

# **Business Process Framework (eTOM)**

*For The Information and Communications Services Industry*

Addendum E:

Application Note: End-to-End Business Flows

**Release 9.1**

**GB921 Addendum E**

**TM Forum Approved Version 9.4**



*April, 2011*

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## Table of Contents

NOTICE .....	2
TABLE OF CONTENTS.....	3
EXECUTIVE SUMMARY .....	6
INTRODUCTION .....	7
<b>1. END-TO-END BUSINESS STREAMS.....</b>	<b>9</b>
1.1. CUSTOMER-CENTRIC END-TO-END BUSINESS STREAMS.....	10
1.2. NETWORK END-TO-END BUSINESS STREAMS.....	10
<b>2. CUSTOMER CENTRIC PROCESS FLOWS.....</b>	<b>12</b>
2.1. PROCESS FLOWS FOR REQUEST-TO-ANSWER .....	13
2.1.1. Overview.....	13
2.1.2. Assumptions: .....	13
2.1.3. eTOM Mapping.....	13
2.1.4. Detailed Process-Flow (Level 3).....	14
2.1.5. Detailed Process-Flow (Level 3) BPMN .....	15
2.1.6. Detailed Information.....	16
2.2. PROCESS FLOWS FOR ORDER-TO-PAYMENT .....	17
2.2.1. Overview.....	17
2.2.2. Assumptions: .....	17
2.2.3. eTOM Mapping.....	17
2.2.4. Detailed Process-Flow (Level 3).....	18
2.2.5. Detailed Process-Flow (Level 3) BPMN .....	19
2.2.6. Detailed Information.....	20
2.3. PROCESS FLOWS FOR USAGE-TO-PAYMENT .....	21
2.3.1. Overview.....	21
2.3.2. Assumptions: .....	21
2.3.3. eTOM Mapping.....	21
2.3.4. Detailed Process-Flow (Level 3).....	22
2.3.5. Detailed Process-Flow (Level 3) BPMN .....	23
2.3.6. Detailed Information.....	24
2.4. PROCESS FLOWS FOR REQUEST-TO-CHANGE.....	25
2.4.1. Overview.....	25
2.4.2. Assumptions: .....	25
2.4.3. eTOM Mapping.....	25
2.4.4. Detailed Process-Flow (Level 3).....	26
2.4.5. Detailed Process-Flow (Level 3) BPMN .....	27
2.4.6. Detailed Information.....	28
2.5. PROCESS FLOWS FOR TERMINATION-TO-CONFIRMATION.....	29
2.5.1. Overview.....	29
2.5.2. Assumptions: .....	29
2.5.3. eTOM Mapping.....	29
2.5.4. Detailed Process-Flow (Level 3).....	30
2.5.5. Detailed Process-Flow (Level 3) BPMN .....	31
2.5.6. Detailed Information.....	32
2.6. PROCESS FLOWS FOR PROBLEM-TO-SOLUTION .....	33
2.6.1. Overview.....	33
2.6.2. Assumptions: .....	33
2.6.3. eTOM Mapping.....	33
2.6.4. Detailed Process-Flow (Level 3).....	34

2.6.5.	Detailed Process-Flow (Level 3) BPMN .....	35
2.6.6.	Detailed Information.....	36
2.7.	PROCESS FLOWS FOR COMPLAINT-TO-SOLUTION .....	37
2.7.1.	Overview.....	37
2.7.2.	Assumptions: .....	37
2.7.3.	eTOM Mapping.....	37
2.7.4.	Detailed Process-Flow (Level 3).....	38
2.7.5.	Detailed Process-Flow (Level 3) BMN.....	39
2.7.6.	Detailed Information.....	40
<b>3.</b>	<b>NETWORK CENTRIC PROCESS FLOWS .....</b>	<b>41</b>
3.1.	PROCESS FLOWS FOR PRODUCTION ORDER-TO-ACCEPTANCE .....	42
3.1.1.	Overview.....	42
3.1.2.	Assumptions: .....	42
3.1.3.	eTOM Mapping.....	43
3.1.4.	Detailed Process-Flow (Level 3).....	44
3.1.5.	Detailed Process-Flow (Level 3) BPMN .....	45
3.1.6.	Detailed Information.....	46
3.2.	PROCESS FLOWS FOR TROUBLE TICKET-TO-SOLUTION .....	47
3.2.1.	Overview.....	47
3.2.2.	Assumptions: .....	47
3.2.3.	eTOM Mapping.....	48
3.2.4.	Detailed Process-Flow (Level 3).....	49
3.2.5.	Detailed Process-Flow (Level 3) BPMN .....	50
3.2.6.	Detailed Information.....	51
3.3.	PROCESS FLOWS FOR USAGE-TO-USAGE DATA .....	52
3.3.1.	Overview.....	52
3.3.2.	Assumptions: .....	52
3.3.3.	eTOM Mapping.....	53
3.3.4.	Detailed Process-Flow (Level 3).....	54
3.3.5.	Detailed Process-Flow (Level 3) BPMN .....	55
3.3.6.	Detailed Information.....	56
3.4.	PROCESS FLOWS FOR CAPACITY MANAGEMENT .....	57
3.4.1.	Overview.....	57
3.4.2.	Assumptions: .....	57
3.4.3.	eTOM Mapping.....	58
3.4.4.	Detailed Process-Flow (Level 3).....	60
3.4.5.	Detailed Process-Flow (Level 3) BPMN .....	61
3.4.6.	Detailed Information.....	62
3.5.	PROCESS FLOWS FOR SERVICE LIFECYCLE MANAGEMENT .....	63
3.5.1.	Overview.....	63
3.5.2.	Assumptions: .....	63
3.5.3.	eTOM Mapping.....	64
3.5.4.	Detailed Process-Flow (Level 3).....	65
3.5.5.	Detailed Process-Flow (Level 3) BPMN .....	66
3.5.6.	Detailed Information.....	67
3.6.	PROCESS FLOWS FOR RESOURCE LIFECYCLE MANAGEMENT .....	68
3.6.1.	Overview.....	68
3.6.2.	Assumptions: .....	68
3.6.3.	eTOM Mapping.....	69
3.6.4.	Detailed Process-Flow (Level 3).....	70
3.6.5.	Detailed Process-Flow (Level 3) BPMN .....	71
3.6.6.	Detailed Information.....	72
<b>4.</b>	<b>APPENDIX .....</b>	<b>73</b>
4.1.	THE EVOLUTION OF ETOM PROCESS FLOWS .....	73

4.2.	DOCUMENT HISTORY .....	74
4.2.1.	<i>Version History</i> .....	74
4.2.1.	<i>Release History</i> .....	74
4.3.	HOW TO COMMENT ON THIS DOCUMENT .....	74

## Executive Summary

Due to increasing competition in the global telecommunication markets, it is essential for telcos to continuously improve their cost and quality position.

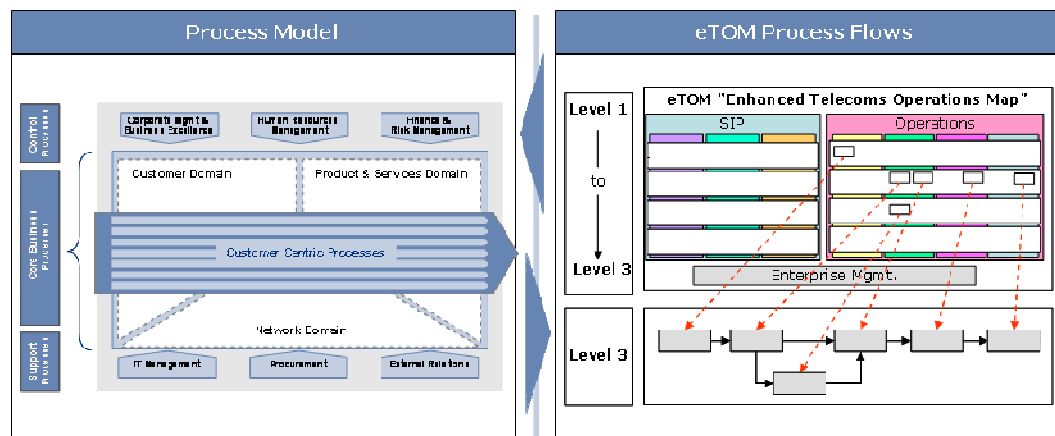
Within this context, the definition of efficient and customer-oriented business processes is a crucial success factor. The Business Process Framework eTOM comprises of functional process structures, i.e. Market, Product & Customer, Service, Resource and Supply / Partner processes. The Process Model discussed in this paper complements eTOM by providing an end-to-end process flow driven view to the different functional groupings. Within the TM Forum Business Process Framework, eTOM Level 1 – 3 already exists as a standard. However, the implementation of this standard can be facilitated through the further enhancement in terms of process flows at Level 3 as demonstrated in Figure 1. Therefore, this document gives clear recommendations on how to develop the core Customer Centric and Network process flows which are compliant with eTOM Level 1 – 3.

This document is an Application Note, aiming to document an approach based on industry experience that sets out a structure for considering how these flows can be organised against the overall business needs, and provides a number of process flows that address these needs. Note that, as an Application Note, this material should not be read as normative – i.e. a single standardised approach – but rather as a representative mechanism that provides a useful base for others to build on. Other approaches, with different organizational structures which may lead to other process flows, are also possible. It is the goal of work like this to assist convergence for the industry, but not to impose a single approach, where there are other variations and alternatives that make sense.

## Introduction

Due to increasing competition in the global telecommunication markets, it is essential for telcos to continuously improve their cost and quality position. One of the most renowned and discussed approaches for improving competitiveness in the last decade is Business Process Management. Business Process Management is about improving organizational performance through the definition, implementation and management of operational, as well as, enterprise (management) processes.

Over the last years, customer satisfaction has become one of the most critical factors to success in an environment which is characterized by growing market transparency, increasing demands from the customers, and reduced customer loyalty. By improving customer loyalty, existing turnover can be secured or even increased – either through growth in terms of turnover per existing customer, or through new customers. The key to success is, however, not purely a case of clever customer loyalty programs, but also the consistent orientation of the core processes towards customers' requirements. The benefit of marketing measures will be short term if customer orientation is not taken seriously in terms of the company's interaction with the customers.



**Figure 1 Process Model and eTOM Flows**

Within this context, the definition of efficient and customer-oriented business processes is a crucial success factor. The Business Process Framework eTOM comprises of functional process structures, i.e. Market, Product & Customer, Service, Resource and Supply / Partner processes. The Process Model discussed in this paper complements eTOM by providing an end-to-end process flow driven view to the different functional groupings.

Note that this can be considered as a customized extension to the standardised Business Process Framework structure, which may be useful for some areas of application. This does not preclude other such extensions and customized views, where these are found useful also. In particular, note that the structure shown in Figure 1 and subsequent figures is not a “different” process model, since this is not proposed as a different process hierarchy. The process hierarchy is still that of the Business Process Framework, and no changes to the decomposition structure in the Business Process Framework are being introduced here. Instead, the structure shown can be thought of as a view of what happens inside a company's organization,

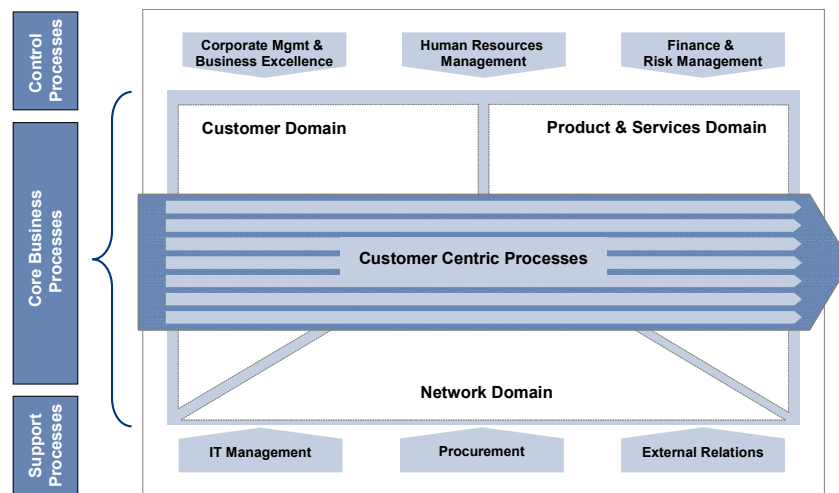
when the process elements from the Business Process Framework are allocated to departments and business units. The view on the left in Figure 1, which is then shown also in Figure 2, can be considered as such an organizational view, and not in any sense in conflict with the decomposition hierarchy of the Business Process Framework, since this organizational view makes direct use of the process elements from the Business Process Framework. The concepts here are discussed at some length in Addendum G “Guide to Applying the Business Process Framework”, and the approach above is in line with this.

Within the TM Forum Business Process Framework, eTOM Level 1 – 3 already exists as a standard. However, the implementation of this standard can be facilitated through further enhancement in terms of process flows at Level 3 as demonstrated in Figure 1. Therefore, this document gives clear guidance on how to develop the identified core Customer Centric and Network process flows, which are designed to be compliant with eTOM Level 1 – 3.

# 1. End-to-End Business Streams

Generally, a service provider can be structured into core business processes, as well as control and support processes. One perspective that can be useful for the core business processes is to view these as consisting of the Customer Centric processes and three additional process areas: Customer, Product & Service and Network. These can be seen to represent process domains arranged as end-end business streams which show a focus across the Service Provider for the area of business activity concerned. Note that the use of the terms “process domains” and “end-end business streams” here is just intended to explain this broad business context and is not a new element of structure or terminology within the core Business process Framework. Note also that there is further work underway as part of the Business Process Framework development, to elaborate the concept of end-end business streams, and to show how these may be used as a stepping stone between the “static” Business Process Framework itself, with its hierarchical structure of process elements, and the “dynamic” process flows that show how these process elements can be linked in practice.

In this model, the Customer Centric processes are characterized as being initiated by the customer and ending at the customer. Additionally, the processes involved include all other core processes, which are not directly initiated by a customer (e.g. marketing campaign, product lifecycle management, network operations). This document focuses on the process flows for the Customer Centric and Network processes.



**Figure 2 A Process view focused on customer-centric processes**

The Customer Centric processes have several interactions with the other three process areas/domains. For instance, they might be initiated by relevant activities in the sense of CRM at the Customer domain, and interactions may include trouble solving in the Network domain and the Product & Service domain.

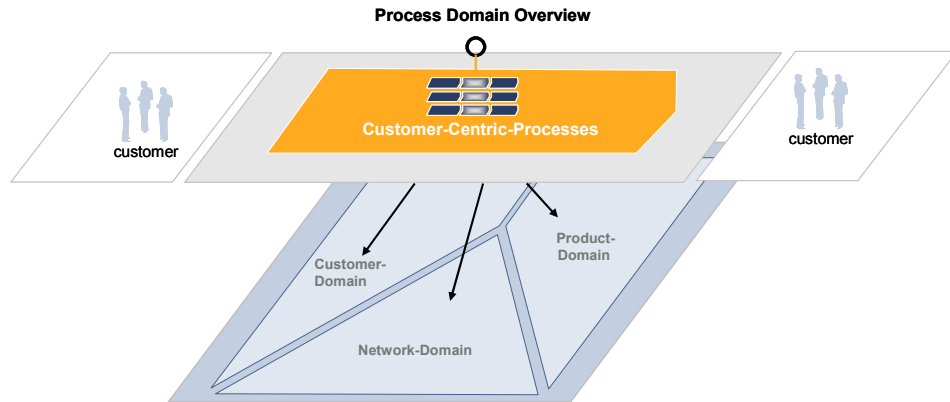


Figure 3 Process domain view - example

## 1.1. Customer-Centric End-to-End Business Streams

A total of seven Customer Centric Processes represent the customer view and interaction with the telecommunication company. These processes start with the customer initiating the contact. They end with the fulfilment of his/her request. Customer Centric processes include activities such as handling information requests, new sale, billing and invoice generation or problem and complaint handling.

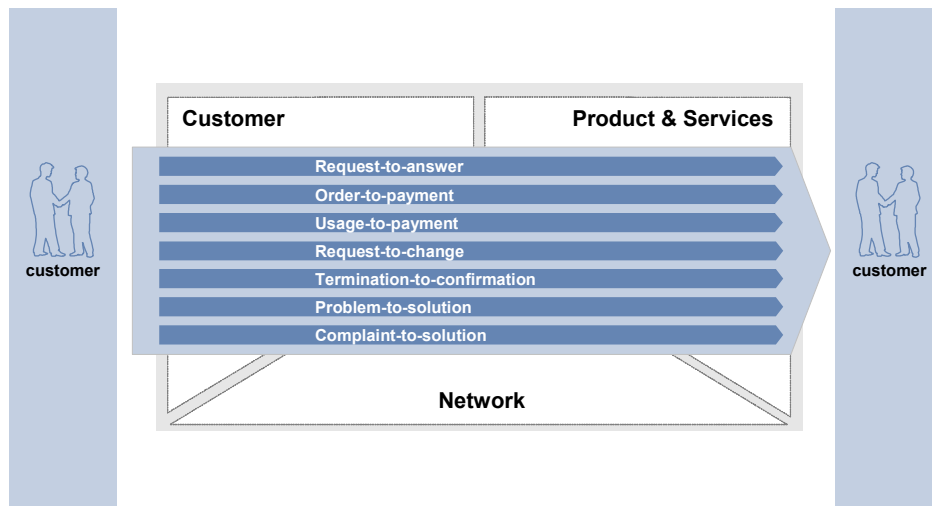


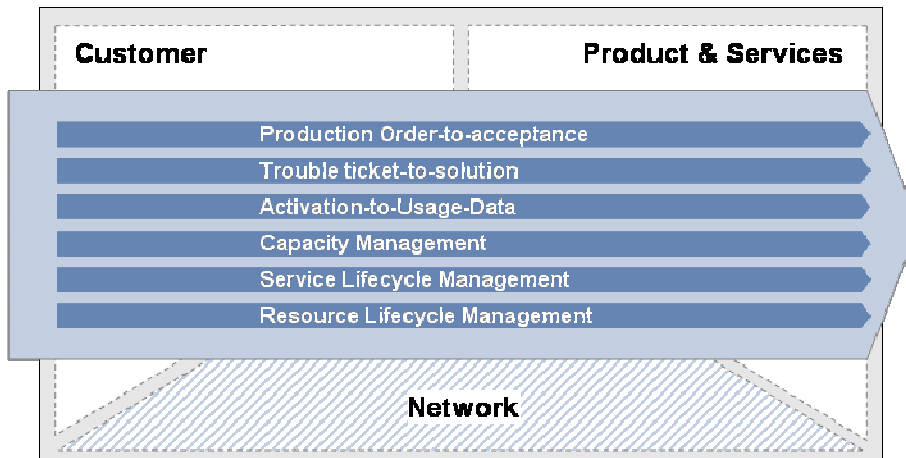
Figure 4 Customer Centric processes

## 1.2. Network End-to-End Business Streams

This consists of seven Network processes, which represent the network operations' view and interaction within the telecommunications company. Network processes

*Business Process Framework (eTOM) – End-to-End Business Flows*

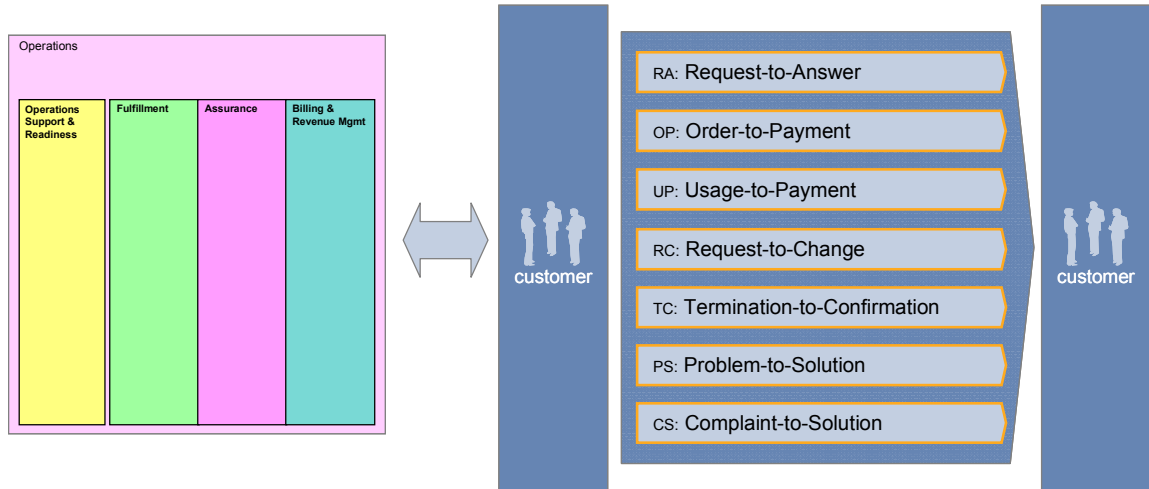
include activities such as order handling, trouble ticket management, billing, capacity management, and service lifecycle management



**Figure 5 Network processes**

## 2. Customer Centric Process Flows

This section includes sample process-flows (eTOM level 3) relevant to the Customer Centric focus. The process flows for the seven Customer Centric end-to-end processes recommend how to apply the Operations part of eTOM to a service provider.



**Figure 6: eTOM and Customer-Centric processes**

Remark: The flow illustration uses level 3 process elements of the Business Process Framework eTOM. In some diagrams you will find databases which are added to explain the flow. The Databases: Customer Subscription Inventory, Service Inventory and Resource Inventory are shown to provide a clearer understanding of the relevant process element. They have the following relation to the Information Framework (SID): Subscription Inventory to the ABE “Customer”, Service Inventory to “Service Configuration” and Resource Inventory to “Resource Configuration”.

## 2.1. Process Flows for Request-to-Answer

### 2.1.1. Overview

- This process comprises of activities relevant to managing customer requests across all communication channels (customer interfaces).
- Specific information requests or product requests from the customer are qualified and addressed.
- This could lead to the preparation of a pre-sales offer if the customer shows interest in a particular product.

### 2.1.2. Assumptions:

- The offer preparation may or may not lead to a reservation of resources in advance.
- Resources might be reserved for some special products or customers depending on the operator’s policies and procedures.
- If the offer is accepted by the customer, the next process ‘Order to Payment’ is triggered.

### 2.1.3. eTOM Mapping

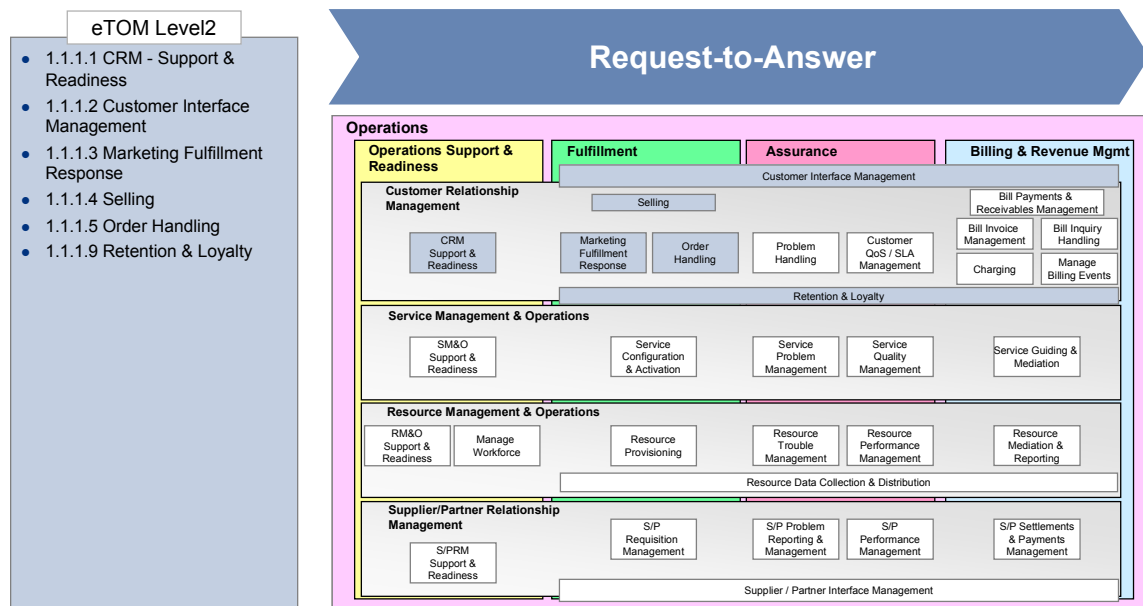


Figure 7: Request-to-Answer - Mapping on eTOM Level 2

### 2.1.4. Detailed Process-Flow (Level 3)

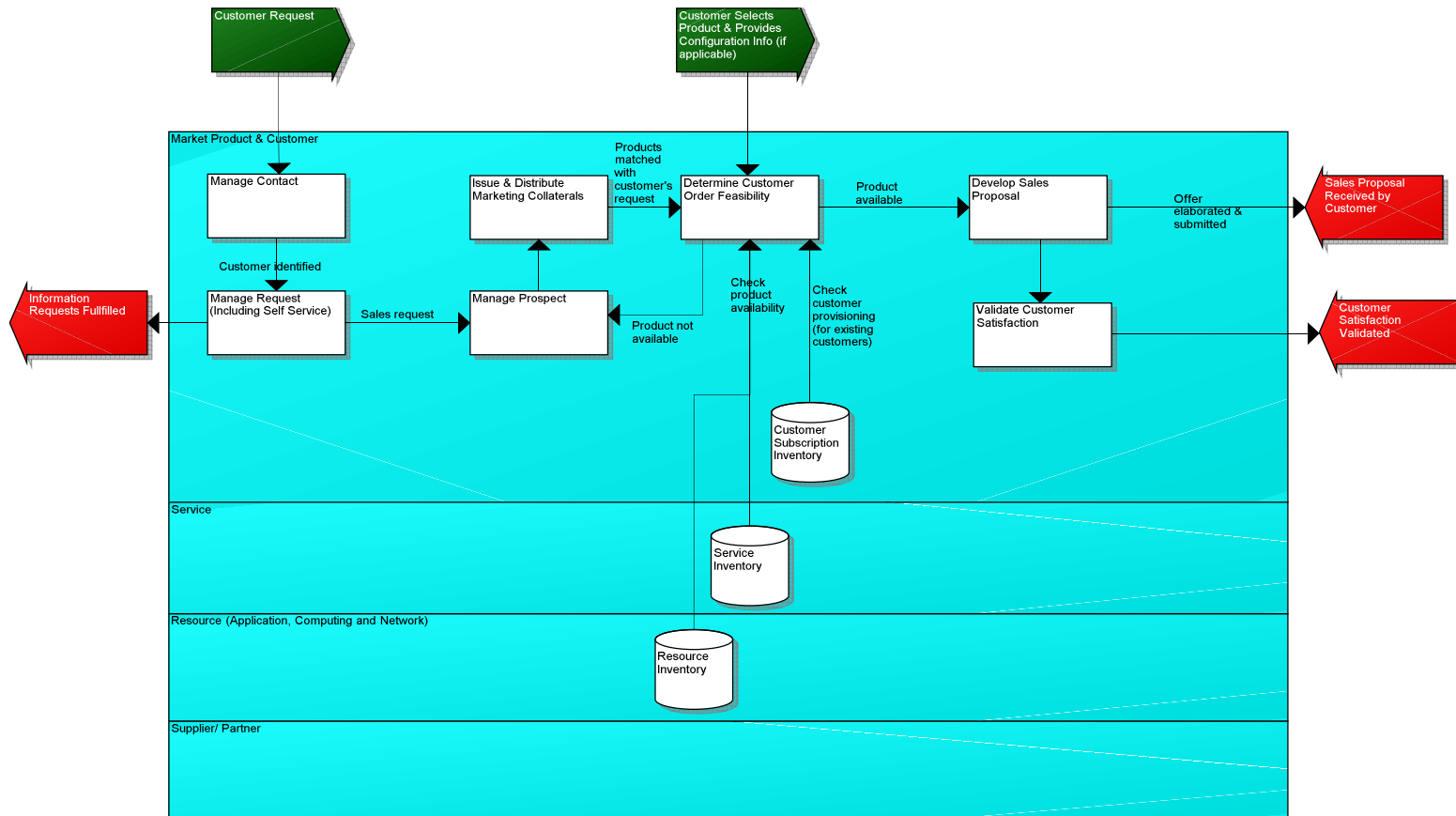


Figure 8: Request-to-Answer – Process-Flow (Level 3)

### 2.1.5. Detailed Process-Flow (Level 3) BPMN

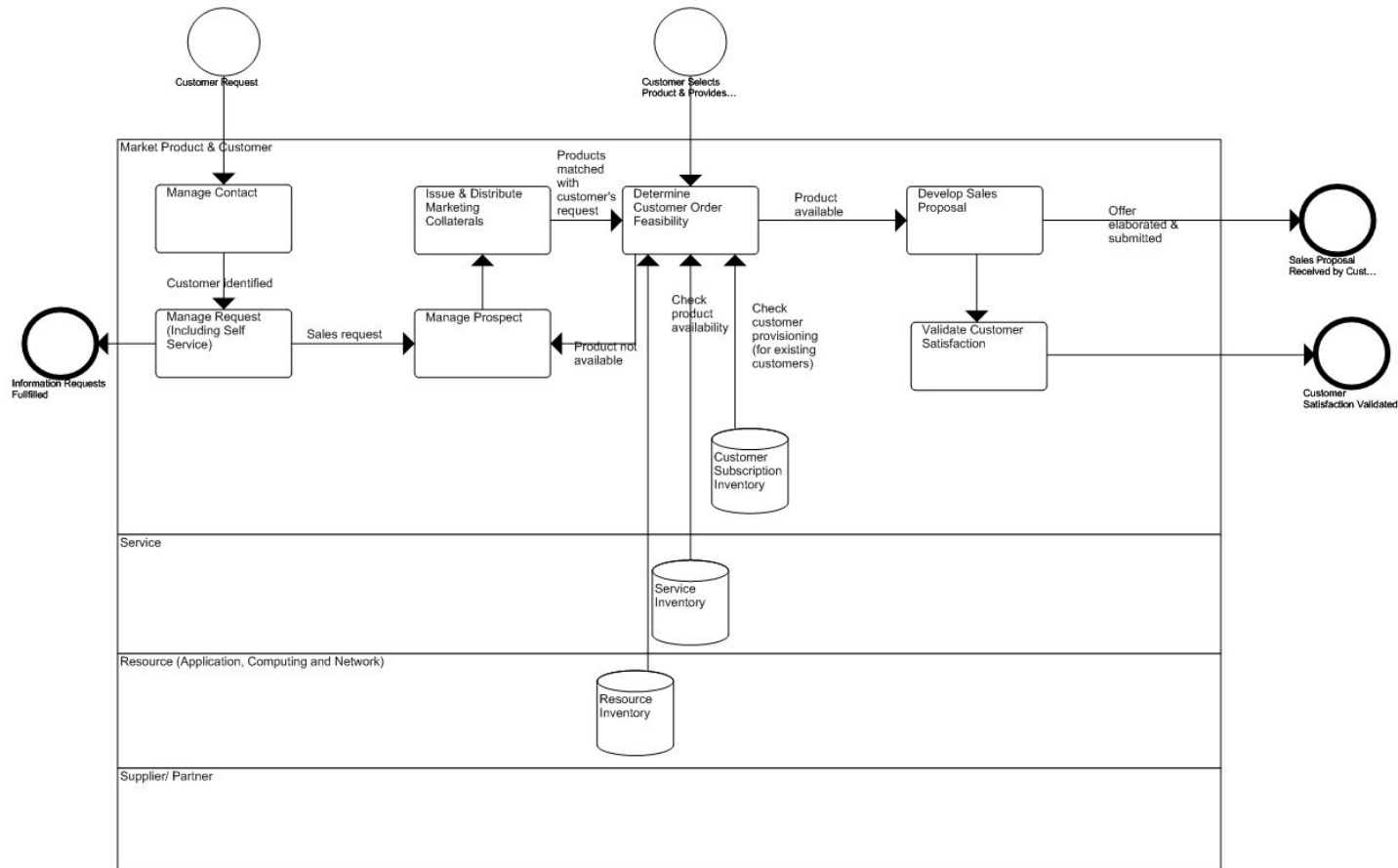


Figure 9: Request-to-Answer – Process-Flow (Level 3) BPMN

### 2.1.6. Detailed Information

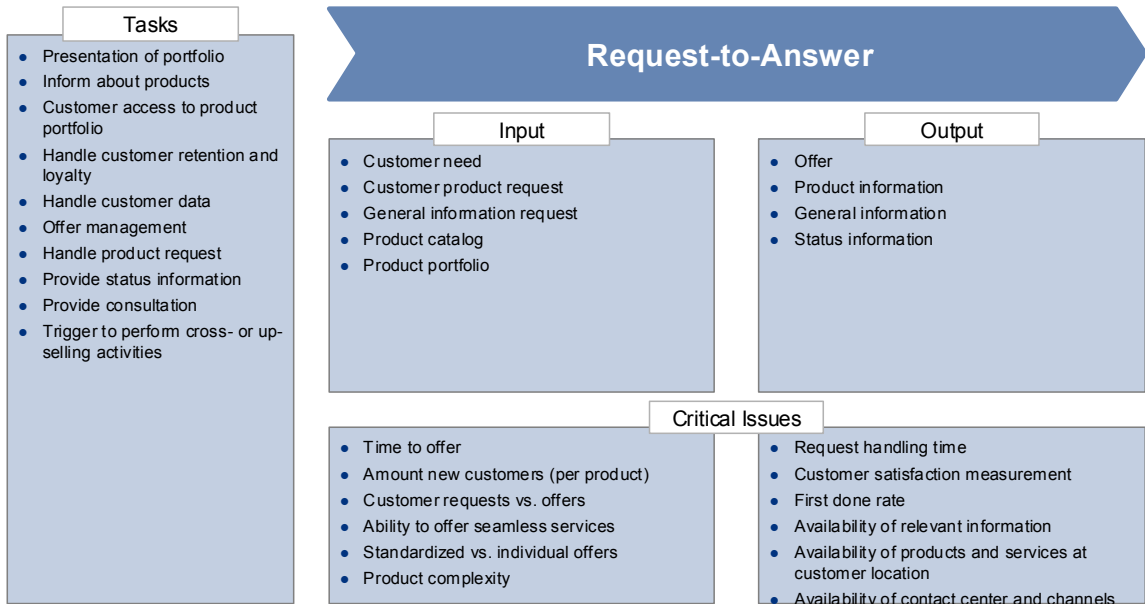


Figure 10: Request-to-Answer – Detailed Information

## 2.2. Process Flows for Order-to-Payment

### 2.2.1. Overview

- This process deals with all activities which convert the customer request or an accepted offer into a 'Ready for use' product.
- This process involves capturing customer order information, triggering the relevant provisioning process and handing over the order to the Service layer.
- Once the product is successfully provisioned, the customer order is closed and the customer satisfaction is validated.

### 2.2.2. Assumptions:

- This scenario is relevant for products offered to the mass customer base.
- Pre-order feasibility check verifies whether the requested product can be offered to the customer based on the service / resource availability, the product portfolio, and the customer's configuration.
- Pre-order feasibility check would not generally involve the reservation of resources prior to issuance of customer order.
- However, there might be a reservation of some critical resources, depending on the operator's policies and procedures.

### 2.2.3. eTOM Mapping

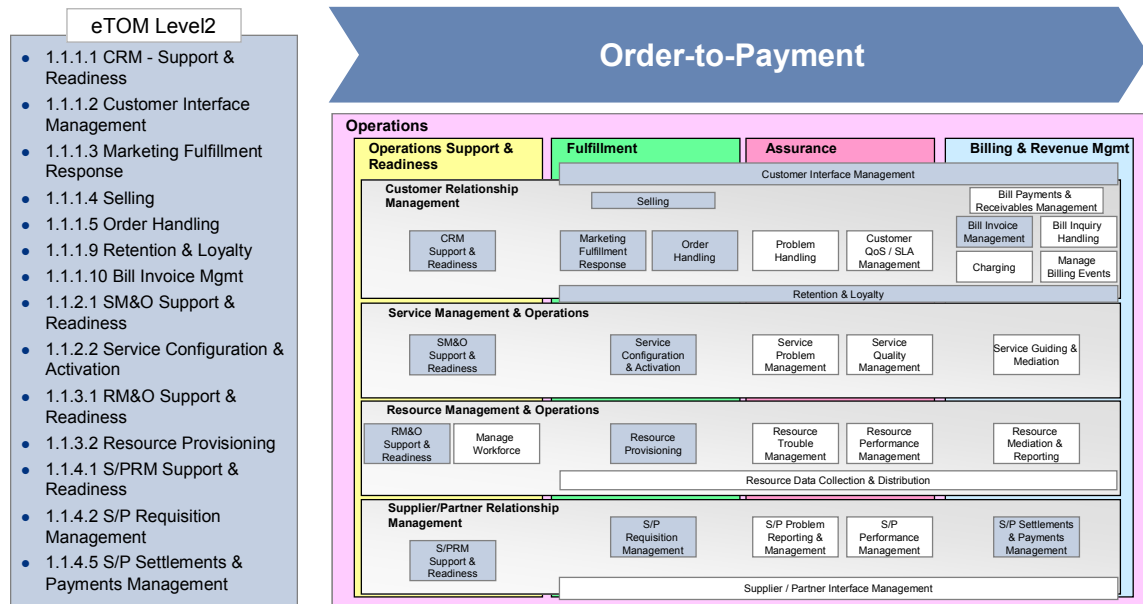


Figure 11: Order-to-Payment - Mapping on eTOM Level 2

### 2.2.4. Detailed Process-Flow (Level 3)

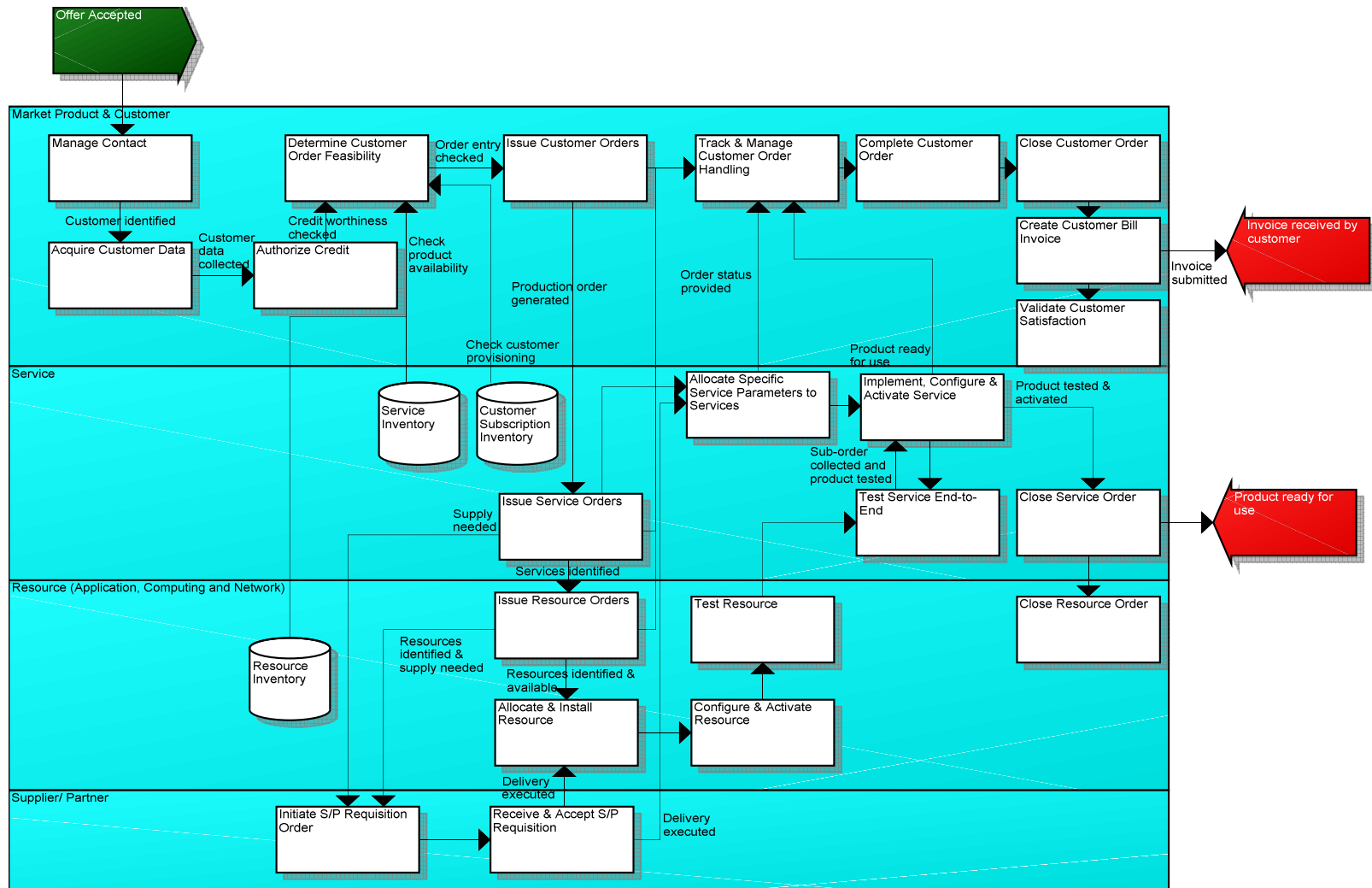


Figure 12: Order-to-Payment – Process-Flow (Level 3)

### 2.2.5. Detailed Process-Flow (Level 3) BPMN

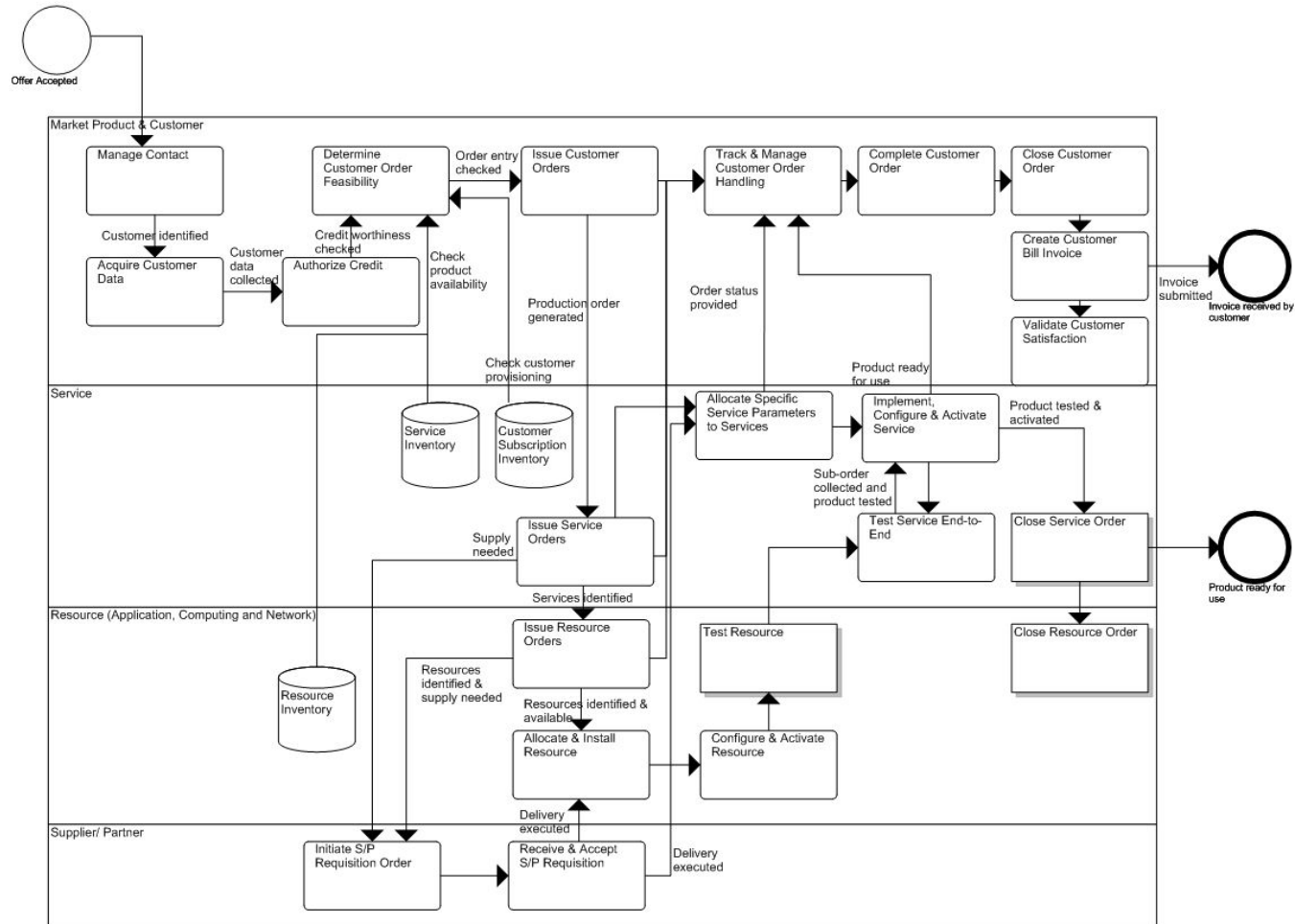
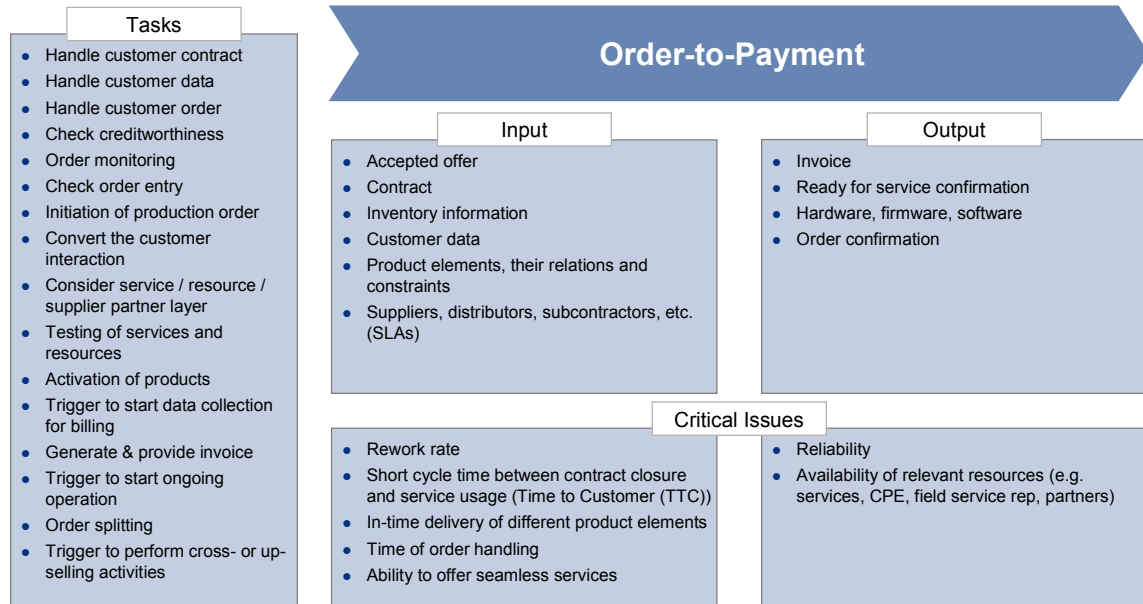


Figure 13: Order-to-Payment – Process-Flow (Level 3) BPMN

### 2.2.6. Detailed Information



**Figure 14: Order-to-Payment – Detailed Information**

## 2.3. Process Flows for Usage-to-Payment

### 2.3.1. Overview

- This process deals with all activities related to the handling of the product/service usage.
- The accuracy of pricing is ensured and all usage data is captured and duly processed for billing information requests and bill generation.

### 2.3.2. Assumptions:

- This scenario is relevant for products offered to the mass customer base.
- The process elements 'Mediate Resource Usage Records' and 'Guide Resource Usage Records' are not always applicable.
- 'Perform Rating' element is usually under the Customer layer for customized products, and under the Service layer for standardized products.

### 2.3.3. eTOM Mapping

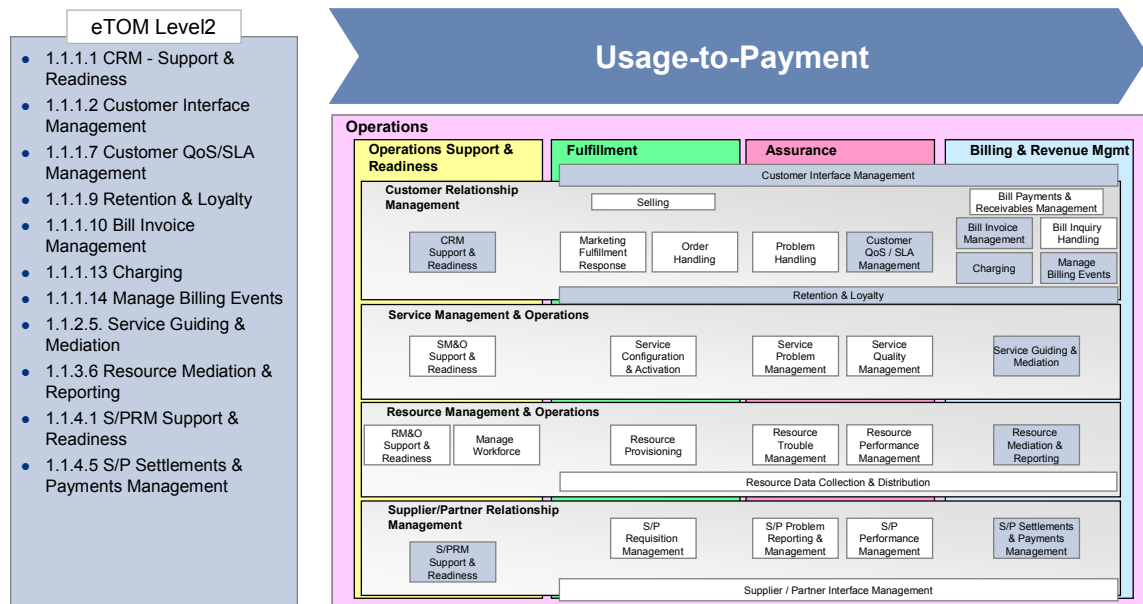


Figure 15: Usage-to-Payment - Mapping on eTOM Level 2

### 2.3.4. Detailed Process-Flow (Level 3)

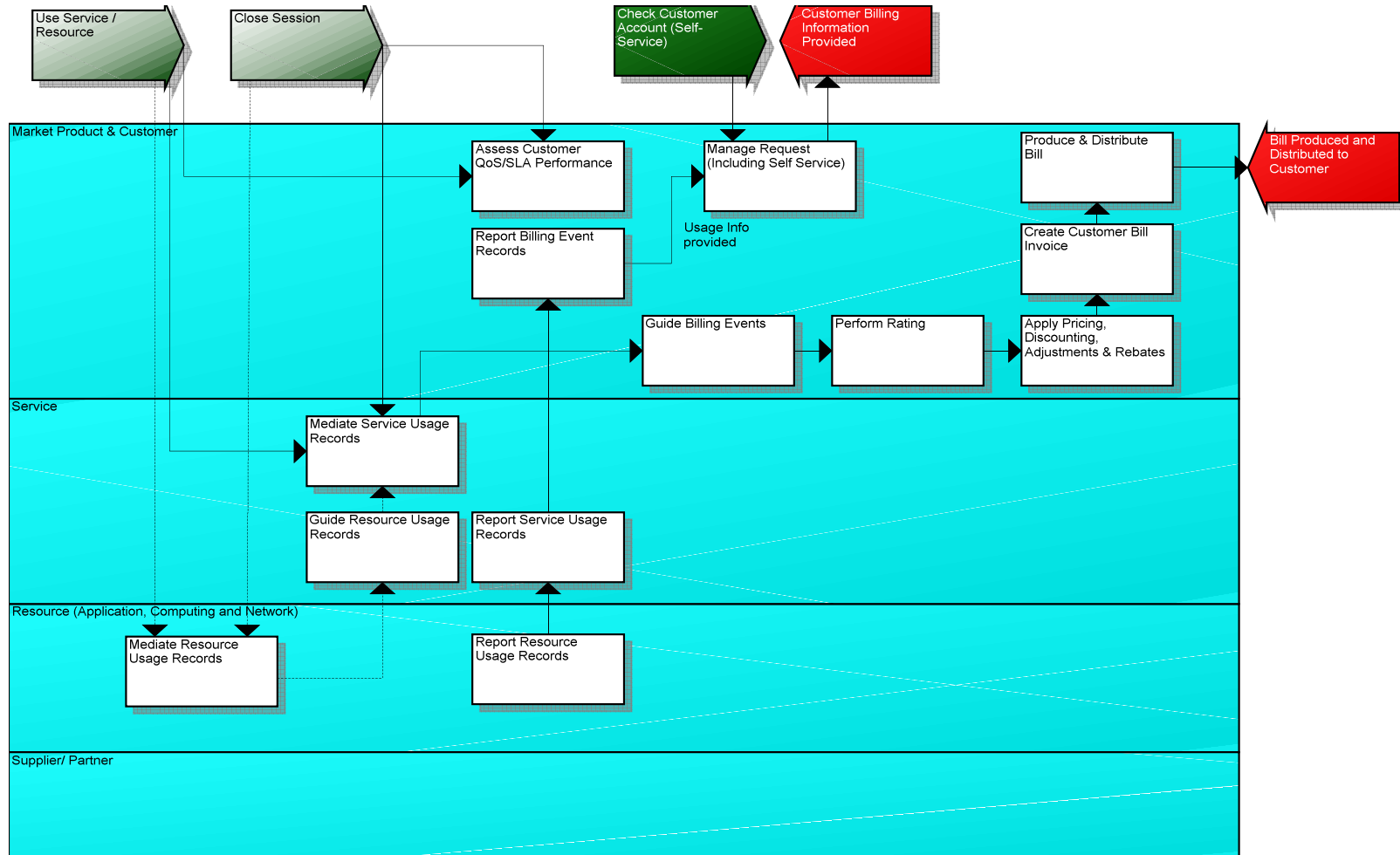


Figure 16: Usage-to-Payment – Process-Flow (Level 3)

### 2.3.5. Detailed Process-Flow (Level 3) BPMN

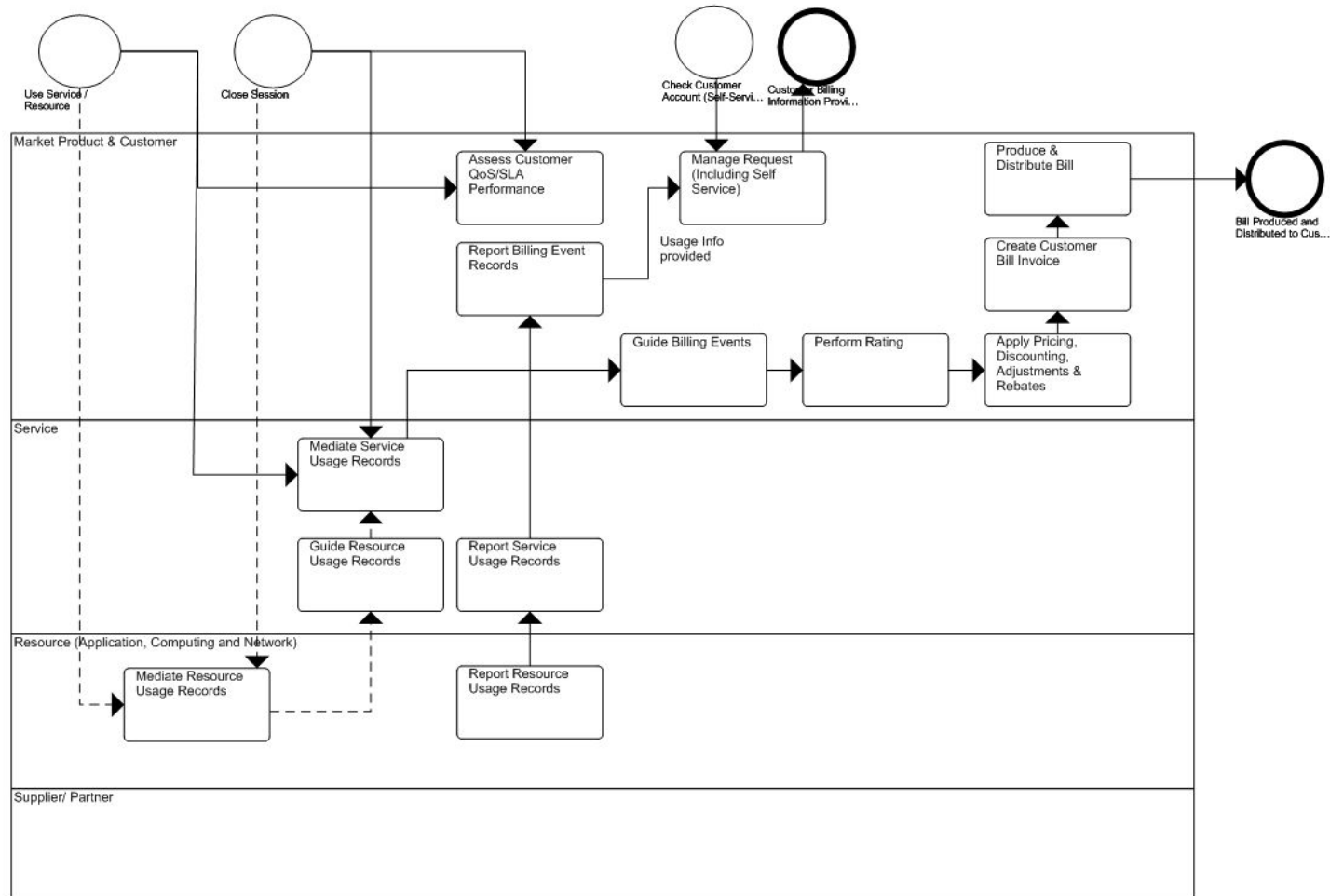


Figure 17: Usage-to-Payment – Process-Flow (Level 3) BPMN

### 2.3.6. Detailed Information

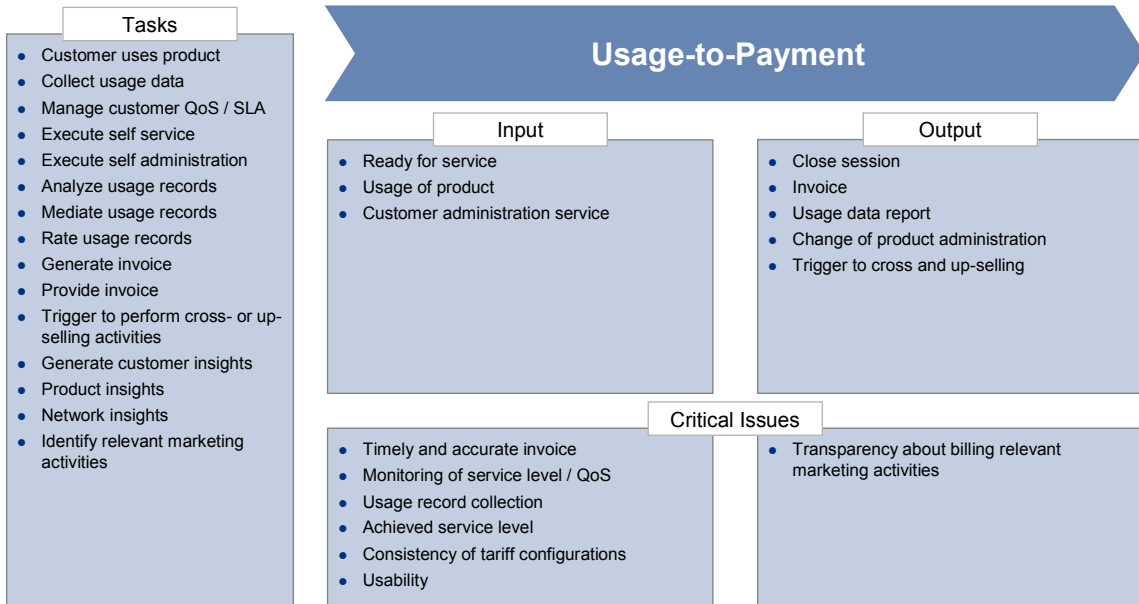


Figure 18: Usage-to-Payment – Detailed Information

## 2.4. Process Flows for Request-to-Change

### 2.4.1. Overview

- This process deals with all activities which convert the customer's change request into a 'Ready for use' product.
- This process involves capturing customer order information, triggering the relevant provisioning process and handing over the order to the Service layer.
- Once the product is successfully provisioned, the customer order is closed and the customer satisfaction is validated.

### 2.4.2. Assumptions:

- This scenario is relevant for products offered to the mass customer base.
- Pre-order feasibility check verifies whether the requested change can be implemented for the customer based on the service / resource availability, the product portfolio, and the customer's configuration.
- Pre-order feasibility check would not generally involve the reservation of resources prior to issuance of customer order.
- However, there might be a reservation of some critical resources, depending on the operator's policies and procedures.

### 2.4.3. eTOM Mapping

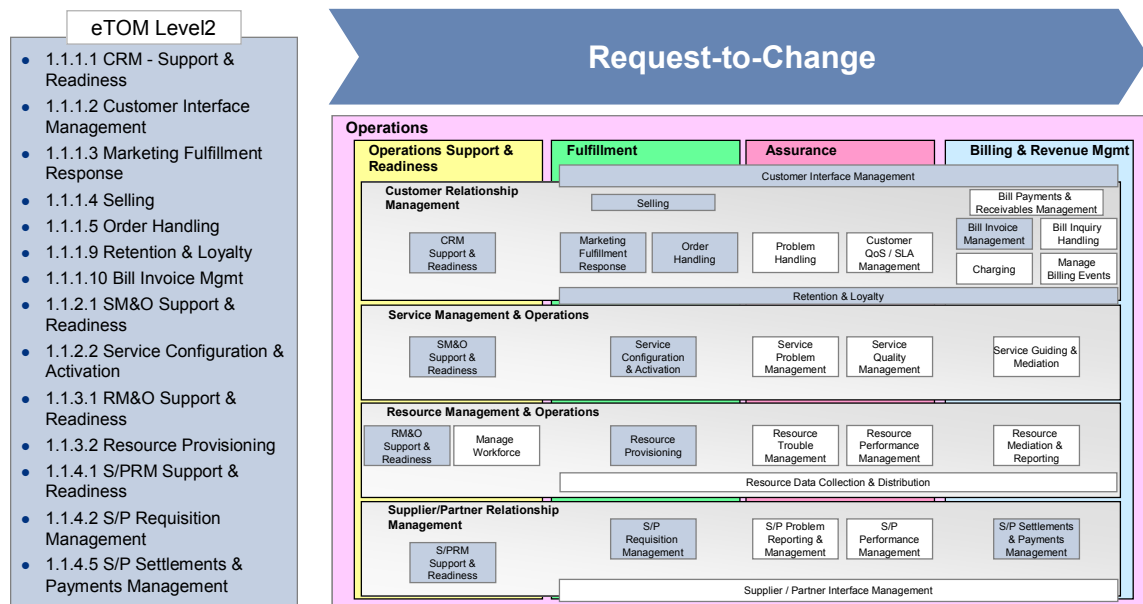


Figure 19: Request-to-Change - Mapping on eTOM Level 2

### 2.4.4. Detailed Process-Flow (Level 3)

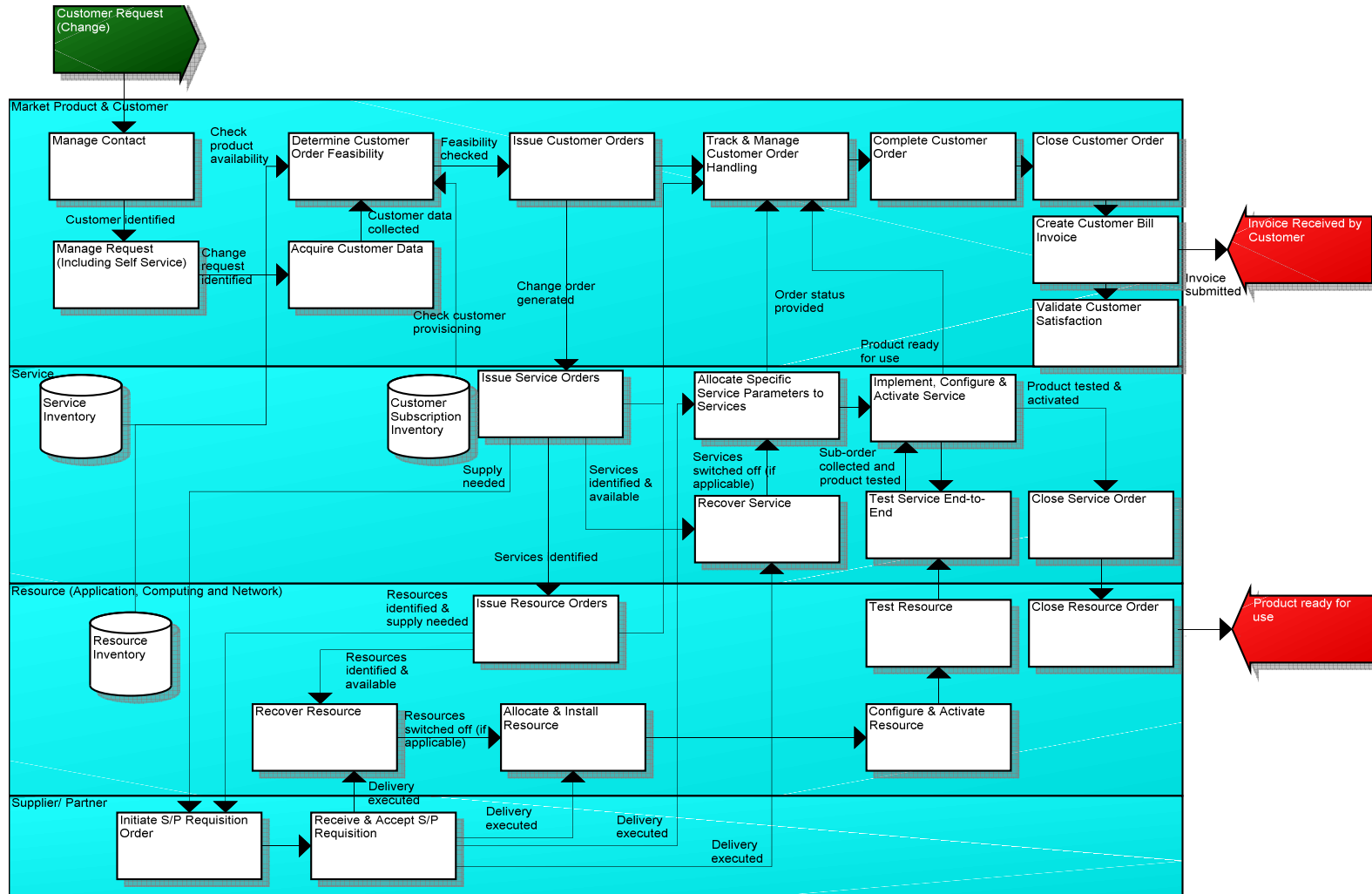


Figure 20: Request-to-Change Process-Flow (Level 3)

### 2.4.5. Detailed Process-Flow (Level 3) BPMN

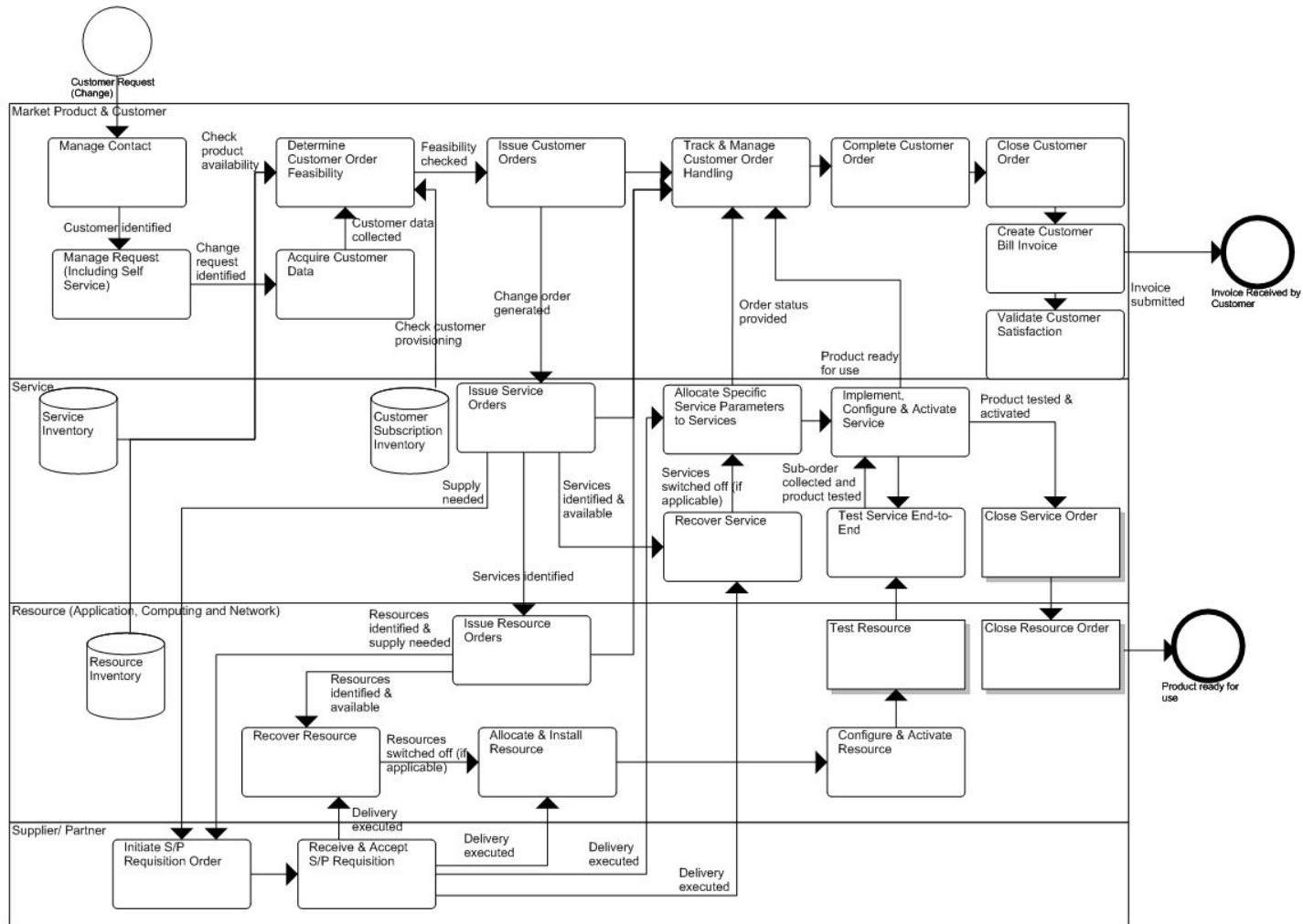
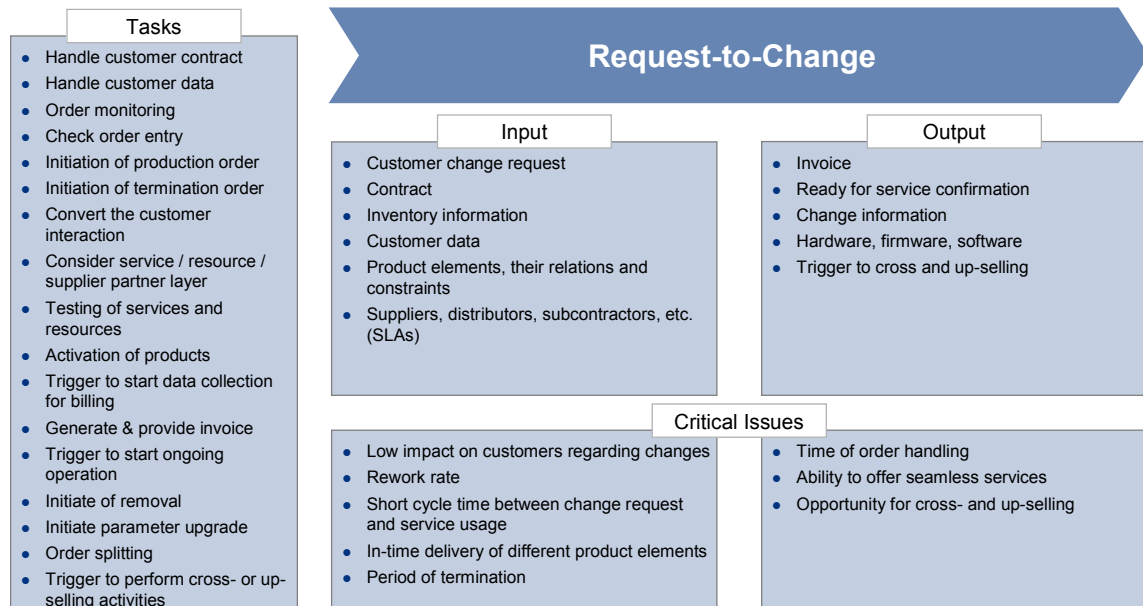


Figure 21: Request-to-Change – Process-Flow (Level 3) BPMN

### 2.4.6. Detailed Information



**Figure 22: Request-to-Change – Detailed Information**

## 2.5. Process Flows for Termination-to-Confirmation

### 2.5.1. Overview

- This process deals with all activities related to the execution of customer’s termination request.
- This process involves retention activities, capturing customer order information, triggering the relevant provisioning process and handing over the order to the Service layer.
- Once the product is successfully terminated, the customer order is closed and the customer satisfaction is validated.

### 2.5.2. Assumptions:

- This scenario is relevant for products offered to the mass customer base.
- This process includes the termination of a customer order or a product.
- Pre-order feasibility check verifies whether the requested termination can be executed based on the customer’s current configuration.

### 2.5.3. eTOM Mapping

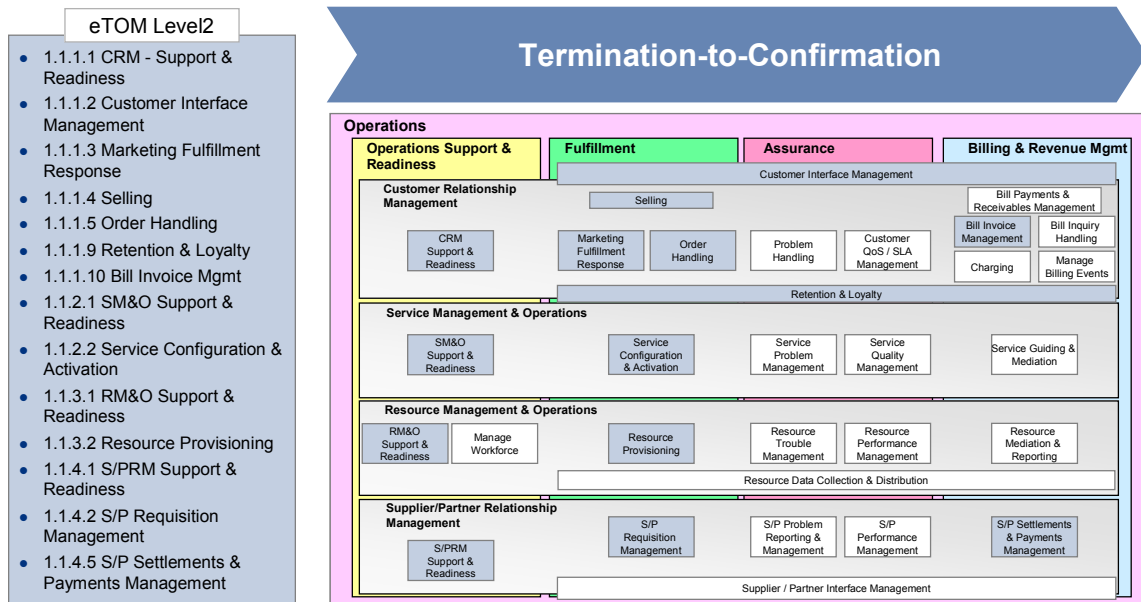


Figure 23: Termination-to-Confirmation - Mapping on eTOM Level 2

### 2.5.4. Detailed Process-Flow (Level 3)

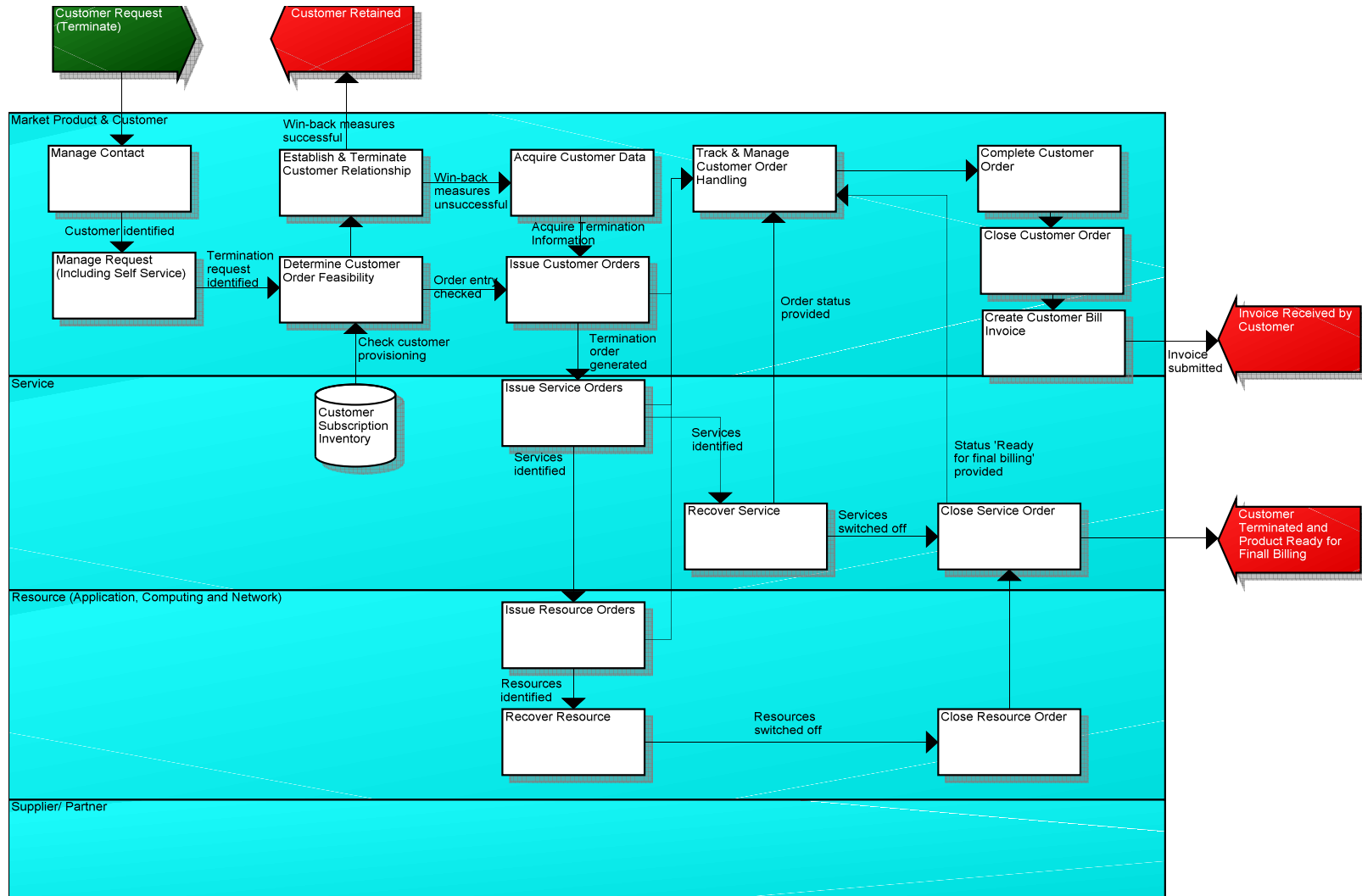


Figure 24: Termination-to-Confirmation – Process-Flow (Level 3)

### 2.5.5. Detailed Process-Flow (Level 3) BPMN

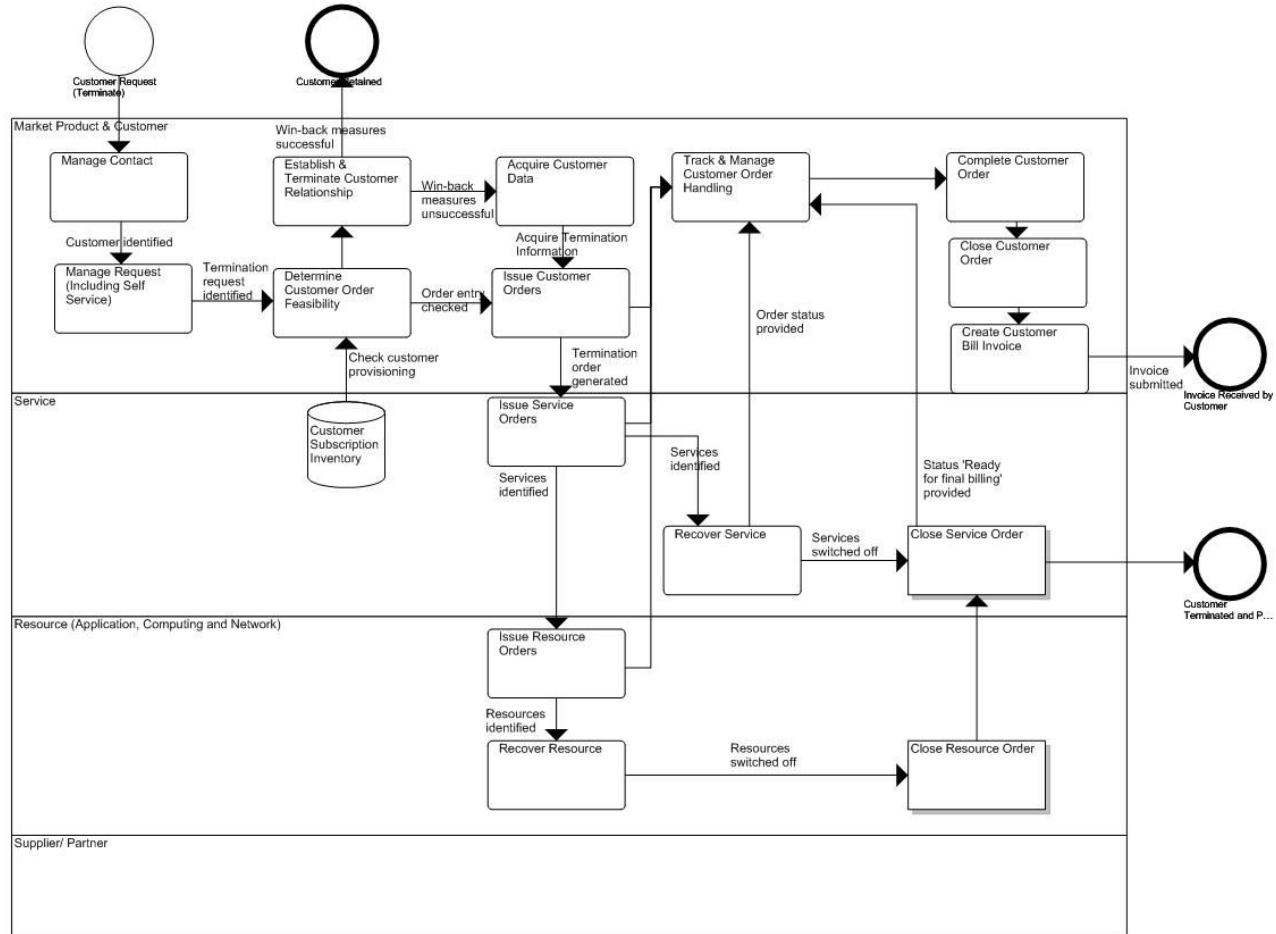
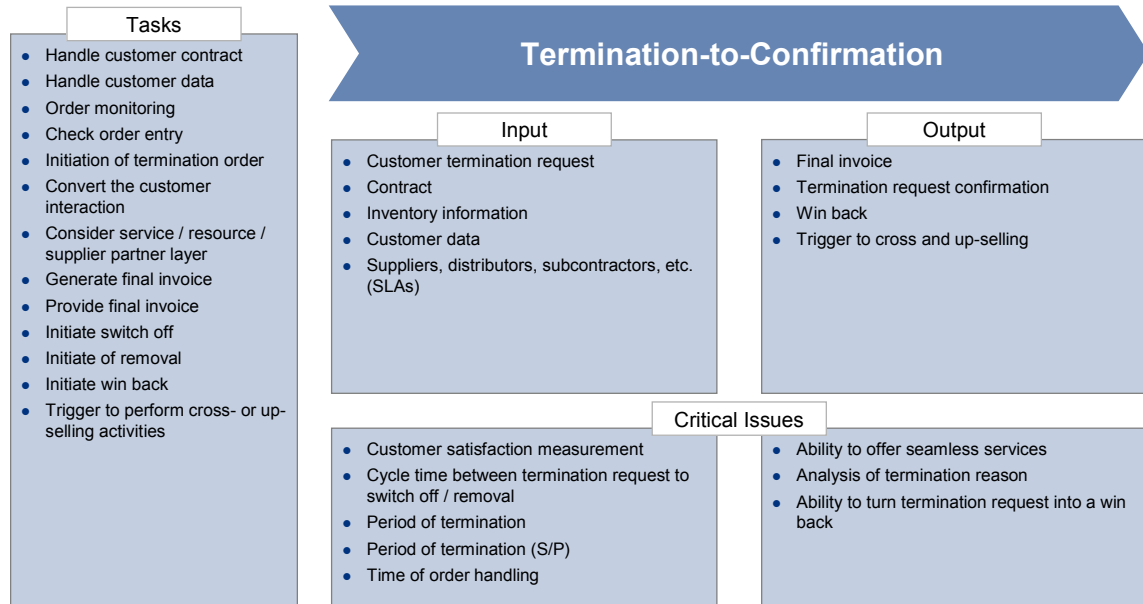


Figure 25: Termination-to-Confirmation – Process-Flow (Level 3) BPMN

### 2.5.6. Detailed Information



**Figure 26: Termination-to-Confirmation – Detailed Information**

## 2.6. Process Flows for Problem-to-Solution

### 2.6.1. Overview

- This process deals with a technical complaint (problem) initiated by the customer, analyzes it to identify the source of the issue, initiates resolution, monitors progress and closes the trouble ticket.
- The basis for a problem is an unplanned interruption to a product / service or reduction in the quality of a product/service. (In comparison, the process “complaint-to-solution” deals with customer inquiries in which the customer is not pleased with a product or handling speed of an inquiry etc.)

### 2.6.2. Assumptions:

- This scenario is relevant only for technical complaints which are termed as ‘problems’.
- Problems such as no outgoing call or sms and faulty handset, may be resolved at first level support or re-directed to other layers
- Non-technical complaints will be dealt by another scenario ‘Complaint-to-Solution’.

### 2.6.3. eTOM Mapping

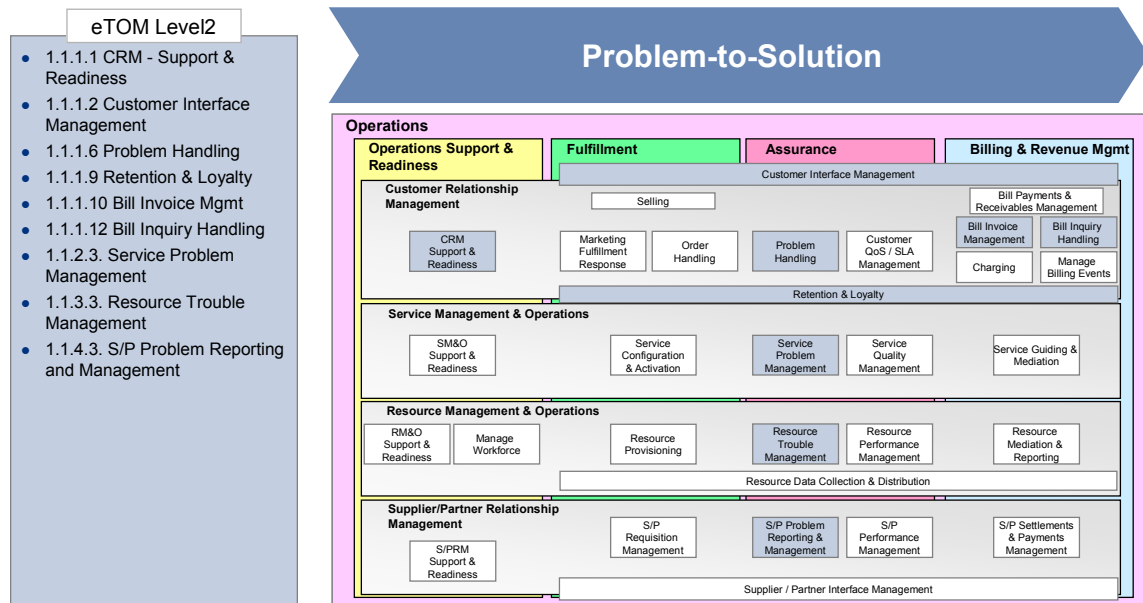


Figure 27: Problem-to-Solution - Mapping on eTOM Level 2

### 2.6.4. Detailed Process-Flow (Level 3)

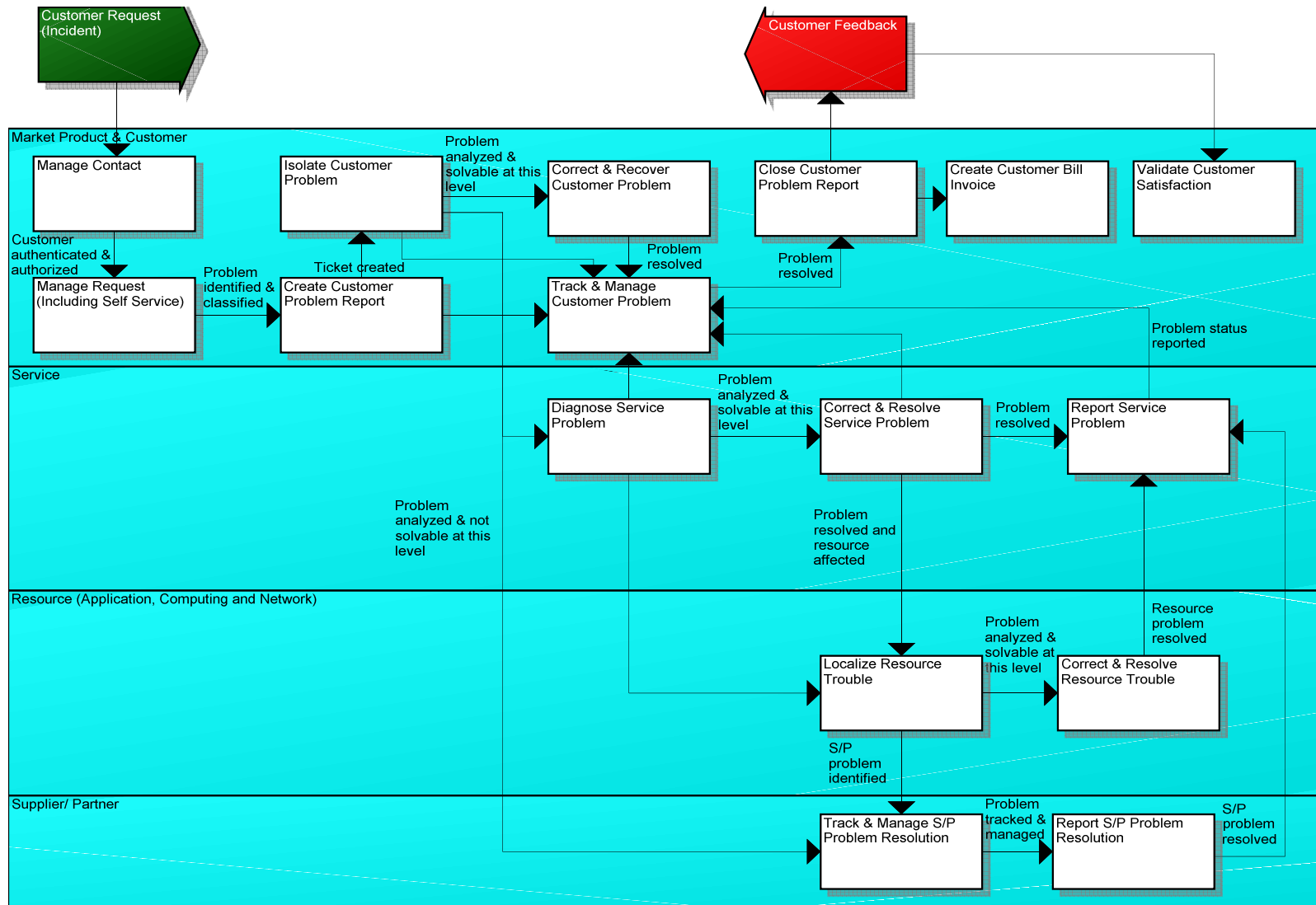


Figure 28: Problem-to-Solution – Process-Flow (Level 3)

2.6.5. Detailed Process-Flow (Level 3) BPMN

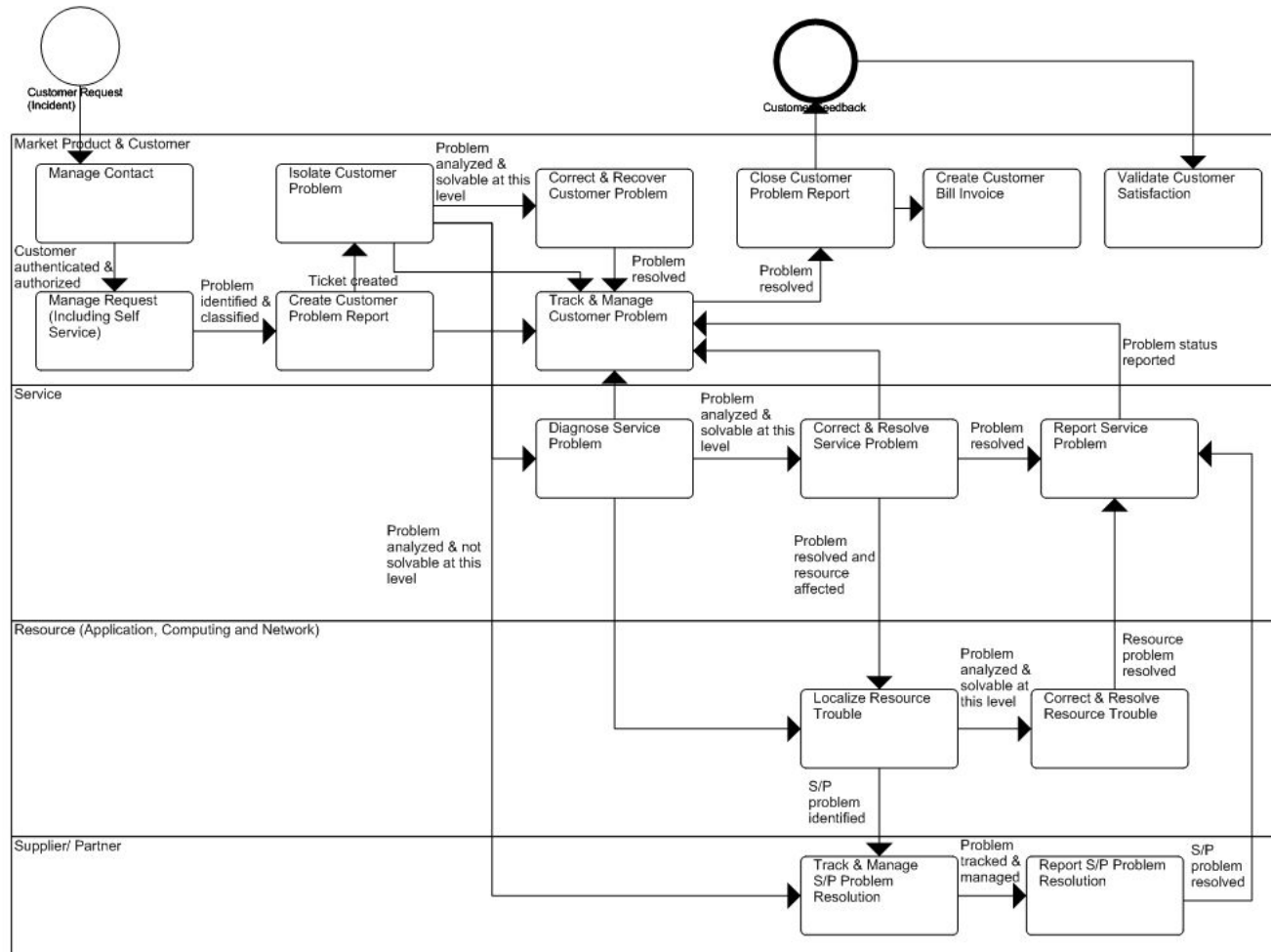


Figure 28: Problem-to-Solution – Process-Flow (Level 3) BPMN

### 2.6.6. Detailed Information

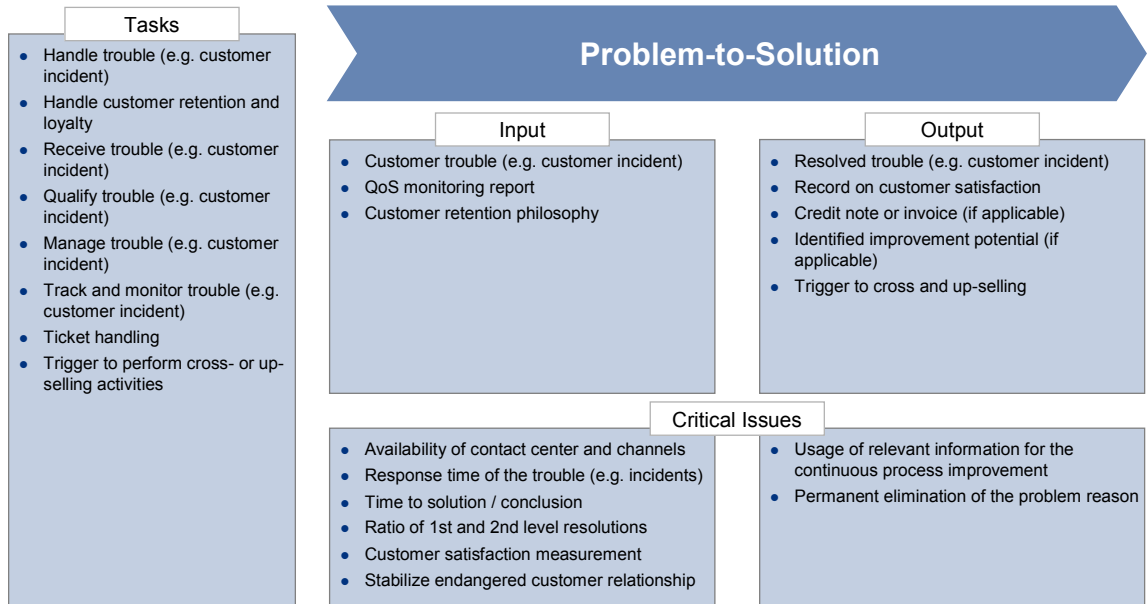


Figure 29: Problem-to-Solution – Detailed Information

## 2.7. Process Flows for Complaint-to-Solution

### 2.7.1. Overview

- This process deals with a complaint (problem) initiated by the customer, analyzes it to identify the source of the issue, initiates resolution, monitors progress and closes the trouble ticket.
- A complaint is a customer inquiry in which the customer is not pleased with a product or the handling speed of an inquiry etc.

### 2.7.2. Assumptions:

- This scenario is relevant only for non-technical complaints which are termed as ‘problems’.
- Complaints such as over-due provisioning, quality of customer service and bill adjustments will fall under the scope of this process.

### 2.7.3. eTOM Mapping

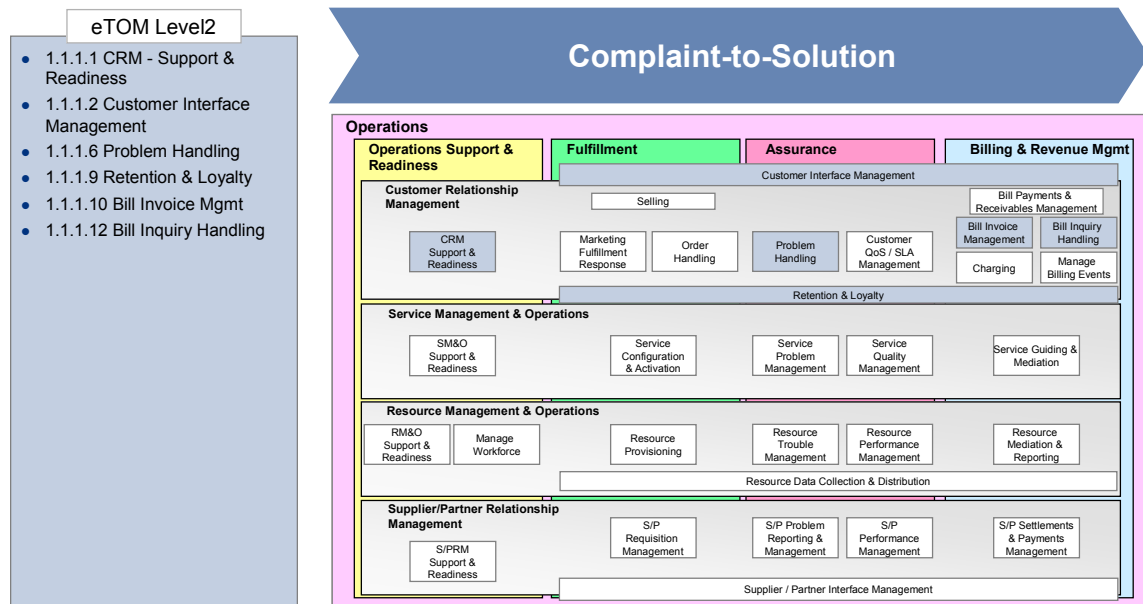


Figure 30: Complaint-to-Solution - Mapping on eTOM Level 2

### 2.7.4. Detailed Process-Flow (Level 3)

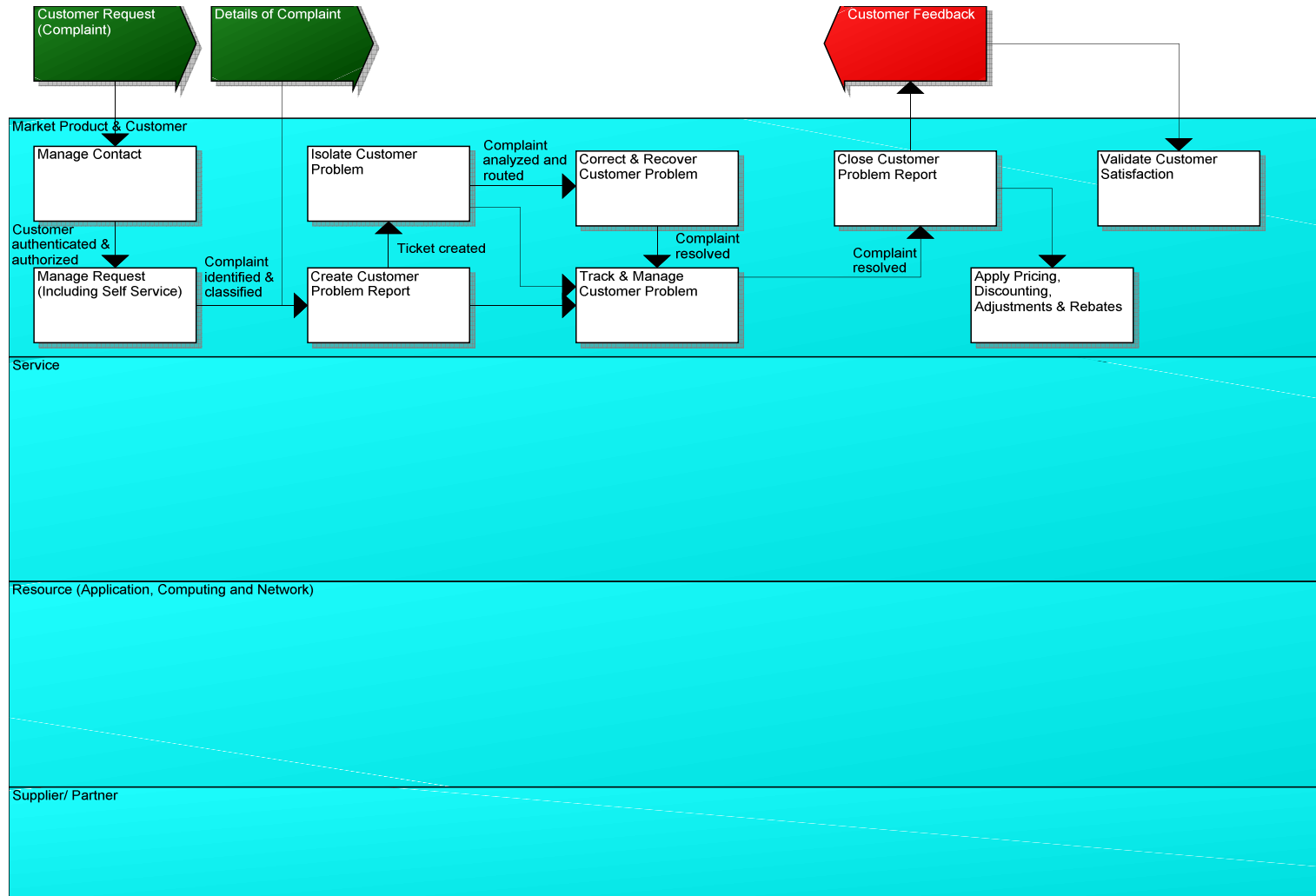


Figure 31: Complaint-to-Solution – Process-Flow (Level 3)

### 2.7.5. Detailed Process-Flow (Level 3) BMN

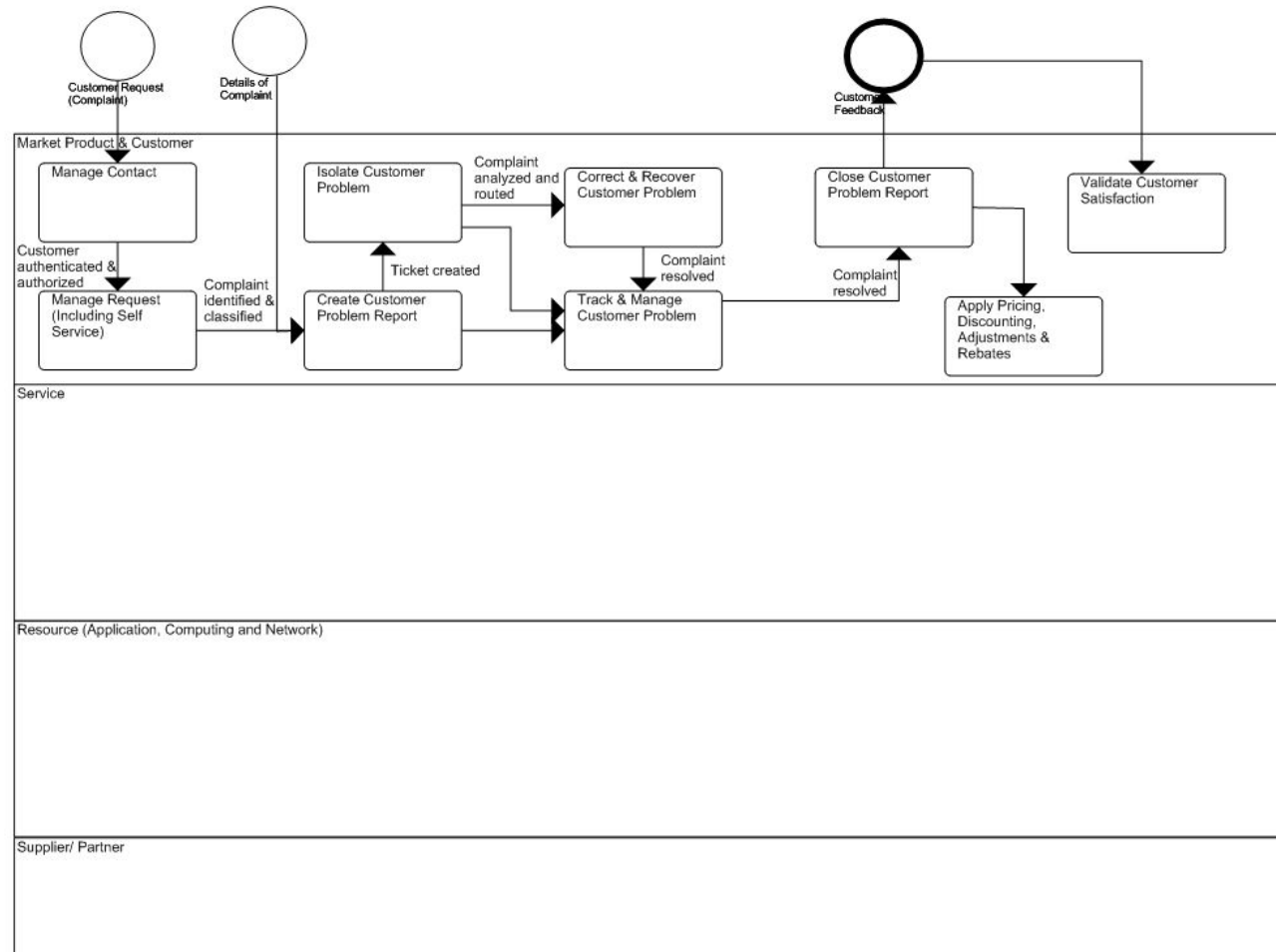
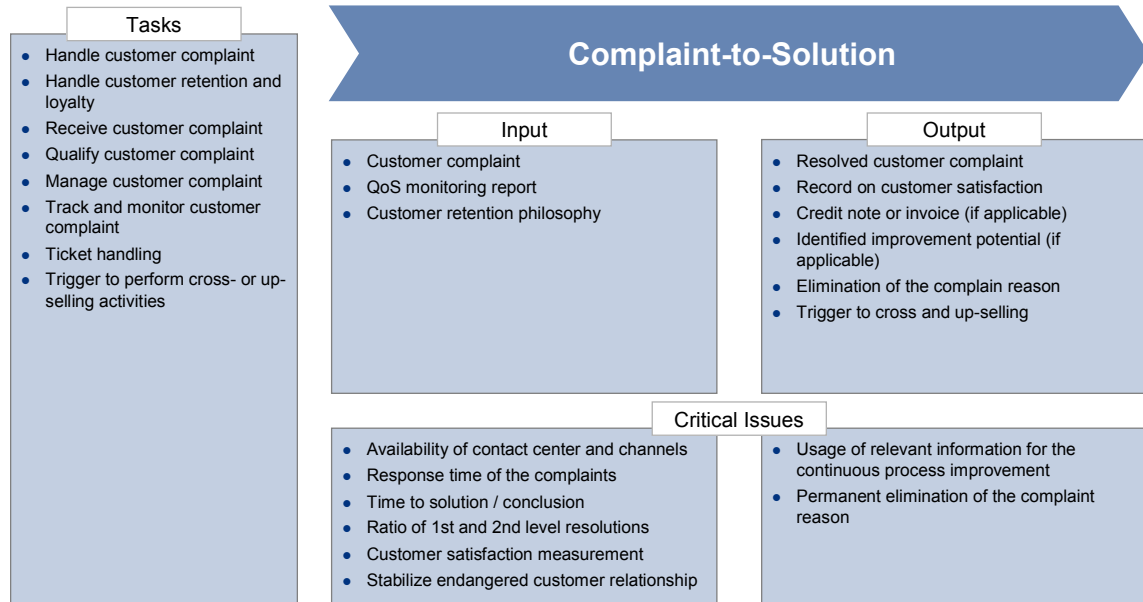


Figure 32: Complaint-to-Solution – Process-Flow (Level 3) BPMN

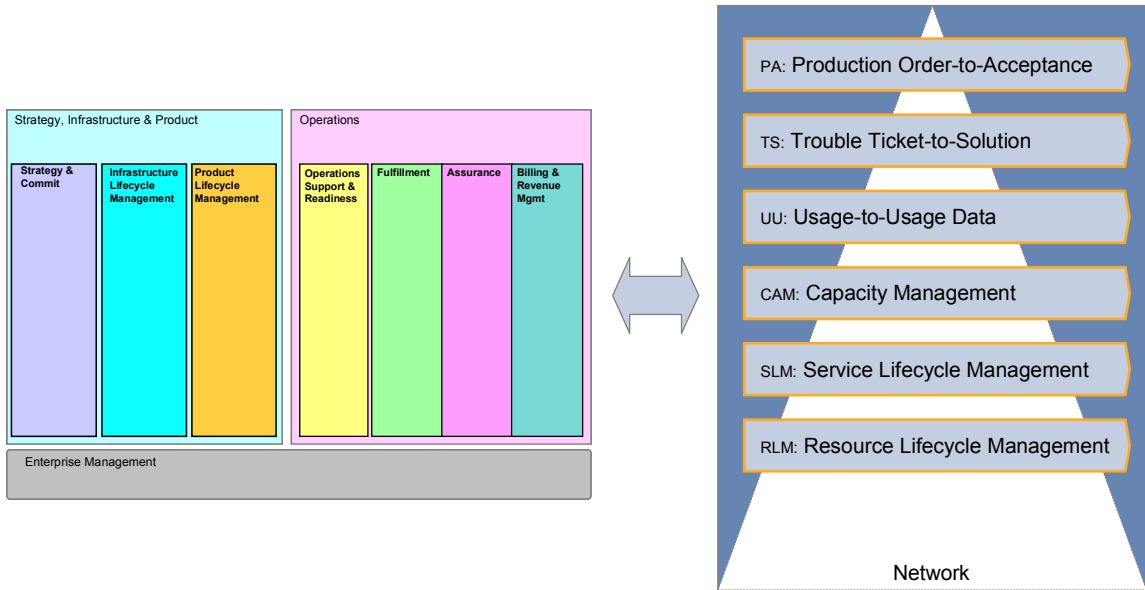
### 2.7.6. Detailed Information



**Figure 33: Complaint-to-Solution – Detailed Information**

### 3. Network Centric Process Flows

This section includes sample process-flows (eTOM level 3) relevant to the Network Centric focus. The process-flows for the six network end-to-end processes show how to apply the Operations, Strategy and Enterprise part of eTOM to a service provider.



**Figure 34: eTOM and Network-Centric processes**

## 3.1. Process Flows for Production Order-to-Acceptance

---

### 3.1.1. Overview

- This scenario manages the provisioning and termination process, starting from the feasibility check and ending with the activation of services and resources.
- The order processing includes the verification of service specifications, the availability check for the services and resources, and the identification of critical and uncritical resources.
- The reservation or cancellation of critical resources then takes place, followed by the completion of the suborder with relevant parameters.
- In the end, an overall acceptance test is executed.

### 3.1.2. Assumptions:

- This scenario is relevant for products offered to the mass customer base.
- This process can be fully automated, but in some cases manual activities are also in scope.
- The processes capacity management, service- and resource lifecycle management manage the requirements of this process.
- The feasibility check considers service-, resource- and workforce capacities.
- The result of the feasibility check is binding for the offer against the customer.
- An order cancellation is not possible at all times. After a certain time period has elapsed, the cancellation of the order cannot be executed.

### 3.1.3. eTOM Mapping

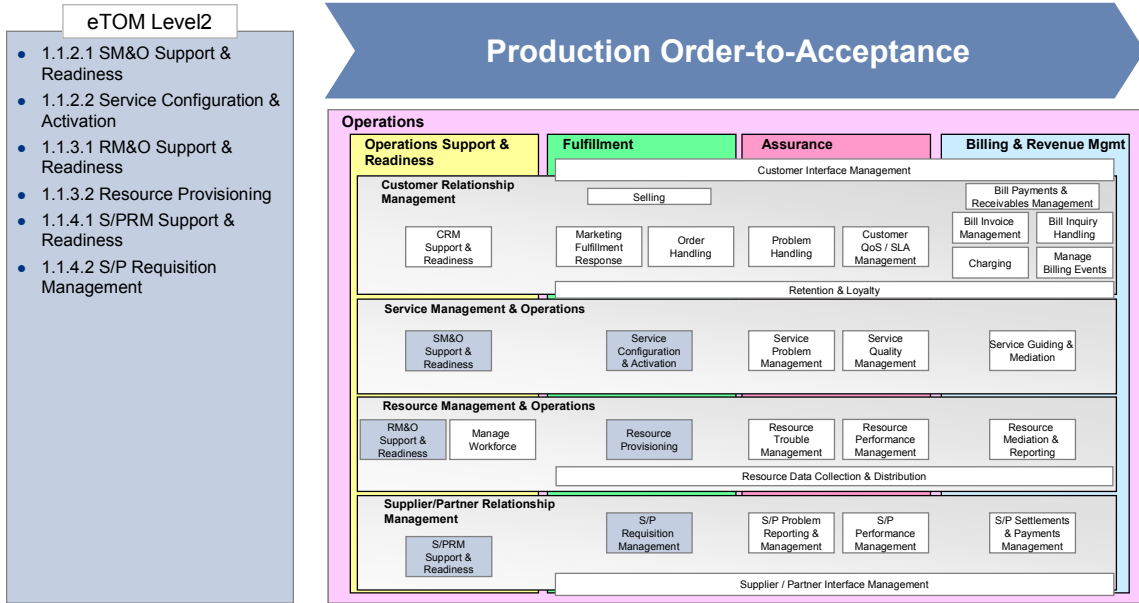


Figure 35: Production Order-to-Acceptance - Mapping on eTOM Level 2

### 3.1.4. Detailed Process-Flow (Level 3)

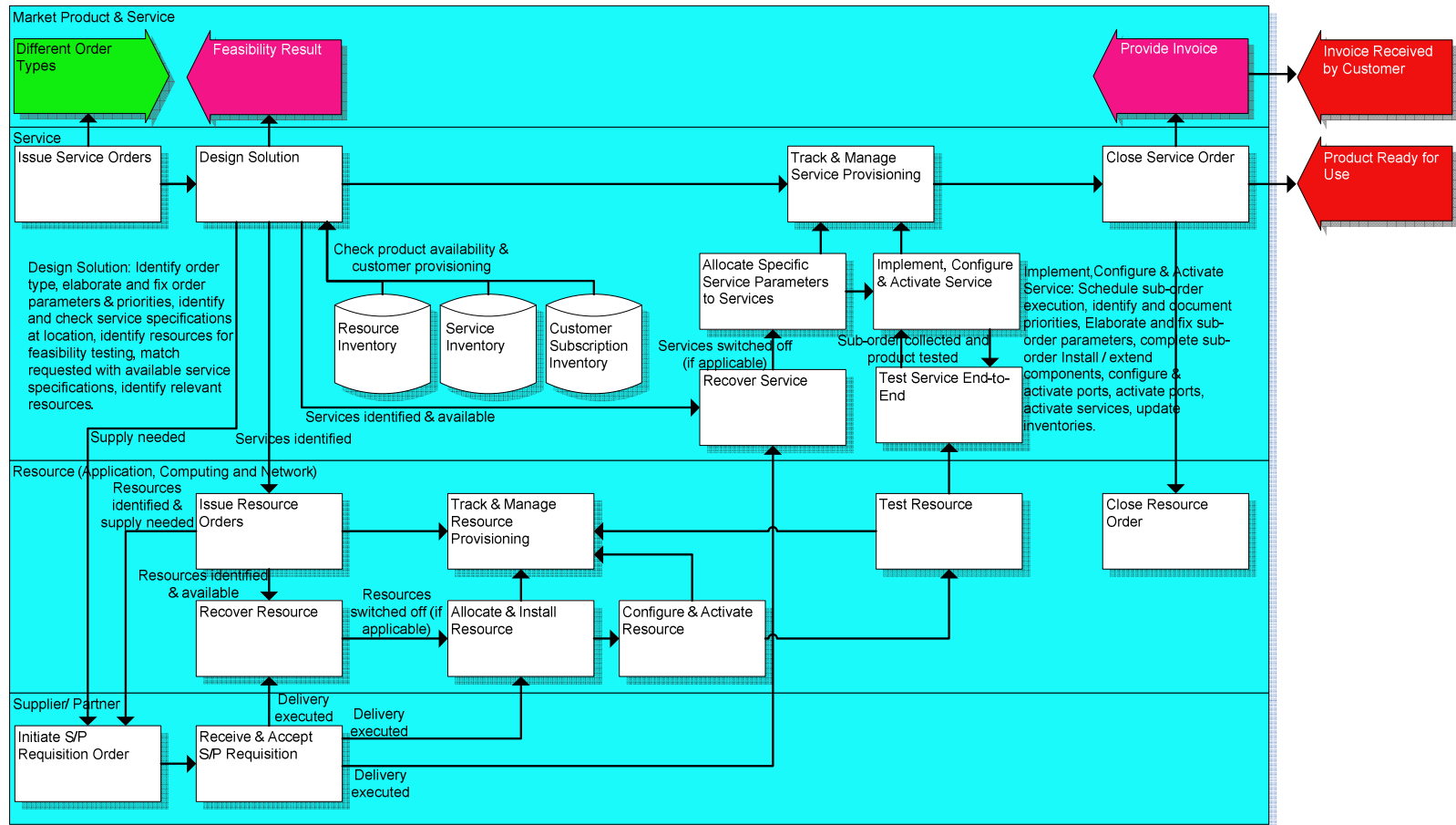


Figure 36: Production Order-to-Acceptance – Process-Flow (Level 3)

### 3.1.5. Detailed Process-Flow (Level 3) BPMN

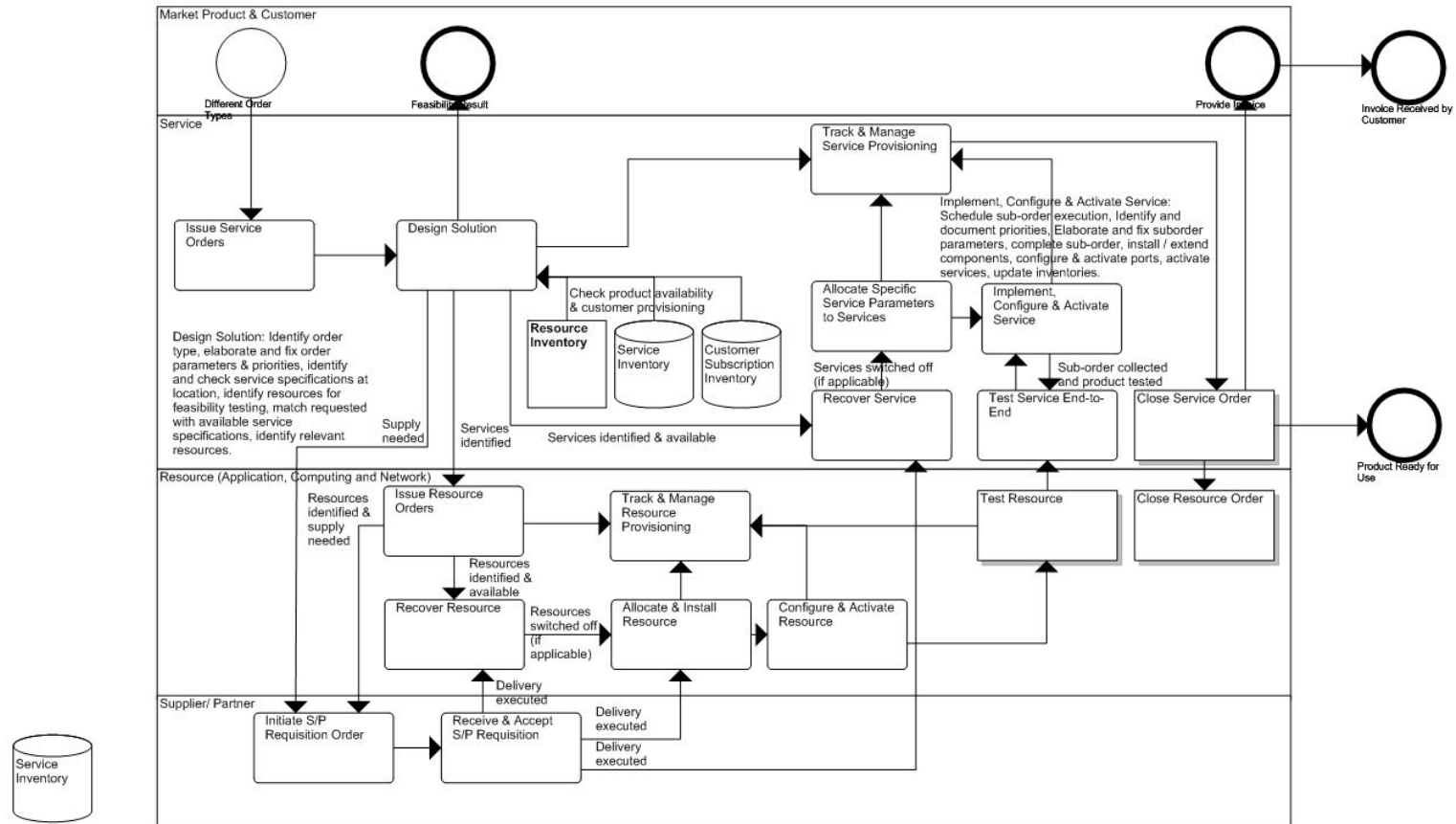


Figure 37: Production Order-to-Acceptance – Process-Flow (Level 3) BPMN

### 3.1.6. Detailed Information

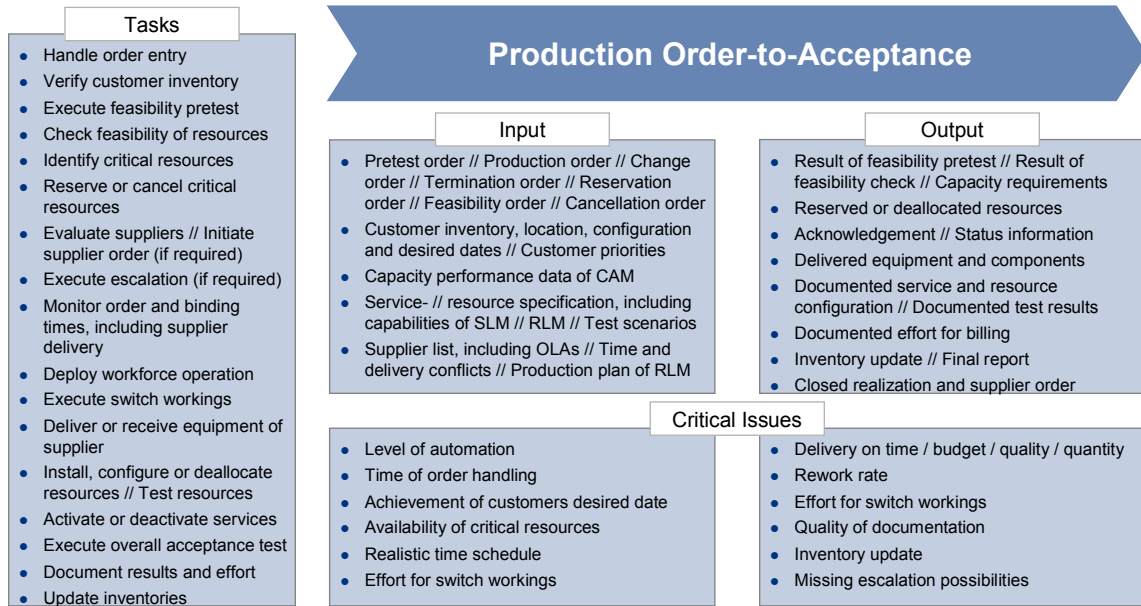


Figure 38: Production Order-to-Acceptance – Detailed Information

## 3.2. Process Flows for Trouble Ticket-to-Solution

---

### 3.2.1. Overview

- This process is either triggered internally through a service or resource alarm, or externally, through a trouble ticket generated based on a complaint of a customer.
- The process covers the qualification, classification and the elimination of the service or resource trouble.
- The analysis of trouble includes the verification of trouble ticket or request, and a delta analysis based on reference and actual values.
- Once the root cause is identified, the trouble eliminated and the acceptance test completed, the trouble ticket is closed.

### 3.2.2. Assumptions:

- This scenario is relevant for products offered to the mass customer base.
- This process can be fully automated, but in some cases manual activities are also in scope.
- This scenario considers the trouble ticket handling triggered by the customer and the event-based handling triggered by the network.
- The source which opens a ticket is also responsible for closing it.
- An error database is established and can be enhanced quickly and easily.
- The assurance and fulfillment processes work with the same data and information.

3.2.3. eTOM Mapping

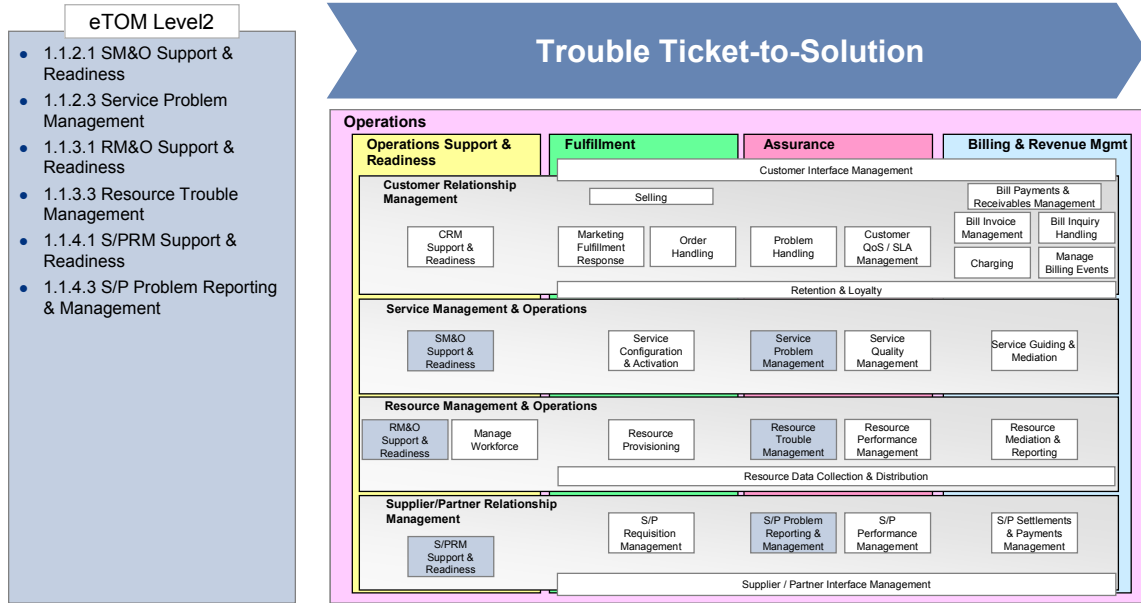


Figure 39: Trouble Ticket-to-Solution - Mapping on eTOM Level 2

### 3.2.4. Detailed Process-Flow (Level 3)

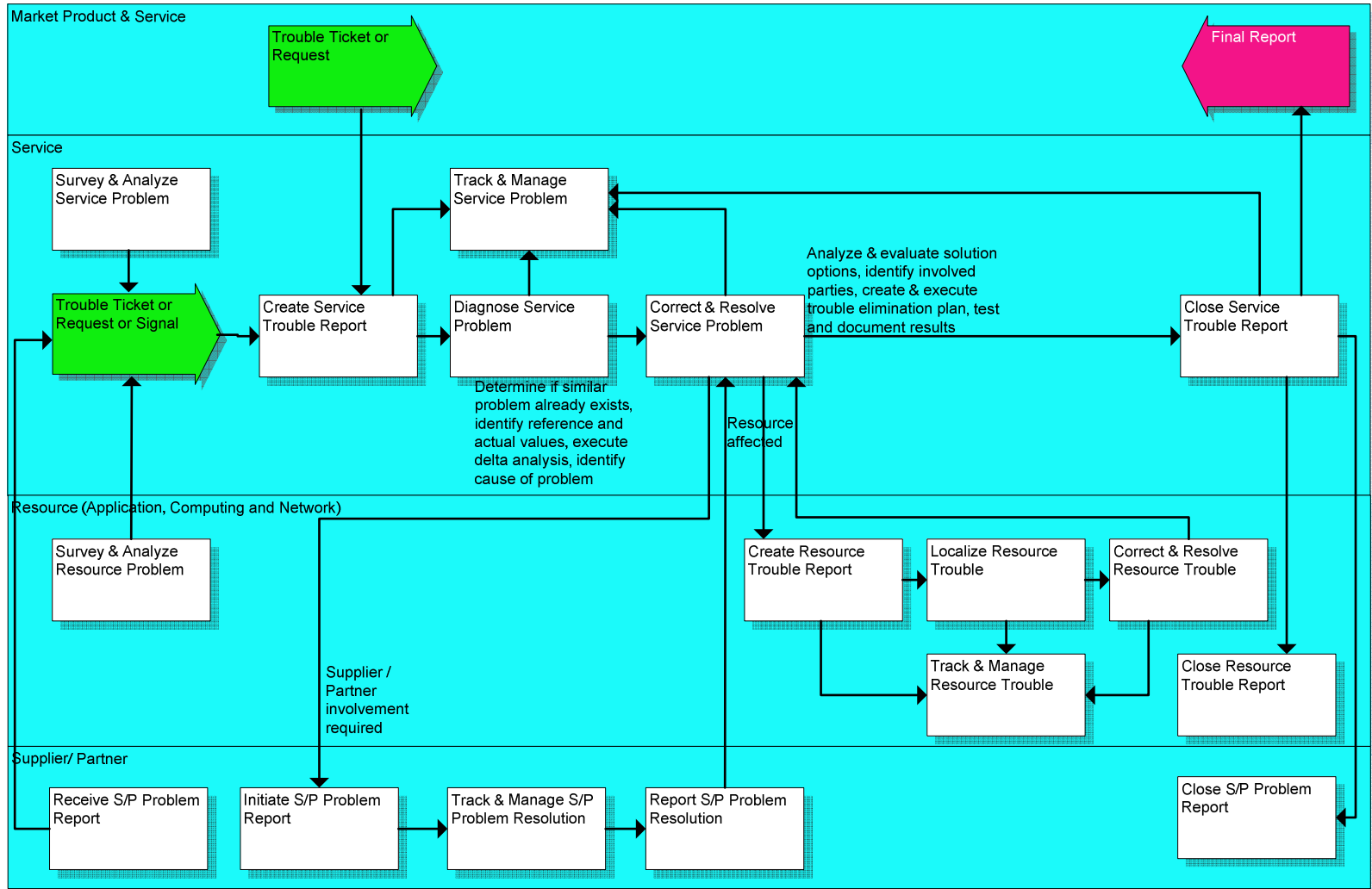


Figure 40: Trouble Ticket-to-Solution – Process-Flow (Level 3)

### 3.2.5. Detailed Process-Flow (Level 3) BPMN

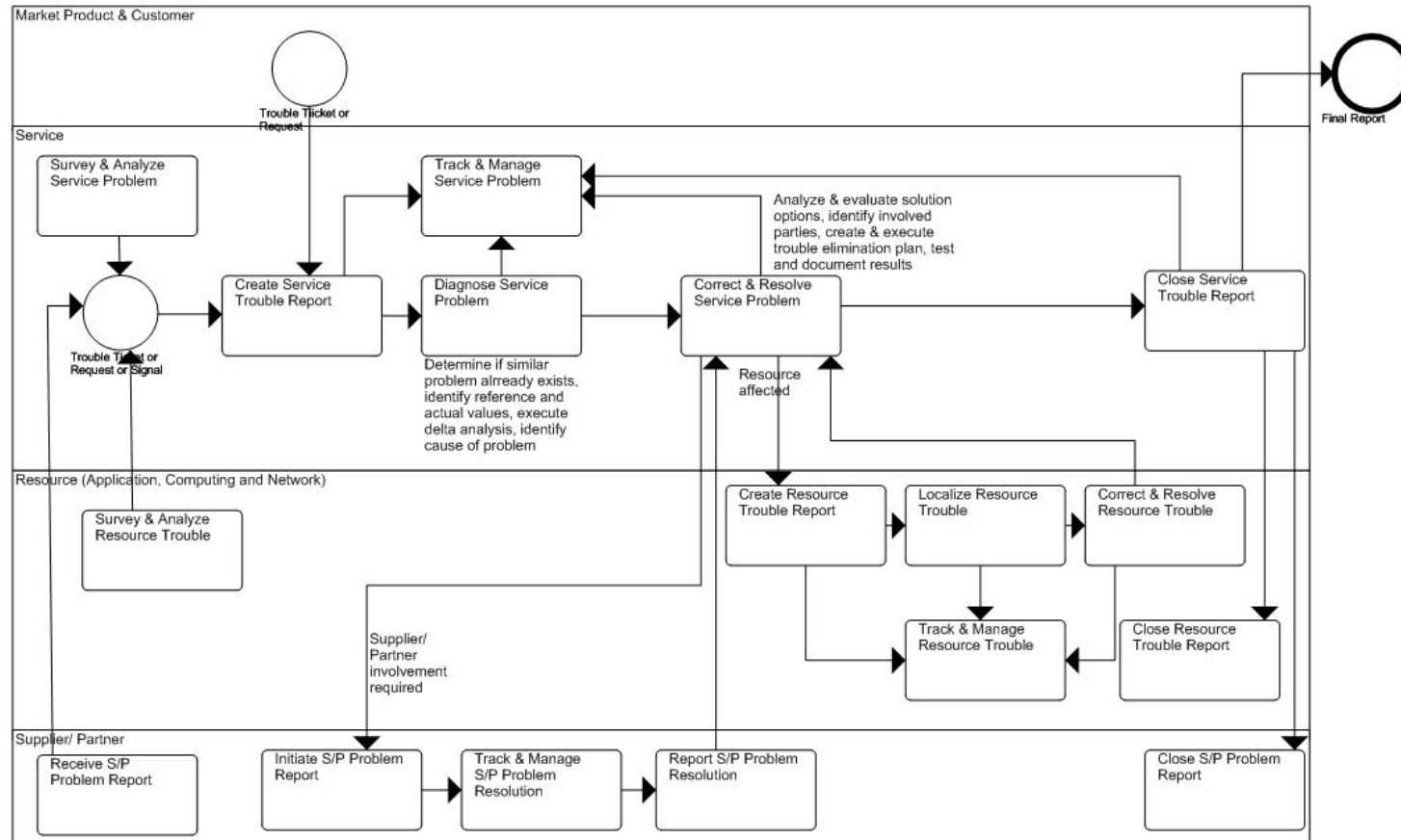
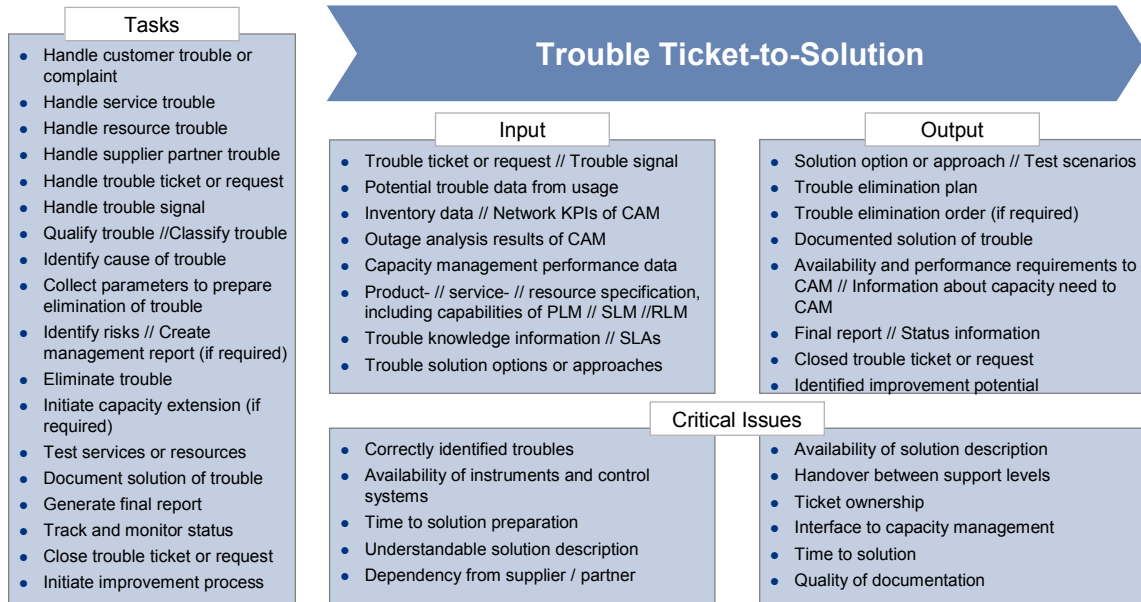


Figure 40: Trouble Ticket-to-Solution – Process-Flow (Level 3) BPMN

### 3.2.6. Detailed Information



**Figure 41: Trouble Ticket-to-Solution – Detailed Information**

### 3.3. Process Flows for Usage-to-Usage Data

---

#### 3.3.1. Overview

- This process focuses on the enabling of usage, the collection of usage records and the monitoring of performance criteria.
- It takes into consideration the authentication and authorization of the user, including the initiation of subsequently following steps and the providing of self service.
- During the usage, the collection of usage data records starts.
- After the records pass through the mediation, matching and rating steps, the bill is produced and distributed to the customer.

#### 3.3.2. Assumptions:

- This scenario is relevant for products offered to the mass customer base.
- After the authentication and authorization of the user, the usage is enabled when no connection restrictions exist.
- During the usage, the customer is provided with the option for self-service or other activities.
- The process elements 'Mediate Resource Usage Records' and 'Guide Resource Usage Records' are not always applicable.
- 'Perform Rating' element is usually under the Customer layer for customized products, and under the Service layer for standardized products.

3.3.3. eTOM Mapping

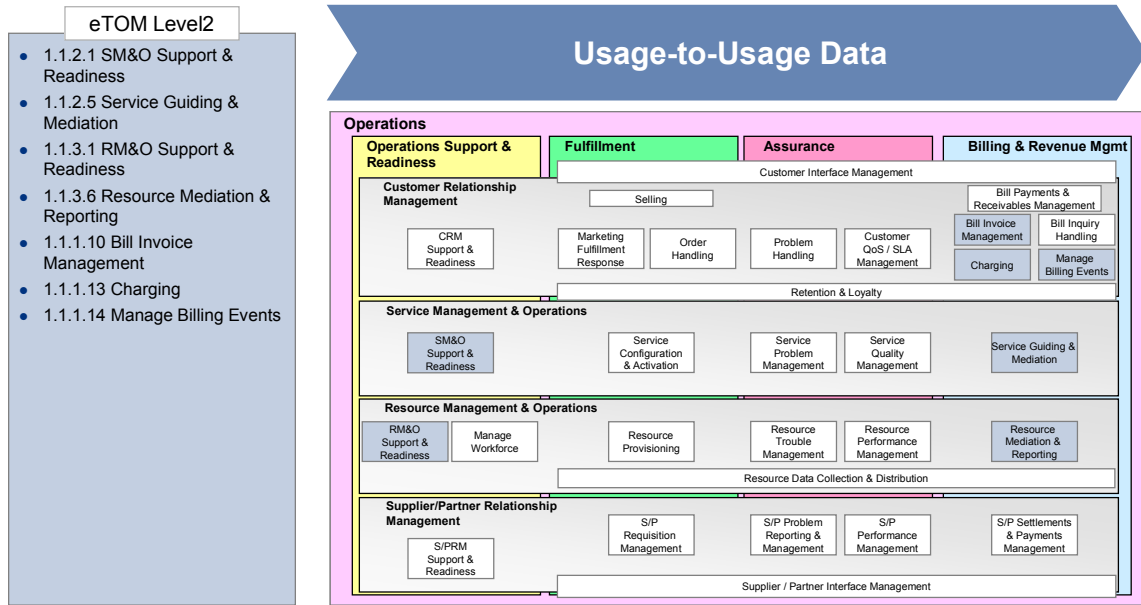


Figure 42: Usage-to-Usage Data - Mapping on eTOM Level 2

### 3.3.4. Detailed Process-Flow (Level 3)

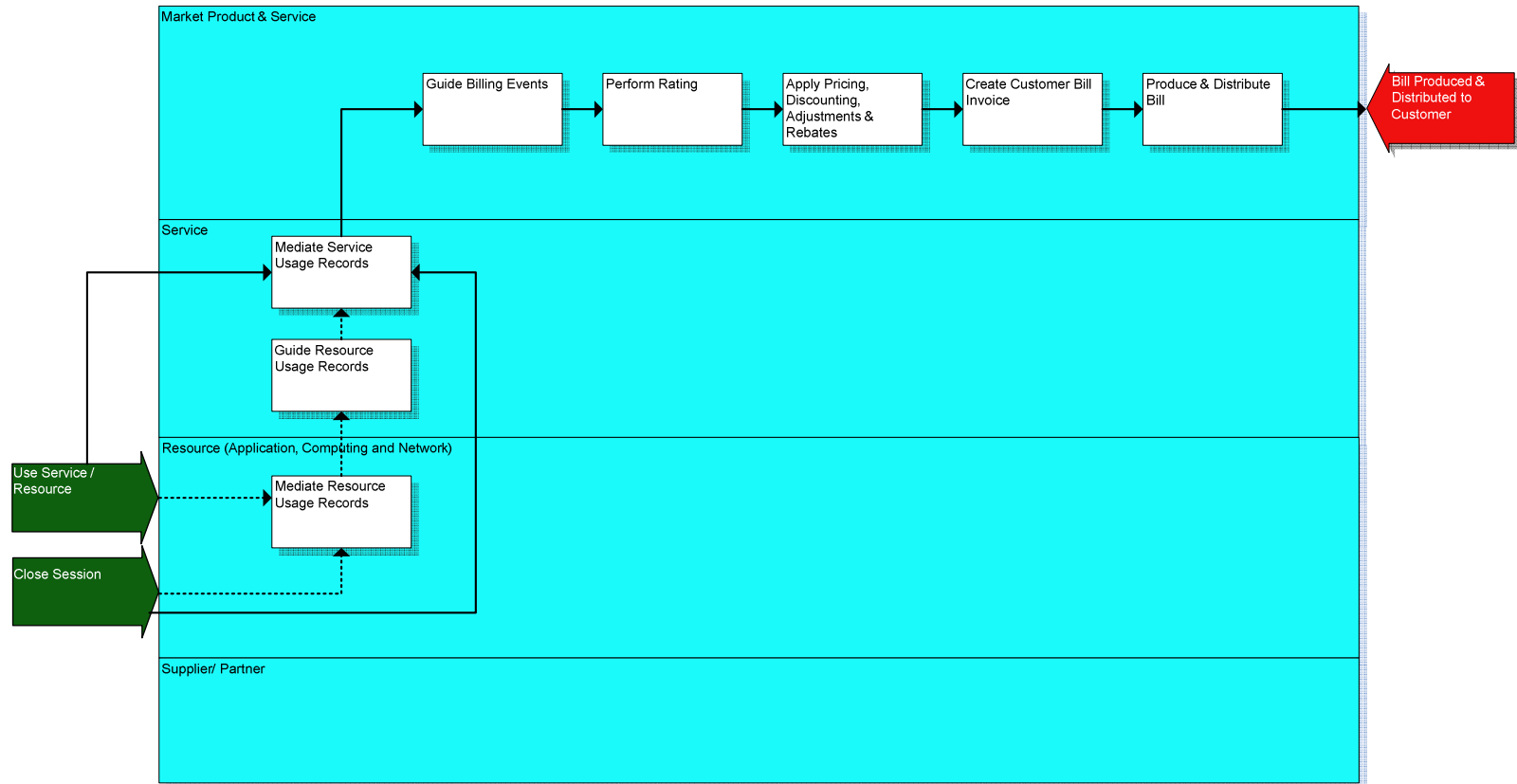


Figure 43: Usage-to-Usage Data – Process-Flow (Level 3)

### 3.3.5. Detailed Process-Flow (Level 3) BPMN

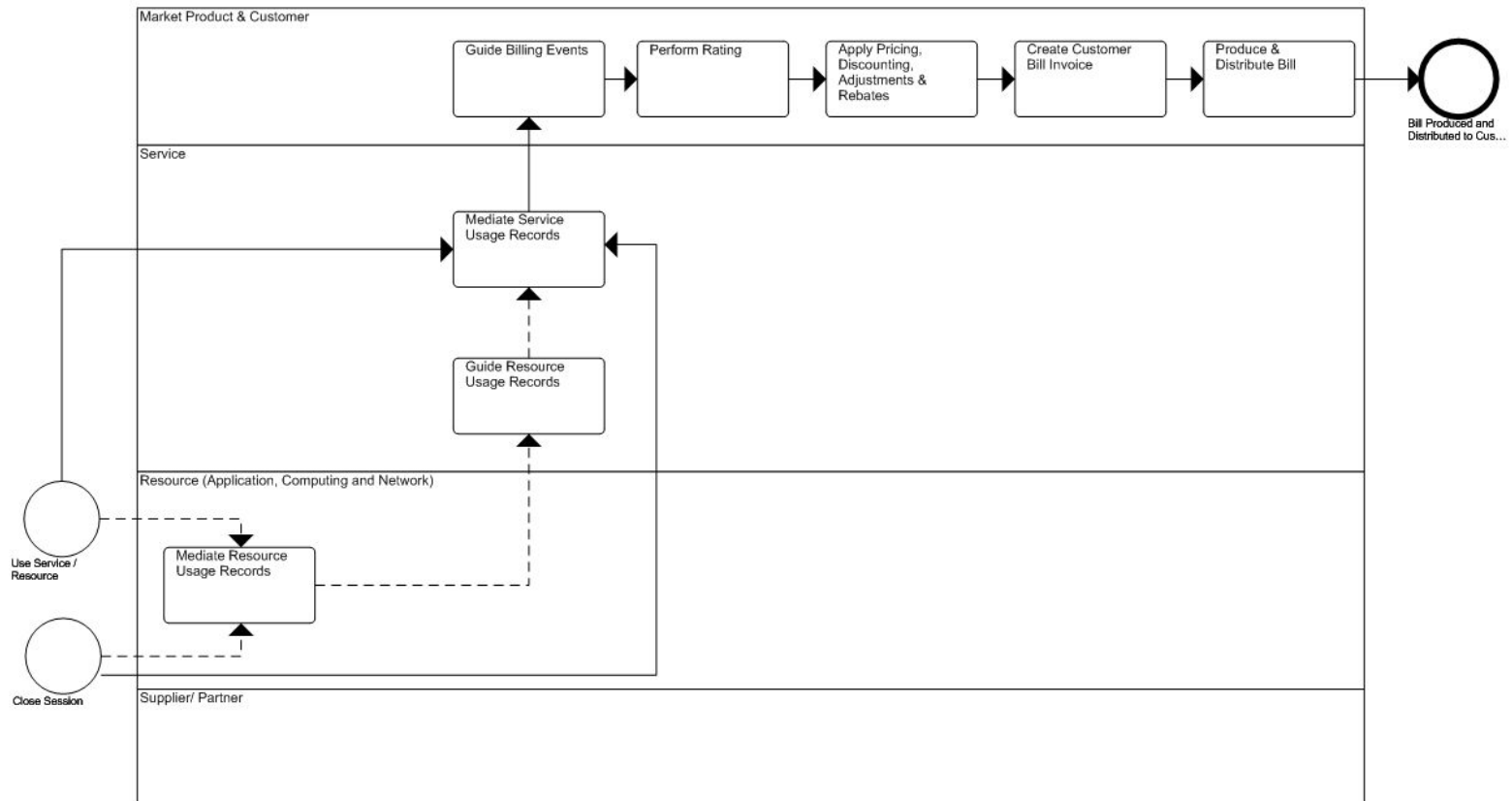


Figure 43: Usage-to-Usage Data – Process-Flow (Level 3) BPMN

### 3.3.6. Detailed Information

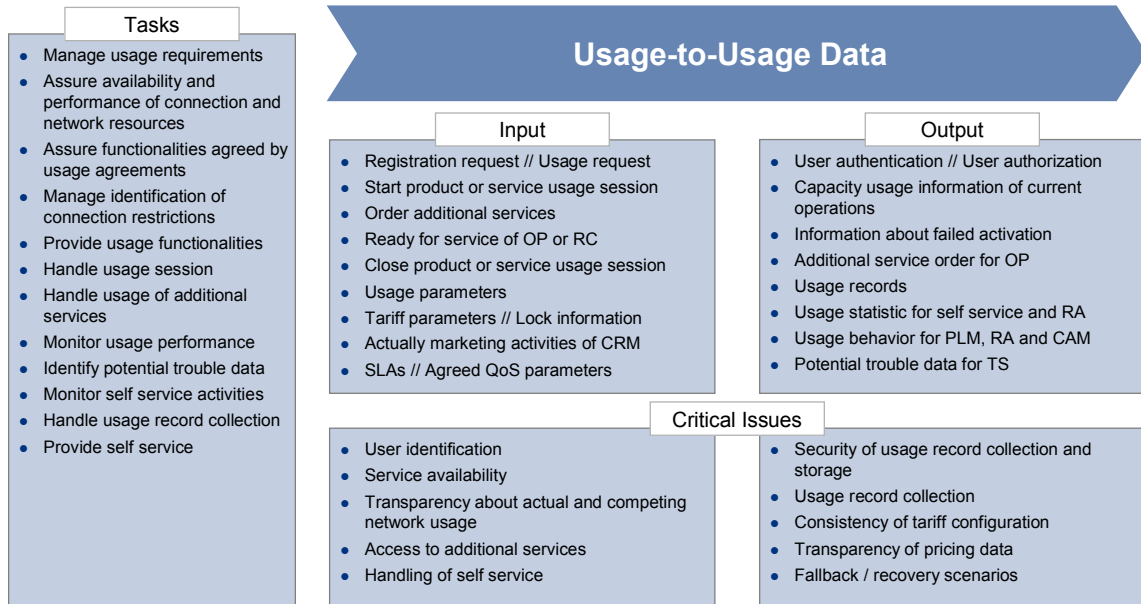


Figure 44: Usage-to-Usage Data – Detailed Information

## 3.4. Process Flows for Capacity Management

---

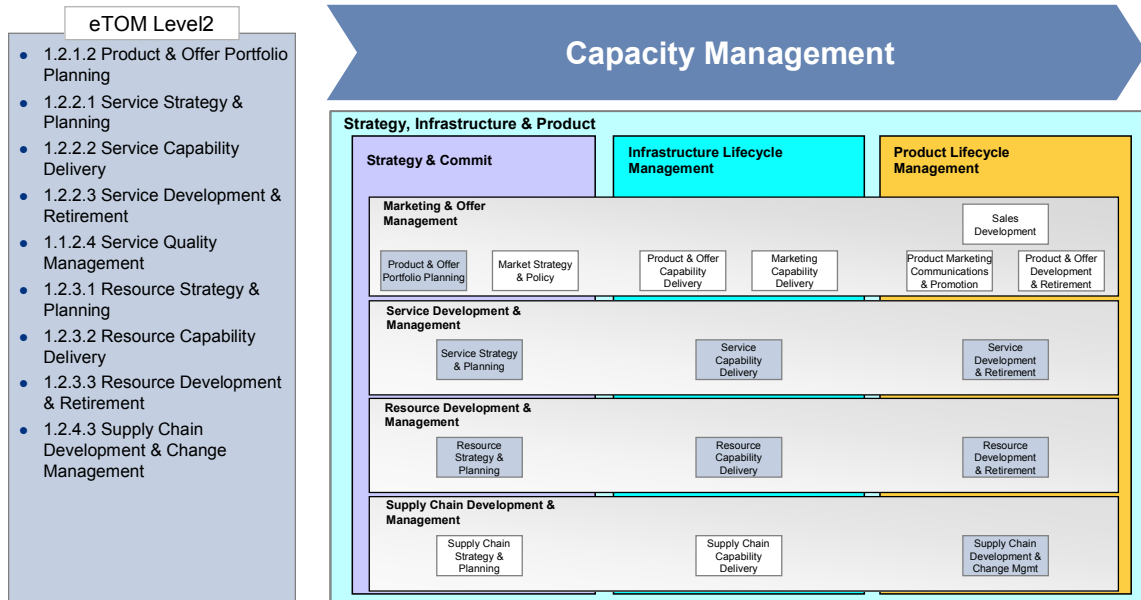
### 3.4.1. Overview

- This process aims to ensure the timely and cost-efficient provisioning of the accurate capacity of services and components.
- There is a collection and qualification of capacity information and the analysis of capacity needs to guarantee adequate levels of capacity for support of operations.
- The scope of capacity management is specified, including the definition of KPIs and measurement methods.
- After the planning and design phase, the implementation plan is developed and executed.
- Lastly, the results of capacity management are handed over to operations and performance is continuously monitored.

### 3.4.2. Assumptions:

- KPIs and performance measurement features are designed and established.
- The network relevant data is available and usable.
- This process scenario is integrated in the network expansion planning process.
- The process scenario manages the requirements of the fulfillment process.
- This scenario is not technically independent.
- This scenario takes into consideration the capacity and availability management as per ITIL V3.

### 3.4.3. eTOM Mapping



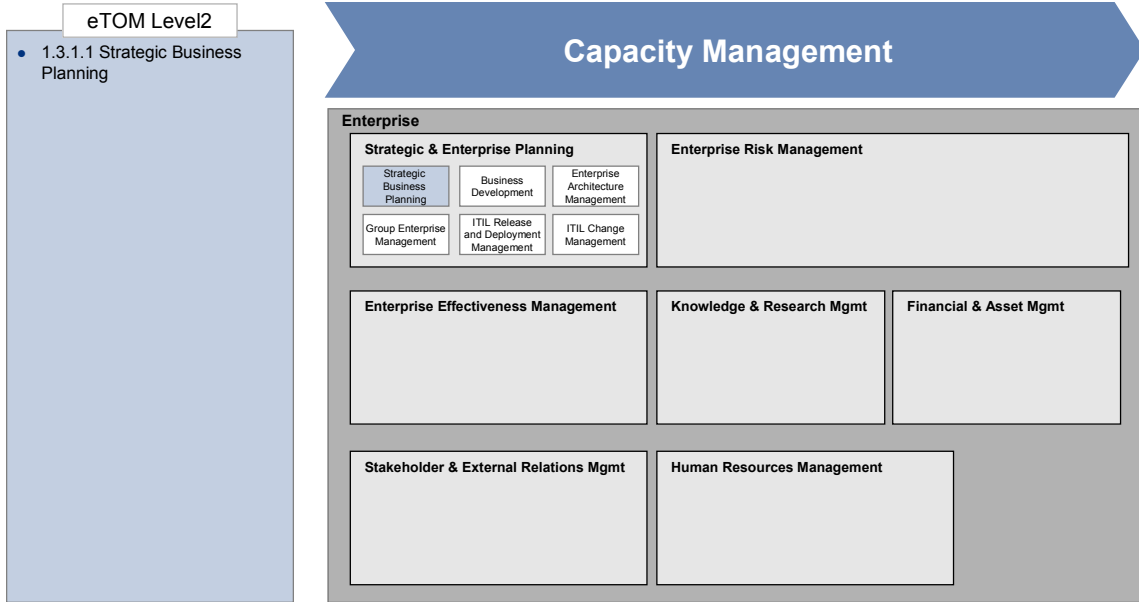


Figure 47: Capacity Management - Mapping on eTOM Level 2 - Enterprise



### 3.4.5. Detailed Process-Flow (Level 3) BPMN

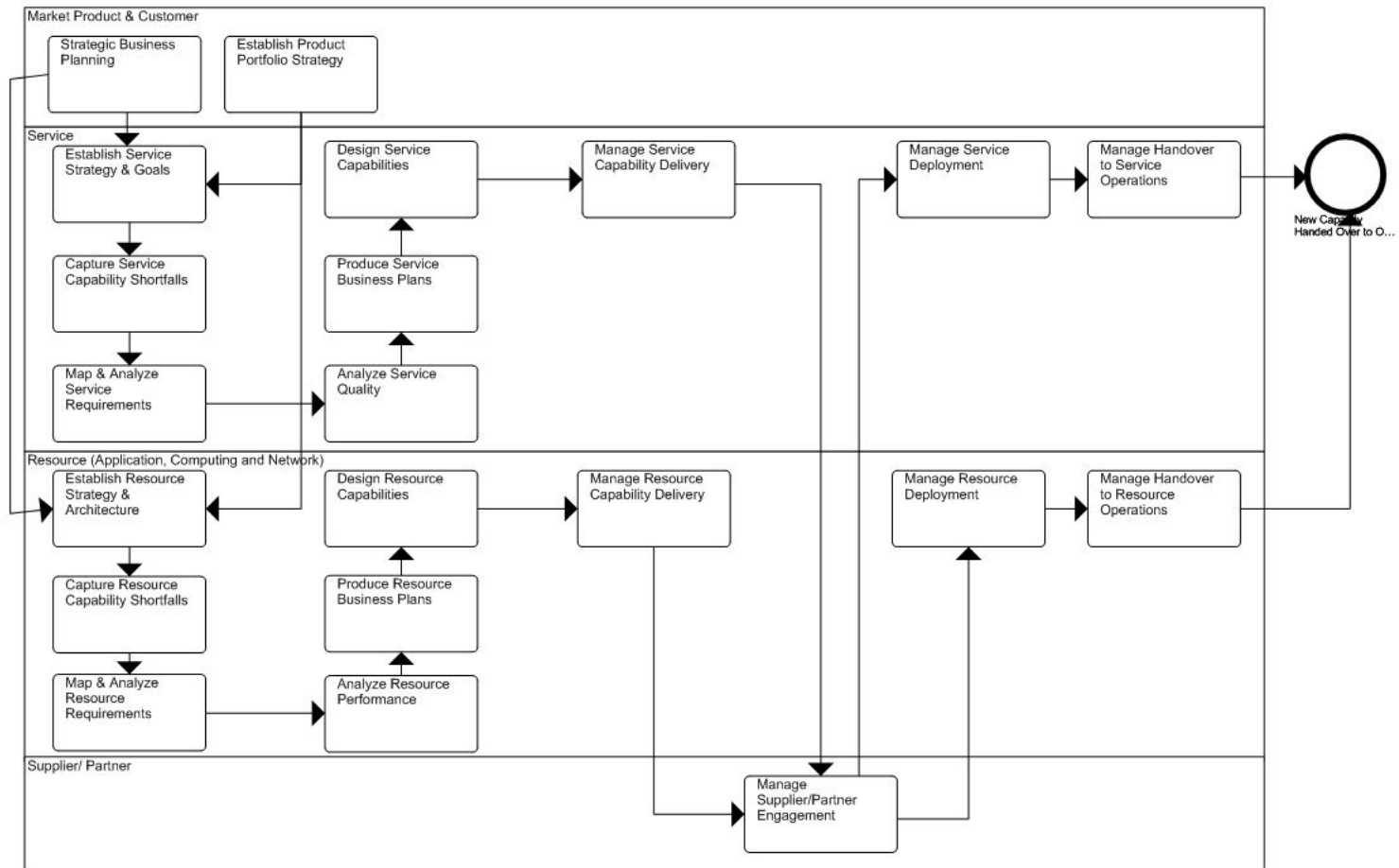


Figure 49: Capacity Management – Process-Flow (Level 3) BPMN

### 3.4.6. Detailed Information

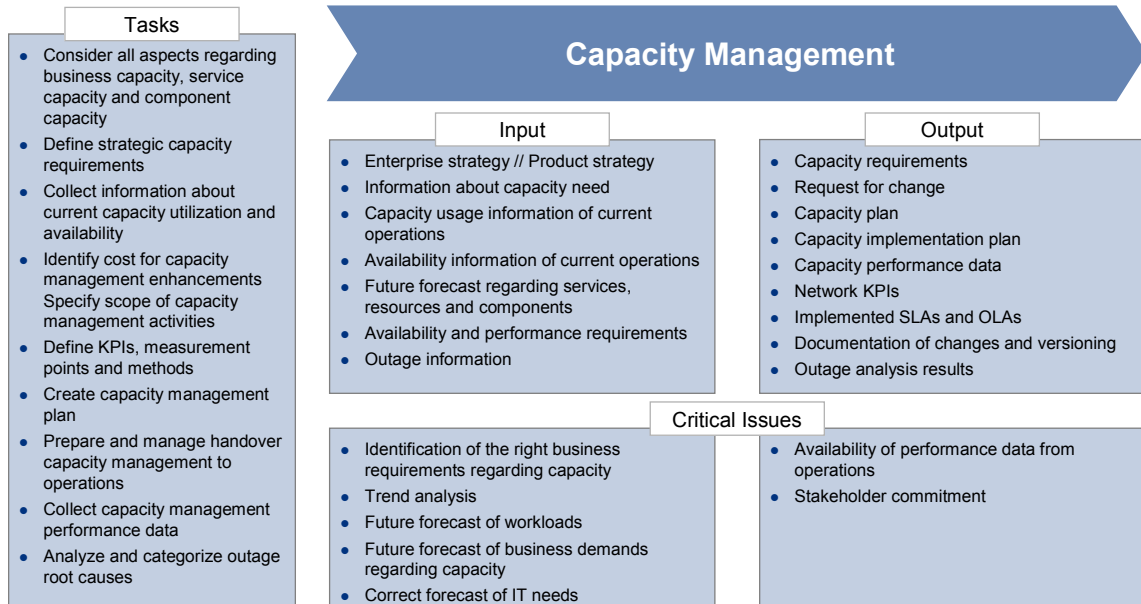


Figure 50: Capacity Management – Detailed Information

## 3.5. Process Flows for Service Lifecycle Management

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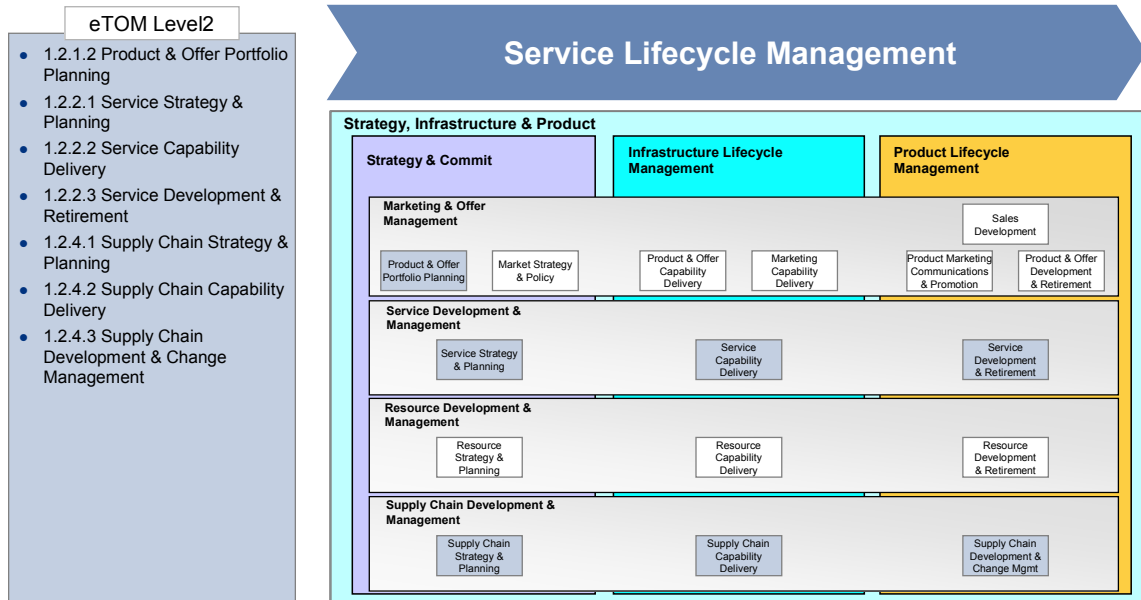
### 3.5.1. Overview

- This process defines, plans, designs and implements all services in order to support the introduction, operations and retirement of market products.
- The process starts with the evaluation of market trends, service specific needs and the definition of the service development and exit strategy.
- This is followed by the creation of the business plan and definition of the service architecture and other strategic documents.
- The design and development of service solutions are in line with the strategic goals and required service capabilities.
- After the implementation and a successful testing phase, the service is handed over to operations.

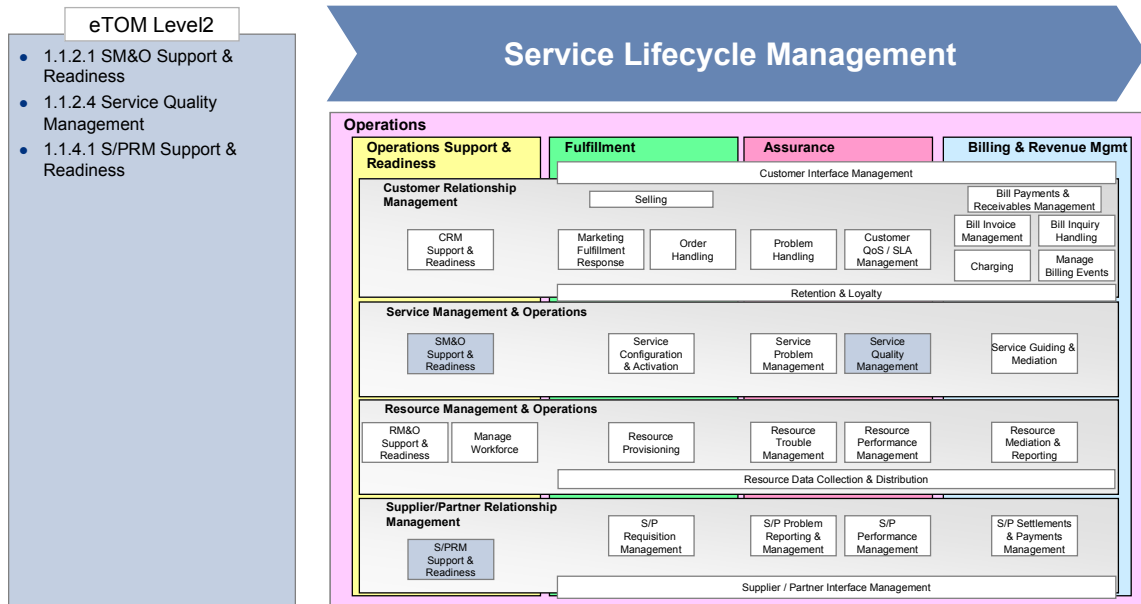
### 3.5.2. Assumptions:

- The product portfolio requirements are defined as per the input from Product Marketing.
- A result of the Service Lifecycle Process may act as an input for the fulfillment process
- Further results of this scenario are requirements for the capacity management process.
- Direct links between products and services are modeled and stored in the product catalog.
- This scenario does not take into consideration the retirement phase.
- In some cases, migration scenarios are needed.

### 3.5.3. eTOM Mapping



**Figure 51: Service Lifecycle Management- Mapping on eTOM Level 2 – Strategy**



**Figure 52: Service Lifecycle Management - Mapping on eTOM Level 2 – Operations**

### 3.5.4. Detailed Process-Flow (Level 3)

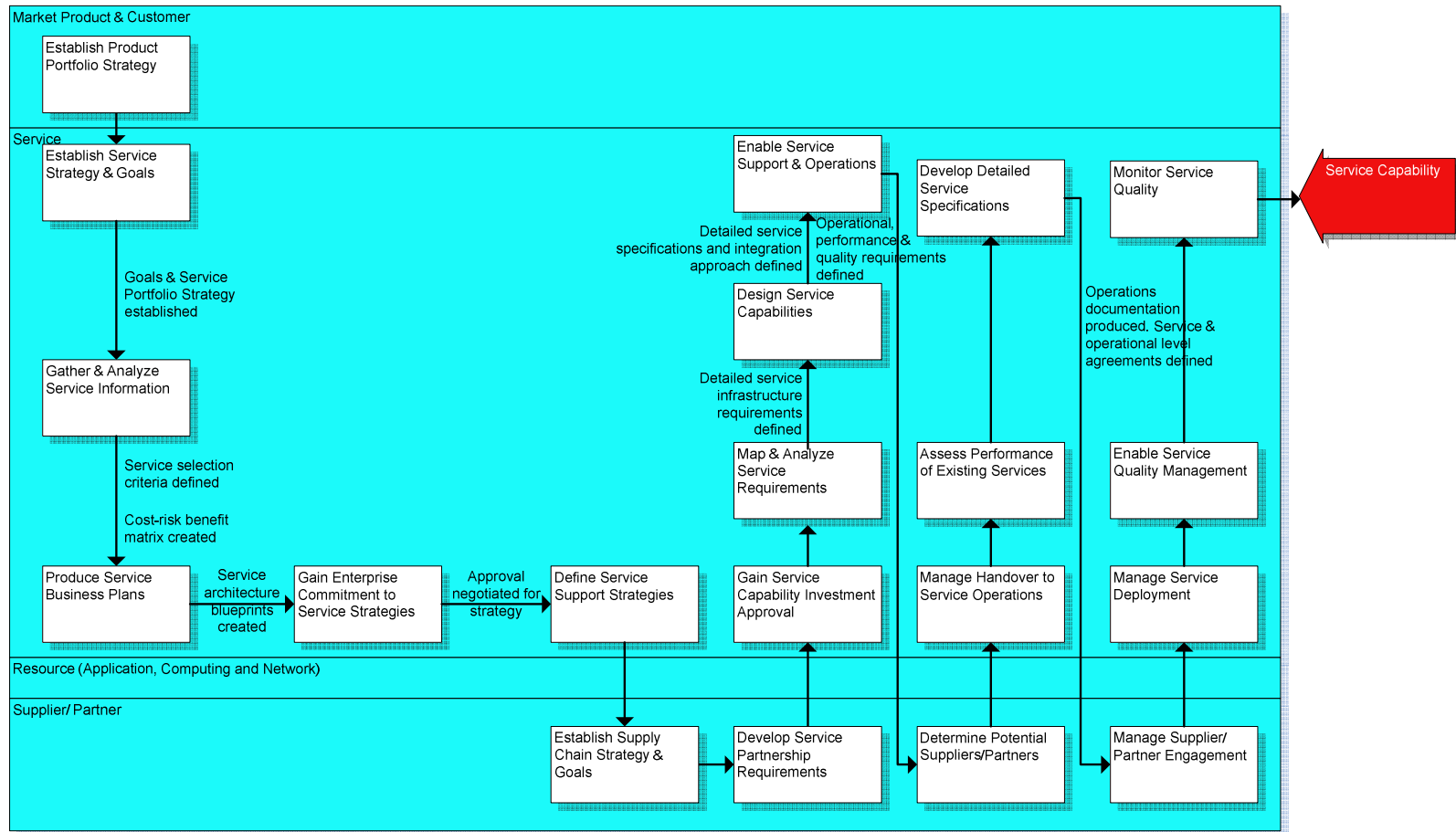


Figure 53: Service Lifecycle Management – Process-Flow (Level 3)

### 3.5.5. Detailed Process-Flow (Level 3) BPMN

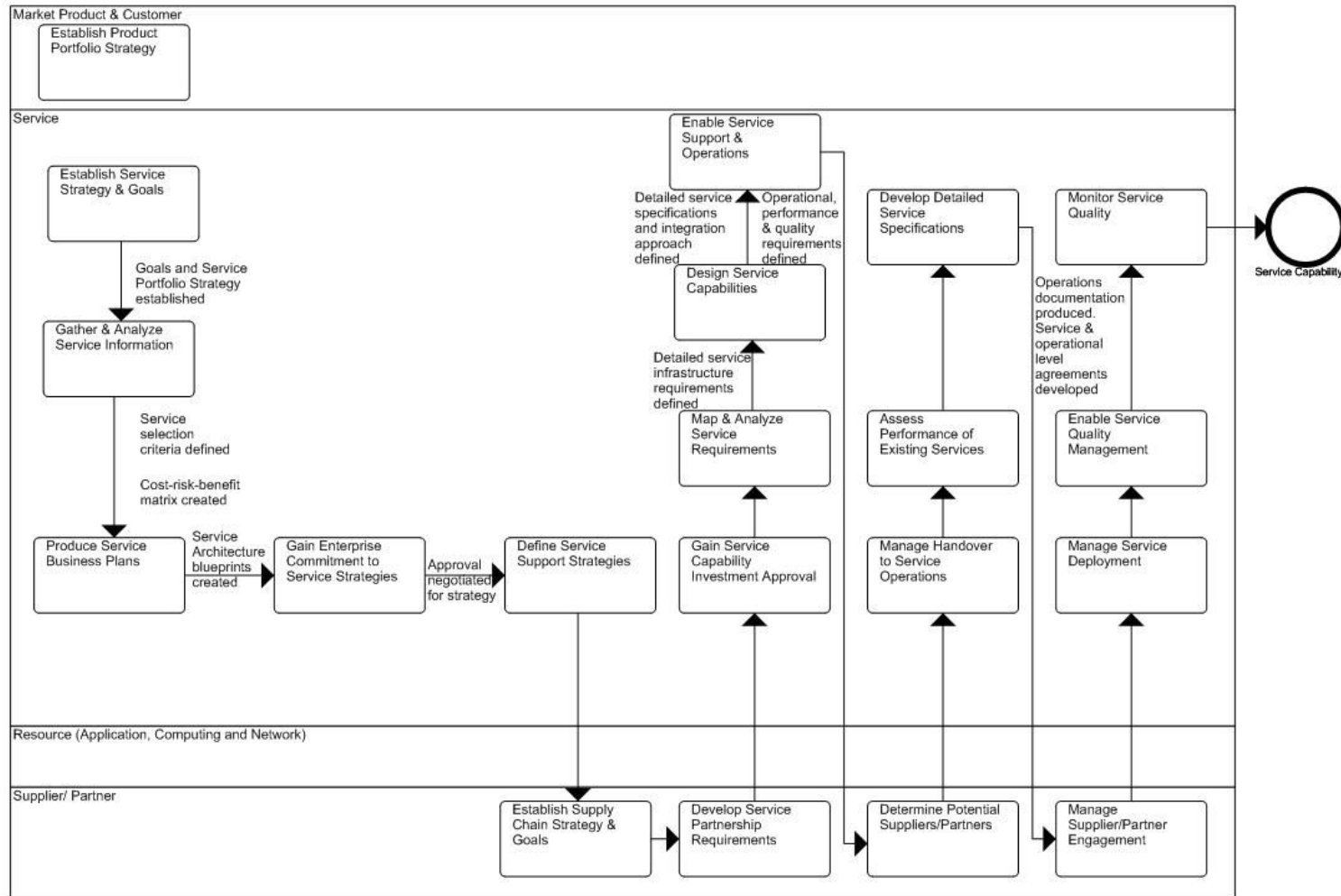
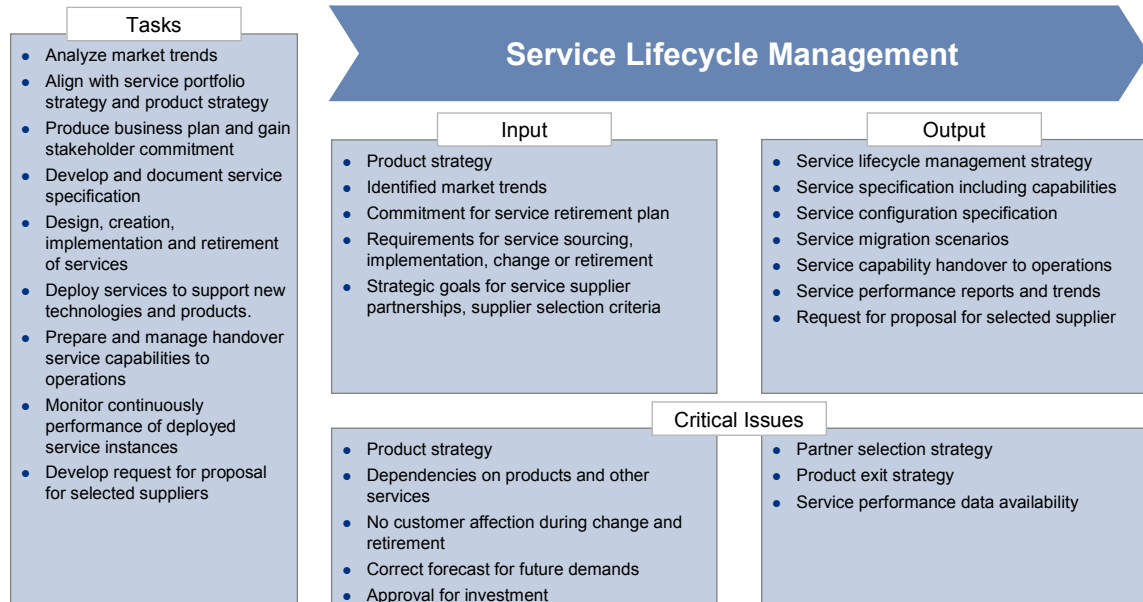


Figure 54: Service Lifecycle Management – Process-Flow (Level 3)

### 3.5.6. Detailed Information



**Figure 55: Service Lifecycle Management – Detailed Information**

## 3.6. Process Flows for Resource Lifecycle Management

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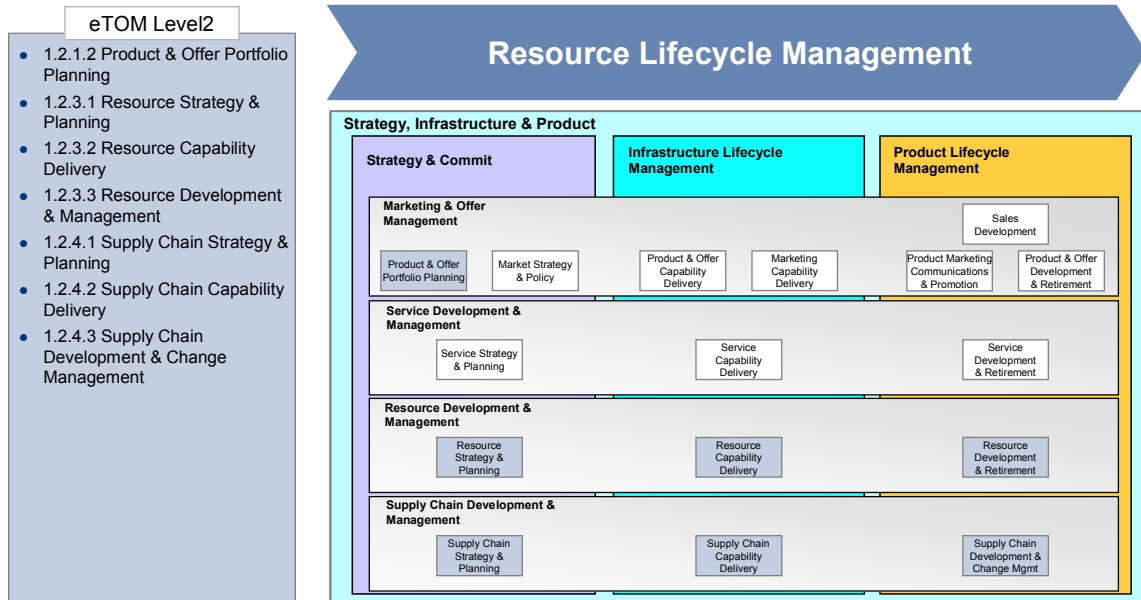
### 3.6.1. Overview

- This process defines, plans, designs and implements all resources in order to support the introduction, operations and retirement of market products.
- The process starts with the evaluation of market trends, resource specific needs and the definition of the resource development and exit strategy.
- This is followed by the creation of the business plan and definition of the resource architecture and other strategic documents.
- The design and development of resource solutions are in line with the strategic goals and required resource capabilities.
- After the implementation and a successful testing phase, the resource is handed over to operations.

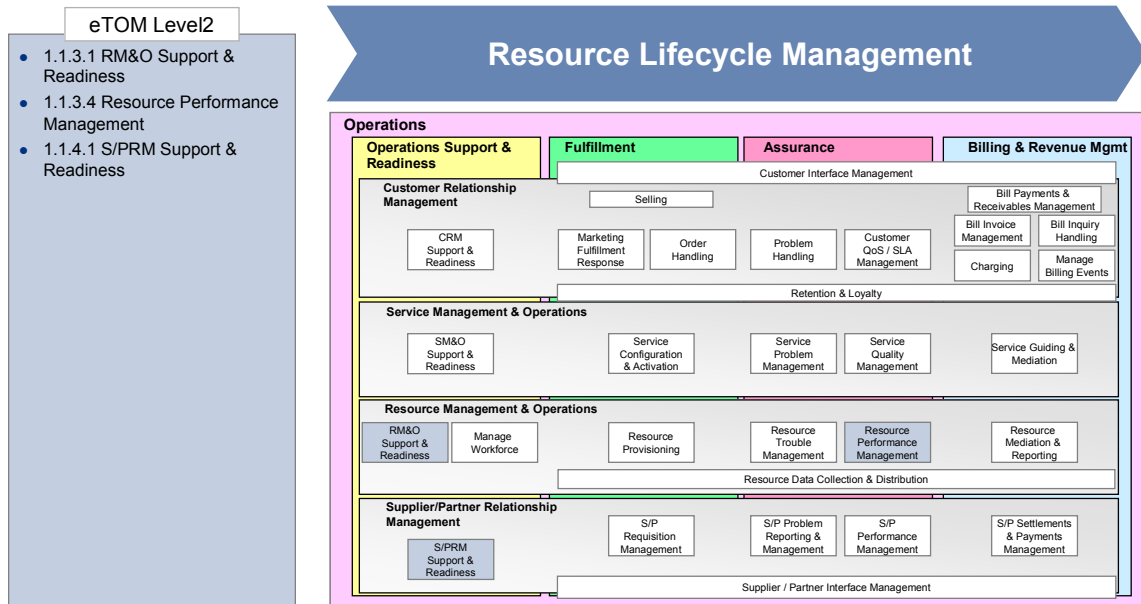
### 3.6.2. Assumptions:

- The product portfolio requirements are defined as per the input from Product Marketing.
- A result of the Resource Lifecycle Process may act as an input for the fulfillment process
- Further results of this scenario are requirements for the capacity management process.
- Direct links between products, services and resources are modeled and stored in the product catalog.
- This scenario does not take into consideration the retirement phase.
- In some cases, migration scenarios are needed.

### 3.6.3. eTOM Mapping



**Figure 56: Resource Lifecycle Management- Mapping on eTOM Level 2 – Strategy**



### 3.6.4. Detailed Process-Flow (Level 3)

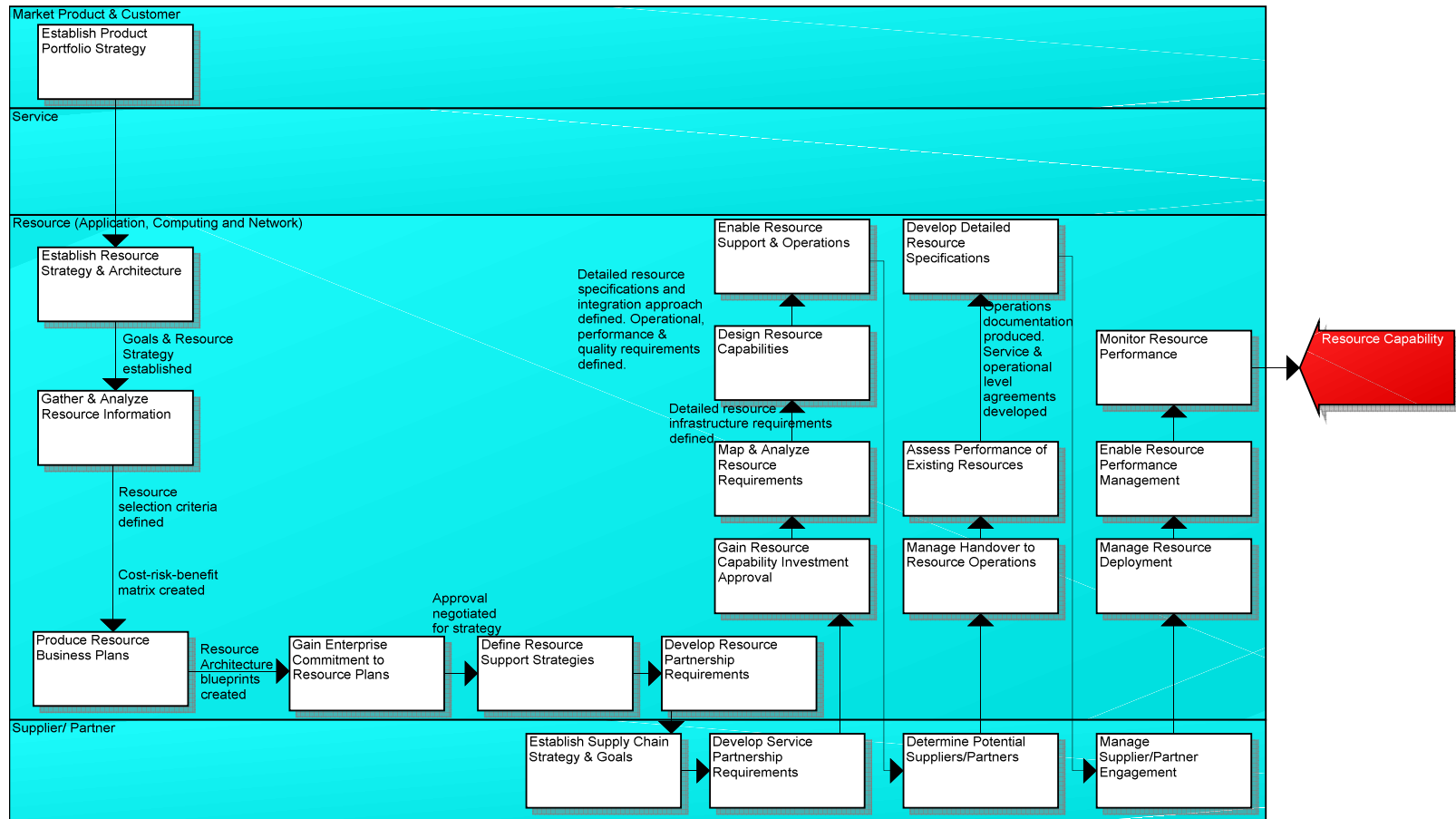


Figure 58: Resource Lifecycle Management – Process-Flow (Level 3)

### 3.6.5. Detailed Process-Flow (Level 3) BPMN

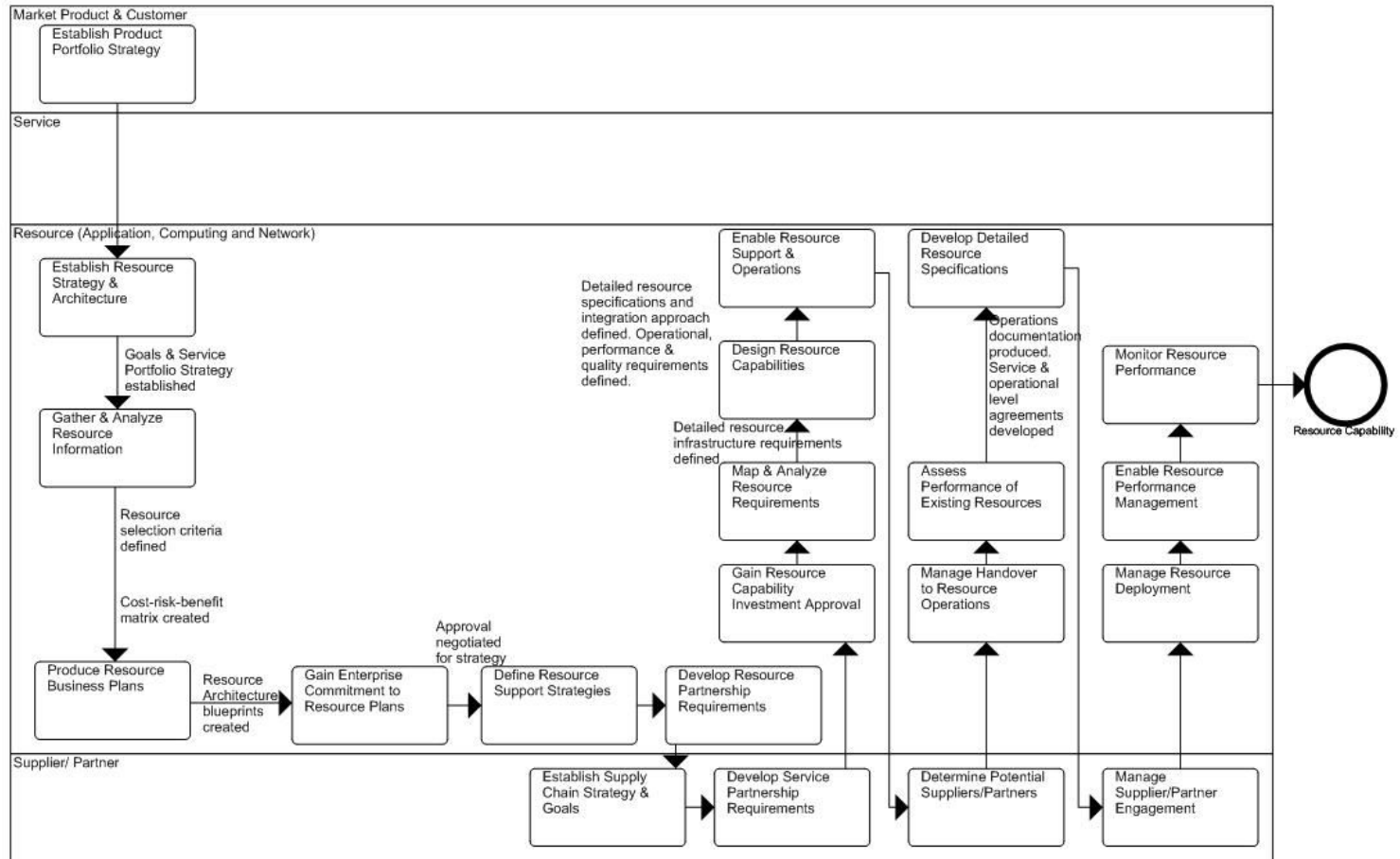
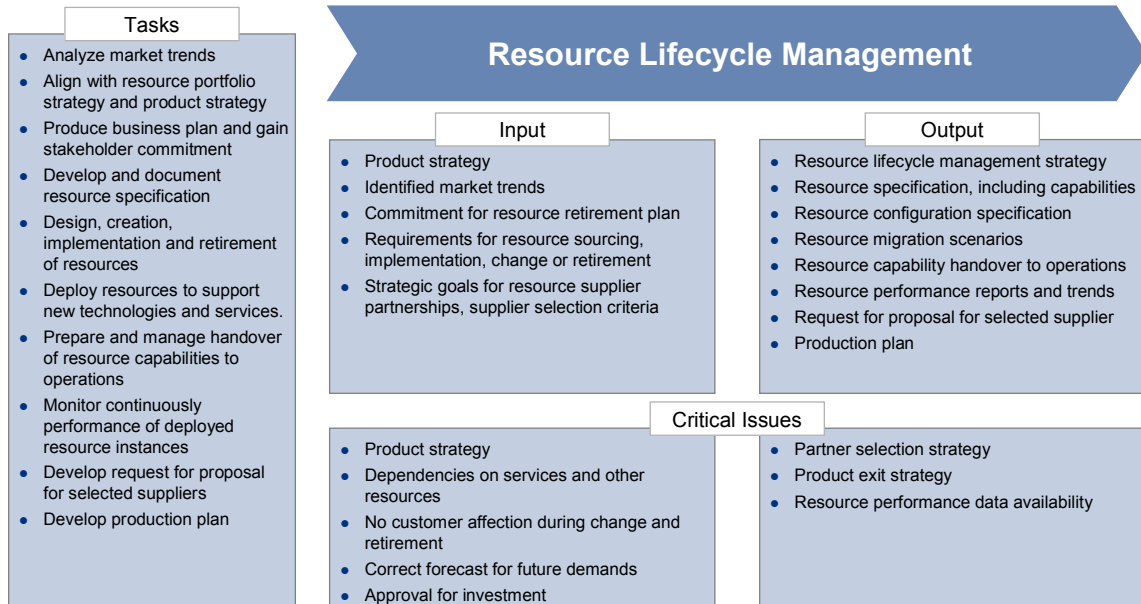


Figure 59: Resource Lifecycle Management – Process-Flow (Level 3)

### 3.6.6. Detailed Information



**Figure 60: Resource Lifecycle Management – Detailed Information**

## 4. Appendix

### 4.1. The Evolution of eTOM Process Flows

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The process flows have been developed over a period of one year by employing a comprehensive methodology for the process design, review and revision cycle. Using a proven process model and Business Process Framework level 3 process elements, TM Forum members have developed recommended process flows for Customer-Centric and Network domains.

The methodology involved using Business Process Framework Level 3 process elements as the basis, and highlighting their inter-linkages to develop end-to-end process flows that are vital for any telecom operator. These process flows are examples and recommendations of the different interfaces between Business Process Framework level 3 process elements, and cannot be considered as the only way of representing the end-to-end scenarios.

The exercise resulted in not only the identification of key steps involved in each end-to-end scenario, but also some areas of improvement within the Business Process Framework. For instance, there are no existing Business Process Framework level 3 process elements for business continuity management, and this presents tremendous opportunities for future enhancements in Business Process Framework.

As far as the process model is concerned, it has been applied in leading telecom providers across the world, particularly in Europe and Middle East. The Customer-Centric and Network domain processes have enabled telecom operators to identify, understand, define and automate key customer-affecting processes. The process model complements Business Process Framework by providing an end-to-end process flow driven view to the different functional groupings.

Although case study input of business process modelling projects with specific clients served as a starting point for the process flows, each process flow has been repeatedly discussed, reviewed and updated within the Business Process Framework working group. Hence, these flows are now viewed as generally applicable and can be used as an example for such teamwork in the future. However, there is not just one right way of modelling these flows, and all Business Process Framework users should modify the linkages between process elements based on their individual perception and needs.

This document currently comprises of Maturity Level 3 process flows, which are TM Forum Business Process Framework team approved and the audience can expect further enhancements to these flows in the future. Ultimately, these flows will be published as part of the Business Process Framework model in the upcoming release.

## 4.2. Document History

### 4.2.1. Version History

Version Number	Date Modified	Modified by:	Description of changes
0.1	15./March /2010	<<Georg Vitt>>	first issue of document
9.0	August 2010	Mike Kelly	Minor formatting and document number updated
9.1	August 2010	Alicja Kawecki	Minor cosmetic corrections for web posting and ME
9.2	December 2010	Mike Kelly	Amendments to reflect comments received, to clarify document as Application Note and to explain terminology
9.3	January 2011	Mike Kelly	Amendment to Appendix to make more generic, and addition of Acknowledgments
9.4	April 2011	Alicja Kawecki	Updated to reflect TM Forum Approved status

### 4.2.1. Release History

Release Number	Date Modified	Modified by:	Description of changes
9.0	August 2010	Mike Kelly (based on document developed by Georg Vitt)	Minor changes to align with detailed GB921 documents.
9.1	December 2010	Mike Kelly	Amendments to reflect comments received, to clarify document as Application Note and to explain terminology

## 4.3. How to comment on this document

Comments and requests for information must be in written form and addressed to the contacts identified below:

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Phone:	+44 1727 863764	
Fax:		

e-mail:	mkelly@tmforum.org	
orGeorg	Vitt	Detecon International GmbH
Phone:	+49 228 7002616	
Fax:		
e-mail:	georg.vitt@detecon.com	

Kindly be specific, since your comments will be dealt with by the team evaluating numerous inputs and is striving to produce a comprehensive document. We are requesting for content-related input. However, editing and structural help will be appreciated if it contributes to the overall clarity of the document.

## Acknowledgments

A number of individuals and companies have contributed to the development of this document, through discussion and suggestions in a series of collaborative reviews and walkthroughs of the process flows.

The TM Forum and the Business Process Framework Team would like to express special thanks to Detecon Int. GmbH for providing the initial input and thought leadership in the development of GB921E.

Those participating in the development include:

Georg Vitt	Detecon (activity lead)
Aamna Alamgir	Detecon (flows editor)
Stefan Nösinger	Detecon
Kevin Scaggs	AT&T (Team Chair)
Robert Bratulic	IBM
Dirk Rejahl	Mediaan
Phillip Williams	BT
Stephen Gehring	Casewise
Antiti Lauila	Nokia
John Wilmes	Progress Software
Wenjie (Jerry) Zhu	Huawei
Francis Anderson	IBM
Jagadish Baddukonda	Wipro

Thanks to all here who attended the discussions or provided input to the flow design and development.