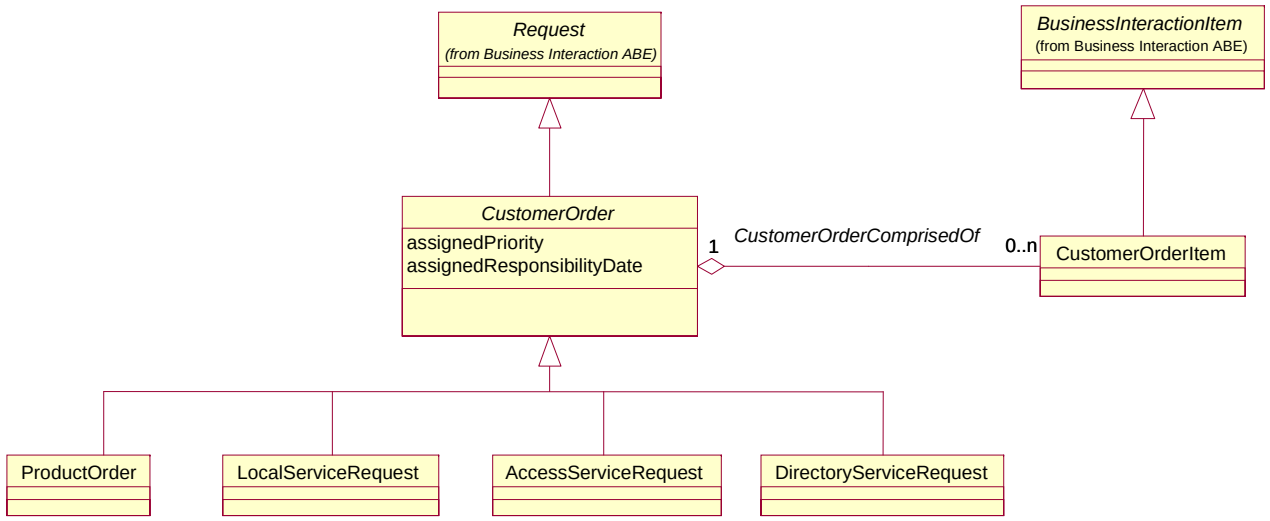
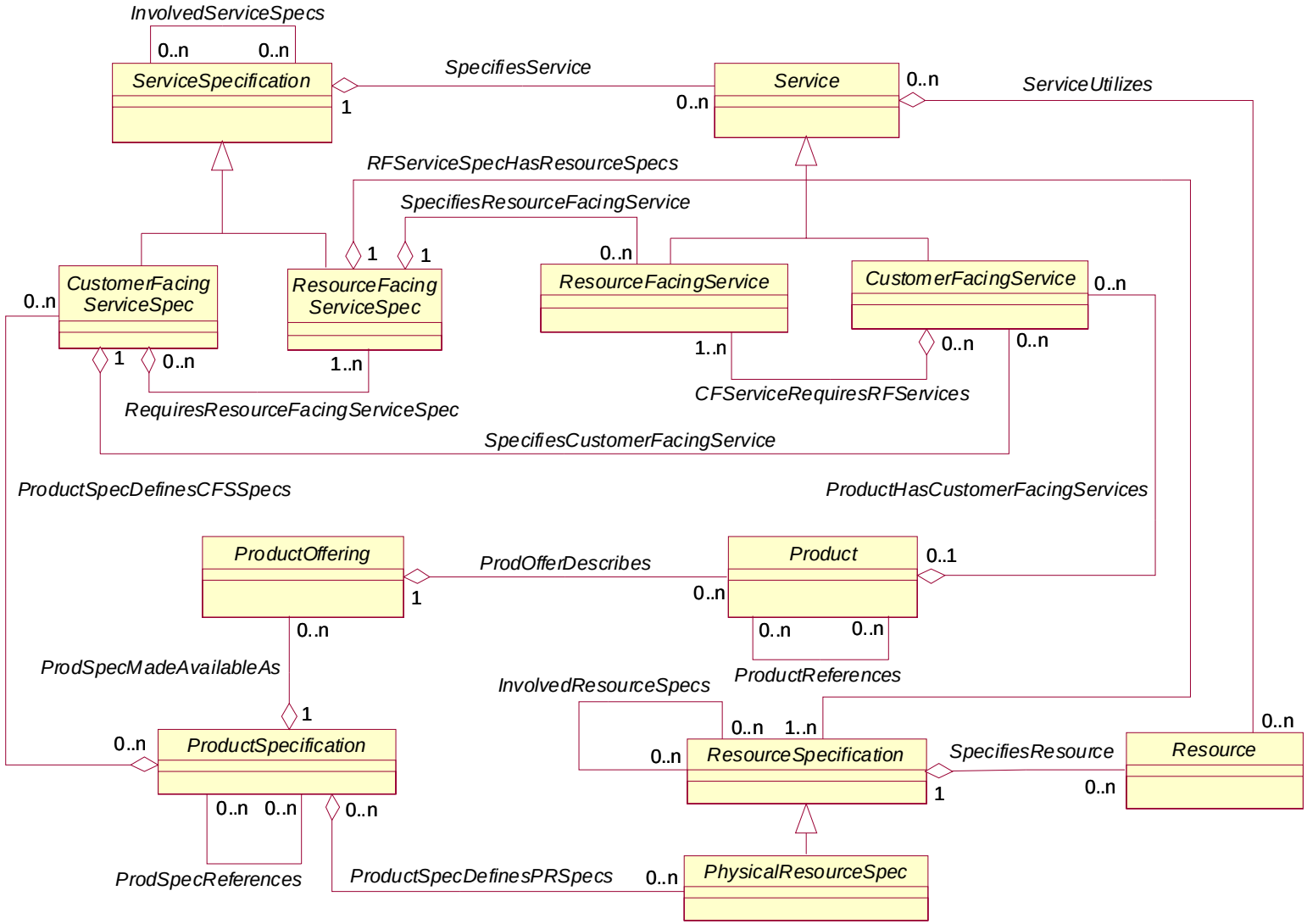


Figure 19 – Customer Order and Related Entities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Service
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ServiceUtilizes
RFServiceSpecHasResourceSpecs
SpecifiesResourceFacingService
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CustomerFacing ServiceSpec
ResourceFacing ServiceSpec
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CustomerFacingService
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1..n
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CFServiceRequiresRFServices
SpecifiesCustomerFacingService
ProductSpecDefinesCFSSpecs
ProductHasCustomerFacingServices
ProductOffering
ProdOfferDescribes
Product
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SpecifiesResource
Resource
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ProdSpecReferences
ProductSpecDefinesPRSpecs
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PhysicalResourceSpec

Figure 20 – Product, Service Resource Associations

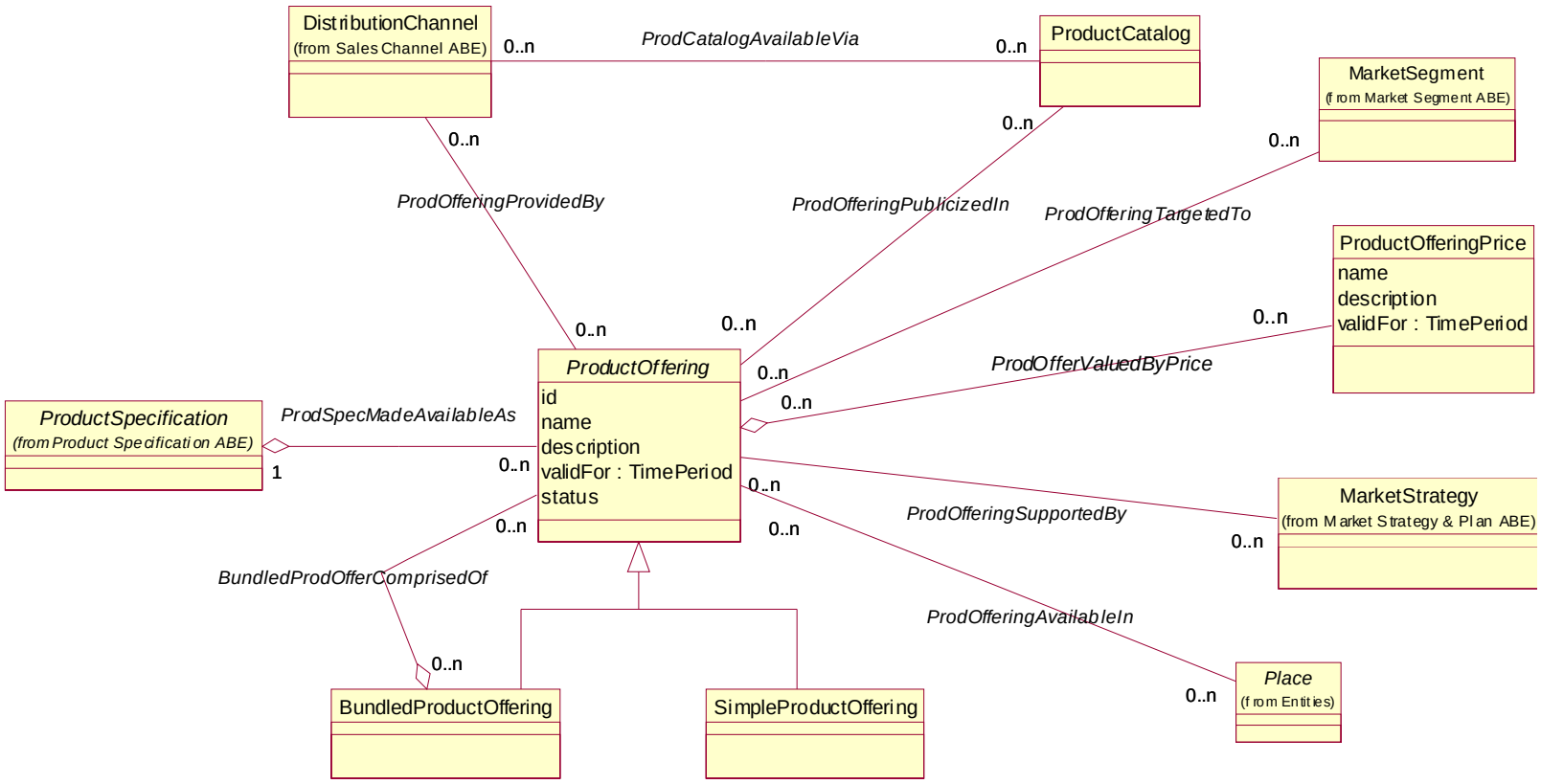

Figure 21 – Product Offering and Related Entities

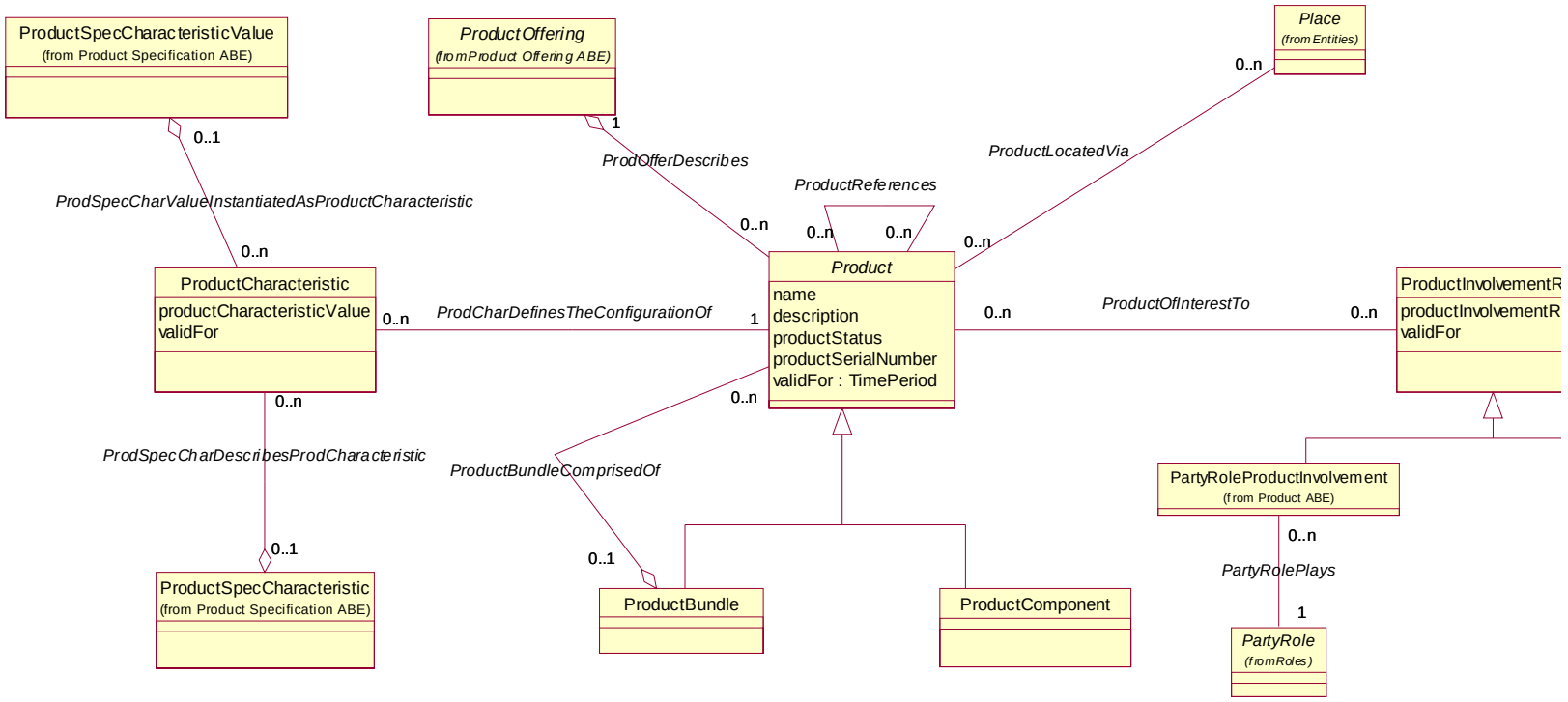

Figure 22 – Product and Related Entities

5. Annexes

5.1. Annex 1: Abbreviations and References

Abbreviations

eTOM	enhanced Telecom Operations Map™
OOAD	Object-Oriented Analysis and Design
OSS	Operational Systems and Software
SID	Shared Information/Data
UML	Unified Modeling Language

Non Normative References

[eTOM]	eTOM – The Business Process Framework – GB921 V7.0
[TNA]	NGOSS Technology Neutral Architecture – TMF053 Series
[NGOSS Metamodel]	NGOSS Metamodel – TMF053M

6. Administrative Appendix

This Appendix provides additional background material about the TM Forum and this document. In general. sections may be included or omitted as desired, however a Document History must always be included..

6.1. About this document

This is a TM Forum Guidebook. The guidebook format is used when:

- The document lays out a 'core' part of TM Forum's approach to automating business processes. Such guidebooks would include the Telecom Operations Map and the Technology Integration Map, but not the detailed specifications that are developed in support of the approach.
- Information about TM Forum policy, or goals or programs is provided, such as the Strategic Plan or Operating Plan.
- Information about the marketplace is provided, as in the report on the size of the OSS market.

6.2. Document History

6.2.1. Version History

Version Number	Date Modified	Modified by:	Description of changes
0.1	Feb 2002		Initial sample of document format and content
0.5	May 2002		Updates based on review and feedback; this is the initial member review version
1.1	Oct 2002		Updates based on review and feedback from members.
1.2	Oct 2002		Further updates based on review by team members.
3.0	June 2003		Updates to SID Framework, added

			SID/eTOM mapping, inter-ABE diagrams
5.0	August 2004	John Reilly	Updated eTOM/SID mappings
6.0	July 2005	John Reilly	Updated with comments from Greg Fidler and eTOM/SID mappings
6.1	November 2005	Tina O'Sullivan	Converted to new template and corrected various administrative items.
6.2		Tina O'Sullivan	Updated Notice Statement & document status
7.5	January 2008	John Reilly	Updates for ITU-T submission
7.6	May 2008	Tina O'Sullivan	Made corrections prior to posting.

6.2.2. Release History

Release Number	Date Modified	Modified by:	Description of changes
Release 7.5	March 2008	J. Reilly	For ITU-T submission

6.3. Company Contact Details

Company	Team Member Representative
Include all involved companies adding lines as necessary.	*Name* *Title* *Email* *Phone* *Fax*
	Name *Title* *Email* *Phone* *Fax*

6.4. Acknowledgments

This document was prepared by the members of the TM Forum SID team:

6.5. About TM Forum

TM Forum is an international consortium of communications service providers and their suppliers. Its mission is to help service providers and network operators automate their business processes in a cost- and time-effective way. Specifically, the work of the TM Forum includes:

- Establishing operational guidance on the shape of business processes.
- Agreeing on information that needs to flow from one process activity to another.
- Identifying a realistic systems environment to support the interconnection of operational support systems.
- Enabling the development of a market and real products for integrating and automating telecom operations processes.

The members of TM Forum include service providers, network operators and suppliers of equipment and software to the communications industry. With that combination of buyers and suppliers of operational support systems, TM Forum is able to achieve results in a pragmatic way that leads to product offerings (from member companies) as well as paper specifications.