

# Framework Standard

## Business Process Framework (eTOM)

*Process Decompositions and Descriptions*

**Sigma Systems**

**Catalog**

**TM Forum Framework Release 18.5**

**Business Process Framework (eTOM) Conformance  
Certification**

**Extract from GB921 Addendum D**

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# 1. Market/Sales Management Domain

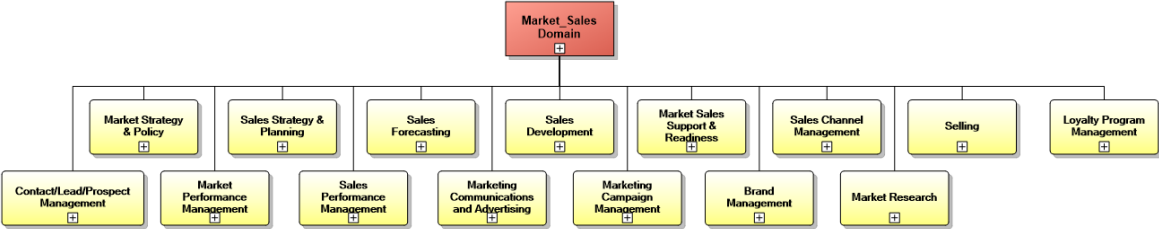


Figure 1 1. Market/Sales Management Domain

### 1.1.1 Market Strategy & Policy



Figure 2 1.1.1 Market Strategy & Policy

#### Gather & Analyze Market Information

**Process Identifier:** 1.1.1.1

##### Brief Description

Research market information and develop market forecasts

##### Extended Description

Gather & Analyze Market Information processes develop enterprise and business views of the market, based on the analysis of external and internal information sources. These processes include the establishment and management of relationships with external providers of market information, and the management of internal resources used for providing market information. Methodologies used for developing market forecasts, as well as the development of forecasts, are managed within these processes.

##### Sigma Self-assessment

The research of internal and external market information/sources is supported manually through the Sigma PLM methodology under a Sigma L3 process "Analyze Market Data & Product Portfolio Data". This L3 process is part of a Sigma L2 process "Develop Product Strategy". **AM**

(refer to Sigma PLM Framework\_v7 Section 3.5 )

The Sigma PLM "Analyze Market Data & Product Portfolio Data" process allows for users to utilize a modeling concept "Generic Entity" to automatically create artifacts for deliverables of this process, such as a market analysis document, market forecasts document or enterprise forecasting view. The Generic Entities relating to Marketing can be modeled and utilized within the Sigma Product Catalog Manager.

Any marketing specific entities and data models required for marketing analysis or forecast generation can be added using the flexible Template and View concepts within the Sigma Catalog Manager.

(refer to Sigma Catalog 7.1 Product Overview page 39-43 specifically for Generic Entities and Templates and Views)

Reporting functionality provided through the Business intelligence (BI) / reporting functionality in the Sigma Catalog Manager can be used to provide the data required to construct business reports related to marketing that can be delivered in any preferred format.

(refer to Sigma Catalog 7.1 Product Overview page 34 Business intelligence Components)

(refer to Product Deck - Sigma Catalog.pdf pages 30 to 36)

## Establish Market Segments

**Process Identifier:** 1.1.1.3

### Brief Description

Establish the market segmentation to be used across the enterprise

### Extended Description

Establish Market Segments processes identify the market segmentation which will be used across the enterprise. These processes identify the areas within the organization responsible for the management of market segment outcomes, as well as identifying and managing reporting processes for specific market segments.

### Sigma Self-assessment

Establishing the market segmentation is supported through the Sigma modelling methodology and through the "Target Market / Market Segment / Customer Segmentation" construct. **AM**

(refer to the Sigma Product Construct Guide.doc, section 6.3).

The Sigma solution allows users to automatically store this market segment analysis and findings into the Enterprise Product Catalog, through the use of the template configuration, schema definition and hierarchy definition and classification definition. **AM**

(refer to the Sigma Product Construct Guide.doc, sections 2.2, 2.3, 2.5, 2.8, 2.9, 3.2, 3.7, 6.1, 6.2, 6.3, 6.6, 10.2, 10.3, 10.4)

(refer to Product Deck - Sigma Catalog.pdf pages 30 to 36)

(refer to Sigma Catalog 7.1 Product Overview pages 39-42 Sigma Catalog Entity Types )

(refer to Sigma Catalog 7.1 Configuration Guide.pdf pages 7-8 The Business Hierarchy)

(refer to Sigma Catalog 7.1 Configuration Guide.pdf pages 45 Using the Hierarchy Tool)

## Link Market Segments & Products

**Process Identifier:** 1.1.1.4

### Brief Description

Analyze the basic consumption profiles of market segments and associate these with the product families available

### Extended Description

The Link Market Segment and Product processes analyze the basic consumption profiles of market segments

and associate these with the product families available, as well as identify potential new product families for the market segments. The processes analyze segment purchase and decision issues, and their geographic locations.

### **Sigma Self-assessment**

Market Segments defined in the Product Catalog can be associated with product family and product definitions through hierarchy and/or classification. Hierarchy allows for the definition of Products within Hierarchy Categories that are used to define Market Segments. **AM**

Classifications can also be used to define logical associations between products or product components and Market Segments. A classification that is defined and configured to represent Market Segments can be linked to any number of products. The data modeling TTree\_Base and TTree\_Leaf can be used for this purpose. **AM**

(refer to the Sigma Product Construct Guide.doc, sections 2.2, 2.3, 2.5, 2.8, 2.9, 3.2, 3.7, 6.1, 6.2, 6.3, 6.6, 10.2, 10.3, 10.4)

(refer to Product Deck - Sigma Catalog.pdf pages 30 to 36)

(refer to Sigma Catalog 7.1 Data Model Guide.pdf pages 136 and 137)



# Product Management Domain

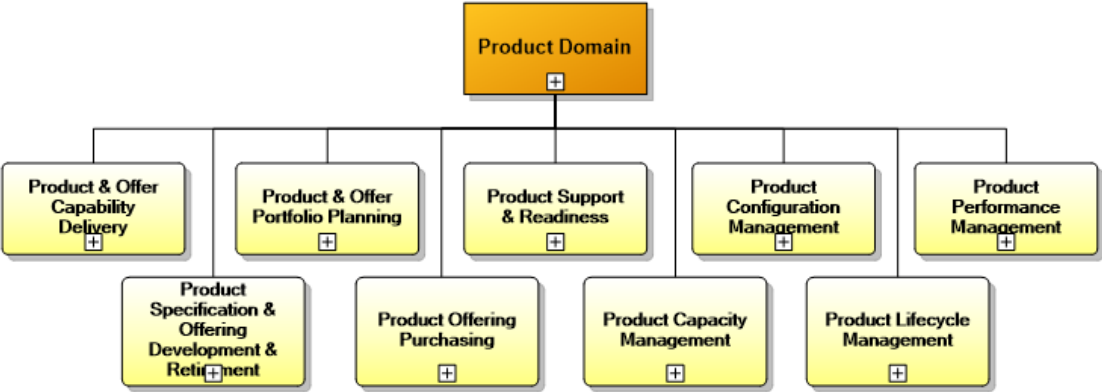


Figure 3.2. Product Management Domain

## 1.2.1 Product & Offer Portfolio Planning

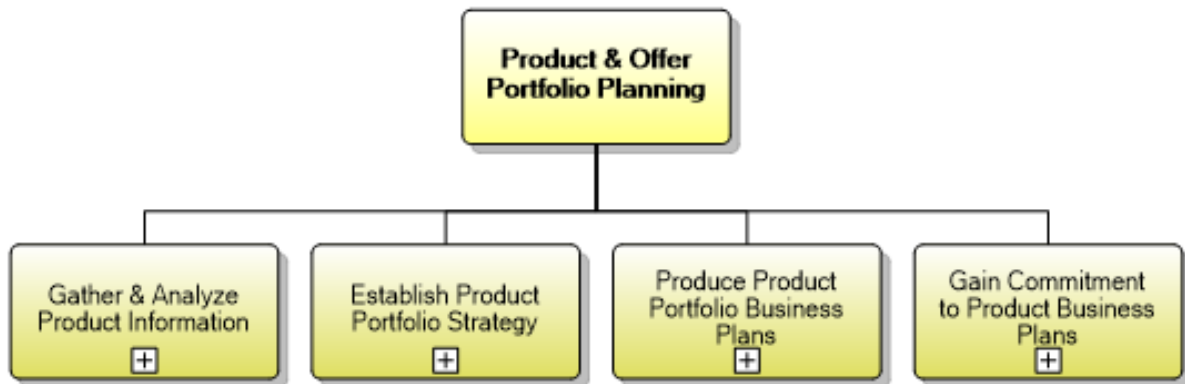


Figure 4 1.2.1 Product & Offer Portfolio Planning

### Gather & Analyze Product Information

**Process Identifier:** 1.2.1.1

#### Brief Description

Research information relating to product ideas and opportunities and identify product opportunities

#### Extended Description

Gather & Analyze Product Information processes research information relating to product ideas and opportunities and identify product opportunities based on the analysis of external and internal information sources. These processes encompass analysis to identify new products as well as reviewing existing products. They also include the establishment and management of relationships with external providers of product information, and the management of internal resources used for providing product information. **AM**

#### Sigma Self-assessment

The research of internal and external product information/sources and identification of product opportunities are covered within the Sigma PLM Methodology under L3 process Analyze Market Data & Product Portfolio Data. This L3 process is part of L2 process Develop Product Strategy. This is further covered within the L3 process "Identify Product Update Opportunities" as part of L2 process Monitor & Update Product Data that deals with existing products already configured within the Sigma solution. **AM**

(refer to Sigma PLM Framework\_v7 Section 3.5)

Gathering & Analyzing product information is supported manually through the Sigma methodology. The methodology and its process allow users to automatically store findings of this research into the Sigma solution by utilizing the concept of Generic Entity. One of the features of this concept allows users to link the information stored within the Product Catalog to the enterprise's document management system where the analysis sources and findings would be stored. Additionally automated solution opportunities can be identified by reusing building blocks already configured and identified by the "Impact Analysis" capability or by reports that can also enable identification of new ideas/update to existing products.

(refer to Sigma Catalog 7.1 Product Overview page 39-43 specifically for Impact Analysis, Business Intelligence Components, Generic Entities and Templates and Views)

(refer to Product Deck - Sigma Catalog.pdf pages 37 to 44, product modelling approach)

The Sigma "Identify Product Update Opportunities" L3 process includes manual activities for discovering new products and changing/updating existing ones. This as mentioned above can be support by auto-populating reports or manually browsing through the catalogue using the concept of reusing existing product building block components. **AM**

Establishment and management of relationships with external providers of product information are handled manually outside of the Sigma solution but form part of the methodology for capturing product data. Part of managing the portfolio entails managing relationships of product data. Product Information would be provided by a number of user communities (eg. IT, Product Management, Business Units), and the Sigma platform supports capture of this data as it is available. (refer to Sigma PLM Overview.pdf- slide 12) that highlights the management of Product and IT managers who would input information into the Sigma solution. The Sigma solution can also support automated links/reference to external resources of product information.

## Establish Product Portfolio Strategy

**Process Identifier:** 1.2.1.2

### **Brief Description**

Define and agree the product and offer portfolio structure to be used within the enterprise

### **Extended Description**

The Establish Product Portfolio Strategy processes define the overall structure of the product portfolios to be used across the enterprise, or between or within business units. These products and product portfolios form the basis of offers made to customers. It includes the agreement on and implementation of cross-portfolio and cross-product co-ordination and management functions. **AM**

### **Sigma Self-assessment**

The manual modelling methodology approach and process will ensure the product and offer portfolio structure has been defined and agreed upon. The solution would capture this agreement using the hierarchy configuration that automatically is displayed within the Sigma Catalog Manager. **AM**

As well as the manual Sigma modelling methodology approach, the establishment of the Product Portfolio Strategy is supported by the Sigma PLM methodology under L3 process "Develop Product Portfolio". This L3 process is part of L2 process "Develop Product Strategy". The configuration and overall structure is automatically supported within the Sigma solution. **AM**

(refer to Sigma PLM Framework\_v7 Section 3.5 "Develop Product Portfolio")

(refer to the Sigma Product Construct Guide.doc, sections 2.2, 2.3 "Product Classification / Product Line").

Implementation of cross portfolio and cross product co-ordination and management can be developed and automatically configured through the Sigma Workbench solution using Hierarchy Configuration and Hierarchy Generator tool.

(refer to Sigma Catalog 7.1 Configuration Guide.pdf page 45 Using the Hierarchy Tool)

(refer to Sigma Catalog 7.1 Configuration Guide.pdf pages 7-8 The Business Hierarchy)

## 1.2.2 Product & Offer Capability Delivery

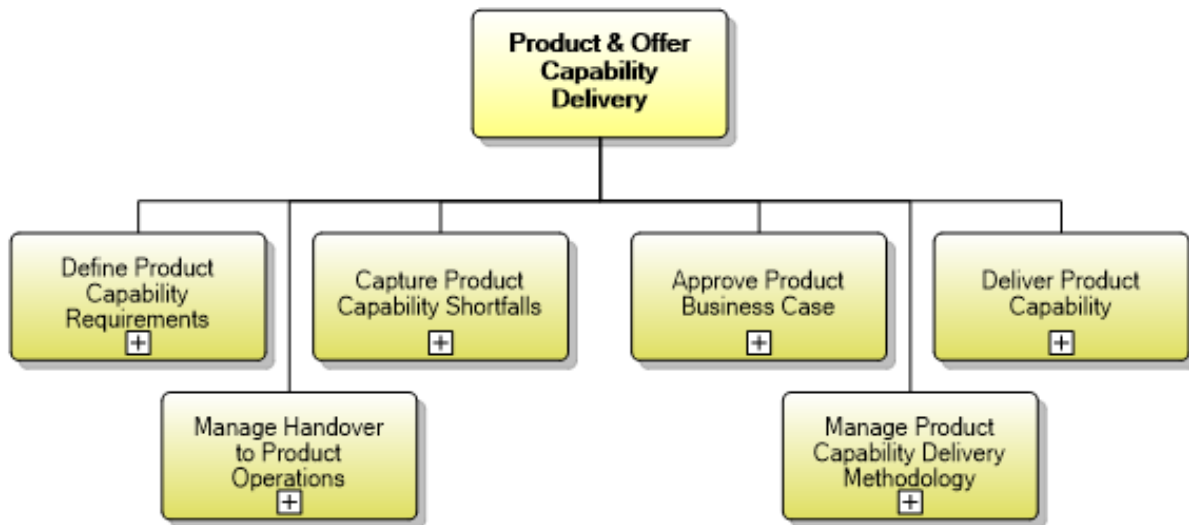


Figure 5 1.2.2 Product & Offer Capability Delivery

### Define Product Capability Requirements

**Process Identifier:** 1.2.2.1

#### Brief Description

Define and obtain agreement to the detailed infrastructure requirements to support the product portfolio and individual product plans

#### Extended Description

The Define Product Capability Requirements processes define and obtain agreement to the detailed infrastructure requirements to support the product portfolio and individual product plans. Product infrastructure requirements to support new product initiatives for the product lifecycle management are captured in this process, as well as any product infrastructure requirements needed to support the specific offers being made to customers through the sales channels. These processes also identify the service infrastructure capabilities required to deliver the product infrastructure. The processes include any cross-enterprise co-ordination and management functions to ensure that the requirements capture the needs of all stakeholders.

These processes provide input into the requirements capture processes in the Service and Party Offering Development & Retirement processes, and potentially the Resource, horizontal process groupings. **AM**

#### Sigma Self-assessment

The manual gathering and agreement of detailed infrastructure requirements would provide an input to the PLM and modelling methodology approach. **AM**

The PLM process (refer to Sigma PLM Framework\_v7 Section 3.5 "Develop Product Plans") addresses a strategy to develop an implementation plan including effort, timeline and resources, all of which can be automatically supported by the Sigma solution and configured using the Generic Entity concept.

(refer to Sigma Catalog 7.1 Product Overview page 39-43 specifically for Generic Entities and Templates and Views)

High level infrastructure requirements would be captured as part of the manual modelling methodology approach that in turn supports the automation into the Sigma solution. ~~AM~~

(refer to Product Deck - Sigma Catalog.pdf pages 30 to 36)

High level service and resource requirements would be captured as part of the modelling methodology approach and can be automatically stored in the Catalog Model defined in the Sigma solution. ~~AM~~

(refer to the Sigma Product Construct Guide.doc, sections 4.1, 4.2, 4.8)

## 1.2.5 Product Configuration Management

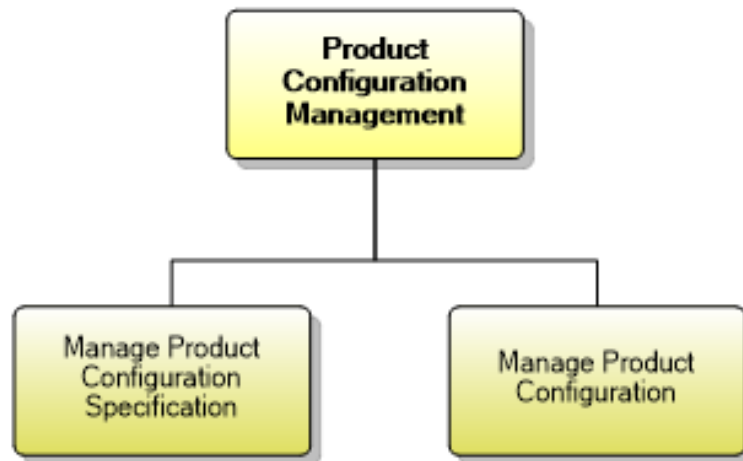


Figure 6 1.2.5 Product Configuration Management

### Manage Product Configuration Specification

**Process Identifier:** 1.2.5.1

#### **Brief Description**

Create and remove a product configuration specification as well as a relationship between a product specification and a product configuration specification. **AM**

#### **Extended Description**

Not used for this process element.

#### **Sigma Self-assessment**

The Sigma platform using the Sigma Catalog Manager and Sigma Catalog Workbench applications provides an environment for users to define the Product Specifications and their associated Configuration Specifications. The Product Configuration Specification extends the Product Specification allowing the definition of Facts, Limits and Specification Characteristics to define configurable elements within the configuration specification.

(refer to Sigma Catalog 7.1 Data Model Guide.pdf pages 116 and 135)

### Manage Product Configuration

**Process Identifier:** 1.2.5.2

#### **Brief Description**

Create and remove a the product configuration as defined by a selected product configuration specification, as well as relationship between a product and a product configuration.

#### **Extended Description**

Not used for this process element.

#### **Sigma Self-assessment**

## 1.2.7 Product Specification & Offering Development & Retirement

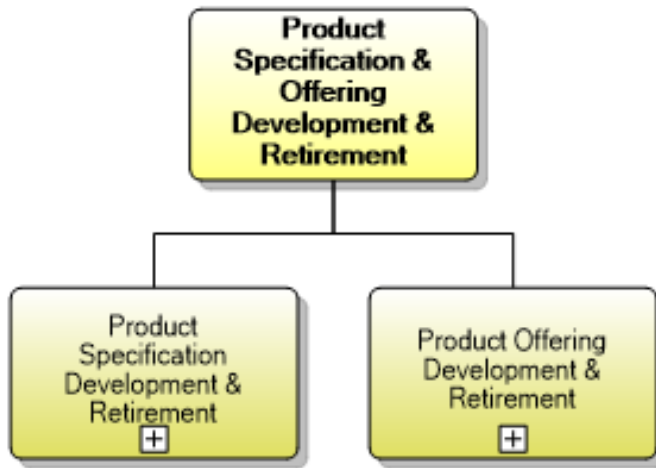


Figure 7 1.2.7 Product Specification & Offering Development & Retirement

### Product Specification Development & Retirement

**Process Identifier:** 1.2.7.1

#### Brief Description

Develop and deliver new product specifications as well as enhancements and new features, ready for use by other processes, including Product Offering Development & Retirement.

Product Specifications represent the types of services and resources made available as product offerings to the market by an enterprise.

#### Extended Description

Product Specification Development & Retirement processes develop and deliver new product specifications as well as enhancements and new features, ready for use by other processes. Additionally, they handle the removal of specifications no longer offered. Also, dynamic allocation of resources and services to deliver products to the market they are responsible **AM**

Product specifications represent the types of services and resources made available as product offerings to the market by an enterprise.

The key measures of this process are how effectively the enterprise's offerings are broadened by these specifications or new specification features. These processes also manage updates and enhancements to product specifications. Business case development tracking and commitment are key elements of this process.

Note that this process is reused to support the development of product specifications on-boarded from other parties with whom an enterprises collaborates to deliver value to customers. This is done to remove the redundancy between this process and the Party Offering Development & Retirement process. The focus of the Party Offering Development & Retirement core process is the relationships that product specifications have with other parties.



Also note that some of these processes, such as Gather & Analyze New Product Specification Ideas and Develop New Product Specification Business Proposal, may be performed in conjunction with the equivalent process in Product Offering Development & Retirement. For example, if ideas for a new specification or feature are being developed, ideas on how to offer it to the market may also be gathered; or if a new offering is being considered it may require new features defined for the specification or one or more new specifications to be developed for it. **AM**

### **Sigma Self-assessment**

The Sigma platform using the Sigma Catalog Manager and Sigma Catalog Workbench applications provides an environment for users to develop and then document detailed Product Specifications. The software facilitates and provides general support to create all specification types including technical, performance and operational information.

During actual implementation, the platform is capable of handling a mix of auto/manual processes depending on how you use the platform and the customer requirements. The Sigma Central Product Catalog acts as an enterprise repository for Product Specifications. Product Lifecycle Management tools within the Product Catalog Manager ensure that appropriate actions and status are maintained for Product Specifications, allowing them to be versioned, updated and eventually retired.

(refer to Sigma Catalog 7.1 User Guide page 147, Managing the Entity Lifecycle)

The Sigma automated solution supports a human operator who develops these specifications. which in turn are manually updated to form the documentation. The Sigma Catalog Manager can be used to:

1. Create/Develop template Specifications (eTOM description – develop detailed product, performance and operational specifications) – This is a Sigma Catalog Workbench capability where the Schema Maintenance Template Manager tool is used to create the specification template

(refer to Sigma Catalog 7.1 Configuration Guide page 16, Data Modeling: Templates)(refer to Sigma Catalog 7.1 Configuration Guide page 74, Template Manager).

2. The template can be configured to capture and document any type of data configuration (eTOM description – develop detailed product, performance and operational specifications) by making use of user defined classes and elements

(refer to Sigma Catalog 7.1 Configuration Guide page 51, Using the Schema Maintenance Tool, Schema Classes )

3. Create an Instance of the product specification using an existing developed template (eTOM description – document specification)

(refer to Sigma Catalog 7.1 User Guide page 71, Working with Product Entities)

to see how Components based on Templates can be created. (refer to Sigma Catalog 7.1 Screen Captures, slides 2 and 3) to see an example of a component that represents a Product Specification based on a Product Specification Template.

4. Update product specification instance manually to document and capture further details (eTOM description – document specification)

Refer to Sigma Catalog 7.1 Screen Captures, slide 4 to see an example of a fully populated Product Specification that has been decorated with additional characteristics that can be used during documentation. All configured documentation is available through the Sigma Catalog Manager, and can also be accessed through the Sigma Catalog APIs.

Refer to Sigma Catalog 7.1 Screen Captures, slide 5 to see an example of an API response that includes Product Specification details that could be used for documentation.

Note: Templates can be configured to capture all specification types, and customer manuals would typically be created outside of Sigma templates and therefore outside of the product catalogue.

Developing and documenting the features, specific service and resource requirements and selection within Sigma will be handled by the Sigma's Product Catalog Manager. Services and Resources supporting a Product can be managed in the same way as a Product component - with templates, custom Schemas and requirements/data configuration defined through the Sigma Catalog Workbench Schema Maintenance tools.

(refer to Product Deck - Sigma Catalog.pdf slides 42 and 43, Modelling Constructs)

(refer to the Sigma Product Construct Guide.doc, sections 4.1 and 4.2)

The Sigma Catalog Workbench Schema Maintenance tools allows a human operator to create additional data structures to capture any required information related to Product-Service-Resource Specifications, such as the specific performance and operational requirements and support activities or any product- specific data required for the systems and network infrastructure.

(refer to Sigma Catalog 7.1 Configuration Guide page 54, Using the Schema Maintenance Tool, Schema Classes) .

## Product Offering Development & Retirement

**Process Identifier:** 1.2.7.2

### **Brief Description**

Develop and deliver new product offerings, their pricing, as well as catalogs that contain both.

### **Extended Description**

Product Offering Development & Retirement develops new product offerings and their associated features. Pricing for the offerings is also developed, such as standard pricing and feature-based pricing. The offerings and selected processes are included in product catalogs which are also developed by these processes.

Note that this process is reused to support the development of product offerings on-boarded from other parties with whom an enterprises collaborates to deliver value to customers. This is done to remove the redundancy between this process and the Party Offering Development & Retirement process. The focus of the Party Offering Development & Retirement core process is the relationships that product offerings have with other parties. **AM**

### **Sigma Self-assessment**

The Sigma platform using the Sigma Catalog Manager and Sigma Catalog Workbench applications provides an environment for users to develop and then document Product Offerings. The software facilitates and provides general support to create and manage Product Offers (associated with Product Specifications), and Pricing for the Offers. The Sigma platform has support for comprehensive pricing schemes, including basic flat rate pricing and feature (or characteristic) based pricing which allows pricing to be established based on selected features or characteristic values.

Product Offers are supported through 3 constructs within the Sigma Catalog application: Packages, Promotions and Bundles. Packages are used to represent single Product Offerings. Promotions and Bundles are used to represent groupings of Product Offerings from a commercial perspective. Pricing can be handled within an Offering and in the case of a Bundle or Promotion pricing overrides can be used to adjust pricing in the context of the Bundle or Promotion.

(refer to Sigma Catalog 7.1 User Guide page 108, Building and Pricing Product Offers)

Product Offers are implemented using configurable Templates and Data Schemas, just as for Product Specifications. The Sigma Catalog Workbench Template Manager and Sigma Catalog Workbench Schema Maintenance tools allow complete customization of the data and structure of an Offer, allowing capture and documentation any type of requirements information or configuration for a Product Offer.

(refer to Sigma Catalog 7.1 Configuration Guide page 16, Data Modeling: Templates) (refer to Sigma Catalog 7.1 Configuration Guide page 54, Using the Schema Maintenance Tool, Schema Classes )

Product Lifecycle Management also directly applies to Product Offers allowing for state and version control.

(refer to Sigma Catalog 7.1 User Guide page 147, Managing the Entity Lifecycle)

## 1.2.10 Product Lifecycle Management

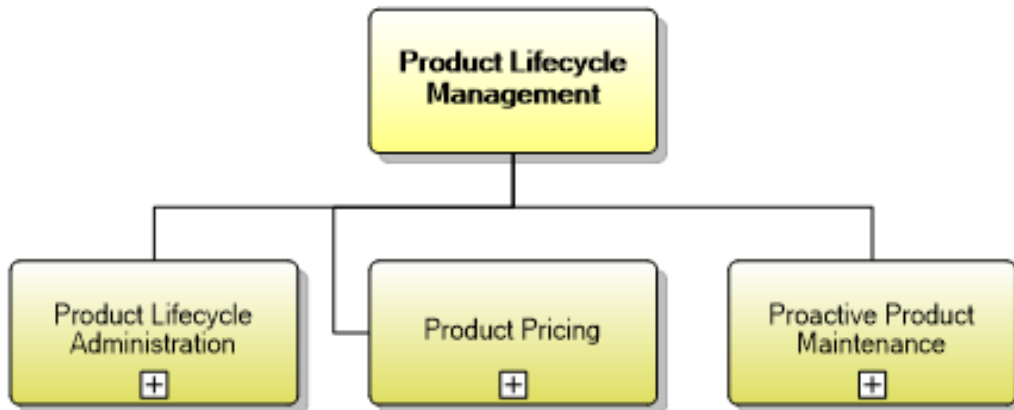


Figure 8 1.2.10 Product Lifecycle Management

### Product Lifecycle Administration

**Process Identifier:** 1.2.10.1

#### Brief Description

Create a product, specify the involvement one or more parties have with it, update information about the product, and remove the product when it is no longer of interest to an enterprise and/or the primary party responsible for the product.

#### Extended Description

Product Lifecycle Administration creates a product, specifies the involvement one or more parties have with it, updates information about the product, and removes the product when it is no longer of interest to an enterprise and/or the primary party responsible for the product.

A product may be created when a party is browsing an enterprise's catalog (a form of window shopping that is supported by the Product Offering Purchase Lifecycle Management process), when configuring a product, or when purchasing a product offering. Note that a purchase may be made from another enterprise.

Involvement may include the party account responsible for paying for the purchase and other charges, the party primarily responsible for the product, as well as users of the product.

Updates may include adding new products to a bundle as well as the location of the product. A product may be removed by such scenarios as when the primary party cancels its subscription to the product or when a party browsing the catalog discards the product in which interest was expressed.

#### Sigma Self-assessment

## Product Pricing

Process Identifier: 1.2.10.2

### Brief Description

Apply, update, and remove a price associated with a product.

### Extended Description

Product Pricing applies, updates, and removes a price associated with a product. A price may be applied when a party is browsing an enterprise's catalog (a form of window shopping that is supported by the Product Offering Purchase Lifecycle Management process), when configuring a product, or when purchasing a product offering.

The price may be what is paid when it is purchased or other types of charges due at some point in the future, such as recurring and usage based charges that are determined by a product's price.

Sigma Self-assessment

1.4. Service Management Domain

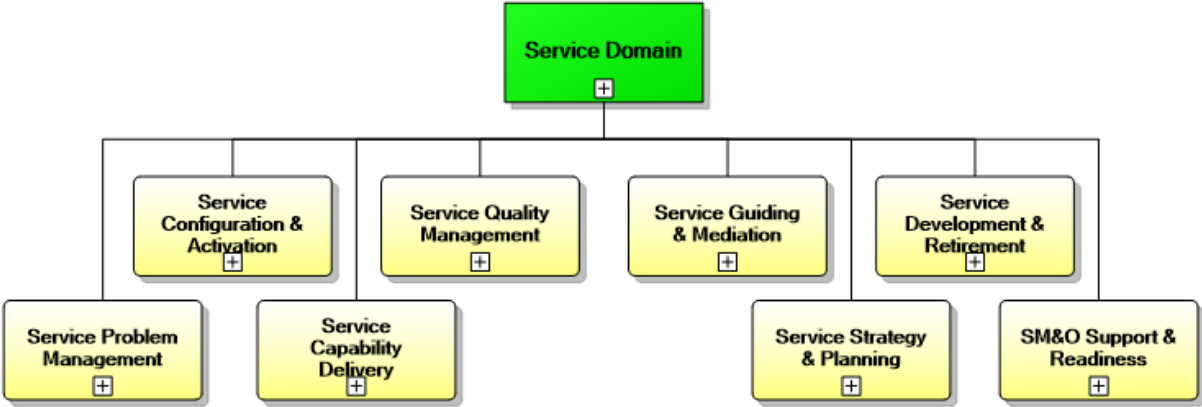


Figure 9 1.4. Service Management Domain

## 1.4.1 Service Strategy & Planning

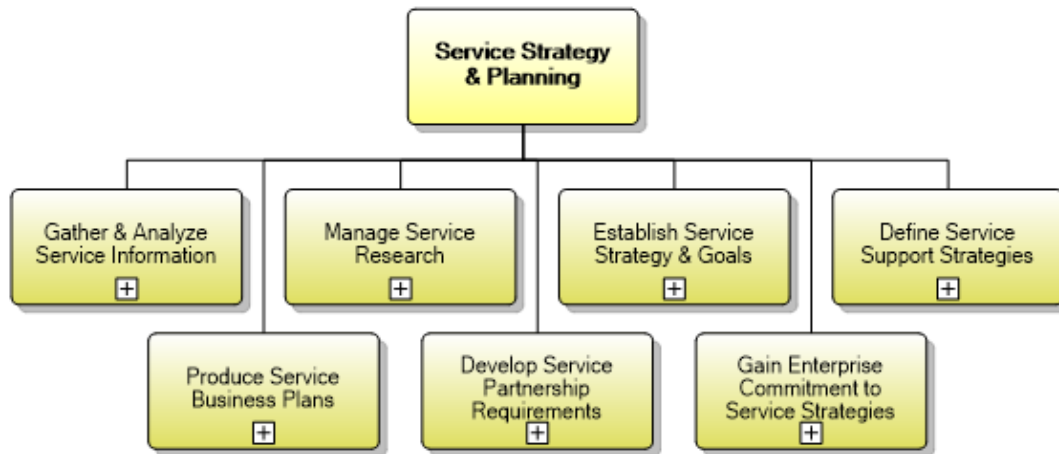


Figure 10 1.4.1 Service Strategy & Planning

### Gather & Analyze Service Information

**Process Identifier:** 1.4.1.1

#### Brief Description

Research and analyze customer, technology, competitor and marketing information to identify new service directions and industry best practice, and potential enhancements to existing services

#### Extended Description

The Gather & Analyze Service Information processes research and analyze customer, technology, competitor and marketing information to identify new service directions and industry best practice, and potential enhancements to existing services. These processes undertake the necessary analysis to identify potential opportunities, compare current capabilities with the identified opportunities, and as a result of the analysis develop new service requirements. Included in this analysis are the capture and analysis of service growth driven by expansion of housing estates, building developments and building approvals forecasts. The new service requirements include an analysis of the customer value proposition.

These processes include the establishment and management of relationships with external providers of service information, and the management of internal resources used for providing service information. A key source of input to this analysis is derived from the marketing and product strategy and planning processes. **AM**

#### Sigma Self-assessment

The research of internal and external service information/sources and identification of service opportunities are covered within the Sigma PLM Methodology under L3 process Analyze Market Data & Product Portfolio Data.

This L3 process is part of L2 process Develop Product Strategy. This is further covered within the L3 process "Identify Product Update Opportunities" as part of L2 process Monitor & Update Product Data that deals with existing products already configured within the Sigma solution.

(refer to Sigma PLM Framework\_v7 Section 3.5 )

As described in the Sigma PLM Framework, the process of identifying Service Information and Service requirements is contained within the Product process since Services and their information directly support Products

(refer to Sigma PLM Framework\_v7 Section 3.2 )

Gathering & Analyzing service information is supported manually through the Sigma methodology. The methodology and its process allow users to automatically store findings of this research into the Sigma solution by utilizing the concept of Generic Entity. One of the features of this concept allows users to link the information stored within the Product Catalog to the enterprise's document management system where the analysis sources and findings would be stored. Additionally, automated solution opportunities can be identified by reusing building blocks already configured and identified by the "Impact Analysis" capability or by reports that can also enable identification of new ideas/update to existing services.

(refer to Sigma Catalog 7.1 Product Overview page 39-43 specifically for Impact Analysis, Business Intelligence Components, Generic Entities and Templates and Views)

(refer to Product Deck - Sigma Catalog.pdf pages 37 to 44, product modelling approach)

The Sigma "Identify Product Update Opportunities" L3 process includes manual activities for discovering new services and changing/updating existing ones. This as mentioned above can be support by auto-populating reports or manually browsing through the catalogue using the concept of reusing existing service building block components.

Establishment and management of relationships with external providers of service information are handled manually outside of the Sigma solution but form part of the methodology for capturing product and service data. Part of managing the portfolio entails managing relationships of product and service data. Service Information would be provided by a number of user communities (eg. IT, Product Management, Business Units, Networks,), and the Sigma platform supports capture of this data as it is available. The Sigma solution can also support automated links/reference to external resources of service information.



### 1.4.3 Service Development & Retirement

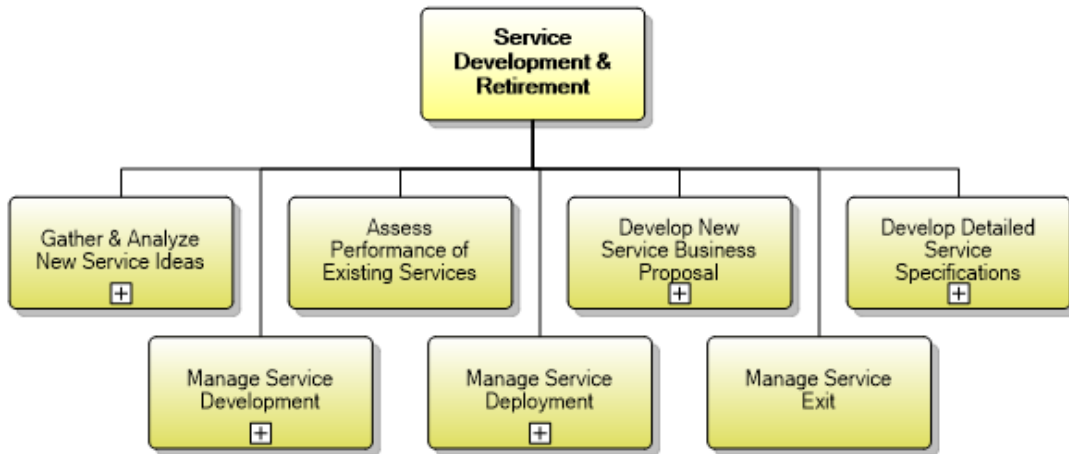


Figure 11 1.4.3 Service Development & Retirement

#### Gather & Analyze New Service Ideas

**Process Identifier:** 1.4.3.1

##### Brief Description

Combine specific product requirements with demographic, customer, technology and marketing information to identify specific new service classes/components or enhancements to existing service classes/components.

##### Extended Description

The Gather & Analyze New Service Ideas processes combine specific product requirements with demographic, customer, technology and marketing information to identify specific new service classes/components or enhancements to existing service classes/components. These processes undertake the necessary analysis to identify potential service classes, compare current service classes with the identified required service classes, and as a result of the analysis develop new service class ideas. The new service class ideas include an analysis of the customer value proposition. **AM**

##### Explanatory

Reserved for future use.

##### Mandatory

Reserved for future use.

##### Optional

Reserved for future use.

##### Interactions

Reserved for future use.

##### Sigma Self-assessment

Gathering and analyzing new service ideas are performed manually, and the Sigma platform automates capture of service requirements and ideas using the Generic Entity capability. This is further supported by the platform's

reporting capability that can combine requirements in order to identify new services or updates to existing services.

Analysis is performed manually, and the platform automates capturing service requirements, comparing current pre-configured service classes and components with use of reporting. The platform (using the automated generic entity capability) will capture service requirements and ideas including the customer value proposition.

(refer to Sigma Catalog 7.1 Product Overview page 39-43 specifically for Generic Entities and Templates and Views)

Reporting functionality provided through the Business intelligence (BI) / reporting functionality in the Sigma Catalog Manager can be used to provide the data required to construct business reports related to marketing and service consumption/popularity/TCO/etc. that can be delivered in any preferred format and can be used to determine customer value propositions for new and existing service ideas.

(refer to Sigma Catalog 7.1 Product Overview page 34 Business intelligence Components)

## Develop New Service Business Proposal

**Process Identifier:** 1.4.3.3

### **Brief Description**

Develop and document business proposals for the identified new or enhanced Service ideas

### **Extended Description**

The Develop New Service Business Proposal processes develop and document business proposals for the identified new or enhanced Service ideas (including if necessary a business case). The business proposal (or business case) identifies the new service requirements, including the specific resource components which underpin the service. The business proposal also identifies the service development, management and operations costs and anticipated benefits, including forecast demand, performance gains, productivity gains and/or operational cost improvements. The business proposal also includes an assessment of the risks and the competitive positioning of the service proposal. As a part of the business proposal development a feasibility assessment can be produced. Potential external parties who can assist in the development of the service classes are also identified (note that commercial arrangements may already be in place with these potential parties). As a part of the process, the business proposal is appropriately approved, and as a result of the approval, necessary staff and other resources are made available. **AM**

### **Sigma Self-assessment**

The business proposal can be developed and documented using the Sigma solution “Generic Entity” concept. This could apply to all artifacts required to support the new service concept, including requirements, costs, benefits, forecast demand, performance gains, productivity gains and TCO information.

(refer to Sigma Catalog 7.1 Product Overview page 39-43 specifically for Generic Entities and Templates and Views)

Reporting functionality provided through the Business intelligence (BI) / reporting functionality in the Sigma Catalog Manager can be used to provide the data required to construct business proposals containing analysis

and risk assessment and competitive information that can be delivered in any preferred format and can be used to determine a feasibility assessment for new and existing service business proposals.

(refer to Sigma Catalog 7.1 Product Overview page 34 Business intelligence Components)

## Develop Detailed Service Specifications

**Process Identifier:** 1.4.3.4

### **Brief Description**

Develop and document the detailed service-related technical and operational specifications, and customer manuals.

### **Extended Description**

The Develop Detailed Service Specifications processes develop and document the detailed service-related technical and operational specifications, and customer manuals. These processes develop and document the required service features, the specific underpinning resource requirements and selections, the specific operational, and quality requirements and support activities, any service specific data required for the systems and network infrastructure as agreed through the Develop New Service Business Proposal processes. The Develop Detailed Product Specifications processes provide input to these specifications. The processes ensure that all detailed specifications are produced and appropriately documented. Additionally the processes ensure that the documentation is captured in an appropriate enterprise repository. **AM**

### **Sigma Self-assessment**

The Sigma platform using the Sigma Catalog Manager and Sigma Catalog Workbench applications provides an environment for users to develop and then document detailed service specifications. The software facilitates and provides general support to create all specification types including technical, performance and operational information.

During actual implementation the platform is capable of handling a mix of auto/manual processes dependant on how you use the platform and the customer requirements. The Sigma Central Product Catalog acts as an enterprise repository for Product/Service/Resource specifications. The Sigma platform can support the concept of both Customer Facing Services and Resource Facing Services.

(refer to the Sigma Product Construct Guide.doc, section 4.1)

Developing and documenting the features, specific service requirements and selection within Sigma will be handled by both the Sigma's Catalog Manager and the Sigma Catalog Workbench.

(refer to Sigma Catalog 7.1 Product Overview pages 13-16, Sigma Catalog Manager)

(refer to Sigma Catalog 7.1 Product Overview page 51, Sigma Catalog Workbench)

The Sigma Catalog Workbench Schema Maintenance Template Manager tool can be used to Create/Develop template specifications (refer to Sigma Catalog 7.1 Configuration Guide page 16, Data Modeling: Templates) (refer to Sigma Catalog 7.1 Configuration Guide page 74, Template Manager) to represent a specific service. The template can be configured to capture and document any type of data configuration by making use of user defined classes and elements – (refer to Sigma Catalog 7.1 Configuration Guide page 54, Using the Schema Maintenance Tool, Schema Classes).

The Sigma Catalog Manager is then used to create an instance of the Service Specification based on a selected template specification and associated schema. This service specification will be populated with the characteristics, facts, rules, limits, dependencies, and associations required to fully define the service and its relationships to underpinning resources.

The Sigma platform acts as an enterprise master data repository for service specifications and can capture documentation in the same way using templates and view as above or as part of the Generic Entity capability.

All configured documentation and information is available through the Sigma Catalog Manager, and can also be accessed through the Sigma Catalog APIs which can be queried and the response used to automatically create documentation.

Specifications may contain links (URLs) for example to Microsoft SharePoint where additional documentation or images may be stored as the customer prefers.

# 1.5. Resource Management Domain

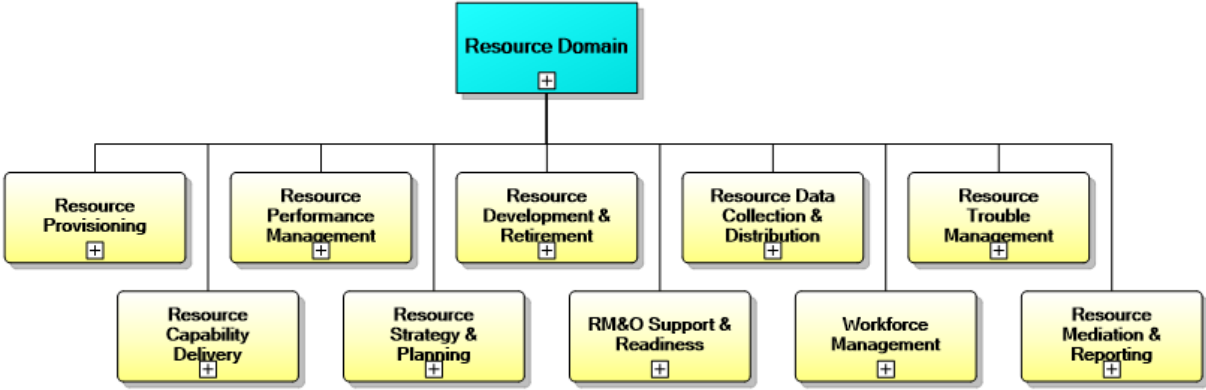


Figure 12 1.5. Resource Management Domain

## 1.5.1 Resource Strategy & Planning

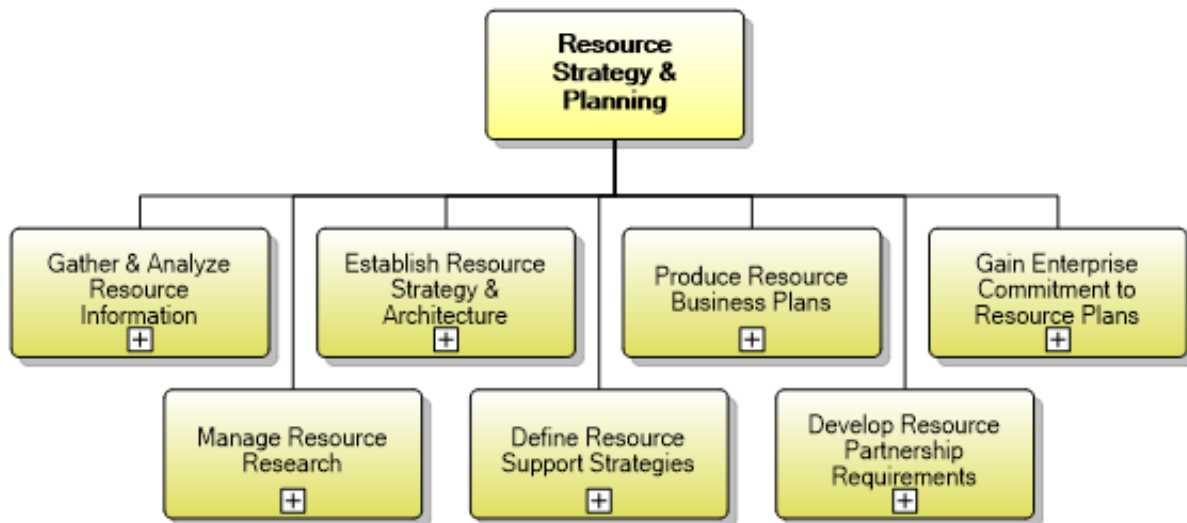


Figure 13 1.5.1 Resource Strategy & Planning

### Gather & Analyze Resource Information

**Process Identifier:** 1.5.1.1

#### Brief Description

Research and analyze customer, technology, competitor and marketing information to identify new resource requirements and industry resource capabilities and availability

#### Extended Description

The Gather & Analyze Resource Information processes research and analyze customer, technology, competitor and marketing information to identify new resource requirements and industry resource capabilities and availability. These processes undertake the necessary analysis to identify potential opportunities, compare current capabilities with the identified opportunities, and as a result of the analysis develop new resource requirements or enhancements to existing requirements. The new or enhanced resource requirements include an analysis of the customer value proposition. These processes include the establishment and management of relationships with external providers of resource information, and the management of internal groups used for providing resource information. A key source of input to this analysis is derived from the business, marketing, service and product strategy and planning processes. **AM**

#### Sigma Self-assessment

The research of internal and external resource information/sources and identification of service opportunities are covered within the Sigma PLM Methodology under L3 process Analyze Market Data & Product Portfolio Data. This L3 process is part of L2 process Develop Product Strategy. This is further covered within the L3 process "Identify Product Update Opportunities" as part of L2 process Monitor & Update Product Data that deals with existing products already configured within the Sigma solution.

(refer to Sigma PLM Framework\_v7 Section 3.5 )

As described in the Sigma PLM Framework, the process of identifying Resource Information and Resource requirements is contained within the Product process since Resources and their information directly support Products

(refer to Sigma PLM Framework\_v7 Section 3.2 )

Gathering & Analyzing Resource information is supported manually through the Sigma methodology. The methodology and its process allow users to automatically store findings of this research into the Sigma solution by utilizing the concept of Generic Entity. One of the features of this concept allows users to link the information stored within the Product Catalog to the enterprise's document management system where the analysis sources and findings would be stored.

Additionally, automated solution opportunities can be identified by reusing building blocks already configured and identified by the "Impact Analysis" capability or by reports that can also enable identification of new ideas/update to existing resources.

(refer to Sigma Catalog 7.1 Product Overview page 39-43 specifically for Impact Analysis, Business Intelligence Components, Generic Entities and Templates and Views)

(refer to Product Deck - Sigma Catalog.pdf pages 37 to 44, product modelling approach)

The Sigma "Identify Product Update Opportunities" L3 process includes manual activities for discovering new resources and changing/updating existing ones. This as mentioned above can be support by auto-populating reports or manually browsing through the catalogue using the concept of reusing existing service building block components.

Establishment and management of relationships with external providers of resource information are handled manually outside of the Sigma solution but form part of the methodology for capturing product, service and resource data. Part of managing the portfolio entails managing relationships of product, service and resource data. Resource Information would be provided by a number of user communities (eg. IT, Product Management, Business Units, Networks), and the Sigma platform supports capture of this data as it is available. The Sigma solution can also support automated links/reference to external resources of resource information.

### 1.5.3 Resource Development & Retirement

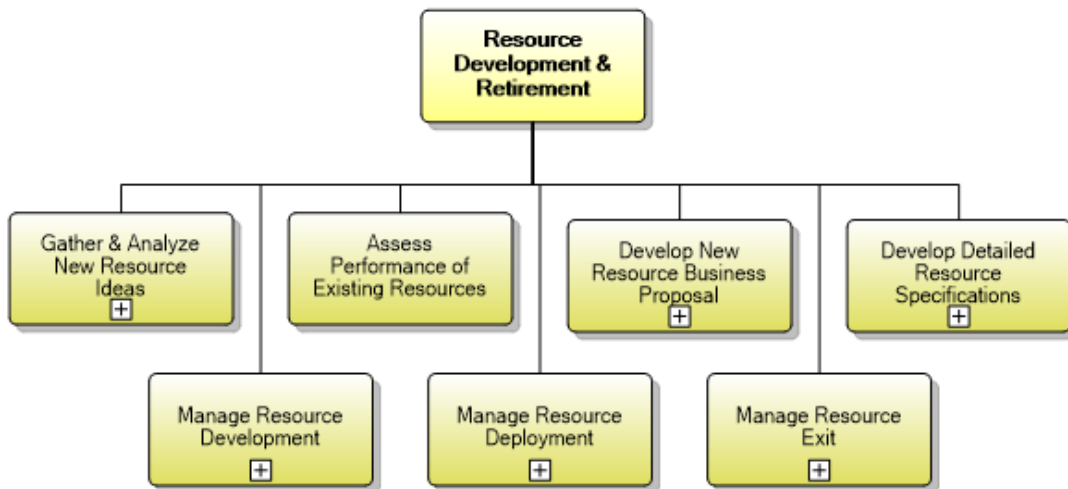


Figure 14 1.5.3 Resource Development & Retirement

#### Gather & Analyze New Resource Ideas

**Process Identifier:** 1.5.3.1

##### Brief Description

Combine specific product & service class requirements with demographic, customer, technology and marketing information to identify specific new resource classes/components, or enhancements to existing resource classes/components

##### Extended Description

The Gather & Analyze New Resource Ideas processes combine specific product & service class requirements with demographic, customer, technology and marketing information to identify specific new resource classes/components, or enhancements to existing resource classes/components. These processes undertake the necessary analysis to identify potential resource classes, compare current resource classes with the identified required resource classes, and as a result of the analysis develop new resource class ideas. **AM**

##### Sigma Self-assessment

Gathering and analyzing new resource ideas are performed manually, and the Sigma platform automates capture of resource requirements and ideas using the Generic Entity capability. This is further supported by the platform's reporting capability that can combine requirements in order to identify new resources or updates to existing resources.

Analysis is performed manually, and the platform automates capturing resource requirements, comparing current pre-configured resource classes and components with use of reporting. The platform (using the automated generic entity capability) will capture resource requirements and ideas including the customer value proposition.

(refer to Sigma Catalog 7.1 Product Overview page 39-43 specifically for Generic Entities and Templates and Views)



Reporting functionality provided through the Business intelligence (BI) / reporting functionality in the Sigma Catalog Manager can be used to provide the data required to construct business reports related to marketing and resource consumption/popularity/TCO/etc. that can be delivered in any preferred format and can be used to determine customer value propositions for new and existing resource ideas.

(refer to Sigma Catalog 7.1 Product Overview page 34 Business intelligence Components)

### **Develop Detailed Resource Specifications**

**Process Identifier:** 1.5.3.4

#### **Brief Description**

Develop and document the detailed resource-related technical, performance and operational specifications, and manuals.

#### **Extended Description**

The Develop Detailed Resource Specifications processes develop and document the detailed resource-related technical, performance and operational specifications, and manuals. These processes develop and document the required resource features, the specific technology requirements and selections, the specific operational performance and quality requirements and support activities, any resource specific data required for the systems and network infrastructure. The Develop Detailed Service Specifications processes provide input to these specifications. The processes ensure that all detailed specifications are produced and appropriately documented. Additionally, the processes ensure that the documentation is captured in an appropriate enterprise repository. **AM**

#### **Sigma Self-assessment**

The Sigma platform using the Sigma Catalog Manager and Sigma Catalog Workbench applications provides an environment for users to develop and then document detailed resource specifications. The software facilitates and provides general support to create all specification types including technical, performance and operational information.

During actual implementation the platform is capable of handling a mix of auto/manual processes dependant on how you use the platform and the customer requirements. The Sigma Central Product Catalog acts as an enterprise repository for Product/Service/Resource specifications.

(refer to the Sigma Product Construct Guide.doc, section 4.2)

Developing and documenting the features, specific resource requirements and selection within Sigma will be handled by both the Sigma's Catalog Manager and the Sigma Catalog Workbench.

(refer to Sigma Catalog 7.1 Product Overview pages 13-16, Sigma Catalog Manager)

(refer to Sigma Catalog 7.1 Product Overview page 51, Sigma Catalog Workbench)

The Sigma Catalog Workbench Schema Maintenance Template Manager tool can be used to Create/Develop template specifications (refer to Sigma Catalog 7.1 Configuration Guide page 16, Data Modeling: Templates) (refer to Sigma Catalog 7.1 Configuration Guide page 74, Template Manager) to represent a specific service.

The template can be configured to capture and document any type of data configuration by making use of user defined classes and elements – (refer to Sigma Catalog 7.1 Configuration Guide page 54, Using the Schema Maintenance Tool, Schema Classes).

The Sigma Catalog Manager is then used to create an instance of the Service Specification based on a selected template specification and associated schema. This service specification will be populated with the characteristics, facts, rules, limits, dependencies, and associations required to fully define the service and its relationships to underpinning resources.

The Sigma platform acts as an enterprise master data repository for service specifications and can capture documentation in the same way using templates and view as above or as part of the Generic Entity capability.

All configured documentation and information is available through the Sigma Catalog Manager, and can also be accessed through the Sigma Catalog APIs which can be queried and the response used to automatically create documentation.

Specifications may contain links (URLs) for example to Microsoft SharePoint where additional documentation or images may be stored as the customer prefers.

## 1.6. Engaged Party Domain

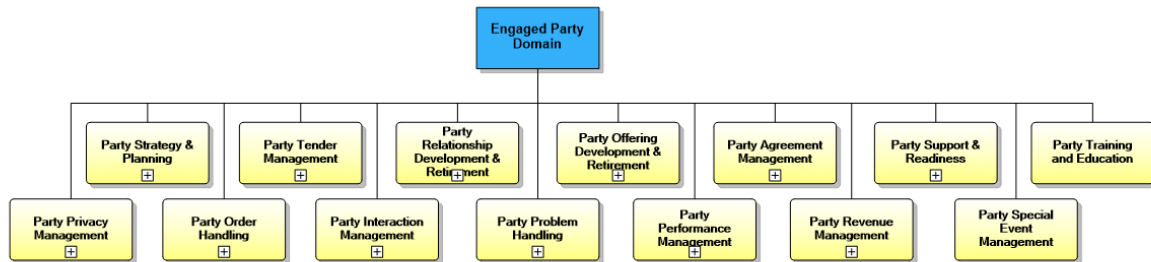


Figure 15 1.6. Engaged Party Domain

### 1.6.4 Party Offering Development & Retirement

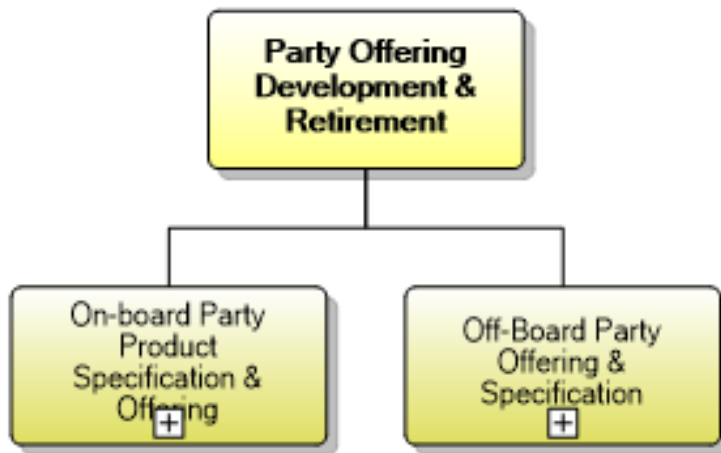


Figure 16 1.6.4 Party Offering Development & Retirement

#### On-board Party Product Specification & Offering

**Process Identifier:** 1.6.4.1

##### Brief Description

Manages the on-boarding another party's product offering or a product specification upon which the offering is based.

Also manage the involvement the enterprise has with a product specification and offering. For example, the enterprise may accept an order for one of its offerings, but it may be fulfilled by another party.

##### Extended Description

On-board Party Product Specification & Offering manages the on-boarding another party's product offering or a product specification upon which the offering is based.

It also manages the involvement the enterprise has with a party's product specification and offering. For example, the enterprise may accept an order for one of its offerings, but it may be fulfilled by another party. By using the on-boarded specifications, this process allows the enterprise to create new product offerings that leverage its own product offerings as well as the acquired product offerings. It may also make a party's offerings available as-is to the market.

The specifications for the product offering made available by another party in catalog may be from a wholesaler's perspective, while the specification in the enterprise's catalog may be from a retailer's perspective, therefore this process maintains the relationship between the enterprise's product specification and product offering and those provided by another party.

It is also used to modify the involvement associated with a party's, including the enterprise, product specifications or offerings. For example, if the party who accept payments for a purchased product offering changes.

This process is initially invoked during and after the agreement for a particular product specification and/or product offering has been established and approved. It is also invoked when modifications to the product specifications or offerings are implemented by another party in accordance with the terms and conditions and the process to manage the variance of an agreement. **AM**

### **Sigma Self-assessment**

The Sigma platform using the Sigma Catalog Manager, Sigma Catalog Workbench applications and the Sigma Catalog API, provides an environment that can support the onboarding of a 3<sup>rd</sup> party Product Specification. Product Offers and Product Specifications are implemented using configurable Templates and Data Schemas. The Sigma Catalog Workbench Template Manager and Sigma Catalog Workbench Schema Maintenance tools allow complete customization of the data and structure of an Offer, allowing capture and documentation any type of requirements information or configuration for a Product Offer or Product Specification.

(refer to Sigma Catalog 7.1 Configuration Guide page 16, Data Modeling: Templates) (refer to Sigma Catalog 7.1 Configuration Guide page 54, Using the Schema Maintenance Tool, Schema Classes )

The templates that are constructed to represent a 3<sup>rd</sup> Party Product Offer or Product Specification can be configured to contain information about the remote implementation. This can include unique identifiers that are owned by the 3<sup>rd</sup> party system and used to identify the Offering or Specification, and data that indicates how the 3<sup>rd</sup> Party offer can be consumed or payed for (for example a remote URL that defines where to order a 3<sup>rd</sup> Party Product, or a remote endpoint that identifies where a billing event should be sent).

The Product Catalog API provides access to the Templates and Schemas that are defined in the Workbench, supporting a range of API Endpoints that can be used to create Product Offering entities or Product Specification entities and create relationships between them.

(refer to Sigma Catalog 7.1 Integration Guide, pages 161-163, Entity Instance API)

Further to this, the Sigma Catalog Manager can be used to create Product Offers that have relationships to on-boarded Product Specifications. Allowing a user to define Product Offers that are built upon a 3<sup>rd</sup> Party Product Specification or Product Offer.

The Template for a 3<sup>rd</sup> Party Product Offer, or 3<sup>rd</sup> Party Product Specification can include additional information about the agreement or contract which is in place for the consumption of the Offer or Specification, allowing a Product Manager who is making use of these 3<sup>rd</sup> Party entities to manage and track the overall process.

## Off-Board Party Offering & Specification

**Process Identifier:** 1.6.4.2

### Brief Description

Off-board a party's offering or specification. If a specification is off-boarded all associated offerings are off-boarded. This can occur when the agreement for a product specification and/or offering is terminated. If an agreement covers multiple specifications and/or offerings off-boarding is done for the item on an agreement that is terminated.

### Extended Description

Off-Board Party Offering & Specification off-boards a party's offering or specification. If a specification is off-boarded all associated offerings are off-boarded. This can occur when the agreement for a product specification and/or offering is terminated. If an agreement covers multiple specifications and/or offerings off-boarding is done for the item on an agreement that is terminated. When the final product offering related to a product specification is off-boarded the product specification may also be off-boarded.

If a product specification is off-boarded then disposition of related service specifications, services, resource specifications, and/or resources is made.

The off-boarding by the enterprise of the capabilities is gradual and allows enough time to account for any contractual obligations of the enterprise with its customers, but without violating the terms and conditions of any agreement with the party. **AM**

### Sigma Self-assessment

The Sigma platform using the Sigma Catalog Manager application provides an environment that allows for the full control of Product Offers and Product Specifications, including 3<sup>rd</sup> Party On-boarded Product Offers or Product Specifications.

The data associated with any Product Offer or Product Specification will include End-Dates which identify when a Product Offer or Specification are no longer valid.

(refer to Sigma Catalog 7.1 User Guide page 17, Common Entity Data - specifically End-Dates)

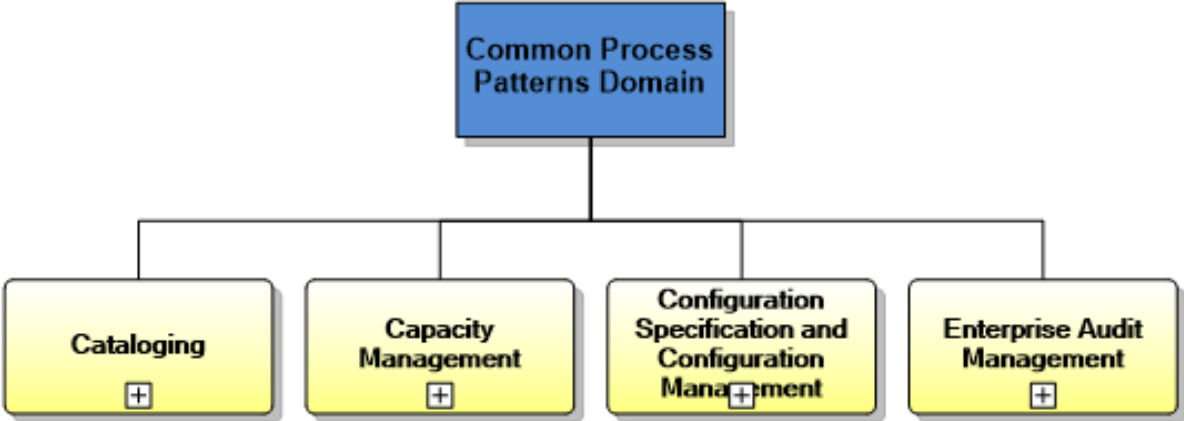
The process to remove an on-boarded Product Offer or Product Specification will involve actions and decisions depending on how the Offer or Specification has been used. The Sigma Catalog Manager provides a number of capabilities to help with this process, including an impact analysis tool: which identifies what related Offers will be impacted by a change, and a Shelve and Restore capability that allows a user to try out changes and save or apply them as needed.

(refer to Sigma Catalog 7.1 User Guide pages 65-68, Viewing an Impact Analysis, Shelve and Restore Changes)

The process to Off-board or stop using an on-boarded Product Offer or Product Specification can be handled in a number of ways, including grandfathering, retiring, and removing.

(refer to Sigma Catalog 7.1 User Guide page 145, Removing Product Offers)

**1.8. Common Process Patterns Domain**



*Figure 17 1.8. Common Process Patterns Domain*

### 1.8.3 Configuration Specification and Configuration Management

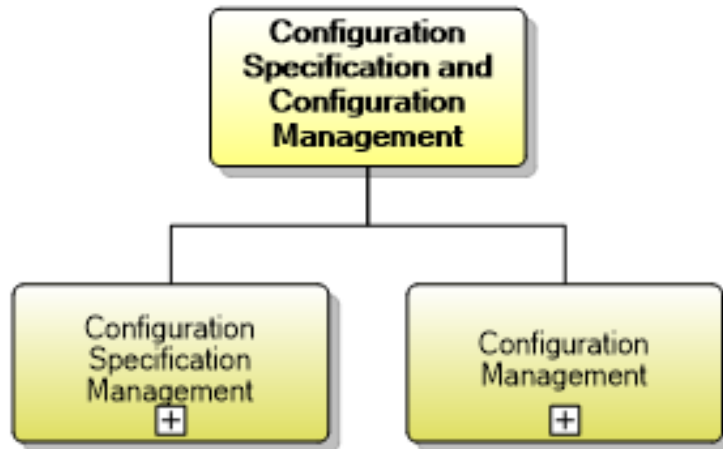


Figure 18 1.8.3 Configuration Specification and Configuration Management

#### Configuration Specification Management

**Process Identifier:** 1.8.3.1

##### Brief Description

Define, modify, and remove a configuration specification that defines how an entity, such as a product, service, or resource functions.

##### Extended Description

Configuration Specification Management defines, modifies, and removes a configuration specification that defines how an entity, such as a product, service, or resource functions.

A configuration specification can be associated with a policy that determines if the specification should be used, contains parameters that represent the details of how an entity functions, constraints that can be used to select the value of a parameter, as well as relationships that a configuration specification has with one or more other configuration specifications. **AM**

##### Sigma Self-assessment

The Sigma platform using the Sigma Catalog Manager and Sigma Catalog Workbench applications provides an environment for users to define Product Specifications, Service Specifications, Resource Specifications and their associated Configuration Specifications. The Configuration Specification extends the Product/Service/Resource Specification allowing the definition of Facts, Limits and Specification Characteristics to define configurable elements within the configuration specification.

(refer to Sigma Catalog 7.1 Data Model Guide.pdf pages 116 and 135)

#### Configuration Management

**Process Identifier:** 1.8.3.2**Brief Description**

Configure or create a new version of a configuration for an entity, such as a product, service, or resource, as defined by a configuration specification. Modify a configuration and values for configuration parameters, and remove a configuration.

**Extended Description**

Configuration Management configures or creates a new version of a configuration for an entity, such as a product, service, or resource, as defined by a configuration specification. This process also modifies a configuration and values for configuration parameters, and removes a configuration.

The configuration of one entity may require the configuration of other entities as defined by a selected configuration specification to use. For example, the configuration of a product may require the configuration of a service and a physical resource, such as a device.

**Sigma Self-assessment**