tmforum

Frameworx 12
Solution Conformance
Certification Report

Tibco

Fulfillment Orchestration Suite

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Version 1.0.1

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1 Introduction

1.1 Executive Summary

This document provides details of TIBCO's self-assessment and TM Forum's Conformance Assessment of **TIBCO Fulfillment Orchestration Suite** solution, against the following Frameworx 12 components:

- Business Process Framework Version 12

- Information Framework Version 12

The assessment included a review of:

- The methodology approach to process modeling against the TM Forum's Business Process Framework Release 12 according to the specific processes submitted in scope for the Assessment.

- Conformance to the Information Framework Release 12 Domains/Aggregate Business Entities according to the specific ABEs submitted in scope for the Assessment.

2 Solution Functionality/Capability Overview

2.1 TIBCO Fulfillment Orchestration Suite – Solution Overview

21st Century Communication Services

CSPs are facing incredible challenges as they enter the second decade of the 21st century. Competition is fierce and coming from all directions. Churn management has often become as important as customer acquisition. New network rollouts such as LTE and fiber are coming at a fast pace, and many providers are looking at new value-added offerings such as smartphones, mobile broadband, convergence, and mobile payments. To extract further value from assets, many providers are also partnering with internet and media companies and virtual operators, and focusing on operational efficiency for improved customer experience.

As a CSP in this environment, you face the challenges of defining, managing, and delivering numerous complex products and product variations in the most effective way possible:

- New product offerings must be designed and rolled out in a few weeks, including implementation throughout the entire fulfillment chain.
- Fulfillment orders will come from a large variety of channels – self-care portals, customer sales representatives, or even network elements detecting service access – each with a different service-Level agreement that needs to be monitored and managed.
- Fulfillment orders must be instantly executed and provisioned in-network to maximize customer experience.

TIBCO helps you meet these challenges by providing a comprehensive and integrated solution for end-to-end fulfillment automation. The TIBCO Fulfillment Orchestration Suite includes all the software needed to define new product and service offerings– along with associated fulfillment rules and processes – and automate delivery, from order capture to network service activation.

The Catalog-Driven Versus Process-Driven Approach

TIBCO's competitive advantage with the Fulfillment Orchestration Suite takes a dynamic, catalog-driven, rules-based approach, based on reusable components. This approach lets you build products and product bundles more quickly across platforms, which reduces testing time for new components, reduces delivery errors, and provides end-to-end visibility throughout the enterprise.

The catalog-driven approach accelerates time to market for new products and offers, speeds concept to cash, enhances the customer experience, and improves the efficiency of IT and operations resources.

Modular, Pre-Integrated TMF eTOM-Compliant Products

The suite's three applications are bundled to optimize automation and flow-through processing. The set combines support for long-running orders with manual interactions and short-lived automated orders. It handles and combines fulfillment of any:

- Customer type: Residential, corporate, post-paid, or pre-paid
- Network access technology: Wireless/LTE, wireline broadband, PSTN, or NGN/IMS
- Service: High-speed Internet, voice, TV,content, new M2M, or mobile payments services

End-To-End Order Fulfillment Operations

The suite provides end-to-end visibility and tracking of customer order progress down to service orders. It supports in-flight changes to customer orders, and service order cancel, suspend/resume, and repair.

The Fulfillment Orchestration Suite

The Fulfillment Orchestration Suite has been deployed and hardened by more than 80 CSPs around the world and integrated into a wide variety of IT systems and more than 300 network and value-added services (VAS) platforms. It has been deployed by emerging and leading telecom organizations in both nascent and mature markets. It consists of these interrelated applications:

• TIBCO® Fulfillment Catalog that defines and manages the lifecycles of commercial and technical offerings.
• TIBCO® Fulfillment Order Management that automates the orchestration of business delivery processes for commercial offers.
• TIBCO® Fulfillment Provisioning that automates the activation of underlying network services and the allocation of network resources.
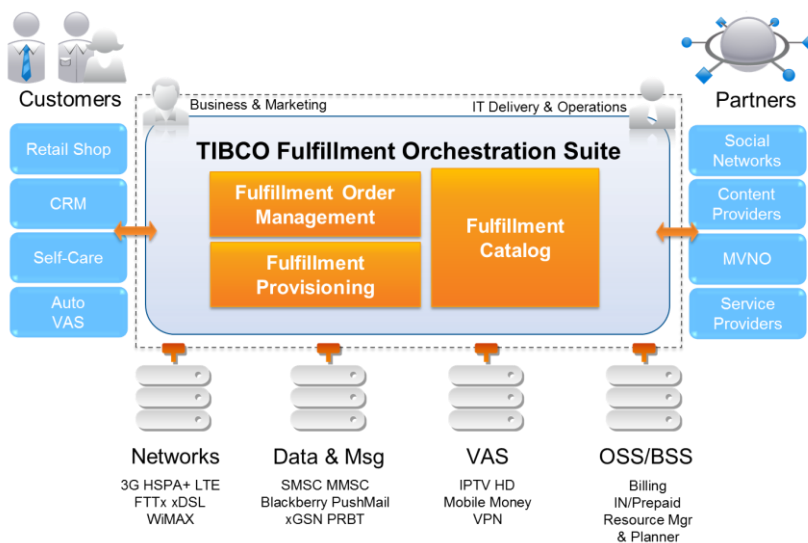
2.2   Solution Certification Versions

The following table provides the versions of the primary components in the Fulfillment Orchestration Suite that have been assessed as part of this certification against Business Process Framework version 12.0 and Information Framework 12.0.

Table 2.1 - Fulfillment Orchestration Suite Certification Versions

Product	Version
TIBCO Fulfillment Order Management	2.0
TIBCO Fulfillment Catalog	2.0
TIBCO Fulfillment Provisioning	3.8

3 Business Process Framework Assessment Overview

3.1 Mapping Technique Employed

Business Process Framework L3 descriptions are analyzed by looking for implied tasks. (This is similar to how process decomposition can use Semantic Analysis). Each Business Process Framework process is supported by descriptive text. In many cases, each process is aligned and mapped to appropriate company documentation references solution, methodology or modeling material.

The Business Process Framework L3 descriptions are analyzed by looking for implied tasks. Color coded text as highlighted below is used as part of the process mapping whereby highlighted text indicates the Level of support for a Level 3 process implied task:

- GREEN is used to highlight key words or key statements that are fully supported
- YELLOW is used to highlight key words/key statements that are partially supported
- GREY is used to highlight key words/key statements that are not supported
- No highlighting is used for words/statements that are irrelevant, just for reference or needed to complete the sentence.

Manual and Automated Support
It is important to determine whether the implied task is supported by manual steps, automated steps, or a combination of both. In this document, "A", "M", or "AM" is used for each task to indicate that the step or steps is/are automated (A), manual (M), or both (AM).

TM Forum Note 1: When process mappings are presented against Level 4 processes, the mappings are provided against the text in the "Mandatory" field for the process. In the event of the Mandatory field not being used, the process mappings are in that case provided against the Level 4 Brief/Extended descriptions.

TM Forum Note 2: Note that if a Level 3 process has not been decomposed to Level 4 processes in the Business Process Framework, in such cases the process mapping support is provided against the Level 4 process descriptions (Brief & Extended).

3.2   Business Process Framework Level 2 Process Scope

The following figure represents the Business Process Framework Level 2 processes that were presented in scope for the assessment, and the textual callouts represent the components of the TIBCO Fulfillment Orchestration Suite that were assessed and support the corresponding Business Process Framework processes according to the results in Chapter 6 Frameworx Conformance.
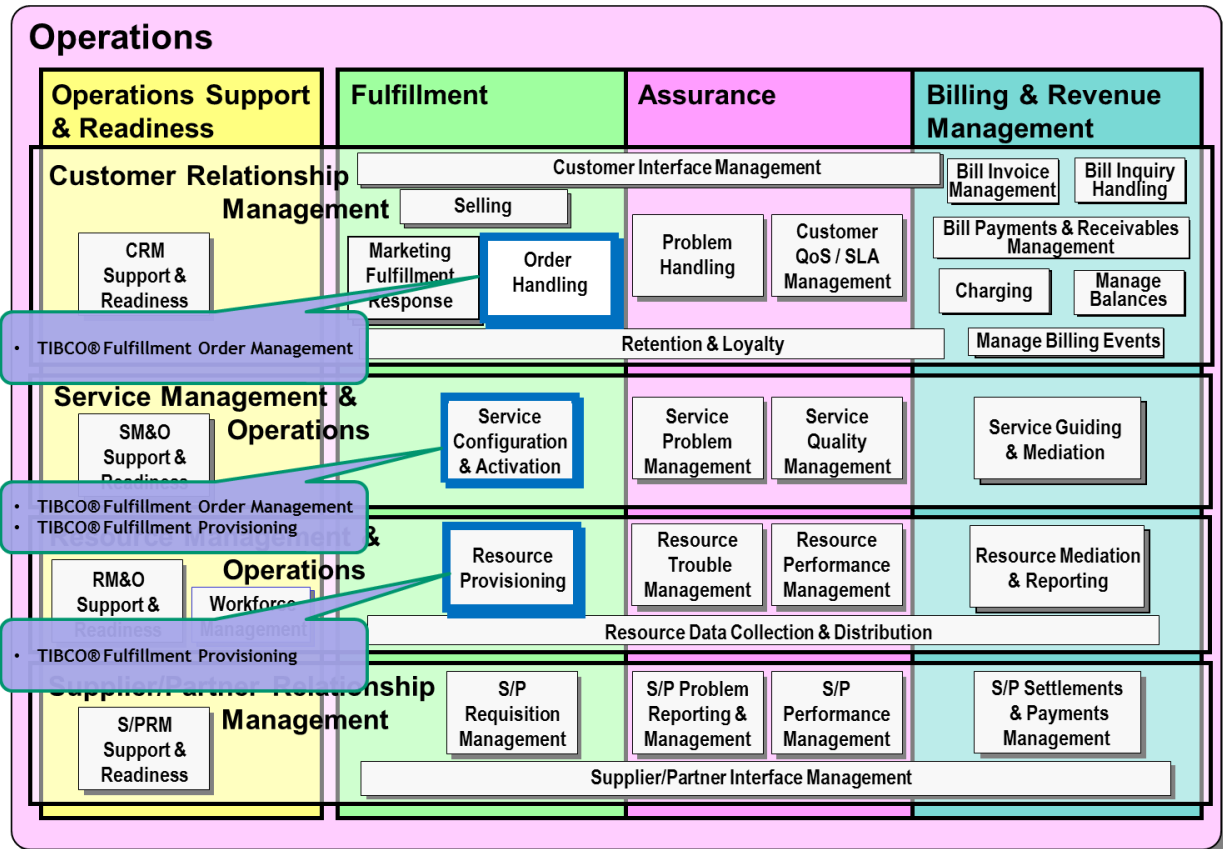
Figure 3.1 - Business Process Framework: Operations Level 2 process coverage for Fulfillment Orchestration Suite Assessment
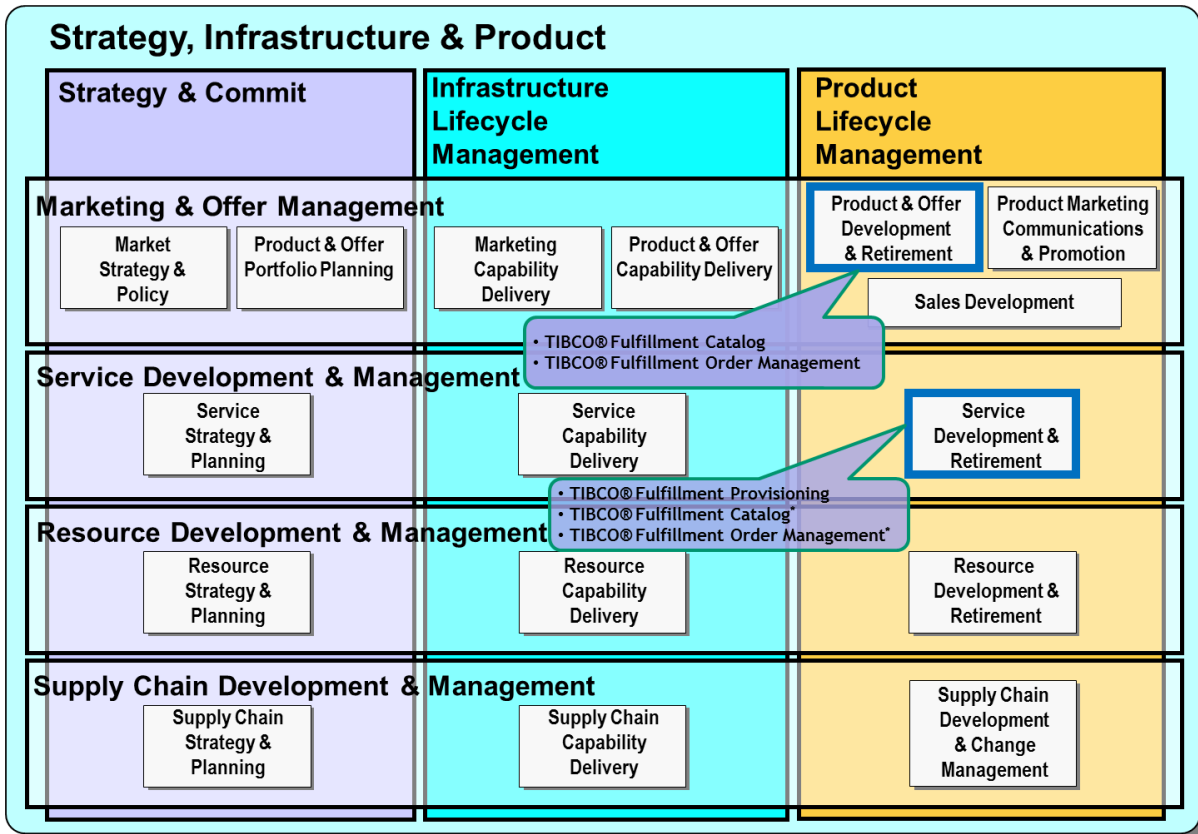
Figure 3.2 - Business Process Framework: Operations Level 2 process coverage for Fulfillment Orchestration Suite Assessment

* The products placement used for the certification of eTOM L2 processes corresponds to the archetypal products positioning within the Fulfillment Orchestration Suite.

Nevertheless, products of the suite are generic and can support more eTOM L2 processes than the ones they are certified against and allow alternate products positioning. See below for more comprehensive products support:

- *The Fulfillment Catalog is certified for:*
  - *eTOM L2 processes "Product & Offer Development & Retirement" but also supports eTOM L2 processes "Service Development & Retirement".*
- *The Fulfillment Order Management is certified for:*
  - *eTOM L2 processes "Order Handling", part of "Service Configuration & Activation" and "Product & Offer Development & Retirement" but also supports eTOM L2 processes "Service Development & Retirement" and more comprehensively "Service Configuration & Activation*

The following diagram identifies the number of Level 3 processes that were submitted for assessment, for each Level 2 process that was submitted in scope for the Assessment.
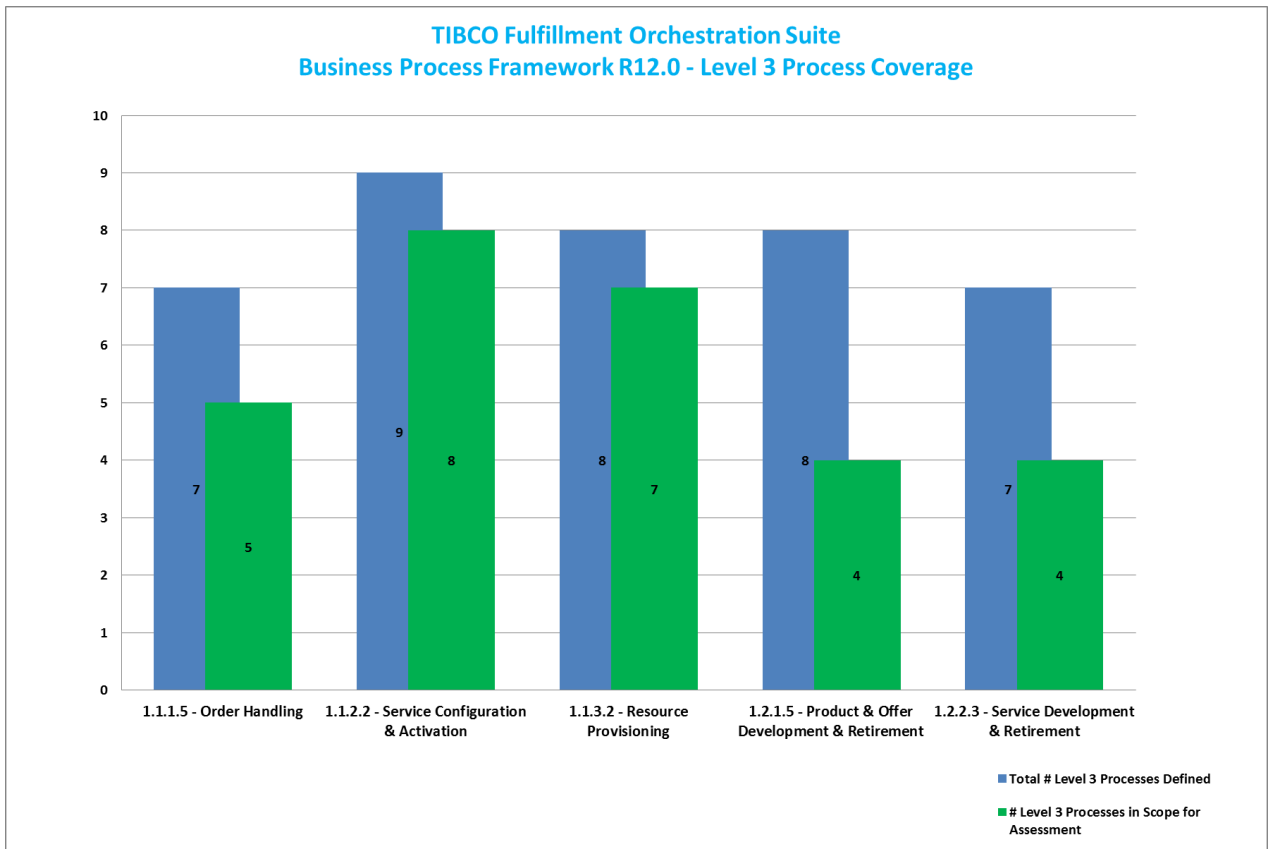
Figure 3.3 Level 3 process coverage for TIBCO Fulfillment Orchestration Suite Assessment

3.3 Solution Scope

The diagram in Figure 3.4 represents the TIBCO Fulfillment Orchestration Suite and how it is mapped to the Business Process Framework processes that were assessed as part of this Frameworx Conformance Assessment.
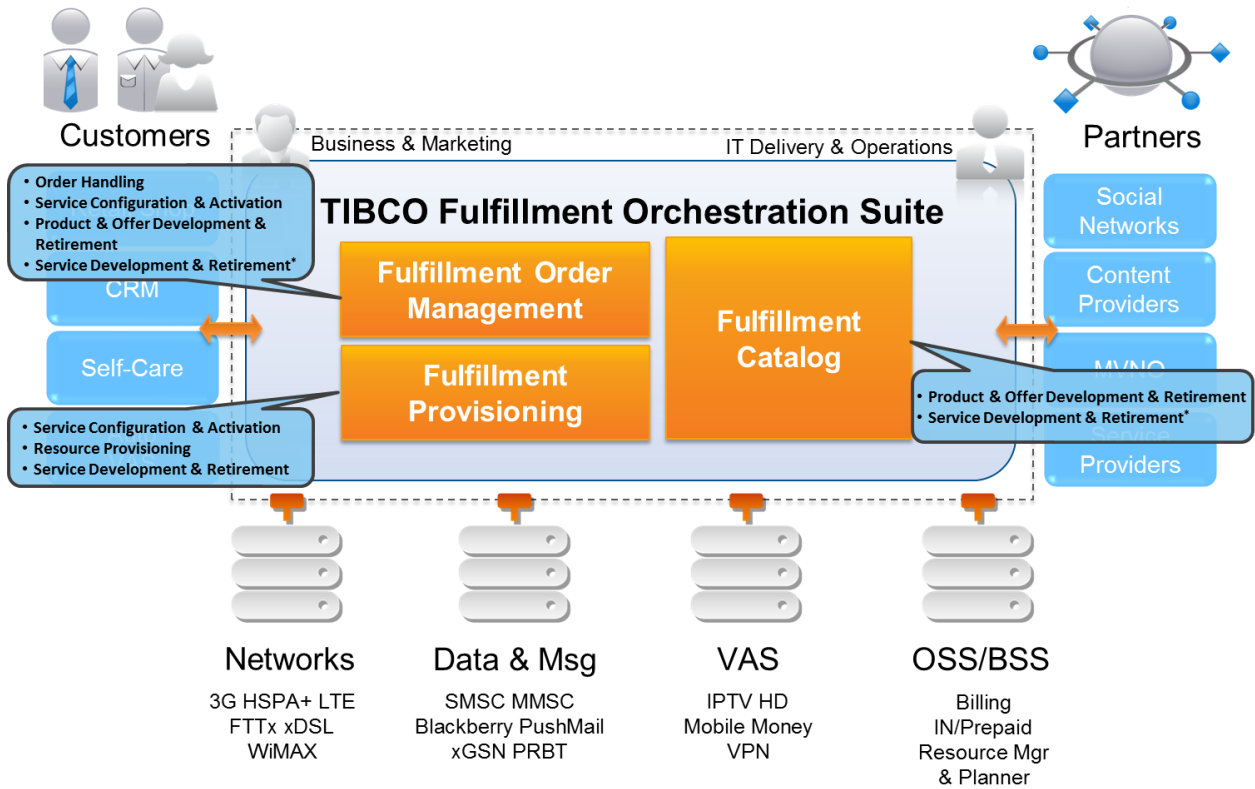
Figure 3.4 - Fulfillment Orchestration Suite Solution Footprint with Scope for eTOM Assessment

* The products placement used for the certification of eTOM L2 processes corresponds to the archetypal products positioning within the Fulfillment Orchestration Suite.
Nevertheless, products of the suite are generic and can support more eTOM L2 processes than the ones they are certified against and allow alternate products positioning. See below for more comprehensive products support:

- *The Fulfillment Catalog is certified for:*
  - *eTOM L2 processes "Product & Offer Development & Retirement" but also supports eTOM L2 processes "Service Development & Retirement".*
- *The Fulfillment Order Management is certified for:*
  - *eTOM L2 processes "Order Handling", part of "Service Configuration & Activation" and "Product & Offer Development & Retirement" but also supports eTOM L2 processes "Service Development & Retirement" and more comprehensively "Service Configuration & Activation*

4 Business Process Framework – Process Mapping Descriptions

This section provides the Process Mapping output from TIBCO' Self-Assessment which was reviewed by TM Forum Subject Matter Experts alongside supporting documentation for the TIBCO Fulfillment Orchestration Suite.

4.1 Level 2: Order Handling (1.1.1.5)

Figure 4.1 – Order Handling decomposition into Level 3 Processes

Process Identifier: 1.1.1.5

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.1.1   L3: Determine Customer Order Feasibility (1.1.1.5.1)

Process Identifier: 1.1.1.5.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.1.1.1 L3: Determine Customer Order Feasibility (1.1.1.5.1) – Mapping Details

NOTE: No decomposition to Level 4 processes, hence mappings provided against the Level 3 process descriptions and implied tasks.

Level 3 PROCESS MAPPING DETAILS
Determine Customer Order Feasibility (1.1.1.5.1)

Brief Description

Check the availability and/or the feasibility of providing and supporting standard and customized product offerings where specified to a customer. **M**

The Fulfillment Order Management supports feasibility checking as an optional step in the order lifecycle that analyzes the order to determine if it can be fulfilled. Feasibility checking may involve validating the order contains the required products, physical network capacity checking, or inventory stock Level check .The Feasibility Provider is a customer-implemented component because feasibility checking is highly customized to the requirements of a particular customer.

([FOM_ADMIN]**, 8 Orchestrator Interfaces - Feasibility Providers)**

Extended Description

The purpose of the Determine Customer Order Feasibility process is to check the availability and/or the feasibility of providing and supporting standard and customized product offerings where specified as part of the standard product offering process flow, to a customer. **M**

See Brief Description

These processes invoke requests to SM&O provisioning processes to determine the availability and supportability of product offerings to a customer. **M**

The Feasibility Provider can implement the invocation of requests to SM&O provisioning processes managed by Fulfillment Provisioning or any other systems. TIBCO BusinessWorks can be used to implement connectivity to external systems.

These processes are also responsible for determining whether the offering can be supported by other CRM processes. **M**

The Feasibility Provider can implement any kind of logic including this one.

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.1.2   L3: Authorize Credit (1.1.1.5.2) [Not Assessed]

This process was not submitted for assessment.

4.1.3   L3: Track & Manage Customer Order Handling (1.1.1.5.4)

Process Identifier: 1.1.1.5.4

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.1.3.1 Level 4: Manage Customer Order (1.1.1.5.4.1) – Mapping Details

Process Identifier: 1.1.1.5.4.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

Level 4 PROCESS MAPPING DETAILS Manage Customer Order (1.1.1.5.4.1)
Brief Description
Schedule, assign and coordinate customer provisioning related activities. **A**
The Fulfillment Order Management schedules customer orders based on "Required By Date" attribute set at order header and/or order line Level.
([FOM_CONCEPTS]**, 3 Definitions and Concepts – Order Header)**
The Fulfillment Order Management generates automatically and dynamically, for each customer order, a corresponding provisioning plan that models all the steps required provisioning the products submitted through the order lines.
The Fulfillment Order Management AOPD component decomposes each order line into a set of provisioning plan items based on the product specification defined in the Fulfillment Catalog. The plan items are organized into a workflow based on the dependencies defined between them. The plan can also be optimized based on rules such as affinity or single use.
Then, the Fulfillment Order Management Orchestrator component coordinates the execution of the

plan.

([FOM_CONCEPTS]**, 1 Introduction – Architecture)**

([FOM_CONCEPTS]**, 4 Fulfillment Process)**

([FOM_CONCEPTS]**, 5 Automated Order Plan Development)**

Generate the respective service order creation request(s) to Issue Service Orders based on specific customer orders. **A**

The Fulfillment Order Management can automatically request the Fulfillment Provisioning to create and execute service orders upon execution of a plan items.

([FOM_CONCEPTS]**, 4 Fulfillment Process - FC and FP Integration)**

([FOM_CONCEPTS]**, 4 Fulfillment Process - FOM and FP Integration)**

([FOM_USERGUIDE]**, 1 Fulfillment Order Management - Fulfillment Order Management Functionality)**

Escalate status of customer orders in accordance with local policy. **A**

The Fulfillment Order Management Jeopardy component permits to detect customer orders in jeopardy condition and notify operators or external system.

([FOM_CONCEPTS]**, 3 Definitions and Concepts - Jeopardy Management)**

Add additional information to an existing customer order. Modify information in an existing customer order. **M**

A customer order can be enriched with new or modified information before submission in the Fulfillment Order Management using shipped Business Works tooling. The customer order and order line information is passed to the corresponding provisioning plan. The provisioning plan information can then be modified at each steps of its execution using SetPlan or SetPlanItem calls.

([FOM_ADMIN]**, 9 Data Access Interfaces – Set Plan / Set Plan Item)**

Cancel a customer order when the initiating sales request is cancelled. **A**

The Fulfillment Order Management provides support for cancelling an in-flight order that is identified by a reference identifier passed as an input parameter. When an order is being cancelled, the initial order is retrieved using provided reference identifier and all its running order lines are cancelled. The Fulfillment Order Management Orchestrator component suspends plan items in execution and applies a rollback if required.

([FOM_CONCEPTS], **5 Automated Order Plan Development - Understanding Orders – Cancel Order)**

([FOM_USERGUIDE]**, 1 Fulfillment Order Management - Fulfillment Order Management Functionality - Canceling an Order)**

==If some specific product components are delivered directly by suppliers/partners, initiate requests, through S/P Requisition Management, for the delivery by the supplier/partner of the specific product components==. **AM**

This is managed through plan items which implementation can access external system responsible for suppliers/partners and execution can request specific product components delivery.

([FOM_CONCEPTS]**, 4 Fulfillment Process)**

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.1.3.2 Level 4: Track Customer Order (1.1.1.5.4.2) – Mapping Details

Process Identifier: 1.1.1.5.4.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

Level 4 PROCESS MAPPING DETAILS
Track Customer Order (1.1.1.5.4.2)

Brief Description

Undertake necessary tracking of the execution process. Modify the customer order status.   **A**

The Fulfillment Order Management controls the execution of the customer order from its reception to its closure through multiple guided steps including:

- *Reception in OMS component*
- *Feasibility check in Feasibility Provider components*
- *Validation in OCV component*
- *Plan generation in AOPD component*
- *Plan execution in Orchestrator component*

Each of these steps can modify the customer order status to reflect execution state. Here are the different customer order states:

- *SUBMITTED*
- *FEASIBILITY*
- *PREQUALIFICATION FAILED*
- *PLAN DEVELOPMENT*
- *EXECUTION*
- *COMPLETE*
- *CANCELED*
- *WITHDRAWN*

The customer order orchestration executes all provisioning activities (called plan items in FOM) following the sequencing and dependencies defined in Fulfillment Catalog for the products being provisioned. It keeps track of status and manages exceptions.

([FOM_CONCEPTS]**, 1 Introduction – Architecture)**

([FOM_CONCEPTS]**, 4 Fulfillment Process)**

Monitor the jeopardy status of customer orders, escalating customer orders as necessary. **A**

The Fulfillment Order Management Jeopardy component permits to detect customer orders in jeopardy condition and notify operators or external system.

([FOM_CONCEPTS]**, 3 Definitions and Concepts - Jeopardy Management)**

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.1.4   L3: Complete Customer Order (1.1.1.5.5)

Process Identifier: 1.1.1.5.5

Brief Description

Manage customer information and interactions after customer contracts or associated service orders have been finalized and during the order completion phase.

4.1.4.1   Level 4: Manage Customer Information (1.1.1.5.5.1) – Mapping Details

Process Identifier: 1.1.1.5.5.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

Level 4 PROCESS MAPPING DETAILS Manage Customer Information (1.1.1.5.5.1)
Brief Description Manage customer information after customer contracts or associated service orders have been finalized and during the order completion phase. Ensure that any customer information required by other CRM processes is updated as part of the customer order completion. **AM** *The Fulfillment Order Management can access customer inventory systems to get and set customer data before entering the solution by developing custom code using TIBCO BusinessWorks product and/or by implementing the logic into Process Components and have them executed as part of the order plan. This can be done by defining a customer inventory product in the catalog and include this product in the composition of official product offering. During order plan generation, plan items for customer inventory action will added to the plan. The sequencing of these plan items can be adjusted to occur before and/or after specific product provisioning activities.* *Moreover, the Fulfillment Order Management generates events to EMS bus upon state changes which can be subscribed by custom component that can then execute necessary logic to manage customer information.* **(**[FOM_CONCEPTS]**, 1 Introduction – Architecture)** ([FOM_CONCEPTS]**, 4 Fulfillment Process)**   **Extended Description** Not used for this process element **Explanatory** Reserved for future use. **Mandatory**

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.1.4.2 Level 4: Manage Customer Interaction (1.1.1.5.5.2) – Mapping Details

Process Identifier: 1.1.1.5.5.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

Level 4 PROCESS MAPPING DETAILS
Manage Customer Interaction (1.1.1.5.5.2)

Brief Description

Coordinate customer participation in commissioning or end-to-end testing and satisfactory delivery.
M

The Fulfillment Order Management provides multiple mechanisms to model a sequence of step required for the coordination with the customer:

A product can be added in Fulfillment Catalog to handle the customer coordination steps each of which being modeled as a sub-product. Each sub-product is assigned a sequence number.

Similarly, a product can be defined to handle the customer coordination but all steps are managed by a Process Component that will implement a workflow using shipped TIBCO Business Works product..

([FOM_CONCEPTS]**, 1 Introduction – Architecture)**

([FOM_CONCEPTS]**, 4 Fulfillment Process)**

Train the customer on the functionality and benefits of the solution. **M**

TIBCO can help coordinating customer training and provide tools such as TIBCO NimbusControl solution that can document processes to train customer on the functionality.

([NIMBUS_QUICK]**, Principles of Process Mapping)**

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.1.5   L3: Issue Customer Orders (1.1.1.5.6) [Not Assessed]

This process was not submitted for assessment.

4.1.6   L3: Report Customer Order Handling (1.1.1.5.7)

Process Identifier: 1.1.1.5.7

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.1.6.1 Level 4: Monitor Customer Order Status (1.1.1.5.7.1) – Mapping Details

Process Identifier: 1.1.1.5.7.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

Level 4 PROCESS MAPPING DETAILS
Monitor Customer Order Status (1.1.1.5.7.1)
Brief Description Continuously monitor the status of customer orders.**A** *The Fulfillment Order Management controls the execution of the customer order from its reception to its closure through multiple guided steps including:* - *Reception in OMS component* - *Feasibility check in Feasibility Provider components* - *Validation in OCV component* - *Plan generation in AOPD component* - *Plan execution in Orchestrator component* *Each of these steps can modify the customer order status to reflect execution state. The Fulfillment Order Management generates events to EMS bus upon state changes.* *Here are the different customer order states:* - *SUBMITTED* - *FEASIBILITY*

- *PREQUALIFICATION FAILED*
- *PLAN DEVELOPMENT*
- *EXECUTION*
- *COMPLETE*
- *CANCELED*
- *WITHDRAWN*

The customer order orchestration executes all provisioning activities (called plan items in FOM) following the sequencing and dependencies defined in Fulfillment Catalog for the products being provisioned. It keeps track of status and manages exceptions.

([FOM_CONCEPTS]**, 1 Introduction – Architecture)**

([FOM_CONCEPTS]**, 4 Fulfillment Process)**

([FOM_CONCEPTS]**, 2 Order Management Concepts – Order Notifications)**

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use

4.1.6.2   Level 4: Manage Customer Order Status Notification (1.1.1.5.7.2) – Mapping Details

Process Identifier: 1.1.1.5.7.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

Level 4 PROCESS MAPPING DETAILS
Manage Customer Order Status Notification (1.1.1.5.7.2)

Brief Description
<mark>Manage notifications to processes and other parties registered to receive notifications of any status changes</mark>. **A**
The Fulfillment Order management integrates with TIBCO JMS bus and publishes all its notifications to a JMS topic. External processes can subscribe to these topics to receive order status change notifications.
([FOM_CONCEPTS]**, 2 Order Management Concepts – Order Notifications)**
Extended Description
Not used for this process element
Explanatory
Reserved for future use.
Mandatory
Reserved for future use.
Optional
Reserved for future use.
Interactions
Reserved for future use

4.1.6.3 Level 4: Report Customer Order Status (1.1.1.5.7.3) – Mapping Details

Process Identifier: 1.1.1.5.7.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

Level 4 PROCESS MAPPING DETAILS
Report Customer Order Status (1.1.1.5.7.3)

Brief Description

Record, analyze and assess the customer order status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall Order Handling process, including specific reports required by specific customers. **AM**

The Fulfillment Order Management OMS component persists in database any customer order modifications and permits to visualize using a graphical interface all the details of execution of a customer order including status, data, plan via a Gantt chart and execution logs.

The Fulfillment Order Management OMS component provides also dashboard that displays set of counters that reflect solution activity such as number of customer orders per status and per period of time but also order in special conditions such as jeopardy or amendment.

There is no capability to produce specific reports by specific customers.

The Fulfillment Order Management OMS does not provide a report document generator but any 3rd party report generators such as TIBCO Spotfire can access the OMS database to produce documents.

 (\[FOM_USERGUIDE\]**, 1 Fulfillment Order Management - Fulfillment Order Management Functionality)**

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.1.7   L3: Close Customer Order (1.1.1.5.8)

Process Identifier: 1.1.1.5.8

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain

4.1.7.1 L3: Close Resource Order (1.1.1.5.8) – Mapping Details

NOTE: No decomposition to Level 4 processes, hence mappings provided against the Level 3 process descriptions and implied tasks.

Level 3 PROCESS MAPPING DETAILS
Close Customer Order (1.1.1.5.8)
Brief Description
Close a customer order when the customer provisioning activities have been completed. Monitor the status of all open customer orders, and recognize that a customer order is ready to be closed when the status is changed to completed. **A**
The Fulfillment Order Management OMS ends customer order execution when after completion of all the processing steps and execution of all provisioning activities defined in corresponding generated plan meaning the status of the customer order is COMPLETE.
([FOM_CONCEPTS]**, 4 Fulfillment Process - Orchestration)**
Extended Description
The objective of the Close Customer Order processes is to close a customer order when the customer provisioning activities have been completed. These processes monitor the status of all open customer orders, and recognize that a customer order is ready to be closed when the status is changed to completed. **A**
See Brief Description
Explanatory
Reserved for future use.
Mandatory
Reserved for future use.
Optional
Reserved for future use.

Interactions

Reserved for future use.

4.1.8   Supporting Evidence References (Works Cited)

[FOM_CONCEPTS]   TIBCO® Fulfillment Order Management Concepts and Architecture

[FOM_USERGUIDE]   TIBCO® Fulfillment Order Management User Guide

[FOM_ADM]   TIBCO® Fulfillment Order Management Administration

[BPM_CONCEPTS]   TIBCO ActiveMatrix™ BPM - BPM Concepts

[NIMBUS_QUICK]   TIBCO Nimbus Control Quick Start Guide

4.1.9   Order Handling (1.1.1.5) – Conformance Scores

Table 4.1 - Order Handling (1.1.1.5) – Conformance Scores

Level 2: 1.1.1.5 - Order Handling [5/7]		
Level 3 Process	**Level 4 Process**	**L4/L3 Process Score**
1.1.1.5.1 - Determine Customer Order Feasibility		**5**
1.1.1.5.2 - Authorize Credit		*0*
1.1.1.5.4 - Track & Manage Customer Order Handling		**5**
	1.1.1.5.4.1 - Manage Customer Order	100%
	1.1.1.5.4.2 - Track Customer Order	100%
1.1.1.5.5 - Complete Customer Order		**4.8**
	1.1.1.5.5.1 - Manage Customer Information	100%
	1.1.1.5.5.2 - Manage Customer Interaction	75%
1.1.1.5.6 - Issue Customer Orders		*0*
1.1.1.5.7 - Report Customer Order Handling		**4.7**
	1.1.1.5.7.1 - Monitor Customer Order Status	100%
	1.1.1.5.7.2 - Manage Customer Order Status Notification	100%
	1.1.1.5.7.3 - Report Customer Order Status	50%
1.1.1.5.8 - Close Customer Order		**5.0**

4.2   Level 2: Service Configuration & Activation (1.1.2.2)
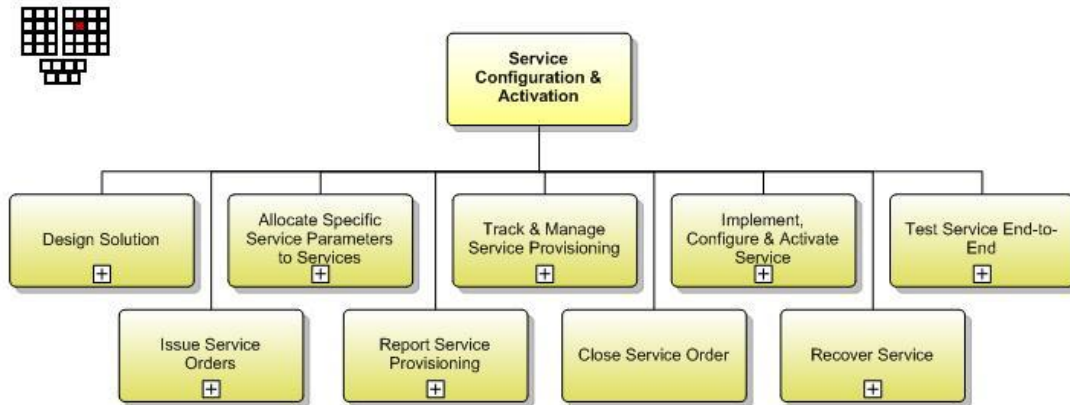
Figure 4.2 – Service Configuiration & Activiation decomposition into Level 3 proceses

Process Identifier: 1.1.2.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.2.1   L3: Design Solution (1.1.2.2.1)

Process Identifier: 1.1.2.2.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.2.1.1 L4: Develop Overall Service Design (1.1.2.2.1.1) – Mapping Details

Process Identifier: 1.1.2.2.1.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Develop Overall Service Design (1.1.2.2.1.1)

Brief Description

Develop an overall service solution design for a particular customer, including customer premises equipment, operational methods, resource assignments and pre-order feasibility;**M**

Fulfillment Provisioning includes a catalog component that allows designers of the solution to create new services by creating new specifications for CFS and RFS and re-use existing specifications for RFSs. Designers can create new services entirely from scratch or through re-use of existing building blocks. Designers can also create new action for existing specifications of CFS and RFS to model new processes for existing services.

Services are defined in Fulfillment Provisioning catalog component as CFS (called Product in FP) and RFS (called Technical Product in FP) specifications. Each CFS specification is associated with one or many RFS specifications. Each association can be made conditional based on order parameter. Arbitrary actions can be defined and associated to CFS and RFS specifications. The CFS to RFS specification composition is used during order plan generation to derive an action for a CFS to an action on a set of RFS. The instantiation of an action on a RFS specification is a RFS order. If decomposition is more complex, it is possible to define specifically how an action on a CFS specification (called Product Order in FP) shall be decomposed into. In that case, designer selects target RFS specifications and action for each RFS specification (called Technical Product Order in FP). This permits to handle not standard cases.

Moreover, rules can be defined between actions on RFS specifications such as sequencing so that resulting RFS orders can be assembled into a workflow with order dependencies. Other rules permits

to add new specific RFS orders required for the execution of RFS orders in the plan or remove RFS orders in the plan which implementation is made obsolete by other RFS orders in the plan.

Designers create the processes of resource orders (called ProductOrderFlow in FP) that implement each action for RFS specification which can conduct a pre-order feasibility check, reserve resources and prepare service inventory, implement, configure and activate any resources including customer premises equipment, commit resources in network inventory and update service inventories…

Designers can also create new cartridges if new network elements are introduced in the network with associated routing rules. Cartridges to existing network elements can be extended to support new actions and model associated implementation process (called WorkOrderFlow in FP).

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_DEVGUIDE]**, 8 Cartridge Network Element Configuration)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

<mark>Develop an overall service solution design for a particular customer, including customer premises equipment, operational methods, resource assignments and pre-order feasibility;</mark>**M**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.2.1.2 L4: Develop Service Implementation Plan (1.1.2.2.1.2) – Mapping Details

Process Identifier: 1.1.2.2.1.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Develop Service Implementation Plan (1.1.2.2.1.2)

Brief Description

Develop an implementation plan considering training and operational support measures and needs, such as the proper parameter information for the Service Quality Management process;

- Consideration of current and future service and underlying resources infrastructure, as well as expected solution results, budget, duration and risks;
- Consideration of the time schedule according with customer requirements;
- Ensure service and provisioning efficiency;
- Undertaking a business assessment, ensuring an appropriate time-to-revenue as a result of the service and underlying resource investment

Extended Description

Not used for this process element

Explanatory

Consideration of current and future service and underlying resources infrastructure, as well as expected solution results, budget, duration and risks;

- Consideration of the time schedule according with customer requirements;
- Ensure service and provisioning efficiency;
- Undertaking a business assessment, ensuring an appropriate time-to-revenue as a result of the service and underlying resource investment;

Mandatory

Develop an implementation plan considering training and operational support measures and needs, such as the proper parameter information for the Service Quality Management process;

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.2.1.3 L4: Develop Detailed Service Design (1.1.2.2.1.3) – Mapping Details

Process Identifier: 1.1.2.2.1.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Develop Detailed Service Design (1.1.2.2.1.3)

Brief Description

Develop a detailed design identifying the relevant service orders to be issued to the Implement, Configure & Activate Service process and the Allocate Specific Service Parameters to Services processes. **AM**

Fulfillment Provisioning includes a catalog component that allows designers of the solution to create new services by creating new specifications for CFS and RFS and re-use existing specifications for RFSs. Designers can create new services entirely from scratch or through re-use of existing building blocks. Designers can also create new action for existing specifications of CFS and RFS to model new processes for existing services.

Services are defined in Fulfillment Provisioning catalog component as CFS (called Product in FP) and RFS (called Technical Product in FP) specifications. Each CFS specification is associated with one or many RFS specifications. Each association can be made conditional based on order parameter. Arbitrary actions can be defined and associated to CFS and RFS specifications. The CFS to RFS specification composition is used during order plan generation to derive an action for a CFS to an action on a set of RFS. The instantiation of an action on a RFS specification is a RFS order. If decomposition is more complex, it is possible to define specifically how an action on a CFS specification (called Product Order in FP) shall be decomposed into. In that case, designer selects target RFS specifications and action for each RFS specification (called Technical Product Order in FP). This permits to handle not standard cases.

Moreover, rules can be defined between actions on RFS specifications such as sequencing so that resulting RFS orders can be assembled into a workflow with order dependencies. Other rules permits to add new specific RFS orders required for the execution of RFS orders in the plan or remove RFS orders in the plan which implementation is made obsolete by other RFS orders in the plan.

Designers creates the processes of resource orders (called ProductOrderFlow in FP) that implement each action for RFS specification which can conduct a pre-order feasibility check, reserve resources and prepare service inventory, implement, configure and activate any resources including customer premises equipment, commit resources in network inventory and update service inventories…

Designers can also create new cartridges if new network elements are introduced in the network with associated routing rules. Cartridges to existing network elements can be extended to support

new actions and model associated implementation process (called WorkOrderFlow in FP).

 (**[**FP_DEVGUIDE**]**, **5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing**)

(**[**FP_DEVGUIDE**]**, **2 Product Order Flows**)

(**[**FP_DEVGUIDE**]**, **8 Cartridge Network Element Configuration**)

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Develop a detailed design identifying the relevant service orders to be issued to the Implement, Configure & Activate Service process and the Allocate Specific Service Parameters to Services processes.**AM**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.2.2   L3: Allocate Specific Service Parameters to Services (1.1.2.2.2)

Process Identifier: 1.1.2.2.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.2.2.1 L4: Determine Service Parameter Availability (1.1.2.2.2.1) – Mapping Details

Process Identifier: 1.1.2.2.2.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Determine Service Parameter Availability (1.1.2.2.2.1)

Brief Description

Where the Allocate Specific Service Parameters to Services processes are requested by a pre-feasibility service order, or by the Design Services processes, these processes determine whether the requested service parameters are available.**AM**

TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a resource and service inventory and so does not implement the complete behavior but permits to implement the process and interaction(s) with external network and service inventory.

This process can be modeled, in Fulfillment Provisioning, as a separate action for CFS specifications or CFS order specification (called Product Order in FP) which can be invoked through service orders by north bound systems including Fulfillment Order Management. The process implementing the steps required to determine the service parameter availability will be modeled and attached to corresponding RFS order specification (called Technical Product Order in FP).

This RFS order specification can be invoked also by other CFS order specifications and could be executed at the beginning of the service configuration, implementation or activation processes as a pre-requisite which will make the service order fail in case of unavailability.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Defining Verbs)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

Extended Description

Not used for this process element

Explanatory

Where the Allocate Specific Service Parameters to Services processes are requested by a pre-feasibility service order, or by the Design Services processes,

Mandatory

<mark>these processes determine whether the requested service parameters are available.</mark> **AM**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.2.2.2 L4: Reserve Service Parameters (1.1.2.2.2.2) – Mapping Details

Process Identifier: 1.1.2.2.2.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Reserve Service Parameters (1.1.2.2.2.2)

Brief Description

<mark>Depending on business rules, and on any specific levels of commitment contained in the initiating service order or service design request, these processes may reserve specific service parameters linked to the initiating service order or service design request for a period of time.</mark>**AM**

TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a resource and service inventory and so does not implement the complete behavior but permits to implement the process and interaction(s) with external network and service inventory.

This process can be modeled, in Fulfillment Provisioning, as a separate action for CFS specifications or CFS order specification (called Product Order in FP) which can be invoked through service orders by north bound systems including Fulfillment Order Management. The process implementing the steps required to reserve service parameters will be modeled and attached to corresponding RFS

order specification (called Technical Product Order in FP).

This RFS order specification can be invoked also by other CFS order specifications and could be executed after service parameter availability (if part of the process) and before the service configuration, implementation and activation process as a pre-requisite which will make the service order fail in case of reserve failure. It must be noted that a recovery of the service order will entail the recovery of the reservation.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Defining Verbs)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

Extended Description

Not used for this process element

Explanatory

Depending on business rules, and on any specific levels of commitment contained in the initiating service order or service design request

Mandatory

these processes may reserve specific service parameters linked to the initiating service order or service design request for a period of time **AM**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.2.2.3 L4: Release Service Parameter (1.1.2.2.2.3) – Mapping Details

Process Identifier: 1.1.2.2.2.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Release Service Parameter (1.1.2.2.2.3)
Brief Description Release the reservation when the time period has expired. **AM** *TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a resource and service inventory and so does not implement the complete behavior but permits to implement the process and interaction(s) with external network and service inventory.* *The Fulfillment Provisioning does not manage the reservation through a time period but through a reserve, commit or abort approach. The reservation of service parameter is defined by a RFS order specification and implemented by its attached process. It can be released by the rollback process which will be called during service order recovery.* (**[**FP_USERGUIDE**]**, **9 Fulfillment Provisioning Modules - Service-order level rollback)** (**[**FP_DEVGUIDE**]**, **2 Product Order Flows)** **Extended Description** Not used for this process element **Explanatory** Not used for this process element **Mandatory** Release the reservation when the time period has expired.**AM** *See Brief Description* **Optional** Not used for this process element **Interactions** Not used for this process element

4.2.2.4 L4: Allocate Service Parameters (1.1.2.2.2.4) – Mapping Details

Process Identifier: 1.1.2.2.2.4

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Allocate Service Parameters (1.1.2.2.2.4)

Brief Description

Where the Allocate Specific Service Parameters to Services processes are requested by a service order issued in response to a confirmed customer order, this process is responsible for allocating the specific service parameters required to satisfy the initiating service order. Any previously reserved specific service parameters are marked as allocated.**AM**

TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a resource and service inventory and so does not implement the complete behavior but permits to implement the process and interaction(s) with external network and service inventory.

This process can be modeled, in Fulfillment Provisioning, as a separate action for CFS specifications or CFS order specification (called Product Order in FP) which can be invoked through service orders by north bound systems including Fulfillment Order Management. The process implementing the steps required to allocate service parameters will be modeled and attached to corresponding RFS order specification (called Technical Product Order in FP).

This RFS order specification can be invoked also by other CFS order specifications and could be executed after service parameter reservation (if part of the process) and before the service configuration, implementation and activation process as a pre-requisite which will make the service order fail in case of reserve failure.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Defining Verbs)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

Extended Description

Not used for this process element

Explanatory

Where the Allocate Specific Service Parameters to Services processes are requested by a service order issued in response to a confirmed customer order,

Mandatory

this process is responsible for allocating the specific service parameters required to satisfy the

initiating service order. Any previously reserved specific service parameters are marked as allocated.

AM

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.2.3   L3: Track & Manage Service Provisioning (1.1.2.2.3)

Process Identifier: 1.1.2.2.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.2.3.1 L4: Assign Service Provisioning Activity (1.1.2.2.3.1) – Mapping Details

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Assign Service Provisioning Activity (1.1.2.2.3.1)
Brief Description   Schedule, assign and coordinate service provisioning related activities. **A**   *The Fulfillment Provisioning (FP) receives service orders through Drivers and injects them into the provisioning flow for execution. The service order goes through a series of steps in the flow called modules. A flow controller coordinates the execution the each service order. Each module is responsible for a specific processing on the service order such as:*   - *scheduling service orders for a later date,*   - *sequencing of the execution to start after completion of another service order,*   - *decomposing the provided service order line items or CFS orders (called Product Order in FP) into a workflow of RFS orders (called Technical Product Orders). This dynamic transformation is using the catalog that defines CFS specifications (called Product in FP) and RFS specifications (called Technical Product in FP) and how an action on a CFS specification translates into a workflow of RFS orders using decomposition and optimization rules,*   - *executing the workflow of RFS orders. A static workflow of Resource Orders (called ProductOrderFlow in FP) is attached to each RFS order in the catalog. Executing an action on a RFS amounts to orchestrate the execution of Resource Orders (called Work Orders in FP). Each Resource Order is assigned to the target resource to provision.*   - *Roll backing execution in case of problem*   - *Responding to the initiator of the request*   **(**[FP_DEVGUIDE]**, 1 STREAM and Provisioning Flows)**   **(**[FP_USERGUIDE]**, 9 Fulfillment Provisioning Modules - Scheduling service orders)**   **(**[FP_USERGUIDE]**, 9 Fulfillment Provisioning Modules - Sequencing a customer's service orders)**

([FP_USERGUIDE]**, 9 Fulfillment Provisioning Modules - Service-order level rollback)**

([FP_USERGUIDE]**, 10 Flow Controller)**

([FP_USERGUIDE]**, 11 Overview of The Fulfillment Provisioning Catalog)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Schedule, assign and coordinate service provisioning related activities. **A**
See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.2.3.2 L4: Track Service Provisioning Activity (1.1.2.2.3.2) – Mapping Details

Process Identifier: 1.1.2.2.3.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Track Service Provisioning Activity (1.1.2.2.3.2)
Brief Description Undertake necessary tracking of the execution process. **A** Monitor the jeopardy status of service orders, and escalating service orders as necessary.**AM** *The Fulfillment Provisioning tracks execution of the service order at each module. When an error is detected the service order is directed to a sub-flow linked to the failed output port of the module permitting to take necessary action.* *The execution of the workflow of CFS orders is orchestrated so that each CFS order result is tracked to determine necessary next step. If a CFS order has failed, depending CFS orders are not provisioned and overall workflow can be roll-backed.* *The priority of the service order is monitored to make sure higher priority orders queued in a module are de-queued before lower priority orders to continue processing. The Fulfillment Provisioning escalates the priority of queued service order using time by which is has been queued to make sure low priority orders are still served properly.* *The service order can be associated with a timer that will permit to necessary action upon timer expiration such as cancelling an order that reach its maximum life-time and validating order execution time against expected completion time and take escalation action.* Designers of the system can implement the escalation action such as cancelling the order, increase the priority of the order or notify an external system that the order enters jeopardy condition. Cancelling an order will be done by using the admin API, increasing the priority by using the order API and notifying an external system will be done by interacting with a cartridge. Moreover, The Fulfillment Order Management which manages customer orders and issues service orders provides a built-ion jeopardy engine that control customer order SLA based on each service order expected and maximum duration. Upon jeopardy condition, notification can be forwarded by email, tibbr (TIBCO social network) and to external system using web services. **(**[FP_DEVGUIDE]**, 1 STREAM and Provisioning Flows)** **(**[FP_USERGUIDE]**, 9 Fulfillment Provisioning Modules - Controlling Request)**

([FP_USERGUIDE]**, 9 Fulfillment Provisioning Modules - Service-order level rollback)**

([FP_DOCAPI]**, P.FP - prov - SOTimerConfig, SOTimerEventHandler and ServiceOrder. setupTimer)**

([FP_USERGUIDE]**, 9 Fulfillment Provisioning Modules - Controlling Administrative States of Orders)**

([FP_DOCAPI]**, P.FP - soadmin)**

([FP_DOCAPI]**, P.FP - basesodata - ServiceOrderData)**

([FOM_CONCEPTS]**, 3 Definitions and Concepts - Jeopardy Management)**

([FOM_USERGUIDE]**, 1, Fulfillment Order Management - Orders Page)**

Jeopardy Management

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Undertake necessary tracking of the execution process. **A**

Monitor the jeopardy status of service orders, and escalating service orders as necessary.**AM**
See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.2.3.3 L4: Manage Service Provisioning Activity (1.1.2.2.3.3) – Mapping Details

Process Identifier: 1.1.2.2.3.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Manage Service Provisioning Activity (1.1.2.2.3.3)

Brief Description

Responsibilities of this processes include, but are not limited to:

- Generating the respective resource order creation request(s) to Issue Resource Orders based on specific service orders; **A**

The Fulfillment Provisioning decomposes a service order in a workflow of RFS Orders each of which being a workflow of Resource Orders (called Work Order in FP).Resource Order are issued during the execution of the RFS Order. A Resource Order is first routed to a cartridge that connects physically to the Resource and submitted.

([FP_USERGUIDE]**, 10 Product order processing)**

· Escalating status of service orders in accordance with local policy; · Undertaking necessary tracking of the execution process; **AM**

See Track Service Provisioning Activity (1.1.2.2.3.2)

· Adding additional information to an existing service order; **AM**

 Modifying information in an existing service order **AM**;·

· Modifying the service order status; **AM**

· Indicating completion of a service order by modifying the service order status. **AM**

The service order can be modified at various steps including:

- *By the Client Adapter driver that receives the Service Order. Drivers can embed scripted or custom code that can; modify attribute value & add/modify/remove user defined fields at Service Order level or Order Line level and also add Order Lines (called Product Order in FP).*
- *By pre-processing modules that perform enrichment for example. They can do similar actions.*
- *During catalog enrichment which overwrite field values and/or add new fields required for proper provisioning.*
- *After execution of a Resource Order or a RFS order which can modify the value of user defined fields or add new ones.*

- *By post-processing modules that prepare the order for proper response and can update customer specific status for example. They can do similar actions that pre-processing modules.*
- *By the Fulfillment Provisioning OMS order tracking function that permits to repair and attach comments to a service order.*

The service order status is modified by Fulfillment Provisioning during service order execution but can also be modified by custom modules through custom code. The status of Resource Orders can be also forced manually using Fulfillment Provisioning OMS

([FP_DEVGUIDE]**, 3 Client Adapters)**

([FP_DEVGUIDE]**, 4 Developing New Modules)**

([FP_USERGUIDE]**, 12 Overview of Fulfillment Provisioning Catalog)**

([FP_USERGUIDE]**, 10 Product Order Processing)**

([FP_DEVGUIDE]**, 6 TIBCO Fulfillment Provisioning Order Management System)**

· Canceling a service order when the initiating customer order is cancelled; **M**

The Fulfillment Provisioning supports the OSS/J OM interface and exposes the abortRequestByKey() an tryAbortRequestsByKeys() operation. An administrative interface permits also through command line or through customer code to cancel Service Orders.

The Fulfillment Order Management (FOM) is responsible for customer and product order management. It receives customer orders and produces dynamically (based on Product and Service specifications defined in Fulfillment Catalog) a corresponding order plan of service orders in the form of order plan items. FOM issues the service orders to Fulfillment Provisioning (FP) during the order plan orchestration passing the order item ID. The service order id in FP is set with the passed FOM order plan item ID establishing a link between both systems. If a customer order is cancelled in FOM, custom code would be necessary to propagate this cancellation to the corresponding service order in Fulfillment Provisioning.

([FOM_CONCEPTS]**, 2 Fulfillment Orchestration Overview)**

([FP_OSSJOMCA]**, 5.1.3.17 and 5.1.3.18)**

([FP_USERGUIDE]**, 9 Fulfillment Provisioning Modules - Controlling administrative states of orders)**

Note that some specific service components may be delivered by suppliers/partners. In these cases the Track & Manage Service Provisioning process is responsible for initiating requests, through S/P Requisition Management for the delivery by the supplier/partner of the specific service components.

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Responsibilities of this processes include, but are not limited to:

- Generating the respective resource order creation request(s) to Issue Resource Orders based on specific service orders; **A**

· Escalating status of service orders in accordance with local policy; · Undertaking necessary tracking of the execution process; **AM**

· Adding additional information to an existing service order; **AM**

· Modifying information in an existing service order;· **AM**

· Modifying the service order status; **AM**

· Canceling a service order when the initiating customer order is cancelled; **M**

· Indicating completion of a service order by modifying the service order status. **AM**

See Brief Description

Optional

Not used for this process element

Interactions

Note that some specific service components may be delivered by suppliers/partners. In these cases the Track & Manage Service Provisioning process is responsible for initiating requests, through S/P Requisition Management for the delivery by the supplier/partner of the specific service components

4.2.4   L3: Implement, Configure & Activate Service (1.1.2.2.4)

Process Identifier: 1.1.2.2.4

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.2.4.1   L4: Configure Service (1.1.2.2.4.1) – Mapping Details

Process Identifier: 1.1.2.2.4.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Configure Service (1.1.2.2.4.1)

Brief Description

Assess and plan the approach to be undertaken for configuration. **A**

The Fulfillment Provisioning decomposes the issued service order line items or CFS orders (called Product Order in FP) into a workflow (or plan) of RFS orders (called Technical Product Orders). This dynamic transformation is using the Fulfillment Provisioning catalog that defines CFS specifications (called Product in FP) and RFS specifications (called Technical Product in FP) and how an action on a CFS specification translates into a workflow of RFS order specification (an action on a RFS specification) using decomposition and optimization rules.

([FP_USERGUIDE]**, 2 Fulfillment Provisioning Flow Overview)**

The catalog permits to define any arbitrary actions on all CFS specifications and RFS specifications to cover all customer types of orders including configuration.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Defining Verbs)**

Re-use standard configuration and processes applicable to specific services. **A**

The process of plan generation is driven by the catalog which specifies decomposition, sequencing and other optimization rules applicable to all service orders. The plan is generated through instantiation of re-usable processes and not statically defined.

([FP_USERGUIDE]**, 2 Fulfillment Provisioning Flow Overview)**

Configure and reconfigure specific services, including customer premises equipment if part of the service provider offering. **A**

The generated plan for a service order can configure services and associated customer premises multiple times at different steps in the workflow. The process of plan generation is generic and based on the catalog specification. The catalog can define that a CFS consists of multiple RFSs which can include services on value added service platforms, network access equipment or customer premises equipment. Then, an action on this CFS (or CFS order) will be translated or decomposed into corresponding RFS orders. The catalog permits to define rules such as sequencing rules between RFS orders which will permit to dynamically assemble them into a workflow. As a result, a CFS order can configure associated RFS services and customer premises equipment if defined as part of the service provider offering in the catalog.

It must be noted that different RFS orders can configure differently a same service or a same customer premises equipment. And, a single RFS order can configure multiple times a same service and even include the configuration of associated customer premises equipment.

Provide notifications as required if the configuration activity requires a planned outage or is likely to initiate false specific service alarm event notifications.**AM**

The Fulfillment Provisioning implements a publish & subscribe mechanism and manages the routing of events between producers and readers. The Fulfillment Provisioning monitors the execution of CFS and RFS orders and generates events at start and at completion of each of their associated process.

A component can be built to receive service configuration process start (event `EventPoExecStarted`*) and ending (event* `EventPoExecEnded`*) and execute required specific actions using custom code.*

An alternative will be to have a dedicated task (Called Resource Order in FP) in the process that will invoke a cartridge that will generate a specific event and forward it to an external system that would need to be notified. Such a task is re-usable and can be added in multiple processes in case many services have recovery actions requiring such notification.

([FP_DEVGUIDE]**, 9 Fulfillment Provisioning Utilities, Event Dictionary)**

([FP_POPDIC]**, `EventPoExecStarted`)**

([FP_POPDIC]**, `EventPoExecEnded`)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_DEVGUIDE]**, 8 Cartridge Network Element Configuration)**

Update the information contained in the service inventory as to the configuration of specific services and their status.**AM**

TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a service inventory yet and so does not implement the complete behavior but permits to model in the RFS order configuring the service as a separate step the interaction(s) with external service inventory to reflect the result of the

service configuration. The update of the service inventory can also be modeled in a separate RFS order.

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Assess and plan the approach to be undertaken for configuration. **A**

Re-use standard configuration and processes applicable to specific services. **A**

Configure and reconfigure specific services, including customer premises equipment if part of the service provider offering. **A**

Provide notifications as required if the configuration activity requires a planned outage or is likely to initiate false specific service alarm event notifications.**AM**

Update the information contained in the service inventory as to the configuration of specific services and their status.**AM**

See Brief Description

Optional

Not used for this process element

Interactions

Provide notifications as required if the configuration activity requires a planned outage or is likely to initiate false specific service alarm event notifications.

4.2.4.2 L4: Implement Service (1.1.2.2.4.2) – Mapping Details

Process Identifier: 1.1.2.2.4.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Implement Service (1.1.2.2.4.2)

Brief Description

Assess and plan the approach to be undertaken for implementation. **A**

The Fulfillment Provisioning decomposes the issued service order line items or CFS orders (called Product Order in FP) into a workflow (or plan) of RFS orders (called Technical Product Orders). This dynamic transformation is using the Fulfillment Provisioning catalog that defines CFS specifications (called Product in FP) and RFS specifications (called Technical Product in FP) and how an action on a CFS specification translates into a workflow of RFS order specification (an action on a RFS specification) using decomposition and optimization rules.

([FP_USERGUIDE]**, 2 Fulfillment Provisioning Flow Overview)**

The catalog permits to define any arbitrary actions on all CFS specifications and RFS specifications to cover all customer types of orders including configuration.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Defining Verbs)**

Re-use standard implementation processes applicable to specific services.**A**

The process of plan generation is driven by the Fulfillment Provisioning catalog which specifies decomposition, sequencing and other optimization rules applicable to all service orders. The plan is generated through instantiation of re-usable processes and is not statically defined.

([FP_USERGUIDE]**, 2 Fulfillment Provisioning Flow Overview)**

Implement specific services, including customer premises equipment if part of the service provider offering. **A**

The generated plan for a service order can implement services and associated customer premises at different steps in the workflow. The process of plan generation is generic and based on the catalog specification. The catalog can define that a CFS consists of multiple RFSs which can include services on value added service platforms, network access equipment or customer premises equipment. Then, an action on this CFS (or CFS order) will be translated or decomposed into corresponding RFS orders. The catalog permits to define rules such as sequencing rules between RFS orders which will permit to dynamically assemble them into a workflow. As a result, a CFS order can implement associated RFS services and customer premises equipment if defined as part of the service provider offering in the

catalog.

It must be noted that a single RFS order can implement multiple services and even include the implementation of associated customer premises equipment.

Provide notifications as required if the implementation activity requires a planned outage or is likely to initiate false specific service alarm event notifications. **AM**

The Fulfillment Provisioning implements a publish & subscribe mechanism and manages the routing of events between producers and readers. The Fulfillment Provisioning monitors the execution of CFS and RFS orders and generates events at start and at completion of each of their associated process.

A component can be built to receive service configuration process start (event `EventPoExecStarted`*) and ending (event* `EventPoExecEnded`*) and execute required specific actions using custom code.*

An alternative will be to have a dedicated task (Called Resource Order in FP) in the process that will invoke a cartridge that will generate a specific event and forward it to an external system that would need to be notified. Such a task is re-usable and can be added in multiple processes in case many services have recovery actions requiring such notification.

([FP_DEVGUIDE]**, 9 Fulfillment Provisioning Utilities, Event Dictionary)**

([FP_POPDIC]**, `EventPoExecStarted`)**

([FP_POPDIC]**, `EventPoExecEnded`)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_DEVGUIDE]**, 8 Cartridge Network Element Configuration)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Assess and plan the approach to be undertaken for implementation. **A**

Re-use standard implementation processes applicable to specific services. **A**

Implement specific services, including customer premises equipment if part of the service provider offering. **A**

Provide notifications as required if the implementation activity requires a planned outage or is likely to initiate false specific service alarm event notifications. **AM**

See Brief Description

Optional

Not used for this process element

Interactions

Provide notifications as required if the implementation activity requires a planned outage or is likely to initiate false specific service alarm event notifications.

4.2.4.3 L4: Activate Service (1.1.2.2.4.3) – Mapping Details

Process Identifier: 1.1.2.2.4.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Activate Service (1.1.2.2.4.3)

Brief Description

Assess and plan the approach to be undertaken for activation. **A**

The Fulfillment Provisioning decomposes the issued service order line items or CFS orders (called Product Order in FP) into a workflow (or plan) of RFS orders (called Technical Product Orders). This dynamic transformation is using the Fulfillment Provisioning catalog that defines CFS specifications (called Product in FP) and RFS specifications (called Technical Product in FP) and how an action on a CFS specification translates into a workflow of RFS order specification (an action on a RFS specification) using decomposition and optimization rules.

([FP_USERGUIDE]**, 2 Fulfillment Provisioning Flow Overview)**

The catalog permits to define any arbitrary actions on all CFS specifications and RFS specifications to cover all customer types of orders including activation.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Defining Verbs)**

Re-used standard activation processes applicable to specific services. **A**

The process of plan generation is driven by the catalog which specifies decomposition, sequencing and other optimization rules applicable to all service orders. The plan is generated through instantiation of re-usable processes and not statically defined.

([FP_USERGUIDE]**, 2 Fulfillment Provisioning Flow Overview)**

Provide notifications as required if the activation activity requires a planned outage or is likely to initiate false specific service alarm event notifications. **AM**

The Fulfillment Provisioning implements a publish & subscribe mechanism and manages the routing of events between producers and readers. The Fulfillment Provisioning monitors the execution of CFS and RFS orders and generates events at start and at completion of each of their associated process.

A component can be built to receive service configuration process start (event `EventPoExecStarted`*) and ending (event* `EventPoExecEnded`*) and execute required specific actions using custom code.*

An alternative will be to have a dedicated task (Called Resource Order in FP) in the process that will invoke a cartridge that will generate a specific event and forward it to an external system that would need to be notified. Such a task is re-usable and can be added in multiple processes in case many services have recovery actions requiring such notification.

([FP_DEVGUIDE]**, 9 Fulfillment Provisioning Utilities, Event Dictionary)**

([FP_POPDIC]**, `EventPoExecStarted`)**

([FP_POPDIC]**, `EventPoExecEnded`)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_DEVGUIDE]**, 8 Cartridge Network Element Configuration)**

At the successful conclusion of this activity, the status of the specific services will be changed from allocated to activated, which means they are in-use.**AM**

TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a service inventory yet and so does not implement the complete behavior but permits to model in the RFS order configuring the service as a separate step the interaction(s) with external service inventory to reflect the result of the service activation. The update of the service inventory can also be modeled in a separate RFS orders specification process.

([FP_DEVGUIDE]**, 2 Product Order Flows)**

Extended Description

Not used for this process element

Explanatory

At the successful conclusion of this activity, the status of the specific services will be changed from allocated to activated, which means they are in-use.

Mandatory

Assess and plan the approach to be undertaken for activation. **A**

Re-used standard activation processes applicable to specific services. **A**

Provide notifications as required if the activation activity requires a planned outage or is likely to initiate false specific service alarm event notifications. **AM**

See Brief Description

Optional

Not used for this process element

Interactions

Provide notifications as required if the activation activity requires a planned outage or is likely to

initiate false specific service alarm event notifications.

4.2.5   L3: Test Service End-to-End (1.1.2.2.5) [Not Assessed]

This process was not submitted for assessment.

4.2.6   L3: Issue Service Orders (1.1.2.2.7)

Process Identifier: 1.1.2.2.7

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.2.6.1   L4: Assess Service Request (1.1.2.2.7.1) – Mapping Details

Process Identifier: 1.1.2.2.7.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 3 PROCESS MAPPING DETAILS
Assess Service Request (1.1.2.2.7.1)
Brief Description
This process assesses the information contained in the customer order, through a service order request, relating to the purchased product offering, initiating service process or supplier/partner initiated request, to determine the associated service orders that need to be issued. **A**
The Fulfillment Order Management receives customer orders with order lines each of which identifying a product and an action on this product. The customer order is validated against the catalog rules which verify that products are eligible for the customer, compatible and with correct information. Then an order plan of service orders is produced based on the Fulfillment Catalog product to service specification and provisioning rules such as sequencing and optimization.
([FOM_CONCEPTS]**, 4, Fulfillment Process)**
Extended Description
Not used for this process element
Explanatory
Not used for this process element

Mandatory

This process assesses the information contained in the customer order, through a service order request, relating to the purchased product offering, initiating service process or supplier/partner initiated request, to determine the associated service orders that need to be issue. **A**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.2.6.2 L4: Create Service Orders (1.1.2.2.7.2) – Mapping Details

Process Identifier: 1.1.2.2.7.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 3 PROCESS MAPPING DETAILS
Create Service Orders (1.1.2.2.7.2)

Brief Description

The service orders may be required to satisfy pertinent customer order information received, may arise as a result of requests for service provisioning to satisfy service problem recovery activities, may arise to alleviate service performance issues, or may arise as a result of information received from suppliers/partners in relations to specific services.

The issued service order may require a service feasibility assessment or a service design to be produced, may require new provisioning activities for specific services, may require a change to a previously issued service order, or may require deletion and/or recovery of previously delivered specific services. Where, the initiating request or the purchased product offering has a standard set of associated service orders this process is responsible for issuing the service orders, and for creating a record of the relevant initiating request or customer order information and the associated service orders.

Where the initiating request or the purchased product offering has special or unusual requirements, and a specific feasibility assessment and/or service design has been previously created, this process is responsible for issuing the service orders, and for creating a record of the relevant initiating

request or customer order information and the associated service orders. **A**

The Fulfillment Order Management produces an order plan of service orders in the form of order plan items based on catalog product to service decomposition. The order plan is linked to initial customer order. Customer orders and order plans are recorded in database and can be consulted using OMS GUI.

([FOM_CONCEPTS]**, 4, Fulfillment Process)**

([FOM_USERGUIDE]**, 1, Fulfillment Order Management - Orders Page)**

Extended Description

Not used for this process element

Explanatory

The service orders may be required to satisfy pertinent customer order information received, may arise as a result of requests for service provisioning to satisfy service problem recovery activities, may arise to alleviate service performance issues, or may arise as a result of information received from suppliers/partners in relations to specific services.

The issued service order may require a service feasibility assessment or a service design to be produced, may require new provisioning activities for specific services, may require a change to a previously issued service order, or may require deletion and/or recovery of previously delivered specific services.

Mandatory

Where, the initiating request or the purchased product offering has a standard set of associated service orders this process is responsible for issuing the service orders, and for creating a record of the relevant initiating request or customer order information and the associated service orders.

Where the initiating request or the purchased product offering has special or unusual requirements, and a specific feasibility assessment and/or service design has been previously created, this process is responsible for issuing the service orders, and for creating a record of the relevant initiating request or customer order information and the associated service orders. **A**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.2.6.3 L4: Mark Service Order for Special Handling (1.1.2.2.7.3) – Mapping Details

Process Identifier: 1.1.2.2.7.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 3 PROCESS MAPPING DETAILS Mark Service Order for Special Handling (1.1.2.2.7.3)
Brief Description Where the purchased product offering has special or unusual requirements, and a specific feasibility assessment and/or specific service design has not been previously created, this process marks the issued service order as requiring special handling, and passes management for further processing to the Track & Manage Service Provisioning process. **AM** *A CFS order can detect that prerequisite actions have not been done after the failure or value of specific parameters within one of its decomposed RFS orders. Additionally, a specific RFS can be added by design for that CFS in the catalog to control special handling cases .Either way, this can force the CFS order to fail and require manual correction/resubmission or to take a specific branch in RFS orders processes that handle that special case. In all cases, an event can be produced to notify operators that an issued resource order requires special handling.* The orchestration, if required, and tracking of the service order progress is the responsibility of the Track & Manage Service Provisioning processes. **Extended Description** Not used for this process element **Explanatory** Not used for this process element **Mandatory** Where the purchased product offering has special or unusual requirements, and a specific feasibility assessment and/or specific service design has not been previously created, this process marks the issued service order as requiring special handling, **AM** *See Brief Description* **Optional** Not used for this process element

Interactions

and passes management for further processing to the Track & Manage Service Provisioning process.

4.2.7   L3: Report Service Provisioning (1.1.2.2.8)

Process Identifier: 1.1.2.2.8

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

Brief Description

Monitor the status of service orders, provide notifications of any changes and provide management reports.

Extended Description

The objective of the Report Service Provisioning processes is to monitor the status of service orders, provide notifications of any changes and provide management reports.

These processes are responsible for continuously monitoring the status of service orders and managing notifications to processes and other parties registered to receive notifications of any status changes. Notification lists are managed and maintained by the Enable Service Configuration & Activation processes.

These processes record, analyze and assess the service order status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall Service Configuration & Activation process. These specialized summaries could be specific reports required by specific audiences.

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.2.7.1 L4: Monitor Service Order Status (1.1.2.2.8.1) – Mapping Details

Process Identifier: 1.1.2.2.8.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 3 PROCESS MAPPING DETAILS Monitor Service Order Status (1.1.2.2.8.1)
Brief Description responsible for continuously monitoring the status of service orders; record, analyze and assess the service order status changes. AM *The Fulfillment Provisioning monitors service orders at each of step of execution and generates events for each service order when entering and leaving each of the provisioning flow modules. Upon generation of these events, the Fulfillment Provisioning updates logs and the OMS database for recording. The execution status of each of these modules is analyzed to decide what branch of the provisioning flow to be routed to. Upon completion of execution, service orders are routed to a post-processing flow which is responsible to format a response to north bound systems.* **(**[FP_DEVGUIDE], **6 TIBCO Fulfillment Provisioning Order Management System)** **(**[FP_DEVGUIDE], **9 Fulfillment Provisioning Utilities, Event Dictionary)** **Extended Description** Not used for this process element **Explanatory** Not used for this process element **Mandatory** responsible for continuously monitoring the status of service orders; record, analyze and assess the service order status changes.AM *See Brief Description* **Optional** Not used for this process element **Interactions** Not used for this process element

4.2.7.2 L4: Distribute Service Order Notification (1.1.2.2.8.2) – Mapping Details

Process Identifier: 1.1.2.2.8.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 3 PROCESS MAPPING DETAILS
Distribute Service Order Notification (1.1.2.2.8.2)

Brief Description

<mark>provide notifications of any changes the status of service orders. Notifications are used to notify the owner of the current status of the order and also distributed to the other parties who require it. Notification lists are managed and maintained by the Enable Service Configuration & Activation processes.</mark> **A**

The Fulfillment Provisioning implements a publish & subscribe mechanism and manages the routing of events between producers and readers. Each event is defined in a dictionary. Each component is responsible to subscribe to the event topics it is interested in. The Fulfillment Provisioning monitors service orders at each of step of execution and generates events for each service order when entering and leaving each of the provisioning flow modules.

The Fulfillment Provisioning maintains the consistency of the order status at service order and all sub-orders levels (aka order lines, RFS orders and resource order) in POP module. The status of the service order is reassessed each time a sub-order status changes via propagation. A change at resource order level can entail a change of status at RFS order, order line and service order level.

The Fulfillment Provisioning notifies service order status and content changes through events defined in the event dictionary. All components that subscribe to these events receive them and can trigger necessary actions. OMS component subscribes to these events and updates database for consultation and administrative actions. Customer components can be written to implement specific behaviors.

([FP_DEVGUIDE]**, 9 Fulfillment Provisioning Utilities, Event Dictionary)**

([FP_USERGUIDE]**, 9 Fulfillment Provisioning Modules - Product order processing)**

([FP_DEVGUIDE]**, 6 TIBCO Fulfillment Provisioning Order Management System)**

Extended Description

Not used for this process element

Explanatory

Notifications are used to notify the owner of the current status of the order and also distributed to

the other parties who require it.

Mandatory

<mark>provide notifications of any changes the status of service orders</mark>.**A**

See Brief Description

Optional

Not used for this process element

Interactions

Notification lists are managed and maintained by the Enable Service Configuration & Activation processes.

4.2.7.3 L4: Distribute Service Provisioning Reports (1.1.2.2.8.3) – Mapping Details

Process Identifier: 1.1.2.2.8.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 3 PROCESS MAPPING DETAILS
Distribute Service Provisioning Reports (1.1.2.2.8.3)
Brief Description   <mark>provide management reports and any specialized summaries of the efficiency and effectiveness of the overall Service Configuration & Activation process. These specialized summaries could be specific reports required by specific audiences.</mark>**AM**   *The Fulfillment Provisioning OMS component permits to visualize all the details of execution of a service order including it-self and all decomposed sub-orders status, data and execution logs. Order and sub-order processes execution status can be visualized as a process flow with task colored per status or with a textual representation of the tasks. Views can be configured to display or hide specific data depending on audience need. All the information is available in database and can be used by 3rd party report generator systems.*   *The Fulfillment Order Management OMS component provides a dashboard that displays real time indicators such as number of service orders, order line or resource orders processed daily grouped per status or average, min and max latency of order lines and resource orders per order types. Query can be configured to reflect audience need.*

([FP_DEVGUIDE]**, 6 TIBCO Fulfillment Provisioning Order Management System)**

Extended Description

Not used for this process element

Explanatory

These specialized summaries could be specific reports required by specific audiences.

Mandatory

<mark>provide management reports and any specialized summaries of the efficiency and effectiveness of the overall Service Configuration & Activation process</mark>. **AM**

See Brief Discussion

Optional

Not used for this process element

Interactions

Not used for this process element

4.2.8   L3: Close Service Order (1.1.2.2.9)

Process Identifier: 1.1.2.2.9

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.2.8.1 L3: Close Service Order (1.1.2.2.9) – Mapping Details

NOTE: No decomposition to Level 4 processes, hence mappings provided against the Level 3 process descriptions and implied tasks.

LEVEL 3 PROCESS MAPPING DETAILS Close Service Order (1.1.2.2.9)
Brief Description
Close a service order when the service provisioning activities have been completed **A**
Extended Description
The objective of the Close Service Order processes is to close a service order when the service provisioning activities have been completed. These processes monitor the status of all open service orders, and recognize that a service order is ready to be closed when the status is changed to completed. **A**
Service orders that are completed reach the terminator module in the provisioning flow which closes the service order and updates the service order status and data to the OMS database.
([FP_USERGUIDE]**, 9 Fulfillment Provisioning Modules - Removing service orders)**
Explanatory
Reserved for future use.
Mandatory
Reserved for future use.
Optional
Reserved for future use.
Interactions
Reserved for future use.

4.2.9   L3: Recover Service (1.1.2.2.10)

Process Identifier: 1.1.2.2.10

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.2.9.1   L4: Develop Service Recovery Plan (1.1.2.2.10.1) – Mapping Details

Process Identifier: 1.1.2.2.10.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 3 PROCESS MAPPING DETAILS
Develop Service Recovery Plan (1.1.2.2.10.1)
Brief Description
Where appropriate recovery plans are not available this process is responsible for developing appropriate recovery plans. **M**
The Fulfillment Provisioning does not provide a project management functions but offers capability to create process to recover a service.
The Fulfillment Provisioning includes a catalog component that allows designers of the solution to create actions for existing specifications of CFS and RFS to model the recovery processes.
([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**
([FP_DEVGUIDE]**, 2 Product Order Flows)**
Extended Description
Not used for this process element
Explanatory
Where appropriate recovery plans are not available
Mandatory

this process is responsible for developing appropriate recovery plans. **M**

See Brief Discussion

Optional

Not used for this process element

Interactions

Not used for this process element

4.2.9.2 L4: Provide Service Recovery Proposal Notification (1.1.2.2.10.2) – Mapping Details

Process Identifier: 1.1.2.2.10.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 3 PROCESS MAPPING DETAILS Provide Service Recovery Proposal Notification (1.1.2.2.10.2)
Brief Description Where recovery of services is likely to impact other in-use specific services, this process is responsible for providing appropriate notification of the recovery proposal.**MA** *The Fulfillment Provisioning implements a publish & subscribe mechanism and manages the routing of events between producers and readers. The Fulfillment Provisioning monitors the execution of CFS and RFS orders and generates events at start and at completion of each of their associated process.* *A component can be built to receive service recovery process start (event* `EventPoExecStarted`*) and ending (event* `EventPoExecEnded`*) and execute required specific actions using custom code.* *An alternative will be to have a dedicated task (Called Resource Order in FP) in the process that will invoke a cartridge that will generate a specific event and forward it to an external system that would need to be notified. Such a task is re-usable and can be added in multiple processes in case many services have recovery actions requiring such notification.* **(**[FP_DEVGUIDE]**, 9 Fulfillment Provisioning Utilities, Event Dictionary)** **(**[FP_POPDIC]**, `EventPoExecStarted`)**

([FP_POPDIC]**, `EventPoExecEnded`)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_DEVGUIDE]**, 8 Cartridge Network Element Configuration)**

Extended Description

Not used for this process element

Explanatory

Where recovery of services is likely to impact other in-use specific services,

Mandatory

this process is responsible for providing appropriate notification of the recovery proposal. **MA**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.2.9.3 L4: Request Service Recovery Authorization (1.1.2.2.10.3) – Mapping Details

Process Identifier: 1.1.2.2.10.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 3 PROCESS MAPPING DETAILS
Request Service Recovery Authorization (1.1.2.2.10.3)
Brief Description
Ensure authorization is received to proceed with the recovery plan.**AM**
The service recovery process can include a pre-requisite task (called Resource Order in FP) that can request an external system for authorization. A negative response can make the recovery process fail by branching out to the "Fail" final state while a positive response will transition to the recovery activity it-self.
([FP_DEVGUIDE]**, 2 Product Order Flows)**
Extended Description
Not used for this process element
Explanatory
Not used for this process element
Mandatory
Ensure authorization is received to proceed with the recovery plan. **AM**
See Brief Description
Optional
Not used for this process element
Interactions
Not used for this process element

4.2.9.4 L4: Commence Service Recovery (1.1.2.2.10.4) – Mapping Details

Process Identifier: 1.1.2.2.10.4

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 3 PROCESS MAPPING DETAILS
Commence Service Recovery (1.1.2.2.10.4)
Brief Description
When the recovery activity is about to commence, this processes is responsible for notifying when recovery work is commencing. **A**
The service recovery process will generate the event `EventPoExecStarted` *upon start.*
([FP_POPDIC]**, `EventPoExecStarted`)**
Extended Description
Not used for this process element
Explanatory
When the recovery activity is about to commence,
Mandatory
this processes is responsible for notifying when recovery work is commencing.**A**
See Brief Description
Optional
Not used for this process element
Interactions
Not used for this process element

4.2.9.5 L4: Complete Service Recovery (1.1.2.2.10.5) – Mapping Details

Process Identifier: 1.1.2.2.10.5

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 3 PROCESS MAPPING DETAILS
Complete Service Recovery (1.1.2.2.10.5)

Brief Description

This process is responsible for notifying when it is completed. **A**

The service recovery process will generate the event `POPImpl::donePO` *upon completion.*

([FP_POPDIC]**, EventPoExecEnded)**

When recovered, the specific services and/or associated service specific parameters will be marked as unallocated. **AM**

TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a service inventory yet and so does not implement the complete behavior but permits to model in the rollback process the interaction(s) with external service inventory to set the parameters of the specific services and/or associated service specific parameters as unallocated.

Extended Description

Not used for this process element

Explanatory

When recovered, the specific services and/or associated service specific parameters will be marked as unallocated.

Mandatory

This process is responsible for notifying when it is completed. **A**

See Brief Description

Optional

Not used for this process element

Interactions

This process is responsible for notifying when it is completed.

4.2.10 Supporting Evidence References (Works Cited)

[FOM_CONCEPTS]   TIBCO® Fulfillment Order Management Concepts and Architecture

[FP_DOCAPI]   HTML-based FP APIs

[FP_DEVGUIDE]   TIBCO® Fulfillment Provisioning Developer's Guide

[FP_OSSJOMCA]   Function Design Specification - OSS/J Order Management Client Adapter

[FP_POPDIC]   TIBCO® Fulfillment Provisioning POP Module Event Dictionary

[FP_USERGUIDE]   TIBCO® Fulfillment Provisioning User's Guide

4.2.11 Service Configuration & Activation (1.1.2.2) – Conformance Scores

Table 4.2 - Service Configuration & Activation (1.1.2.2) – Conformance Scores

Level 2: 1.1.2.2 - Service Configuration & Activation [8/9]		
Level 3 Process	**Level 4 Process**	**L4/L3 Process Score**
1.1.2.2.1 - Design Solution		**4.3**
	1.1.2.2.1.1 - Develop Overall Service Design	100%
	1.1.2.2.1.2 - Develop Service Implementation Plan	0%
	1.1.2.2.1.3 - Develop Detailed Service Design	100%
1.1.2.2.2 - Allocate Specific Service Parameters to Services		**4.5**
	1.1.2.2.2.1 - Determine Service Parameter Availability	100%
	1.1.2.2.2.2 - Reserve Service Parameters	50%
	1.1.2.2.2.3 - Release Service Parameter	50%
	1.1.2.2.2.4 - Allocate Service Parameters	100%
1.1.2.2.3 - Track & Manage Service Provisioning		**5**
	1.1.2.2.3.1 - Assign Service Provisioning Activity	100%
	1.1.2.2.3.2 - Track Service Provisioning Activity	100%
	1.1.2.2.3.3 - Manage Service Provisioning Activity	100%
1.1.2.2.4 - Implement, Configure & Activate Service		**5**
	1.1.2.2.4.1 - Configure Service	100%
	1.1.2.2.4.2 - Implement Service	100%
	1.1.2.2.4.3 - Activate Service	100%
1.1.2.2.5 - Test Service End-to-End		*0*
1.1.2.2.7 - Issue Service Orders		**5**
	1.1.2.2.7.1 - Assess Service Request	100%
	1.1.2.2.7.2 - Create Service Orders	100%
	1.1.2.2.7.3 - Mark Service Order for Special Handling	100%
1.1.2.2.8 - Report Service Provisioning		**5**
	1.1.2.2.8.1 - Monitor Service Order Status	100%
	1.1.2.2.8.2 - Distribute Service Order Notification	100%
	1.1.2.2.8.3 - Distribute Service Provisioning Reports	100%
1.1.2.2.9 - Close Service Order		**5**
1.1.2.2.10 - Recover Service		**4.8**
	1.1.2.2.10.1 - Develop Service Recovery Plan	50%
	1.1.2.2.10.2 - Provide Service Recovery Proposal Notification	100%
	1.1.2.2.10.3 - Request Service Recovery Authorization	100%
	1.1.2.2.10.4 - Commence Service Recovery	100%
	1.1.2.2.10.5 - Complete Service Recovery	100%

4.3   L2: Resource Provisioning (1.1.3.2)
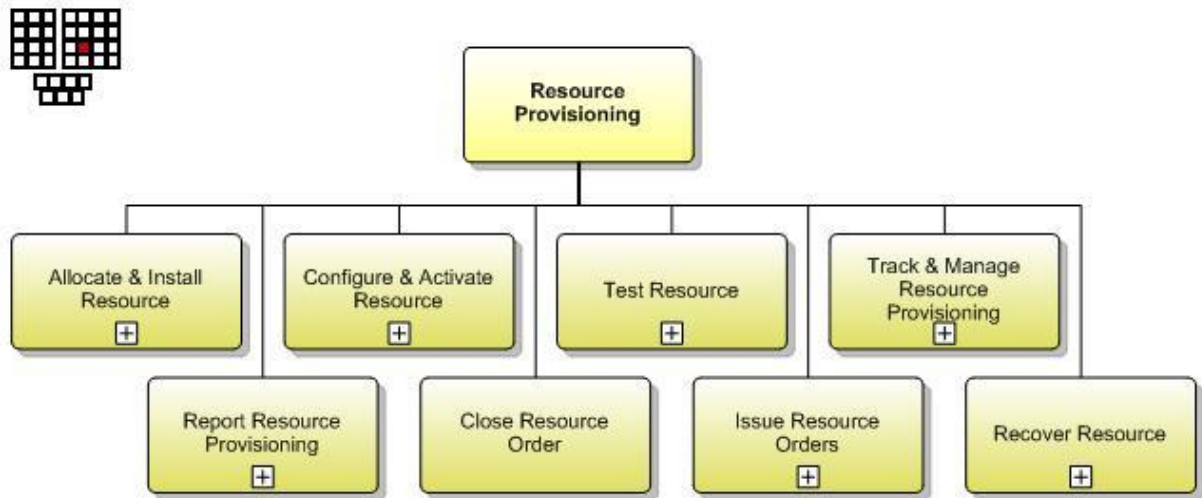
Figure 4.3 - Resource Provisioning decomposition to Level 3 processes

Process Identifier: 1.1.3.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.3.1 L3: Allocate & Install Resource (1.1.3.2.1)

Process Identifier: 1.1.3.2.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.3.1.1 L4: Determine Resource Availability (1.1.3.2.1.1) – Mapping Details

Process Identifier: 1.1.3.2.1.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Determine Resource Availability (1.1.3.2.1.1)
Brief Description
This process investigates the ability to be able to satisfy specific service orders as a part of a feasibility check. Where the Allocate & Install Resource processes are requested by a pre-feasibility resource order, or by the Design Resources processes, these processes determine whether the requested resources are available.**AM**
TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a resource and service inventory and so does not implement the complete behavior but permits to implement the process and interaction(s) with external resource inventory.
This process can be modeled, in Fulfillment Provisioning, as a separate action for RFS specifications or RFS order specification (called Technical Product Order in FP) which can be instantiated and invoked through service orders by north bound systems including Fulfillment Order Management. The process will implement the steps required to determine the resource availability.
This RFS order specification can be associated to a dedicated CFS order specification and possibly to other CFS order specifications so that it can be instantiated and executed at the beginning of the resource implementation or activation processes as a pre-requisite which will make the service order fail in case of unavailability.
([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**
([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Defining Verbs)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

Extended Description

Not used for this process element

Explanatory

This process investigates the ability to be able to satisfy specific service orders as a part of a feasibility check.

Mandatory

<mark>Where the Allocate & Install Resource processes are requested by a pre-feasibility resource order, or by the Design Resources processes, these processes determine whether the requested resources are available</mark>. **AM**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.1.2 L4: Reserve Resource (1.1.3.2.1.2) – Mapping Details

Process Identifier: 1.1.3.2.1.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Reserve Resource (1.1.3.2.1.2)

Brief Description

This process reserves specific resources in response to issued resource orders. Depending on business rules, and on any specific levels of commitment contained in the initiating resource order or resource design request, these processes may reserve specific resources linked to the initiating resource order or resource design request for a period of time. **AM**

TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a resource and service inventory and so does not implement the complete behavior but permits to implement the process and interaction(s) with external resource inventory.

This process can be modeled, in Fulfillment Provisioning, as a separate action for RFS specifications or RFS order specification (called Technical Product Order in FP) which can be invoked through service orders by north bound systems including Fulfillment Order Management. The process will implement the actions required to reserve specific resources for a RFS order.

Designers model graphically processes in Fulfillment Studio as a workflow of actions on resource type (called Work Order in FP) per RFS order specification. A type of resource can be anything ranging for resource inventory to access network elements or service platforms. The instance of the resource type such as a specific HLR from a specific vendor is resolved during routing. The transitions between actions on resource types can be conditional and permit to execute certain branches based on order input data or previously executed step.

Moreover a RFS order specification can be linked to other RFS order specifications through rules in Fulfillment provisioning catalog. Rules (such as Append and Prepend) can permit to add pre-requisite RFS orders that satisfies conditions. These conditions are based on order input data.

This RFS order specification can be associated to a dedicated CFS order specification and possibly to other CFS order specifications so that it can be instantiated and executed at the beginning of the resource implementation or activation processes as a pre-requisite which will make the service order fail in case of unavailability.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**

 ([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Defining Verbs)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_USERGUIDE]**, 2 Fulfillment Provisioning Flow Overview)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

==This process reserves specific resources in response to issued resource orders==. **AM**

See Brief Description

Optional

Depending on business rules, and on any specific levels of commitment contained in the initiating resource order or resource design request, these processes may reserve specific resources linked to the initiating resource order or resource design request for a period of time.

Interactions

Not used for this process element

4.3.1.3 L4: Release Resource (1.1.3.2.1.3) – Mapping Details

Process Identifier: 1.1.3.2.1.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Release Resource (1.1.3.2.1.3)

Brief Description

Release the reservation when the time period has expired. **AM**

TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a resource and service inventory and so does not implement the complete behavior but permits to implement the process and interaction(s) with external resource inventory.

The Fulfillment Provisioning does not manage the reservation through a time period but through a reserve, commit or abort approach. The reservation of resource is defined by a RFS order specification and implemented by its attached process. It can be released by the rollback process which will be called during RFS order recovery.

(**[FP_DEVGUIDE], 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**

(**[FP_DEVGUIDE], 2 Product Order Flows)**

(**[FP_USERGUIDE], 10 Fulfillment Provisioning Modules - Service-order level rollback)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Release the reservation when the time period has expired. **AM**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.1.4 L4: Allocate Resource (1.1.3.2.1.4) – Mapping Details

Process Identifier: 1.1.3.2.1.4

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Allocate Resource (1.1.3.2.1.4)

Brief Description

This process allocates specific resources in response to issued resource orders. Where the Allocate & Install Resource processes are requested by a resource order issued in response to a confirmed customer order, this process is responsible for allocating the specific resources required to satisfy the initiating resource order. Any previously reserved specific resources are marked as allocated.
AM

TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a resource and service inventory and so does not implement the complete behavior but permits to implement the process and interaction(s) with external resource inventory.

This process can be modeled, in Fulfillment Provisioning, as a separate action for RFS specifications or RFS order specification (called Technical Product Order in FP) which can be instantiated and invoked through service orders by north bound systems including Fulfillment Order Management. The process will implement the steps required to allocate specific resources.

This RFS order specification can be associated to a dedicated CFS order specification and possibly to other CFS order specifications so that it can be instantiated and executed at the beginning of the resource implementation or activation processes as a pre-requisite which will make the service order fail in case of unavailability.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Defining Verbs)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

Extended Description

Not used for this process element

Explanatory

This process allocates specific resources in response to issued resource orders.

Mandatory

<mark>Where the Allocate & Install Resource processes are requested by a resource order issued in response to a confirmed customer order, this process is responsible for allocating the specific resources required to satisfy the initiating resource order. Any previously reserved specific resources are marked as allocated</mark>. **AM**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.1.5   L4: Install and Commission Resource (1.1.3.2.1.5) – Mapping Details

Process Identifier: 1.1.3.2.1.5

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Install and Commission Resource (1.1.3.2.1.5)
Brief Description ==This process is responsible for installing and commissioning specific resources, and updating the resource inventory as part of these processes==. **AM** *TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a resource and service inventory and so does not implement the complete behavior but permits to implement the process and interaction(s) with external resource inventory.* *This process can be modeled, in Fulfillment Provisioning, as a separate action for RFS specifications or RFS order specification (called Technical Product Order in FP) which can be instantiated and invoked through service orders by north bound systems including Fulfillment Order Management. The process will implement the steps required to install and commission specific resources and update the resource inventory.* *This RFS order specification can be associated to a dedicated CFS order specification and possibly to other CFS order specifications so that it can be instantiated and executed at the beginning of the resource implementation or activation processes as a pre-requisite which will make the service order fail in case of unavailability.* **(**[FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)** **(**[FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Defining Verbs)** **(**[FP_DEVGUIDE]**, 2 Product Order Flows)** **Extended Description** Not used for this process element **Explanatory** Not used for this process element **Mandatory** ==responsible for installing and commissioning specific resources, and updating the resource inventory==

==as part of these processes==.**AM**

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.2   L3: Configure & Activate Resource (1.1.3.2.2)

Process Identifier: 1.1.3.2.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.3.2   L3: Configure & Activate Resource (1.1.3.2.2)

4.3.2.1 L4: Configure Resource (1.1.3.2.2.1) – Mapping Details

Process Identifier: 1.1.3.2.2.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Configure Resource (1.1.3.2.2.1)

Brief Description

This process assesses and plans the approach to be undertaken for configuration. **A**

The Fulfillment Provisioning retrieves the process model attached to the RFS Order specification dedicated for configuration using the catalog, instantiates it and executes it. The Fulfillment provisioning executes each action on resource defined in the process model following the workflow.

([FP_USERGUIDE]**, 2 Fulfillment Provisioning Flow Overview)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

It re-uses standard configuration and processes applicable to specific resources. **A**

Designers model graphically processes in Fulfillment Studio as a workflow of actions on resource type (called Work Order in FP) per RFS order specification. A type of resource can be anything ranging for resource inventory to access network elements or service platforms. The instance of the resource type such as a specific HLR from a specific vendor is resolved during routing and is implemented by cartridge. A Fulfillment Provisioning cartridge provides implementation of all the actions on a specific resource which is re-usable in many RFS order specification processes. Each action on a resource can be modeled as a workflow (called Work Order Flow in FP).

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_USERGUIDE]**, 1 Overview - Architectural Components - Cartridges)**

([FP_DEVGUIDE]**, 8 Cartridge Network Element Configuration)**

It configures and reconfigures specific resources, including customer premises equipment if part of the resource provider offering. **A**

A RFS order specification process can configure and reconfigure many resources of any kind including customer premises at different steps in the workflow. Additionally, a RFS order specification can also require through rules (defined as part of the resource provider offering in the catalog) the addition of pre-requisite RFS order specification which could configure associated resources such as customer premises equipment.

It provides notifications as required if the configuration activity requires a planned outage or is likely

to initiate false specific resource alarm event notifications. **AM**

A step can be added in the RFS order specification process workflow to notify an external system that a planned outage is required or the generation of false alarm may be produced. This step can be re-used in other RFS order specification.

It updates the information contained in the resource inventory as to the configuration of specific resources and their status. **M**

TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a resource inventory yet and so does not implement the complete behavior but permits to model in the RFS order specification process activating the resource as a separate step the interaction(s) with external resource inventory to reflect the result of the resource activation. The update of the resource inventory can also be modeled in a separate RFS order specification which can be sequenced to be executed after the execution using catalog rules.

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**

Extended Description

Not used for this process element.

Explanatory

This process re-uses standard implementation processes applicable to specific resources.

Mandatory

This process assesses and plans the approach to be undertaken for configuration. It configures and reconfigures specific resources, including customer premises equipment if part of the resource provider offering. **A**

It provides notifications as required if the configuration activity requires a planned outage or is likely to initiate false specific resource alarm event notifications. **AM**

It updates the information contained in the resource inventory as to the configuration of specific resources and their status. **AM**

See Brief Description

Optional

Not used for this process element

Interactions

 It provides notifications as required

4.3.2.2 L4: Implement Resource (1.1.3.2.2.2) – Mapping Details

Process Identifier: 1.1.3.2.2.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Implement Resource (1.1.3.2.2.2)

Brief Description

This process re-uses standard implementation processes applicable to specific resources. **A**

Designers model graphically processes in Fulfillment Studio as a workflow of actions on resource type (called Work Order in FP) per RFS order specification. A type of resource can be anything ranging for resource inventory to access network elements or service platforms. The instance of the resource type such as a specific HLR from a specific vendor is resolved during routing and is implemented by cartridge. A Fulfillment Provisioning cartridge provides implementation of all the actions on a specific resource which is re-usable in many RFS order specification processes. Each action on a resource can be modeled as a workflow (called Work Order Flow in FP).

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_USERGUIDE]**, 1 Overview - Architectural Components - Cartridges)**

 ([FP_DEVGUIDE]**, 8 Cartridge Network Element Configuration)**

It implements specific resources, including customer premises equipment if part of the resource provider offering. **A**

A RFS order specification process can implement many resources of any kind including customer premises at different steps in the workflow. Additionally, a RFS order specification can also require through rules (defined as part of the resource provider offering in the catalog) the addition of pre-requisite RFS order specification which could implement associated resources such as customer premises equipment.

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**

It provides notifications as required if the implementation activity requires a planned outage or is likely to initiate false specific resource alarm event notifications. **AM**

A step can be added in the RFS order specification process workflow to notify an external system that a planned outage is required or the generation of false alarm may be produced. This step can be re-used in other RFS order specification.

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_USERGUIDE]**, 1 Overview - Architectural Components - Cartridges)**

Extended Description

Not used for this process element.

Explanatory

This process re-uses standard implementation processes applicable to specific resources.

Mandatory

It implements specific resources, including customer premises equipment if part of the resource provider offering. **A**

It provides notifications as required if the implementation activity requires a planned outage or is likely to initiate false specific resource alarm event notifications. **AM**

See Brief Description

Optional

Not used for this process element

Interactions

It provides notifications as required

4.3.2.3 L4: Activate Resource (1.1.3.2.2.3) – Mapping Details

Process Identifier: 1.1.3.2.2.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Activate Resource (1.1.3.2.2.3)

Brief Description

This process assesses and plans the approach to be undertaken for activation. **A**

The Fulfillment Provisioning retrieves the process model attached to the RFS Order specification using the catalog, instantiates it and executes it. The Fulfillment provisioning executes each action on resource defined in the process model following the workflow.

([FP_USERGUIDE]**, 2 Fulfillment Provisioning Flow Overview)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

It re-uses standard activation processes applicable to specific resources. **A**

Designers model graphically processes in Fulfillment Studio as a workflow of actions on resource type (called Work Order in FP) per RFS order specification. A type of resource can be anything ranging for resource inventory to access network elements or service platforms. The instance of the resource type such as a specific HLR from a specific vendor is resolved during routing and is implemented by cartridge. A Fulfillment Provisioning cartridge provides implementation of all the actions on a specific resource which is re-usable in many RFS order specification processes. Each action on a resource can be modeled as a workflow (called Work Order Flow in FP).

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_USERGUIDE]**, 1 Overview - Architectural Components - Cartridges)**

([FP_DEVGUIDE]**, 8 Cartridge Network Element Configuration)**

It provides notifications as required if the activation activity requires a planned outage or is likely to initiate false specific resource alarm event notifications. **AM**

A step can be added in the RFS order specification process workflow to notify an external system that a planned outage is required or the generation of false alarm may be produced. This step can be re-used in other RFS order specification.

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_USERGUIDE]**, 1 Overview - Architectural Components - Cartridges)**

<mark>At the successful conclusion of this activity, the status of the specific resources will be changed from allocated to activated, which means they are in-use</mark>. **AM**

TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a resource inventory yet and so does not implement the complete behavior but permits to model in the RFS order specification process activating the resource as a separate step the interaction(s) with external resource inventory to reflect the result of the resource activation. The update of the resource inventory can also be modeled in a separate RFS order specification which can be sequenced to be executed after the execution using catalog rules.

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**

Extended Description

Not used for this process element

Explanatory

This process re-uses standard implementation processes applicable to specific resources.

Mandatory

<mark>This process assesses and plans the approach to be undertaken for activation</mark>. **A**

<mark>It provides notifications as required if the activation activity requires a planned outage or is likely to initiate false specific resource alarm event notifications</mark>. **AM**

<mark>At the successful conclusion of this activity, the status of the specific resources will be changed from allocated to activated, which means they are in-use</mark>. **AM**

See Brief Description

Optional

Not used for this process element

Interactions

It provides notifications as required

4.3.3 L3: Test Resource (1.1.3.2.3) [Not Assessed]

This process was not submitted for assessment.

4.3.4 L3: Track & Manage Resource Provisioning (1.1.3.2.5)

Process Identifier: 1.1.3.2.5

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.3.4.1 L4: Coordinate Resource Provisioning Activity (1.1.3.2.5.1) – Mapping Details

Process Identifier: 1.1.3.2.5.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Coordinate Resource Provisioning Activity (1.1.3.2.5.1)

Brief Description

This process schedules, assigns and coordinates resource provisioning related activities. **A**

The Fulfillment Provisioning defines resource provisioning activities in catalog component as RFS specifications and supported actions which are implemented by modeled processes. These RFS specifications are associated to CFS specifications and are instantiated, scheduled, assigned and coordinated as part of the service provisioning process which is defined in "Assign Service Provisioning Activity (1.1.2.2.3.1)".

([FP_USERGUIDE]**, 2 Fulfillment Provisioning Flow Overview)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

This process schedules, assigns and coordinates resource provisioning related activities.A

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.4.2 L4: Track Resource Provisioning Activity (1.1.3.2.5.2) – Mapping Details

Process Identifier: 1.1.3.2.5.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Track Resource Provisioning Activity (1.1.3.2.5.2)
Brief Description This process tracks the order execution process.**A** *The Fulfillment Provisioning executes RFS order by executing its attached process model. A RFS specification process is modeled as a workflow of resource orders (called work orders in FP) that are assembled together though workflow elements (transitions, fork & join and guards). When a resource order is executed, it is first assigned and routed to a cartridge that connects physically to the external resource instance.* *A cartridge is specific to a resource and is responsible to establish the communication session with that resource and implement the actions supported for that resource including the coding and submission of action request and reception and decoding of the action response in a session manner.* Upon resource order execution completion, the resource order status is updated and the Fulfillment Provisioning continues the execution of the depending resource actions in workflow. The Fulfillment Provisioning can execute resources orders in parallel in a same RFS order specification process if there are not dependent to each of other. A RFS order completes when the workflow transitions to a final state which gives its status. **(**[FP_USERGUIDE]**, 2 Fulfillment Provisioning Flow Overview)** **(**[FP_DEVGUIDE]**, 2 Product Order Flows)** **Extended Description** Not used for this process element **Explanatory** Not used for this process element **Mandatory** This process tracks the order execution process. **A** *See Brief Description*

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.4.3 L4: Manage Resource Provisioning Activity (1.1.3.2.5.3) – Mapping Details

Process Identifier: 1.1.3.2.5.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Manage Resource Provisioning Activity (1.1.3.2.5.3)

Brief Description

This process escalates resource orders in accordance with local policy,**M**

The following mechanism is not provided with the Fulfillment Provisioning but can be implemented quite easily through customization. Designers of the system can associate to each resource order modeled in a RFS order specification process an expected duration by setting a user defined parameter (called nvset in FP) indicating its expected duration. A custom component that will have to be written and that will have for responsibility to set a timer for provided expected duration will be called at resource order execution time in forward data mapper. Another customer component that will have the responsibility to remove a timer provided the resource order identifier that initiated the time in the first place will be called at resource order execution completion in backward data mapper. Upon timer expiration, the timer handler could generate an event indicating that the resource order is in jeopardy condition and needs escalation.

([FP_DEVGUIDE]**, 7 Data Mapping – WorkOrder Data Mapping)**

([FP_DOCAPI]**, P.FP - prov - SOTimerConfig, SOTimerEventHandler and ServiceOrder. setupTimer)**

adds information to an existing resource order, **AM**

modifies information in an existing resource order, **AM**

 The resource order information is being added or modified at various steps including:

- *During catalog enrichment which overwrites field values and/or adds new fields required for proper provisioning for each CFS order and through derivation to associated RFS order and through derivation to each resource order.*
- *During RFS order execution which allows any resource orders to add or modify any of its fields for the benefits of other resource orders.*
- *During workorder data mapping before execution of the resource order. This steps permit to adapt business field to more specific resource capabilities which include addition and modification of fields. Similar treatment can be done after execution.*
- *During work order execution inside the cartridge which implements a workflow of commands to a network element and for which any command can used previous command output parameter.*
- *By the Fulfillment Provisioning OMS order tracking function that permits to repair a resource*

order by adding and/or modifying fields.
([FP_USERGUIDE]**, 12 Overview of Fulfillment Provisioning Catalog)**

([FP_USERGUIDE]**, 10 Product Order Processing)**

([FP_DEVGUIDE]**, 7 Data Mapping – WorkOrder Data Mapping)**

([FP_DEVGUIDE]**, 6 TIBCO Fulfillment Provisioning Order Management System)**

cancels a resource order when the initiating service order is cancelled, **A**

The Fulfillment Provisioning provides support for gracefully cancelling a service order and its affiliated CFS orders, RFS orders and resource orders or forcing execution abort. When a service order is cancelled or aborted, all unprocessed CFS order, RFS order and resource orders are set to do not execute. A graceful cancellation will wait for all RFS orders in execution to complete before stopping all processing. A forced abort will wait for all resource orders in execution to complete before stopping which means that RFS orders in execution may not be complete after abort.

([FP_DEVGUIDE]**, 7 Fulfillment Provisioning Modules – Controlling Administrative States of Orders)**

([FP_DOCAPI]**, P.FP - soadmin)**

and also modifies the resource order status, including setting it to complete when the resource order has been fulfilled. **AM**

The resource order status is modified by Fulfillment Provisioning upon completion of the resource order execution but can also be modified by custom modules through custom code. The status of Resource Orders can be also forced manually using Fulfillment Provisioning OMS.

([FP_DEVGUIDE]**, 4 Developing New Modules)**

([FP_USERGUIDE]**, 10 Product Order Processing)**

([FP_DEVGUIDE]**, 6 TIBCO Fulfillment Provisioning Order Management System)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

This process escalates resource orders in accordance with local policy, **M**

adds information to an existing resource order, **AM**

modifies information in an existing resource order, **AM**

cancels a resource order when the initiating service order is cancelled, **A**

and also modifies the resource order status, including setting it to complete when the resource

<mark>order has been fulfilled</mark>. **AM**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.5   L3: Report Resource Provisioning (1.1.3.2.6)

Process Identifier: 1.1.3.2.6

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.3.5.1 L4: Monitor Resource Order Status (1.1.3.2.6.1) – Mapping Details

Process Identifier: 1.1.3.2.6.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Monitor Resource Order Status (1.1.3.2.6.1)
Brief Description This process is responsible for continuously monitoring the status of resource orders. **A** *The Fulfillment Provisioning, as part of the RFS order execution, initiates the execution of resource orders and gets notified when resource order execution completes. The status of the resource order is then used to by RFS order process workflow to determine next steps.* **(**[FP_USERGUIDE]**, 2 Fulfillment Provisioning Flow Overview)** **(**[FP_USERGUIDE]**, 10 Product Order Processing)** **(**[FP_DEVGUIDE]**, 2 Product Order Flows)** **Extended Description** Not used for this process element **Explanatory** Not used for this process element **Mandatory** This process is responsible for continuously monitoring the status of resource orders. **A** *See Brief Description* **Optional** Not used for this process element **Interactions** Not used for this process element

4.3.5.2 L4: Distribute Resource Order Notification (1.1.3.2.6.2) – Mapping Details

Process Identifier: 1.1.3.2.6.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Distribute Resource Order Notification (1.1.3.2.6.2)

Brief Description

<mark>This process is responsible for managing notifications to processes and other parties registered to receive notifications of any status changes</mark>. **A**

The Fulfillment Provisioning implements a publish & subscribe mechanism and manages the routing of events between producers and readers. Each event is defined in a dictionary. Each component is responsible to subscribe to the event topics it is interested in.

The Fulfillment Provisioning notifies resource order status changes through events defined in the event dictionary. All components that subscribe to these events receive them and can trigger necessary actions. OMS component subscribes to these events and updates database for consultation and administrative actions. Customer components can be written to implement specific behaviors.

([FP_DEVGUIDE], **9 Fulfillment Provisioning Utilities, Event Dictionary)**

([FP_USERGUIDE], **10 Product order processing)**

([FP_DEVGUIDE], **6 TIBCO Fulfillment Provisioning Order Management System)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

<mark>This process is responsible for managing notifications to processes and other parties registered to receive notifications of any status changes</mark>. **A**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.5.3 L4: Distribute Resource Provisioning Reports (1.1.3.2.6.3) – Mapping Details

Process Identifier: 1.1.3.2.6.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Distribute Resource Provisioning Reports (1.1.3.2.6.3)

Brief Description

This process records, analyzes and assesses the resource order status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall Resource Provisioning process, including specific reports required by specific audiences. **AM**

The Fulfillment Provisioning OMS component permits to visualize all the details of execution of a resource order including status, data and execution logs. Resource order flow can be visualized as a process flow showing the logic of commands. Views can be configured to display or hide specific data depending on audience need. All the information is available in database and can be used by 3rd party report generator systems.

The Fulfillment Order Management OMS component provides a dashboard that displays real time indicators such as number of resource orders processed daily grouped per status, average, min and max latency of resource orders per types or specific network elements having generated technical or functional failures. Query can be configured to reflect audience need.

Each user of the system can configure the OMS dashboard and order presentation views for its own needs.

([FP_DEVGUIDE]**, 6 TIBCO Fulfillment Provisioning Order Management System)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

This process records, analyzes and assesses the resource order status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall Resource Provisioning process, including specific reports required by specific audiences. **AM**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.6   L3: Close Resource Order (1.1.3.2.7)

Process Identifier: 1.1.3.2.7

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain

4.3.6.1 L3: Close Resource Order (1.1.3.2.7) – Mapping Details

NOTE: No decomposition to Level 4 processes, hence mappings provided against the Level 3 process descriptions and implied tasks.

LEVEL 3 PROCESS MAPPING DETAILS Close Resource Order (1.1.3.2.7)
Brief Description
This process monitors the status of the order and changes the status to closed when it is completed. **A**
The Fulfillment Provisioning initiates the execution of resource orders and sets the status of execution upon completion which indicates that resource order is closed.
(**[**FP_USERGUIDE**], 10 Product order processing**)
Extended Description
The objective of the Close Resource Order processes is to close a resource order when the resource provisioning activities have been completed.
These processes monitor the status of all open resource orders, and recognize that a resource order is ready to be closed when the status is changed to completed. **A**
See Brief Description
Explanatory
Reserved for future use.
Mandatory
Reserved for future use.
Optional
Reserved for future use.

Interactions

Reserved for future use.

4.3.7   L3: Issue Resource Orders (1.1.3.2.8)

Process Identifier: 1.1.3.2.8

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.3.7.1 L4: Assess Resource Request (1.1.3.2.8.1) – Mapping Details

Process Identifier: 1.1.3.2.8.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Assess Resource Request (1.1.3.2.8.1)
Brief Description
This process assesses the information contained in the service order, through a resource order request, initiating resource process request or supplier/partner initiated request, to determine the associated resource orders that need to be issued. **A** *The Fulfillment Provisioning (FP) receives service orders through Drivers and injects them into the provisioning flow for execution. The service order goes through a series of steps in the flow called modules. A flow controller coordinates the execution the each service order. Each module is responsible for a specific processing on the service order such as:* - *scheduling service orders for a later date,* - *sequencing of the execution to start after completion of another service order,* - *decomposing the provided service order line items or CFS orders (called Product Order in FP) into a workflow of RFS orders (called Technical Product Orders). This dynamic transformation is using the catalog that defines CFS specifications (called Product in FP) and RFS specifications (called Technical Product in FP) and how an action on a CFS specification translates into a workflow of RFS orders using decomposition and optimization rules,* - *executing the workflow of RFS orders. A static workflow of Resource Orders (called ProductOrderFlow in FP) is attached to each RFS order in the catalog. Executing an action on a RFS amounts to orchestrate the execution of Resource Orders (called Work Orders in FP). Each Resource Order is assigned to the target resource to provision.* - *Responding to the initiator of the request* As described in above paragraph, resource orders are automatically determined by catalog definition and service order data during decomposition step. **(**[FP_USERGUIDE]**, 6 Service Orders)** **(**[FP_USERGUIDE]**, 11 Overview of The Fulfillment Provisioning Catalog)** **Extended Description** Not used for this process element **Explanatory**

Not used for this process element

Mandatory

<mark>This process assesses the information contained in the service order, through a resource order request, initiating resource process request or supplier/partner initiated request, to determine the associated resource orders that need to be issued</mark>. **A**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.7.2 L4: Create Resource Orders (1.1.3.2.8.2) – Mapping Details

Process Identifier: 1.1.3.2.8.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Create Resource Orders (1.1.3.2.8.2)

Brief Description

Where the initiating request or the purchased product offering has a standard set of associated resource orders this process is responsible for issuing the resource orders, and for creating a record of the relevant initiating request or customer order information and the associated resource orders.

Where the initiating request or the purchased product offering has special or unusual requirements, and a specific feasibility assessment and/or resource design has been previously created, this process is responsible for issuing the resource orders, and for creating a record of the relevant initiating request or customer order information and the associated resource orders. **A**

The Fulfillment Provisioning (FP) receives service orders through Drivers and injects them into the provisioning flow for execution. The service order goes through a series of steps in the flow called modules. A flow controller coordinates the execution the each service order. Each module is responsible for a specific processing on the service order such as:

- *scheduling service orders for a later date,*
- *sequencing of the execution to start after completion of another service order,*
- *decomposing the provided service order line items or CFS orders (called Product Order in FP) into a workflow of RFS orders (called Technical Product Orders). This dynamic transformation is using the catalog that defines CFS specifications (called Product in FP) and RFS specifications (called Technical Product in FP) and how an action on a CFS specification translates into a workflow of RFS orders using decomposition and optimization rules,*
- *executing the workflow of RFS orders. A static workflow of Resource Orders (called ProductOrderFlow in FP) is attached to each RFS order in the catalog. Executing an action on a RFS amounts to orchestrate the execution of Resource Orders (called Work Orders in FP). Each Resource Order is assigned to the target resource to provision.*
- *Responding to the initiator of the request*

As described in above paragraph, resource orders are automatically determined and instantiated during decomposition step.

Resource orders are recorded in database and can be consulted using Fulfillment Provisioning OMS GUI.

Additionally, The Fulfillment Provisioning provides capabilities for the designers of the system to

handle special use cases that need to issue not standard resource orders :

- *Extend a standard RFS order process (workflow of resource orders) by adding a conditional branch that handles a special use case upon detection of the special use case. The condition can evaluate passed parameters, parameters returned by previous resource order or result of previous resource orders.*
- *Define a new RFS order specification that implements the special workflow of resource orders and define conditional rules to add this process to the standard RFS order process.*

([FP_USERGUIDE]**, 6 Service Orders)**

([FP_USERGUIDE]**, 11 Overview of The Fulfillment Provisioning Catalog)**

([FP_DEVGUIDE]**, 6 TIBCO Fulfillment Provisioning Order Management System)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Where the initiating request or the purchased product offering has a standard set of associated resource orders this process is responsible for issuing the resource orders, and for creating a record of the relevant initiating request or customer order information and the associated resource orders.

Where the initiating request or the purchased product offering has special or unusual requirements, and a specific feasibility assessment and/or resource design has been previously created, this process is responsible for issuing the resource orders, and for creating a record of the relevant initiating request or customer order information and the associated resource orders. **A**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.7.3 L4: Mark Resource Order for Special Handling (1.1.3.2.8.3) – Mapping Details

Process Identifier: 1.1.3.2.8.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Mark Resource Order for Special Handling (1.1.3.2.8.3)
Brief Description Where the purchased product offering has special or unusual requirements, and a specific feasibility assessment and/or specific resource design has not been previously created, this process marks the issued resource order as requiring special handling, and passes management for further processing to the Track & Manage Resource Provisioning process. **AM** *A RFS order workflow can detect that prerequisite actions have not been done after the failure or value of specific parameters returned by a resource order. This can force the RFS order to fail and require manual resubmission and/or to take a specific branch that handle a special case. Either way, an event can be produced to notify operators that an issued resource order requires special handling.* **Extended Description** Not used for this process element **Explanatory** Not used for this process element **Mandatory** Where the purchased product offering has special or unusual requirements, and a specific feasibility assessment and/or specific resource design has not been previously created, this process marks the issued resource order as requiring special handling, and passes management for further processing to the Track & Manage Resource Provisioning process. **AM** *See Brief Description* **Optional** Not used for this process element **Interactions** passes management for further processing to the Track & Manage Resource Provisioning process.

4.3.8   L3: Recover Resource (1.1.3.2.9)

Process Identifier: 1.1.3.2.9

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.3.8.1 L4: Develop Resource Recovery Plan (1.1.3.2.9.1) – Mapping Details

Process Identifier: 1.1.3.2.9.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Develop Resource Recovery Plan (1.1.3.2.9.1)

Brief Description

Where appropriate recovery plans are not available this process is responsible for developing appropriate recovery plans. **M**

The Fulfillment Provisioning does not provide a project management function but offers capability to create process to recover a resource.

The Fulfillment Provisioning includes a catalog component that allows designers of the solution to create actions for existing specifications of RFS and Resource to model the recovery processes. The Fulfillment Studio will be used to model the RFS order process (called Product Order Flow in FP) and Resource order process (called Work Order Flow in FP) responsible for the recovery.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**

([FP_USERGUIDE]**,6 Fulfillment Provisioning Flow Overview)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

([FS_USERGUIDE]**, 4 Cartridges – Adding a Work Order Flow)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Where appropriate recovery plans are not available this process is responsible for developing appropriate recovery plans. **M**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.8.2 L4: Provide Resource Recovery Proposal Notification (1.1.3.2.9.2) – Mapping Details

Process Identifier: 1.1.3.2.9.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Provide Resource Recovery Proposal Notification (1.1.3.2.9.2)

Brief Description

Where recovery of services is likely to impact other in-use specific services, this process is responsible for providing appropriate notification of the recovery proposal. **MA**

The Fulfillment Provisioning permits for designers of the solution to model in specific RFS order processes such as service recovery, the generation of a specific event notifying possible service impact. Once determined during service specification, designers can place the event notification in the process to occur after specific tasks or actions on resources and make it depend on the result of execution of these tasks. A possible impact on a service can be detected by the result of execution of a previous resource orders or tasks involved for that service. A way to implement that strategy is to model a dedicated task (Called Resource Order in FP) in the RFS order process that will invoke a cartridge that will generate a specific event and forward it to an external system that would need to be notified. Such a task is re-usable and can be added in multiple processes in case many services have recovery actions requiring such notification.

Alternatively, designers can customize the solution to notify an external system upon completion of specific RFS order or resource order processes. This approach is less granular as it does not permit to notify an external system at a specific step with an order process. A component can be built to receive resource recovery process start (event `EventPoExecStarted` *for RFS orders and* `EventWoStarted` *for resource orders) and ending (event* `EventPoExecEnded` *for RFS orders and* `EventWoEnded` *for resource orders) and execute required specific actions using custom code.*

It is also possible to include in the implementation of a specific resource order the generation of such notification.

([FP_DEVGUIDE], **9 Fulfillment Provisioning Utilities, Event Dictionary)**

([FP_POPDIC], **EventPoExecStarted** *and* **EventWoStarted)**

([FP_POPDIC], **EventPoExecEnded** *and* **EventWoEnded)**

([FP_DEVGUIDE], **2 Product Order Flows)**

([FP_DEVGUIDE]**, 8 Cartridge Network Element Configuration)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

<mark>Where recovery of services is likely to impact other in-use specific services, this process is responsible for providing appropriate notification of the recovery proposal</mark>. **MA**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.8.3 L4: Request Resource Recovery Authorization (1.1.3.2.9.3) – Mapping Details

Process Identifier: 1.1.3.2.9.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Request Resource Recovery Authorization (1.1.3.2.9.3)
Brief Description Ensure authorization is received to proceed with the recovery plan. **AM** *The resource recovery process (RFS order process) can include a pre-requisite task (called Resource Order in FP) that can request an external system for authorization. A negative response can make the recovery process fail by branching out to the "Fail" final state while a positive response will transition to the recovery activity it-self.* (**[**FP_DEVGUIDE**], 2 Product Order Flows)** **Extended Description** Not used for this process element **Explanatory** Not used for this process element **Mandatory** Ensure authorization is received to proceed with the recovery plan. **AM** *See Brief Description* **Optional** Not used for this process element **Interactions** Not used for this process element

4.3.8.4 L4: Commence Resource Recovery (1.1.3.2.9.4) – Mapping Details

Process Identifier: 1.1.3.2.9.4

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Commence Resource Recovery (1.1.3.2.9.4)

Brief Description

When the recovery activity is about to commence, this processes is responsible for notifying when recovery work is commencing. **A**

The resource recovery process will generate the event `EventPoExecStarted` *upon RFS recovery starts and* `EventWoStarted` *for resource recovery tasks.*

([FP_POPDIC]**, `EventPoExecStarted` *and* `EventWoStarted`)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

When the recovery activity is about to commence, this processes is responsible for notifying when recovery work is commencing. **A**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.8.5 L4: Complete Resource Recovery (1.1.3.2.9.5) – Mapping Details

Process Identifier: 1.1.3.2.9.5

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Complete Resource Recovery (1.1.3.2.9.5)

Brief Description

This process is responsible for notifying when it is completed. **A**

The resource recovery process will generate the event `EventPoExecEnded` *upon RFS recovery completion and the event* `EventWoEnded` *upon resource recovery task.*

([FP_POPDIC]**, EventPoExecEnded** *and* **EventWoEnded**)

When recovered, the specific resources and/or associated resource specific parameters will be marked as unallocated. **AM**

TIBCO, as part of its Fulfillment Orchestration Suite, does not provide a resource inventory yet and so does not implement the complete behavior but permits to model in the RFS recovery process the interaction(s) with external resource inventory to set the parameters of the specific resource and/or associated resource specific parameters as unallocated.

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

This process is responsible for notifying when it is completed. **A**

When recovered, the specific resources and/or associated resource specific parameters will be marked as unallocated. **AM**

See Brief Description

Optional

Not used for this process element

Interactions

Not used for this process element

4.3.8.6 L4: Recover Specific Resource (1.1.3.2.9.6) – Mapping Details

Process Identifier: 1.1.3.2.9.6

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Recover Specific Resource (1.1.3.2.9.6)
Brief Description
This process recovers a specific resource that is no longer required. **A**
A RFS order specification process (called product Order Flow in FP) or a resource order process (called Work Order Flow in FP) it-self can implement the logic of recovering a specific resource. The logic is modeled in Fulfillment Studio. The implementation of the commands to send to the external elements on behalf of a resource order to effectively do the recovery is done in the cartridge.
([FP_USERGUIDE],**6 Fulfillment Provisioning Flow Overview)**
([FP_DEVGUIDE]**, 2 Product Order Flows)**
([FS_USERGUIDE]**, 4 Cartridges – Adding a Work Order Flow)**
Extended Description
Not used for this process element
Explanatory
Not used for this process element
Mandatory
This process recovers a specific resource that is no longer required. **A**
See Brief Description
Optional
Not used for this process element
Interactions
Not used for this process element

4.3.9   Supporting Evidence References (Works Cited)

[FOM_CONCEPTS]   TIBCO® Fulfillment Order Management Concepts and Architecture

[FP_DOCAPI]   HTML-based FP APIs

[FP_DEVGUIDE]   TIBCO® Fulfillment Provisioning Developer's Guide

[FP_OSSJOMCA]   Function Design Specification - OSS/J Order Management Client Adapter

[FP_POPDIC]   TIBCO® Fulfillment Provisioning POP Module Event Dictionary

[FP_USERGUIDE]   TIBCO® Fulfillment Provisioning User's Guide

[FS_USERGUIDE]   TIBCO(R) Fulfillment Studio User's Guide

4.3.10 Resource Provisioning (1.1.3.2) – Conformance Scores

Table 4.3 - Resource Provisioning (1.1.3.2) – Conformance Scores

Level 2: 1.1.3.2 - Resource Provisioning [7/8]		
Level 3 Process	**Level 4 Process**	**L4/L3 Process Score**
1.1.3.2.1 - Allocate & Install Resource		**4**
	1.1.3.2.1.1 - Determine Resource Availability	50%
	1.1.3.2.1.2 - Reserve Resource	50%
	1.1.3.2.1.3 - Release Resource	50%
	1.1.3.2.1.4 - Allocate Resource	50%
	1.1.3.2.1.5 - Install and Commission Resource	50%
1.1.3.2.2 - Configure & Activate Resource		**5**
	1.1.3.2.2.1 - Configure Resource	100%
	1.1.3.2.2.2 - Implement Resource	100%
	1.1.3.2.2.3 - Activate Resource	100%
1.1.3.2.3 - Test Resource		*0*
1.1.3.2.5 - Track & Manage Resource Provisioning		**5**
	1.1.3.2.5.1 - Coordinate Resource Provisioning Activity	100%
	1.1.3.2.5.2 - Track Resource Provisioning Activity	100%
	1.1.3.2.5.3 - Manage Resource Provisioning Activity	100%
1.1.3.2.6 - Report Resource Provisioning		**5**
	1.1.3.2.6.1 - Monitor Resource Order Status	100%
	1.1.3.2.6.2 - Distribute Resource Order Notification	100%
	1.1.3.2.6.3 - Distribute Resource Provisioning Reports	100%
1.1.3.2.7 - Close Resource Order		**5**
1.1.3.2.8 - Issue Resource Orders		**5**
	1.1.3.2.8.1 - Assess Resource Request	100%
	1.1.3.2.8.2 - Create Resource Orders	100%
	1.1.3.2.8.3 - Mark Resource Order for Special Handling	100%
1.1.3.2.9 - Recover Resource		**4.8**
	1.1.3.2.9.1 - Develop Resource Recovery Plan	50%
	1.1.3.2.9.2 - Provide Resource Recovery Proposal Notification	100%
	1.1.3.2.9.3 - Request Resource Recovery Authorization	100%
	1.1.3.2.9.4 - Commence Resource Recovery	100%
	1.1.3.2.9.5 - Complete Resource Recovery	75%
	1.1.3.2.9.6 - Recover Specific Resource	100%

4.4 Product & Offer Development & Retirement (1.2.1.5)
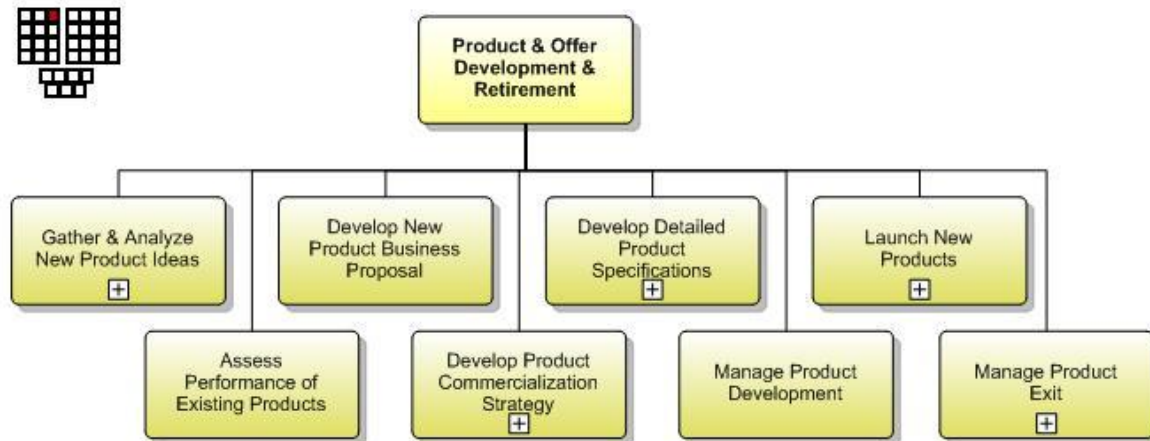
Figure 4.4 - Product & Offer Development & Retirement decomposition to Level 3 processes

Process Identifier: 1.2.1.5

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.4.1   L3: Gather & Analyze New Product Ideas (1.2.1.5.1) [Not Assessed]

This process was not submitted for assessment.

4.4.2   L3: Assess Performance of Existing Products (1.2.1.5.2) [Not Assessed]

This process was not submitted for assessment.

4.4.3   L3: Develop New Product Business Proposal (1.2.1.5.3) [Not Assessed]

This process was not submitted for assessment.

4.4.4   L3: Develop Product Commercialization Strategy (1.2.1.5.4) [Not Assessed]

This process was not submitted for assessment.

4.4.5 L3: Develop Detailed Product Specifications (1.2.1.5.5)

Process Identifier: 1.2.1.5.5

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.4.5.1 L4: Develop Detailed Product Technical Specifications (1.2.1.5.5.1) – Mapping Details

Process Identifier: 1.2.1.5.5.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Develop Detailed Product Technical Specifications (1.2.1.5.5.1)

Brief Description

These processes develop and document the detailed product-related technical specifications. These processes develop and document the required product features, and the specific service and resource requirements and selections. **AM**

The Fulfillment Catalog is the placeholder to define the specifications of all Products and their composition in terms of CFS and Resources as well as the corresponding valid actions and associated plan fragment. The Fulfillment Catalog specification or documentation is directly used as the configuration of the generic catalog–driven runtime part of the application making documentation and development a similar activity.

([FOM_CONCEPTS]**, 4 Fulfillment Process)**

([FC_USERGUIDE]**, 2 High Level Data Model - Fulfillment Catalog Data Model for the Telecommunications Product Catalog)**

([FC_USERGUIDE]**, 3 SID-based Data modeling for the Product Catalog)**

The processes ensure that all detailed specifications are produced and appropriately documented. **AM**

Based on TIBCO Master Data Management product (called CIM), the Fulfillment Catalog provides generic capabilities to capture all required detailed specifications in appropriate form. The

Fulfillment Catalog enables customers to add new attributes, add rules to validate entered values and add approval workflow activities.

The TIBCO CIM's rulebase is preconfigured for basic validations to ensure a record is accurate for the purposes of Fulfillment Catalog and Fulfillment Order Management. The rulebase manages data entry validation and structure validation. The customer can add more rules in rulebase for specific use cases.

([CSRD_USERGUIDE]**, 10 Validation)**

Fulfillment Catalog uses an out of the box GUI to configure authorization and control flow, including what user/group is allowed to create/modify/delete records/attribute/attribute groups, as well as define who needs to approval during the product lifecycle. Customers can configure workflow further using CIM Studio.

([CSPD_USERGUIDE]**, 3 Activities)**

([CSPD_USERGUIDE]**, 5 Transitions)**

<mark>Additionally the processes ensure that the documentation is captured in an appropriate enterprise repository</mark>. **AM**

The Fulfillment Catalog acts as an enterprise repository which is responsible to the storage of all specifications on database and permits the consultation and editing using a Web interface and user access control.

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.4.5.2 L4: Develop Detailed Product Performance Specifications (1.2.1.5.5.2) – Mapping Details

Process Identifier: 1.2.1.5.5.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Develop Detailed Product Performance Specifications (1.2.1.5.5.2)

Brief Description

These processes develop and document the detailed product-related performance specifications. These processes develop and document the specific performance requirements. 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**

Fulfillment Catalog permits to capture performance specifications using mechanisms described for 1.2.1.5.5.1.

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.4.5.3 L4: Develop Detailed Product Operational Specifications (1.2.1.5.5.3) – Mapping Details

Process Identifier: 1.2.1.5.5.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Develop Detailed Product Operational Specifications (1.2.1.5.5.3)
Brief Description These processes develop and document the detailed product-related operational specifications. These processes develop and document the specific performance and operational requirements and support activities, along with any product specific data required for the systems and network infrastructure. 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** *The Fulfillment Catalog provide support for these process by providing capability to capture operational specifications using mechanisms described for 1.2.1.5.5.1.* **Extended Description** Not used for this process element **Explanatory** Reserved for future use. **Mandatory** Reserved for future use. **Optional** Reserved for future use. **Interactions** Reserved for future use.

Process Identifier: 1.2.1.5.5.4

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Develop Detailed Product Customer Manuals (1.2.1.5.5.4)

Brief Description

The Develop Detailed Product Specifications processes develop and document the detailed customer manuals. 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.

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.4.6   L3: Manage Product Development (1.2.1.5.6)

Process Identifier: 1.2.1.5.6

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.4.6.1 L3: Manage Product Development (1.2.1.5.6) – Mapping Details

NOTE: No decomposition to Level 4 processes, hence mappings provided against the Level 3 process descriptions and implied tasks.

LEVEL 3 PROCESS MAPPING DETAILS
Manage Product Development (1.2.1.5.6)

Brief Description

<mark>Ensure the co-coordinated delivery in line with the approved business case of all required product capabilities for that business case across the enterprise.</mark> **AM**

TIBCO Fulfillment Order Management and Fulfillment Catalog provide support for these processes by providing deployment capabilities. An instance of Fulfillment Catalog data containing all the products specifications from a development environment can be exported and re-imported by another Fulfillment Catalog instance responsible for a specific environment such as testing, trials or production. Once imported, it can be published to running Fulfillment Order Management for immediate deployment.

([FC_USERGUIDE]**, 4 Interface)**

Extended Description

<mark>The Manage Product Development processes ensure the co-coordinated delivery in line with the approved business case of all required product capabilities for that business case across the enterprise. These processes use project management disciplines to deliver the necessary capabilities, including process development, specific systems & network infrastructure developments, specific channel developments, specific operational procedures, etc. required to support the new product. It is predominantly a program/project management function, with the detailed management of individual capability delivery managed through separate processes in other horizontal process groupings.</mark> **AM**

See Brief Description

Note that delivery of products within the context of existing commercial arrangements is managed through the Supply Chain Development and Change Management process. If new suppliers/partners are required, the Supply Chain Capability Delivery process is used to deliver the necessary

commercial arrangements.

Note that the management of major new or enhanced infrastructure development to support Product & Offer Development is managed within the Product & Offer Capability Delivery process.

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.4.7   L3: Launch New Products (1.2.1.5.7)

Process Identifier: 1.2.1.5.7

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.4.7.1 L4: Identify Product Issues (1.2.1.5.7.1) – Mapping Details

Process Identifier: 1.2.1.5.7.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Identify Product Issues (1.2.1.5.7.1)

Brief Description

These processes identify the shortcomings or issues in the product. **AM**

The Fulfillment Order Management provides support for these processes by detecting and reporting problems during the fulfillment activities which can be analyzed in logs and order/plan detail views in OMS component. These problems can be found in multiple environments such as unit test, integration test, trials or production phases.

 ([FOM_USERGUIDE], **1 Fulfillment Order Management - Fulfillment Order Management Functionality)**

Extended Description

Not used for this process element

Explanatory

Not used for this process element

Mandatory

Not used for this process element

Optional

Not used for this process element

Interactions

Not used for this process element

4.4.7.2 L4: Manage Product Improvements (1.2.1.5.7.2) – Mapping Details

Process Identifier: 1.2.1.5.7.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Manage Product Improvements (1.2.1.5.7.2)

Brief Description

These processes manage the necessary improvements to the product to allow full rollout. **AM**

The specification of a product can be modified in the Fulfillment Catalog to capture required improvements. The specification of a product can change with the addition of new attribute, change of attribute value, change product composition by adding or removing services and/or resources, change plan generation,… These modifications can then be published to Fulfillment Order Management for immediate deployment.

([FC_USERGUIDE]**, 4 Interface)**

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.4.7.3 L4: Manage Product Handover (1.2.1.5.7.3) – Mapping Details

Process Identifier: 1.2.1.5.7.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Manage Product Handover (1.2.1.5.7.3)
Brief Description
At the conclusion of the pilots and/or trials when the product passes its acceptance tests or defined acceptance criteria, these processes manage the handover to operations. **AM**
The Fulfillment Catalog can be deployed in multiple environments such as development, testing, trials and production through import/export/publish mechanism.
([FC_USERGUIDE]**, 4 Interface)**
Extended Description
Not used for this process element
Explanatory
Reserved for future use.
Mandatory
Reserved for future use.
Optional
Reserved for future use.
Interactions
Reserved for future use.

4.4.8   L3: Manage Product Exit (1.2.1.5.8)

Process Identifier: 1.2.1.5.8

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.4.8   L3: Manage Product Exit (1.2.1.5.8)

4.4.8.1 L4: Identify Unviable Products (1.2.1.5.8.1) – Mapping Details

Process Identifier: 1.2.1.5.8.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Identify Unviable Products (1.2.1.5.8.1)
Brief Description These processes analyze existing products & sales offers to identify economically or strategically unviable products. **Extended Description** Not used for this process element **Explanatory** Reserved for future use. **Mandatory** Reserved for future use. **Optional** Reserved for future use. **Interactions** Reserved for future use.

4.4.8.2 L4: Identify Impacted Product Customers (1.2.1.5.8.2) – Mapping Details

Process Identifier: 1.2.1.5.8.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Identify Impacted Product Customers (1.2.1.5.8.2)
Brief Description These processes identify customers impacted by any exit and develop customer specific or market segment exit or migration strategies. **Extended Description** Not used for this process element **Explanatory** Reserved for future use. **Mandatory** Reserved for future use. **Optional** Reserved for future use. **Interactions** Reserved for future use.

4.4.8.3 L4: Develop Product Transition Strategies (1.2.1.5.8.3) – Mapping Details

Process Identifier: 1.2.1.5.8.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Develop Product Transition Strategies (1.2.1.5.8.3)
Brief Description These processes develop infrastructure transition and/or replacement strategies. **Extended Description** Not used for this process element **Explanatory** Reserved for future use. **Mandatory** Reserved for future use. **Optional** Reserved for future use. **Interactions** Reserved for future use.

4.4.8.4 L4: Manage Product Exit Process (1.2.1.5.8.4) – Mapping Details

Process Identifier: 1.2.1.5.8.4

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Manage Product Exit Process (1.2.1.5.8.4)
Brief Description These processes manage the operational aspects of the exit process.**AM** *The Fulfillment Catalog permits to model specific actions on products to handle specific use cases such as product migration or specific exit.* **(**[FC_USERGUIDE]**, 2 High Level Data Model - Fulfillment Catalog Data Repository Dictionary - Action)** **Extended Description** Not used for this process element **Explanatory** Reserved for future use. **Mandatory** Reserved for future use. **Optional** Reserved for future use. **Interactions** Reserved for future use.

4.4.9 Supporting Evidence References (Works Cited)

[CIM_USERGUIDE]   TIBCO Collaborative Information Manager User Guide

[CSRD_USERGUIDE]   TIBCO CIM Studio Repository Designer User's Guide

[CSPD_USERGUIDE]   TIBCO CIM Studio Process Designer User's Guide

[FC_USERGUIDE]   TIBCO® Fulfillment Catalog Product Catalog User Guide

[FOM_CONCEPTS]   TIBCO® Fulfillment Order Management Concepts and Architecture

[FOM_USERGUIDE]   TIBCO® Fulfillment Order Management User Guide

4.4.9 Supporting Evidence References (Works Cited)

4.4.10 Product & Offer Development & Retirement (1.2.1.5) – Conformance Scores

Table 4.4 - Product & Offer Development & Retirement (1.2.1.5) – Conformance Scores

Level 2: 1.2.1.5 - Product & Offer Development & Retirement [4/8]		
Level 3 Process	**Level 4 Process**	**L4/L3 Process Score**
1.2.1.5.1 - Gather & Analyze New Product Ideas		*0*
1.2.1.5.2 - Assess Performance of Existing Products		*0*
1.2.1.5.3 - Develop New Product Business Proposal		*0*
1.2.1.5.4 - Develop Product Commercialization Strategy		*0*
1.2.1.5.5 - Develop Detailed Product Specifications		**4.3**
	1.2.1.5.5.1 - Develop Detailed Product Technical Specifications	100%
	1.2.1.5.5.2 - Develop Detailed Product Performance Specifications	100%
	1.2.1.5.5.3 - Develop Detailed Product Operational Specifications	50%
	1.2.1.5.5.4 - Develop Detailed Product Customer Manuals	0%
1.2.1.5.6 - Manage Product Development		**4**
1.2.1.5.7 - Launch New Products		**4.7**
	1.2.1.5.7.1 - Identify Product Issues	50%
	1.2.1.5.7.2 - Manage Product Improvements	100%
	1.2.1.5.7.3 - Manage Product Handover	100%
1.2.1.5.8 - Manage Product Exit		**3.3**
	1.2.1.5.8.1 - Identify Unviable Products	0%
	1.2.1.5.8.2 - Identify Impacted Product Customers	0%
	1.2.1.5.8.3 - Develop Product Transition Strategies	0%
	1.2.1.5.8.4 - Manage Product Exit Process	50%

4.6   Service Development & Retirement (1.2.2.3)
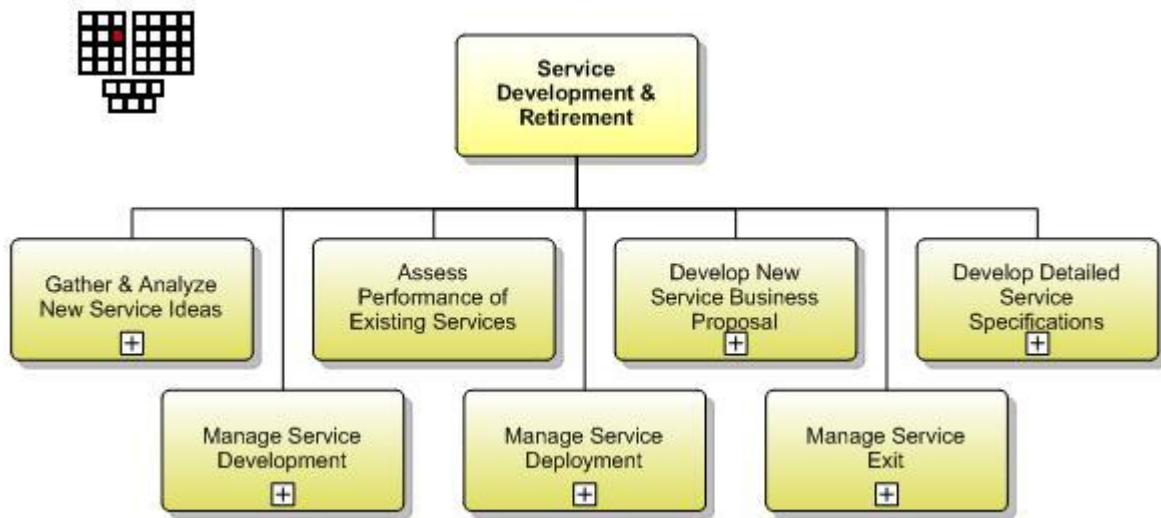
Figure 4.5 - Service Development & Retirement decomposition into Level 3 processes

Process Identifier: 1.2.2.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.6.1   L3: Gather & Analyze New Service Ideas (1.2.2.3.1) [Not Assessed]

This process was not submitted for assessment.

4.6.2   L3: Assess Performance of Existing Services (1.2.2.3.2) [Not Assessed]

This process was not submitted for assessment.

4.6.3   L3: Develop New Service Business Proposal (1.2.2.3.3) [Not Assessed]

This process was not submitted for assessment.

4.6.4   L3: Develop Detailed Service Specifications (1.2.2.3.4)

Process Identifier: 1.2.2.3.4

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.6.4.1 L4: Develop Detailed Service Technical Specifications (1.2.2.3.4.1) – Mapping Details

Process Identifier: 1.2.2.3.4.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Develop Detailed Service Technical Specifications (1.2.2.3.4.1)

Brief Description

These processes develop and document the required service features for the systems and network infrastructure as agreed through the Develop New Service Business Proposal processes. **AM**

The Fulfillment Provisioning catalog is the placeholder to define all CFS and RFS specifications (called Product and Technical Product in FP) as well as the corresponding valid actions and associated processes which define the required resources and actions on them. The Fulfillment Provisioning catalog specification or documentation is directly used as the configuration of the generic catalog–driven runtime part of the application making documentation and development a similar activity.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

The processes ensure that all detailed specifications are produced and appropriately documented. **AM**

The Fulfillment Provisioning catalog provides control mechanisms to validate that entered data are correct validating that a Parameter value match valid values, range, mi, max or regular expression depending on Parameter type. Cyclical relationships and dependencies through rules are also detected. At last, creation or editing of any catalog concept is controlled and guided by specific web page assuring catalog consistency.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Technical Configuration)**

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Catalog Configuration)**

The Fulfillment Provisioning catalog provides a testing capability that permits to validate that catalog specification is properly documented or configured by simulating service order execution and

controlling that generated plan corresponds to expected result.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Administration Features - Testing Fulfillment Provisioning Catalog Configuration)**

<mark>Additionally the processes ensure that the documentation is captured in an appropriate enterprise repository</mark>. **AM**

The Fulfillment Provisioning catalog acts as an enterprise repository which is responsible to the storage of all specifications on disk and permits the consultation and editing using a Web interface and user access control.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Administration Features - Configuring TIBCO Fulfillment Provisioning)**

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Administration Features - User Administration)**

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.6.4.2 L4: Develop Detailed Service Support Specifications (1.2.2.3.4.2) – Mapping Details

Process Identifier: 1.2.2.3.4.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Develop Detailed Service Support Specifications (1.2.2.3.4.2)
Brief Description These processes develop and document the specific underpinning resource requirements and selections required for the systems and network infrastructure as agreed through the Develop New Service Business Proposal processes. **AM** *The Fulfillment Provisioning catalog is the placeholder to define all CFS and RFS specifications (called Product and Technical Product in FP) as well as the corresponding valid actions and associated processes which define the required resources and actions on them. The Fulfillment Provisioning catalog specification or documentation is directly used as the configuration of the generic catalog–driven runtime part of the application making documentation and development a similar activity.* (**[FP_DEVGUIDE], 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)** (**[FP_DEVGUIDE], 2 Product Order Flows)** The processes ensure that all detailed specifications are produced and appropriately documented. **AM** *The RFS specification includes, for each valid action, a BPMN process (called Product Order Flow) consisting of a workflow of resource orders. This BMPN process documented in Eclipse application is also actionable is used by Fulfillment Provisioning to execute RFS orders. Similarly, a Resource order is defined by a BPMN process (called Work Order Flow) consisting of a workflow of resource commands.* (**[FP_DEVGUIDE], 2 Product Order Flows)** (**[FS_USERGUIDE], 4 Cartridges – Adding a Product Order Flow)** (**[FS_USERGUIDE], 4 Cartridges – Adding a Work Order Flow)** Additionally the processes ensure that the documentation is captured in an appropriate enterprise repository. **A** The Fulfillment Provisioning catalog acts as an enterprise repository which is responsible to the storage of all specifications on disk and permits the consultation and editing using a Web interface

and user access control.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Administration Features - Configuring TIBCO Fulfillment Provisioning)**

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Administration Features - User Administration)**

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.6.4.3 L4: Develop Detailed Service Operational Specifications (1.2.2.3.4.3) – Mapping Details

Process Identifier: 1.2.2.3.4.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Develop Detailed Service Operational Specifications (1.2.2.3.4.3)

Brief Description

These processes develop and document the specific operational, and quality requirements and support activities, and any service specific data required for the systems and network infrastructure required for the systems and network infrastructure as agreed through the Develop New Service Business Proposal processes. **AM**

The Fulfillment Provisioning provides support for this process by extending capability described for process 1.2.2.3.4.1 with specific data. The catalog component permits to add any number of new parameters of any types to any RFS specification to handle service specific data.

 ([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**

([FP_DEVGUIDE]**, 2 Product Order Flows)**

The processes ensure that all detailed specifications are produced and appropriately documented. **AM**

The Fulfillment Provisioning catalog provides control mechanisms to validate that entered data are correct validating that a Parameter value match valid values, range, mi, max or regular expression depending on Parameter type. Cyclical relationships and dependencies through rules are also detected. At last, creation or editing of any catalog concept is controlled and guided by specific web page assuring catalog consistency.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)**

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Technical Configuration)**

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Catalog Configuration)**

The Fulfillment Provisioning catalog provides a testing capability that permits to validate that catalog specification is properly documented or configured by simulating service order execution and controlling that generated plan corresponds to expected result.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Administration Features - Testing Fulfillment Provisioning Catalog Configuration)**

==Additionally the processes ensure that the documentation is captured in an appropriate enterprise repository.== **AM**

The Fulfillment Provisioning catalog acts as an enterprise repository which is responsible to the storage of all specifications on disk and permits the consultation and editing using a Web interface and user access control.

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Administration Features - Configuring TIBCO Fulfillment Provisioning)**

([FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Administration Features - User Administration)**

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.6.4.4 L4: Develop Detailed Service Customer Manuals (1.2.2.3.4.4) – Mapping Details

Process Identifier: 1.2.2.3.4.4

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Develop Detailed Service Customer Manuals (1.2.2.3.4.4)

Brief Description

These processes develop and document the customer manuals as agreed through the Develop New Service Business Proposal processes. 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.

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.6.5   L3: Manage Service Development (1.2.2.3.5)

Process Identifier: 1.2.2.3.5

Brief Description

Ensure the co-coordinated development in line with the approved business case of all required new or enhanced service classes/components for that business case across the enterprise.

4.6.5.1 L4: Identify Required Processes & Procedures (1.2.2.3.5.1) – Mapping Details

Process Identifier: 1.2.2.3.5.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Identify Required Processes & Procedures (1.2.2.3.5.1)
Brief Description These processes ensure that all operational processes and procedures, resource changes (e.g. network and/or IT resources), operational procedures, testing tools and procedures, etc. required to support the new resource class/component are identified.**AM** *The Fulfillment Provisioning catalog provides support for these processes by maintaining and identifying complete set of actionable specifications required for the successful execution of fulfillment activities on services including service specification, processes involving resources and fulfillment rules.*   ([FP_DEVGUIDE], **5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing**) **(**[FP_DEVGUIDE]**, 2 Product Order Flows)** **(**[FS_USERGUIDE]**, 4 Cartridges – Adding a Product Order Flow)** **(**[FS_USERGUIDE]**, 4 Cartridges – Adding a Work Order Flow)** **Extended Description** Not used for this process element **Explanatory** Reserved for future use. **Mandatory**

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.6.5.2   L4: Develop Required Processes & Procedures (1.2.2.3.5.2) – Mapping Details

Process Identifier: 1.2.2.3.5.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Develop Required Processes & Procedures (1.2.2.3.5.2)
Brief Description These processes ensure that all operational processes and procedures, resource changes (e.g. network and/or IT resources), operational procedures, testing tools and procedures, etc. required to support the new resource class/component are developed. **AM** *The Fulfillment Provisioning catalog provides support for these processes by providing the infrastructure to develop complete set of actionable specifications required for the successful execution of fulfillment activities on services including services specification, processes involving resources and fulfillment rules.* **(**[FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)** **(**[FP_DEVGUIDE]**, 2 Product Order Flows)** **(**[FS_USERGUIDE]**, 4 Cartridges – Adding a Product Order Flow)** **(**[FS_USERGUIDE]**, 4 Cartridges – Adding a Work Order Flow)** **Extended Description** Not used for this process element **Explanatory** Reserved for future use. **Mandatory**

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.6.5.3 L4: Product Documentation & Training Packages (1.2.2.3.5.3) – Mapping Details

Process Identifier: 1.2.2.3.5.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Product Documentation & Training Packages (1.2.2.3.5.3)
Brief Description
These processes ensure that the necessary documentation and training packages are produced to support the operation of the new resource class.
Extended Description
Not used for this process element
Explanatory
Reserved for future use.
Mandatory
Reserved for future use.
Optional
Reserved for future use.
Interactions
Reserved for future use.

4.6.5.4 L4: Develop Service & Operational Agreements (1.2.2.3.5.4) – Mapping Details

Process Identifier: 1.2.2.3.5.4

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Develop Service & Operational Agreements (1.2.2.3.5.4)
Brief Description
These processes ensure that the required service level agreements and operational level agreements are developed and agreed for each resource class deployed, and that any supplier/partner operational support has been identified.
Extended Description
Not used for this process element
Explanatory
Reserved for future use.
Mandatory
Reserved for future use.
Optional
Reserved for future use.
Interactions
Reserved for future use.

4.6.5.5 L4: Gain Service & Operational Agreements Approval (1.2.2.3.5.5) – Mapping Details

Process Identifier: 1.2.2.3.5.5

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Gain Service & Operational Agreements Approval (1.2.2.3.5.5)
Brief Description These processes ensure that the required service level agreements and operational level agreements are developed and agreed for each resource class deployed, and that any supplier/partner operational support has been agreed. **Extended Description** Not used for this process element **Explanatory** Reserved for future use. **Mandatory** Reserved for future use. **Optional** Reserved for future use. **Interactions** Reserved for future use.

4.6.6 L3: Manage Service Deployment (1.2.2.3.6)

Process Identifier: 1.2.2.3.6

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.6.6.1 L4: Manage Service Process & Procedure Implementation (1.2.2.3.6.1) – Mapping Details

Process Identifier: 1.2.2.3.6.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Manage Service Process & Procedure Implementation (1.2.2.3.6.1)
Brief Description
These processes ensure that all operational processes and procedures, IT systems changes, network changes, channel changes, operational procedures, testing tools and procedures, etc. required to support the new service class/component have been implemented.
Extended Description
Not used for this process element
Explanatory
Reserved for future use.
Mandatory
Reserved for future use.
Optional
Reserved for future use.
Interactions
Reserved for future use.

4.6.6.2 L4: Manage Service Operational Staff Training (1.2.2.3.6.2) – Mapping Details

Process Identifier: 1.2.2.3.6.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Manage Service Operational Staff Training (1.2.2.3.6.2)

Brief Description

These processes ensure that appropriate operational staff are identified and have received the necessary training.

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

4.6.6.3 L4: Develop Service Supplier/Partner Operational Support (1.2.2.3.6.3) – Mapping Details

Process Identifier: 1.2.2.3.6.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

| **LEVEL 4 PROCESS MAPPING DETAILS** |
| Develop Service Supplier/Partner Operational Support (1.2.2.3.6.3) |
| **Brief Description** |
| These processes ensure that the agreed supplier/partner operational support has been implemented. |
| **Extended Description** |
| Not used for this process element |
| **Explanatory** |
| Reserved for future use. |
| **Mandatory** |
| Reserved for future use. |
| **Optional** |
| Reserved for future use. |
| **Interactions** |
| Reserved for future use. |

4.6.6.4 L4: Manage Service Acceptance Testing (1.2.2.3.6.4) – Mapping Details

Process Identifier: 1.2.2.3.6.4

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Manage Service Acceptance Testing (1.2.2.3.6.4)
Brief Description These processes ensure that acceptance testing is successfully performed to assure that the new or enhanced services comply with the specifications. **AM** The Fulfillment Provisioning provides support for these processes by offering a testing framework. (**[FP_DEVGUIDE], 12 Provtest**) **Extended Description** Not used for this process element **Explanatory** Reserved for future use. **Mandatory** Reserved for future use. **Optional** Reserved for future use. **Interactions** Reserved for future use.

4.6.7   L3: Manage Service Exit (1.2.2.3.7)

Process Identifier: 1.2.2.3.7

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

4.6.7.1 L4: Identify Unviable Services (1.2.2.3.7.1) – Mapping Details

Process Identifier: 1.2.2.3.7.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

<table>
<tr><td colspan="1">LEVEL 4 PROCESS MAPPING DETAILS
Identify Unviable Services (1.2.2.3.7.1)</td></tr>
<tr><td>

Brief Description

These processes analyze existing resource classes to identify economically or strategically unviable classes.

Extended Description

Not used for this process element

Explanatory

Reserved for future use.

Mandatory

Reserved for future use.

Optional

Reserved for future use.

Interactions

Reserved for future use.

</td></tr>
</table>

4.6.7.2 L4: Identify Impacted Service Customers (1.2.2.3.7.2) – Mapping Details

Process Identifier: 1.2.2.3.7.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Identify Impacted Service Customers (1.2.2.3.7.2)
Brief Description These processes identify products, services classes & customers impacted by any exit. **Extended Description** Not used for this process element **Explanatory** Reserved for future use. **Mandatory** Reserved for future use. **Optional** Reserved for future use. **Interactions** Reserved for future use.

4.6.7.2 L4: Identify Impacted Service Customers (1.2.2.3.7.2) – Mapping Details

4.6.7.3 L4: Develop Service Transition Strategies (1.2.2.3.7.3) – Mapping Details

Process Identifier: 1.2.2.3.7.3

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS
Develop Service Transition Strategies (1.2.2.3.7.3)
Brief Description
These processes develop specific exit or migration strategies, and develop resource infrastructure transition and/or replacement strategies.
Extended Description
Not used for this process element
Explanatory
Reserved for future use.
Mandatory
Reserved for future use.
Optional
Reserved for future use.
Interactions
Reserved for future use.

4.6.7.4 L4: Manage Service Exit Process (1.2.2.3.7.4) – Mapping Details

Process Identifier: 1.2.2.3.7.4

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS Manage Service Acceptance Testing (1.2.2.3.7.4)
Brief Description These processes manage the operational aspects of the exit process.**AM** *The Fulfillment Provisioning permits to model specific action (called verb in FP) and associate processes (called product Order Flow in FP) on services that can handle service migration or specific exit.* **(**[FP_DEVGUIDE]**, 5 TIBCO Fulfillment Provisioning Catalog Details - Object Model and Processing)** **(**[FP_DEVGUIDE]**, 2 Product Order Flows)** **(**[FS_USERGUIDE]**, 4 Cartridges – Adding a Product Order Flow)** **(**[FS_USERGUIDE]**, 4 Cartridges – Adding a Work Order Flow)** **Extended Description** Not used for this process element **Explanatory** Reserved for future use. **Mandatory** Reserved for future use. **Optional** Reserved for future use. **Interactions** Reserved for future use.

4.6.8   Supporting Evidence References (Works Cited)

[FOM_CONCEPTS]   TIBCO® Fulfillment Order Management Concepts and Architecture

[FOM_USERGUIDE]   TIBCO® Fulfillment Order Management User Guide

[FOM_ADM]   TIBCO® Fulfillment Order Management Administration

[BPM_CONCEPTS]   TIBCO ActiveMatrix™ BPM - BPM Concepts

[NIMBUS_QUICK]   TIBCO Nimbus Control Quick Start Guide

4.6.9   Service Development & Retirement (1.2.2.3) – Conformance Scores

Table 4.5 - Service Development & Retirement (1.2.2.3) – Conformance Scores

Level 2: 1.2.2.3 - Service Development & Retirement [4/7]		
Level 3 Process	**Level 4 Process**	**L4/L3 Process Score**
1.2.2.3.1 - Gather & Analyze New Service Ideas		*0*
1.2.2.3.2 - Assess Performance of Existing Services		*0*
1.2.2.3.3 - Develop New Service Business Proposal		*0*
1.2.2.3.4 - Develop Detailed Service Specifications		**4.3**
	1.2.2.3.4.1 - Develop Detailed Service Technical Specifications	100%
	1.2.2.3.4.2 - Develop Detailed Service Support Specifications	100%
	1.2.2.3.4.3 - Develop Detailed Service Operational Specifications	50%
	1.2.2.3.4.4 - Develop Detailed Service Customer Manuals	0%
1.2.2.3.5 - Manage Service Development		**3.4**
	1.2.2.3.5.1 - Identify Required Processes & Procedures	50%
	1.2.2.3.5.2 - Develop Required Processes & Procedures	50%
	1.2.2.3.5.3 - Product Documentation & Training Packages	0%
	1.2.2.3.5.4 - Develop Service & Operational Agreements	0%
	1.2.2.3.5.5 - Gain Service & Operational Agreements	0%
1.2.2.3.6 - Manage Service Deployment		**3.3**
	1.2.2.3.6.1 - Manage Service Process & Procedure Implementation	0%
	1.2.2.3.6.2 - Manage Service Operational Staff Training	0%
	1.2.2.3.6.3 - Develop Service Supplier/Partner Operational Support	0%
	1.2.2.3.6.4 - Manage Service Acceptance Testing	50%
1.2.2.3.7 - Manage Service Exit		**3.3**
	1.2.2.3.7.1 - Identify Unviable Services	0%
	1.2.2.3.7.2 - Identify Impacted Service Customers	0%
	1.2.2.3.7.3 - Develop Service Transition Strategies	0%
	1.2.2.3.7.4 - Manage Service Exit Process	50%

5 Information Framework Assessment Overview

5.1   Mapping Technique Employed

The certification scope defines the list of ABEs (Aggregated Business Entities) to be addressed during the assessment. The entities, association classes and dependent entities for each ABE in scope are also included in the assessment.

The mapping technique used, was based on the analysis of the SID model files and addendum specifications for the entities', association classes' in scope and its related attributes. The role of each entity', association class or attribute is then interpreted and mapped into the Fulfillment Orchestration Suite information model related element. This will clearly state how the SID model is supported by Fulfillment Orchestration Suite.

5.2   Information Framework Assessment - ABE Scope

The diagram in Figure 5.1 illustrates the Information Framework Level 1 ABEs that were presented in scope for the Assessment, and the textual callouts represent the domain areas of the TIBCO Fulfillment Orchestration Suite that were assessed and support the corresponding SID ABEs.
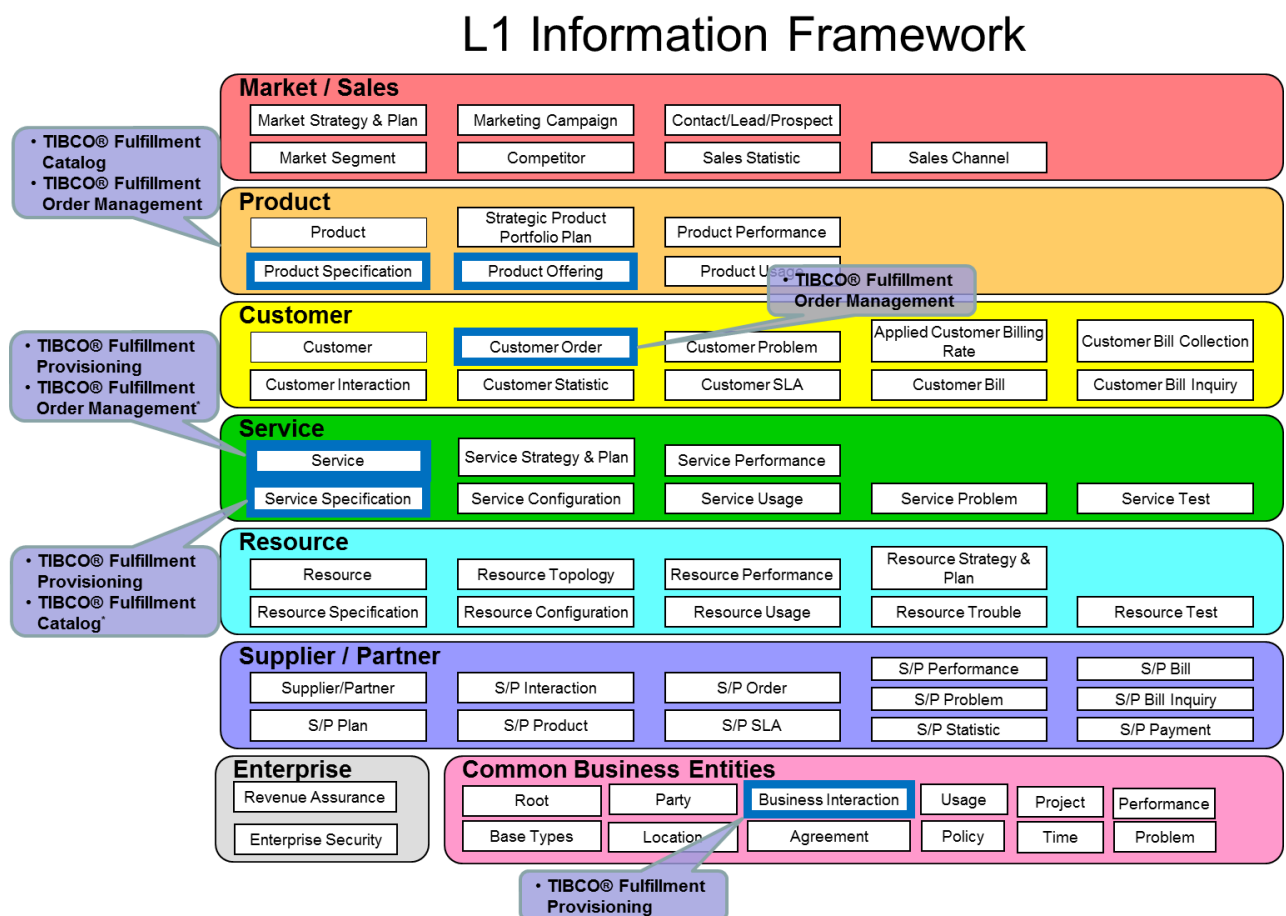

Figure 5.1 - Information Framework: Level 1 ABEs in scope for Fulfillment Orchestration Suite Assessment

* The products placement used for the certification of SID ABEs corresponds to the archetypal products positioning within the Fulfillment Orchestration Suite.

Nevertheless, products of the suite are generic and can support more SID ABEs than the ones they are certified against and allow alternate products positioning. See below for more comprehensive products support:

- *The Fulfillment Catalog is certified for:*
    - o *SID ABEs "Product Offering" and "Product Specification" but also supports SID ABE "Service Specification".*
- *The Fulfillment Order Management is certified for:*
    - o *SID ABEs "Customer Order", "Product Offering" and "Product Specification" but also supports SID ABEs "Service Order" and "Service Specification".*

5.3   **Solution Scope**

The diagram in Figure 5.2 represents the TIBCO Fulfillment Orchestration Suite and how it is mapped to the Information Framework Level 1 ABEs that were assessed as part of this Frameworx Conformance Assessment.
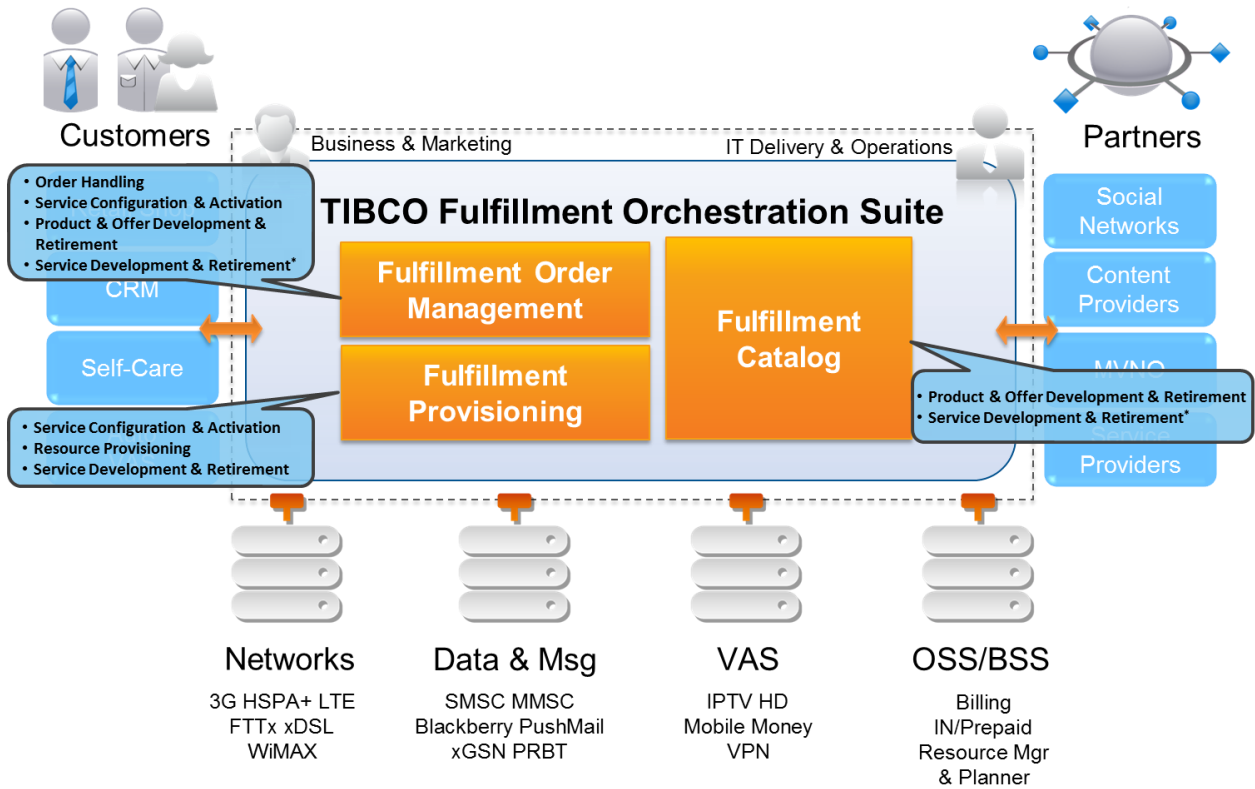

Figure 5.2 - Fulfillment Orchestration Suite Solution Footprint: Solution Scope for SID Assessment

* The products placement used for the certification of SID ABEs corresponds to the archetypal products positioning within the Fulfillment Orchestration Suite.
Nevertheless, products of the suite are generic and can support more SID ABEs than the ones they are certified against and allow alternate products positioning. See below for more comprehensive products support:

- *The Fulfillment Catalog is certified for:*
    - *SID ABEs "Product Offering" and "Product Specification" but also supports SID ABE "Service Specification".*
- *The Fulfillment Order Management is certified for:*
    - *SID ABEs "Customer Order", "Product Offering" and "Product Specification" but also supports SID ABEs "Service Order" and "Service Specification".*

tm forum

6 Frameworx Conformance Result

This section details the Scores awarded to reflect Conformance of the TIBCO Fulfillment Orchestration Suite to the Business Process Framework & Information Framework components of Frameworx 12.

6.1   Business Process Framework – Scoring Rules

The conformance scores granted were based on the following TM Forum scoring rules:

Frameworx 12.0 Conformance Certification (Product/Solution/Implementation)		
Business Process Framework (eTOM) - Conformance Level Descriptions (Level 3 processes)		
Process level	**Conformance Score**	**Qualifier**
Level 1	Not applicable	Conformance Assessment shall not be carried out at this process level - hence Confomance Level shall not be awarded at this level.
Level 2	Not applicable	A conformance level is not awarded to Level 2 processes in Frameworx 12.0 Assessments. The Certification Report shall highlight the coverage of a Level 2 process submitted in scope for an Assessment in terms of number of Level 3 processes submitted for assessment out of the total number defined for the Level 2 process.
Level 3	Score is awarded between 3.1 & 5.	The Conformance Score is awarded for each Level 3 processes submitted in scope for the Assessment. The Conformance Score awarded can be a value between 3.1 & 5 depending on the level of coverage & conformance to the Level 3 process based on the alignment to the level 3 Implied Tasks as decomposed in the Level 4 process definitions. *Any manual implementation of the process support shall be noted in the Conformance Report and Detailed Results Report.*

Figure 6.1 - TM Forum Business Process Framework: Conformance Scoring Rules

6.2 Business Process Framework - Conformance Result Summary

The graph in this section provides an overview of the conformance Levels granted to the Level 3 Processes presented in scope for the TIBCO Fulfillment Orchestration Suite Assessment. Each Level 3 process was measured using a Business Process Framework (eTOM) conformance score according to Level of Conformance – Full Conformance or Partial Conformance as described in section 6.1 Business Process Framework – Scoring Rules.
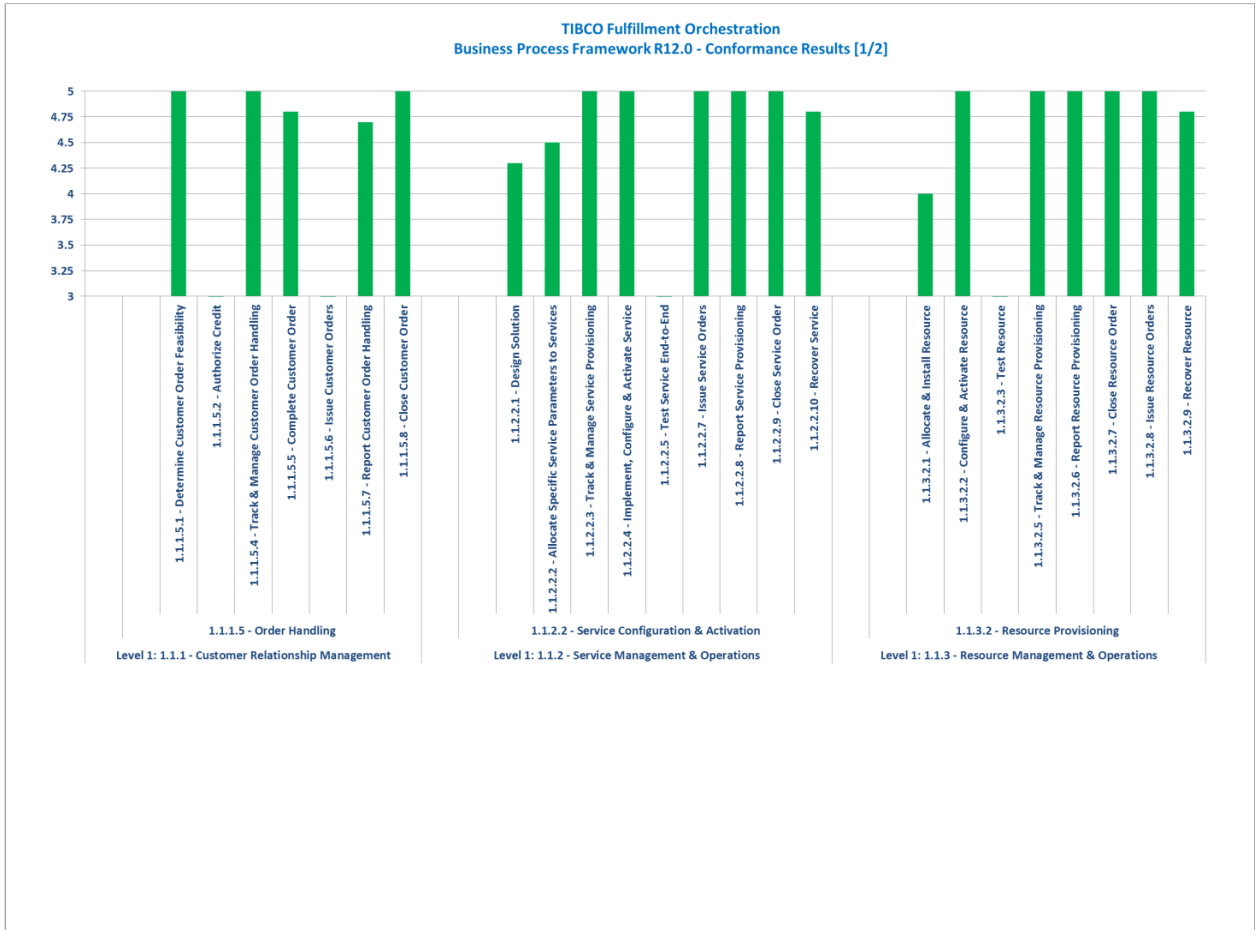

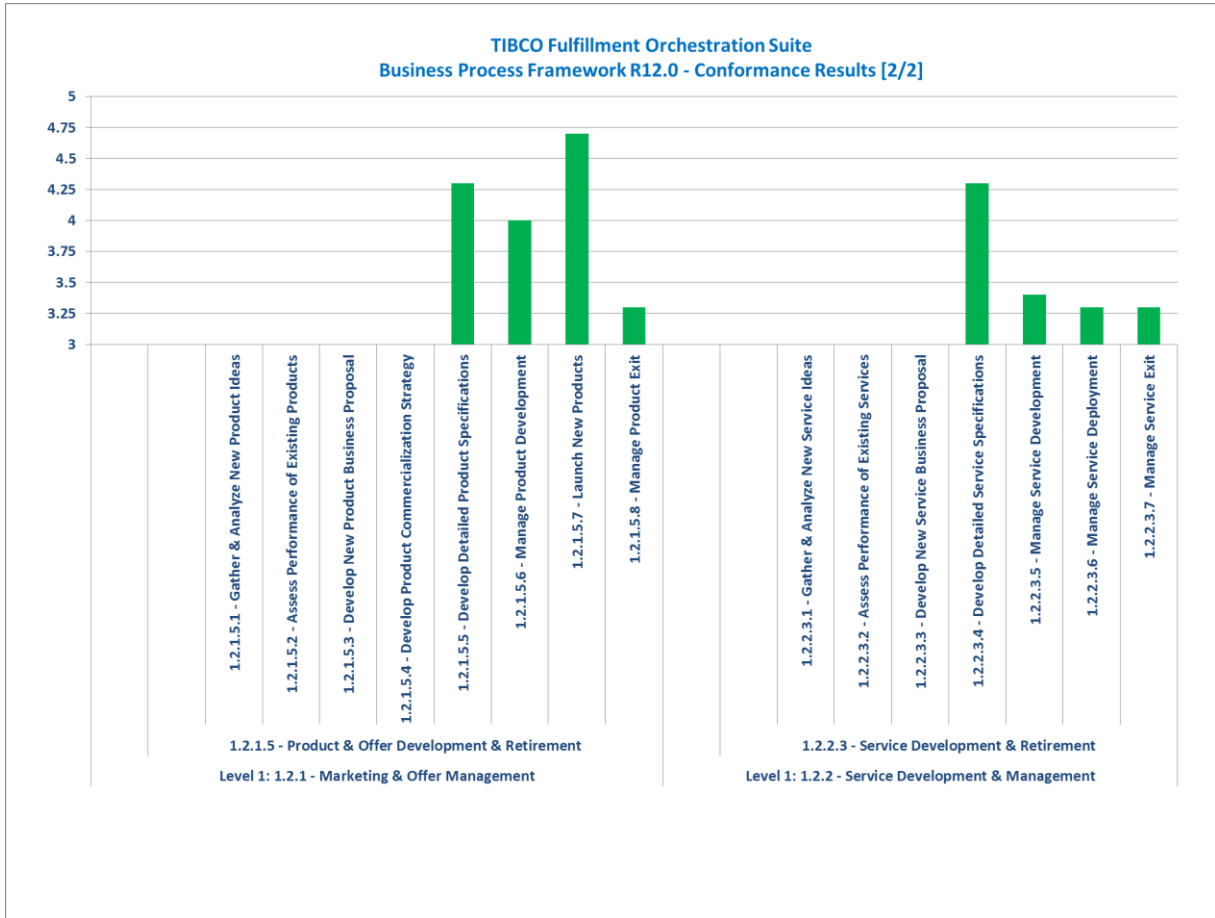**Figure 6.2 – Business Process Framework Conformance Result Summary [1/2]**

Figure 6.3 – Business Process Framework Conformance Result Summary [2/2]

6.3   Business Process Framework – Conformance Results Detailed

The following table provides a more detailed breakdown of the scores awarded with some additional commentary.

Table 6.1 - Business Process Framework: Detailed Conformance Result

Tibco Fulfillment Orchestration Suite **Business Process Framework R12.0 - Conformance Results**		
Level 3 Process	**L3 Process Score [Coverage]**	**Comments**
Level 1: 1.1.1 Customer Relationship Management	**N/A**	
Level 2: 1.1.1.5 - Order Handling	**[5/7]**	
1.1.1.5.1 - Determine Customer Order Feasibility	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.5.2 - Authorize Credit	0	This process was not submitted for assessment.
1.1.1.5.4 - Track & Manage Customer Order Handling	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.5.5 - Complete Customer Order	**4.8**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.
1.1.1.5.6 - Issue Customer Orders	0	This process was not submitted for assessment.

1.1.1.5.7 - Report Customer Order Handling	**4.7**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.
1.1.1.5.8 - Close Customer Order	**5.0**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
Level 1: 1.1.2 - Service Management & Operations	**N/A**	
Level 2: 1.1.2.2 - Service Configuration & Activation	**[8/9]**	
1.1.2.2.1 - Design Solution	**4.3**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.
1.1.2.2.2 - Allocate Specific Service Parameters to Services	**4.5**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.

1.1.2.2.3 - Track & Manage Service Provisioning	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.2.2.4 - Implement, Configure & Activate Service	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.2.2.5 - Test Service End-to-End	0	This process was not submitted for assessment.
1.1.2.2.7 - Issue Service Orders	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.2.2.8 - Report Service Provisioning	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.2.2.9 - Close Service Order	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).

1.1.2.2.10 - Recover Service	**4.8**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.
Level 1: 1.1.3 - Resource Management & Operations	**N/A**	
Level 2: 1.1.3.2 - Resource Provisioning	**[7/8]**	
1.1.3.2.1 - Allocate & Install Resource	**4**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.
1.1.3.2.2 - Configure & Activate Resource	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.3.2.3 - Test Resource	0	This process was not submitted for assessment.
1.1.3.2.5 - Track & Manage Resource Provisioning	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).

1.1.3.2.6 - Report Resource Provisioning	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.3.2.7 - Close Resource Order	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.3.2.8 - Issue Resource Orders	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.3.2.9 - Recover Resource	**4.8**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.
Level 1: 1.2.1 - Marketing & Offer Management	**N/A**	
Level 2: 1.2.1.5 - Product & Offer Development & Retirement	**[4/8]**	
1.2.1.5.1 - Gather & Analyze New Product Ideas	**0**	**This process was not submitted for assessment.**
1.2.1.5.2 - Assess Performance of Existing Products	**0**	**This process was not submitted for assessment.**
1.2.1.5.3 - Develop New Product Business Proposal	**0**	**This process was not submitted for assessment.**
1.2.1.5.4 - Develop Product Commercialization Strategy	**0**	**This process was not submitted for assessment.**

1.2.1.5.5 - Develop Detailed Product Specifications	**4.3**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.
1.2.1.5.6 - Manage Product Development	**4**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.
1.2.1.5.7 - Launch New Products	**4.7**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.
1.2.1.5.8 - Manage Product Exit	**3.3**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.
Level 1: 1.2.2 - Service Development & Management	**N/A**	
Level 2: 1.2.2.3 - Service Development & Retirement	**[4/7]**	
1.2.2.3.1 - Gather & Analyze New Service Ideas	0	This process was not submitted for assessment.

1.2.2.3.2 - Assess Performance of Existing Services	0	This process was not submitted for assessment.
1.2.2.3.3 - Develop New Service Business Proposal	0	This process was not submitted for assessment.
1.2.2.3.4 - Develop Detailed Service Specifications	**4.3**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.
1.2.2.3.5 - Manage Service Development	**3.4**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.
1.2.2.3.6 - Manage Service Deployment	**3.3**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.
1.2.2.3.7 - Manage Service Exit	**3.3**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this Level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM) but with some deviations. See Mapping Table for more details.

6.4 Information Framework – Scoring Rules

The conformance scores granted were based on the following TM Forum scoring rules:

Frameworx 12.0 Conformance Certification (Product/Solution/Implementation)	
Information Framework (SID) - Conformance Score Descriptions	
Conformance Score	**Qualifier**
Non Conformance **[Score = 1]**	The content of the model is compatible with a subset of the Information Framework (SID) ABEs that define its domain coverage. This provides two interacting components/solutions with a common vocabulary and model structure. The subset represents the scope of the model, expressed in Information Framework (SID) domains
Non Conformance **[Score = 2]**	The model has passed level 1 conformance and the content of the ABE, part of the domain coverage and defined in the model, contains the ABE's core business entity or entities. A core business entity is an entity upon which other entities within the ABE are dependent. e.g. Service in the Service ABE. A core entity is also an entity whose
Very Low Conformance **[2.0 < Score <= 3.0]**	The model has passed level 2 conformance and *a percentage of the required attributes of the ABE's core entity or entities are defined in the model.
Low Conformance **[3.0 < Score <= 4.0]**	The model has passed level 3 conformance and *a percentage of the dependent entities within the ABE are defined in the model. A dependent entity is one whose instances are dependent on an instance of a core entity. For example, a ServiceCharacteristic instance within the Service ABE is dependent upon an instance of the Service entity.
Medium Conformance **[4.0 < Score <= 5.0]**	The model has passed level 4 conformance and *a percentage of the required attributes of the ABE's dependent entities are defined in the model.
High Conformance **[5.0 < Score <= 6.0]**	The model has passed level 5 conformance and *a percentage of all attributes of the ABE's core entities are defined in the model.
Very High Conformance **[6.0 < Score < 7.0]**	The model has passed level 6 conformance and *a percentage of all attributes of the ABE's dependent entities are defined in the model.
Full Conformance **[Score = 7.0]**	The model has achieved Level 7 conformance (Full Conformance) and all attributes of the ABE's core & dependent entities are defined in the model.
* For each level, according to what is required, a value is calculated based on the percentage of entities/attributes supported - as appropriate. This will result in a decimal figure (rounded to one decimal place).	

Figure 6.4 - TM Forum Information Framework: Conformance Scoring Rules

Notes:

A **core business entity** *is an entity upon which other entities within the ABE are dependent. For example, Service in the Service ABE. A model should strive to attain as high a Level of Information Framework (SID) conformance as possible. A core entity is also an entity whose absence in the ABE would make the ABE incomplete.*

*A **dependent entity** is one whose instances are dependent on an instance of a core entity. For example, a ServiceCharacteristic instance within the Service ABE is dependent upon an instance of the Service entity.*

6.5 Information Framework – Conformance Result Summary

The following graph provides an overview of the conformance Levels granted to the ABEs presented in scope for the TIBCO Fulfillment Orchestration Suite Information Framework Assessment. Each ABE was measured using an Information Framework (SID) conformance scale of 1–7 as described in section 6.4.
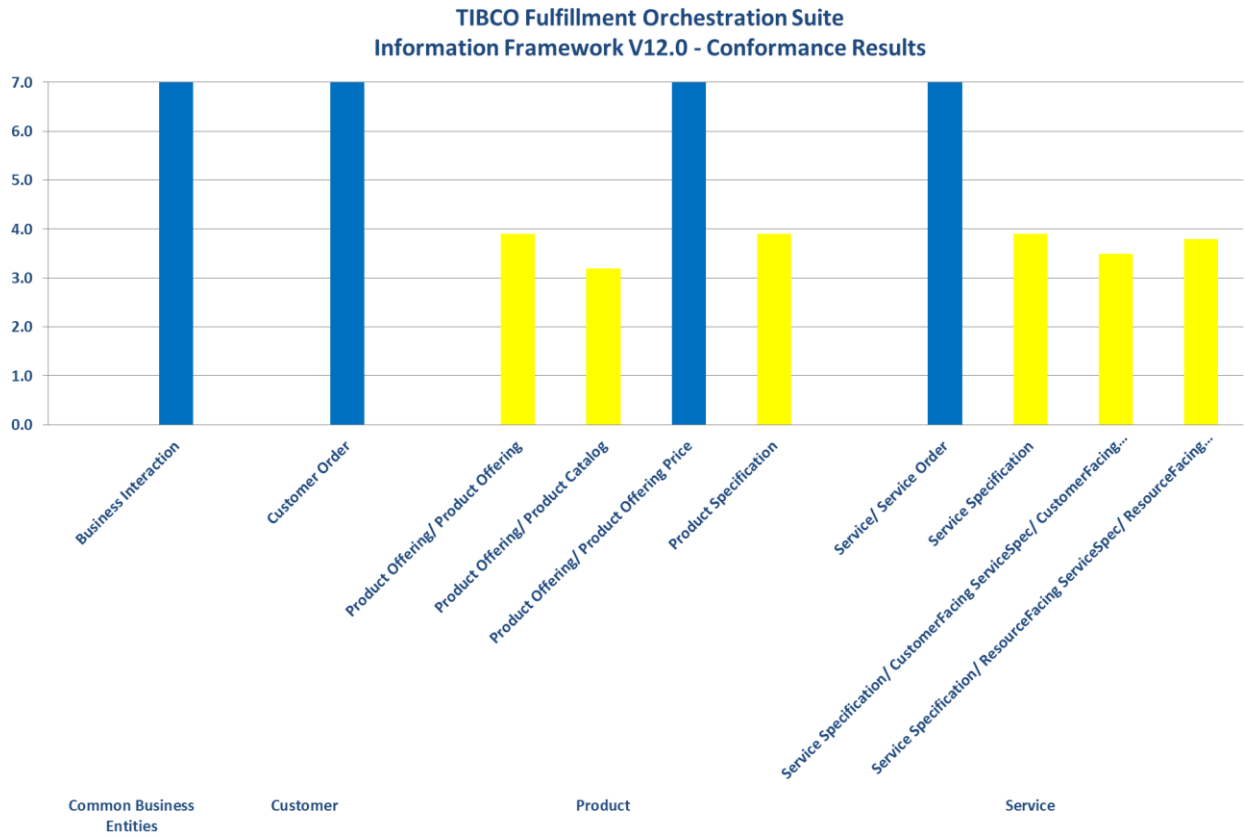

Figure 6.5 - Information Framework: Conformance Result Summary

6.6   Information Framework – Conformance Result Detailed

The following table provides a more detailed breakdown of the scores awarded with some additional commentary.

Table 6.2 - Information Framework: Detailed Conformance Result

TIBCO Fulfillment Orchestration Suite Information Framework (SID) Release 12.0 Conformance		
ABE	**Conformance Score**	**Comment**
Common Business Entities Domain		
Business Interaction	7.0	Core entity, required attributes, dependent entities, required attributes of dependent entities, all attributes of the core entity, all attributes of dependent entities supported.
Customer Domain		
Customer Order	7.0	Core entity, required attributes, dependent entities, required attributes of dependent entities, all attributes of the core entity, all attributes of dependent entities supported.
Product Domain		
Product Offering/ Product Offering	3.9	Core entity, required attributes, 90% of dependent entities supported.
Product Offering/ Product Catalog	3.2	Core entity, required attributes, 20% of dependent entities supported.
Product Offering/ Product Offering Price	7.0	Core entity, required attributes, dependent entities, required attributes of dependent entities, all attributes of the core entity, all attributes of dependent entities supported.

Product Specification	3.9	Core entity, required attributes, 90% of dependent entities supported.
Service Domain		
Service/ Service Order	7.0	Core entity, required attributes, dependent entities, required attributes of dependent entities, all attributes of the core entity, all attributes of dependent entities supported.
Service Specification	3.9	Core entity, required attributes, 90% of dependent entities supported.
Service Specification/ CustomerFacing ServiceSpec/ CustomerFacing ServiceSpec	3.5	Core entity, required attributes, 50% of dependent entities supported.
Service Specification/ ResourceFacing ServiceSpec/ ResourceFacing ServiceSpec	3.8	Core entity, required attributes, 80% of dependent entities supported.