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SERIES M: TELECOMMUNICATION MANAGEMENT, INCLUDING TMN AND NETWORK MAINTENANCE

Telecommunications management network

Enhanced Telecom Operations Map (eTOM) – Process decompositions and descriptions

ITU-T Recommendation M.3050.2

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ITU-T Recommendation M.3050.2

Enhanced Telecom Operations Map (eTOM) –
Process decompositions and descriptions

Summary

ITU-T Recommendations M.3050.x series contain a reference framework for categorizing the business activities that a service provider will use. The Enhanced Telecom Operations Map® (or eTOM for short), which has been developed by the TeleManagement Forum, describes the enterprise processes required by a service provider and analyses them to different levels of detail according to their significance and priority for the business. This business process approach has built on the concepts of management services and functions in order to develop a framework for categorizing all the business activities.

This Recommendation provides further detail concerning the eTOM through definition of the process elements within the eTOM business process framework at several levels of detail.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure e.g. interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at http://www.itu.int/ITU-T/ipr/.

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Enhanced Telecom Operations Map (eTOM) – Process decompositions and descriptions

1 Scope

The Enhanced Telecom Operations Map® (eTOM) [b-TMF GB921] has been developed by the TeleManagement Forum as a reference framework for categorizing all the business activities that a service provider will use.

This Recommendation is part of a series of ITU-T texts dealing with eTOM (Release 7), which has the following structure:

M.3050.0	eTOM – Introduction.
M.3050.1	eTOM – The business process framework. (TMF GB921 Release 7.0.)
M.3050.2	eTOM – Process decompositions and descriptions. (TMF GB921 Addendum D – Release 7.0.)
M.3050.3	eTOM – Representative process flows. (TMF GB921 Addendum F – Release 4.5.)
M.3050.4	eTOM – B2B integration: Using B2B inter-enterprise integration with the eTOM. (TMF GB921 Addendum B – Release 6.1.)
M.3050 Supplement 1	eTOM – An Interim View of and Interpreter's Guide for eTOM and ITIL Practitioners. (TMF GB921 Application Note V – Release 6.0.)
M.3050 Supplement 2	eTOM – Public B2B Business Operations Map (BOM). (TMF GB921 Addendum C – Release 4.)
M.3050 Supplement 3	eTOM to M.3400 mapping.
M.3050 Supplement 4	eTOM – An eTOM Primer (TMF GB921 Addendum P – Release 4.5.).

Additional parts will be published as material becomes available.

This series of ITU-T Recs M.3050.x builds on the management services approach described in [ITU-T M.3010] and [ITU-T M.3200] by developing a business process framework.

This Recommendation provides further detail concerning the eTOM through definition of the process elements within the eTOM business process framework at several levels of detail. It should be read in conjunction with [ITU-T M.3050.1] and other parts of ITU-T Recommendations M.3050.x series.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

[ITU-T M.3010]	ITU-T Recommendation M.3010 (2000), *Principles for a telecommunications management network*.
[ITU-T M.3200]	ITU-T Recommendation M.3200 (1997), *TMN management services and telecommunications managed areas: overview*.

3 Definitions

This Recommendation uses the following term defined elsewhere:

3.1 **eTOM**: [ITU-T M.3050.0].

4 Abbreviations and acronyms

Abbreviations and acronyms used in this Recommendation are defined in [ITU-T M.3050.1].

5 Conventions

It is convenient to illustrate all the level 1 processes within eTOM in a single figure, as in GB921 v4.0. To extend this figure to show all the level 2 processes within each Level 1 process grouping is possible, but is too graphically complex a picture to be used directly. Once level 3 processes are included, a single figure becomes quite impractical. In this Recommendation, each level 1 process grouping is therefore shown in isolation, with its dependant level 2 processes and, where available, level 3 processes. It is to be understood that the aggregation of all these level 2 processes, within the overall eTOM structure, represents the totality of the level 2 processes within the eTOM. Similarly, the aggregation of all component level 3 processes, within their "parent" level 2 process, represents the totality of that level 2 process, and this pattern is repeated as further levels of decomposition are exposed.

Note that the process decomposition diagrams used in this Recommendation can include black dots within some of the process boxes. These are not graphical errors, but are inserted automatically by a process-modelling tool to indicate that a further decomposition of that process has been made in the tool.

To aid understanding, each level 2 and level 3 process described here has an associated indication of its positioning within the particular vertical and horizontal level 1 process with which it is associated. For example, CRM operations support and process management (shown under customer relationship management level 2 process descriptions, below) has the indication (CRM-OSR) to indicate it is within the horizontal customer relationship management process, and the vertical operations support and readiness process.

Processes have been given a process IDs throughout this Recommendation. The format of the numbering scheme work as follow:

aaaaaa.b.XXXX.c.d.e, where:

aaaaaa: This will represent a company-specific number. The eTOM team recognizes the need for a company-specific identifier but has not yet decided upon one specific format (this is for further study). This field is used to prefix the process ID so that individual companies may extend and/or change the processes, and to identify the changes with a company specific identifier.

b: This digit is used to identify the originator of the process. It is set to 1 if the process is the TMF original one, to 2 otherwise.

XXXX: These letters (up to 4 letters) are used to identify level 1 vertical end-to-end processes in the operations and strategy infrastructure and product areas, or the enterprise management area. They are set as follows:

- S for strategy and commit;
- I for infrastructure lifecycle management;
- P for product lifecycle management;
- O for operations support and readiness;
- F for fulfilment;

- A for assurance;
- B for billing;
- E for enterprise management.

Note that for processes spanning more than one vertical process, the combination of letters representing those vertical processes is used (for example, "customer interface management" uses FAB).

c: Digit representing level 1 process.

d: Digit representing level 2 process.

e: Digit representing level 3 process.

Clauses have been numbered throughout this Recommendation to assist in locating individual processes.

6   Introduction

In [ITU-T M.3050.1], the overall eTOM business process framework was described. In addition, brief descriptions of the level 1 process groupings of the eTOM business process framework were provided. This Recommendation provides the level 2 decompositions and descriptions for each of these high-level process groupings. Each horizontal and vertical level 1 process grouping is shown with its constituent level 2 processes, and brief process descriptions are provided for level 2 processes in each of the major process areas: operations (OPS); strategy, infrastructure and product (SIP); and enterprise management.

This Recommendation is organized using the horizontal functional process groupings as the prime categorization for the SIP and OPS process areas. The enterprise process groupings are considered individually.

In addition, level 3 decompositions and descriptions are provided for level 2 processes within the operations (OPS) area of eTOM. The processes that have been decomposed are those within the customer relationship management (CRM), the service management and operations (SM&O), the resource management and operations (RM&O) and the supplier/partner relationship management (S/PRM) level 1 process areas.

In the eTOM release 3.6, a tentative structure was proposed for operations support and readiness (OSR) vertical end-end process grouping within the operation process area, and several processes from OSR had been redistributed in the enterprise management area. In this release, after further analysis and comment, the enterprise management area processes and the strategy, infrastructure and product (SIP) area processes have been revised and reorganized.

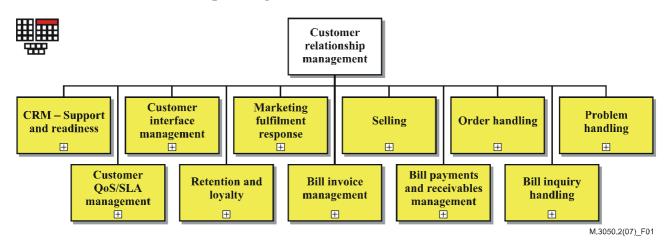# 7 Operations level 2 and level 3 processes

7.1 Customer relationship management

Figure 1 – Customer relationship management decomposition into level 2 processes

Customer relationship management

Process identifier: 1.1.1.

Brief description

This horizontal functional process grouping considers the fundamental knowledge of customers' needs and includes all functionalities necessary for the acquisition, enhancement and retention of a relationship with a customer.

Extended description

This horizontal functional process grouping considers the fundamental knowledge of customers' needs and includes all functionalities necessary for the acquisition, enhancement and retention of a relationship with a customer. It is about customer service and support, whether storefront, telephone, web or field service. It is also about retention management, cross-selling, up-selling and direct marketing for the purpose of selling to customers. CRM also includes the collection of customer information and its application to personalize, customize and integrate delivery of service to a customer, as well as to identify opportunities for increasing the value of the customer to the enterprise.

CRM applies to both conventional retail customer interactions, as well as to wholesale interactions, such as when an enterprise is selling to another enterprise that is acting as the retailer. CRM makes no distinction between manual or automated interactions with customers, nor whether interactions are by paper, telephone, web-based transactions or some other alternative arrangement.

CRM – Support and readiness

Process identifier: 1.1.1.1.

Brief description

CRM support and readiness processes manage classes of products, ensuring that all CRM processes in fulfilment, assurance and billing are supported and able to manage interactions with customers promptly and efficiently.

Extended description

CRM support and readiness processes ensure the support capability is in place to allow the CRM fulfilment, assurance and billing processes to operate effectively. The support capability covers infrastructure to support customers and customer interactions, sales activity and product offerings, and for monitoring and reporting on the capabilities and costs of the individual CRM FAB processes. They undertake longer-term trend analysis on product classes in order to establish the extent to which enterprise targets for these product classes are being achieved. These processes support the operational introduction of new product classes and of additional features and enhancements to existing product classes, and are responsible for conducting operations readiness testing and acceptance. They develop the procedures for the specific fulfilment, assurance and billing processes and keep them up to date. After successful testing, these processes accept the new or enhanced product class and perform a full-scale introduction for general availability.

Customer interface management

Process identifier: 1.1.1.2.

Brief description

Managing all interfaces between the enterprise and potential and existing customers.

Extended description

Customer interface management processes are responsible for managing all interfaces between the enterprise and potential and existing customers. They deal with contact management, understanding the reason for contact, directing customer contacts to the appropriate process, contact closure, exception management, contact results analysis and reporting. CRM contact may be related to one or several of service fulfilment, service assurance (service quality management and trouble or problem management) and billing related customer enquiries or contacts.

Marketing fulfilment response

Process identifier: 1.1.1.3.

Brief description

Responsible for the issue and distribution of marketing collateral directly to a customer and the subsequent tracking of resultant leads.

Extended description

Marketing fulfilment response processes are responsible for the issue and distribution of marketing collateral (i.e., coupon, premium, sample, toys, fliers, etc.) directly to a customer and the subsequent tracking of resultant leads. These processes include campaign management activities from lead generation to product and literature fulfilment, and hand-off of leads to the selling processes.

Selling

Process identifier: 1.1.1.4.

Brief description

Responsible for managing prospective customers, for qualifying and educating customers and matching customer expectations.

Extended description

Selling processes are responsible for managing prospective customers, for the qualification and education of the customer and for matching customer expectations to the enterprise's products and services and ability to deliver. These processes also manage the response to customer RFPs.

Order handling

Process identifier: 1.1.1.5.

Brief description

Responsible for accepting and issuing orders.

Extended description

Order handling processes are responsible for accepting and issuing orders. They deal with pre-order feasibility determination, credit authorization, order issuance, order status and tracking, customer update on order activities and customer notification on order completion. Responsibilities of the order handling processes include, but are not limited to:

- issuing new customer orders, modifying open customer orders or cancelling open customer orders;
- verifying whether specific non-standard offerings sought by customers are feasible and supportable;
- checking the credit worthiness of customers as part of the customer order process;
- testing the completed offering to ensure it is working correctly;
- updating of the customer inventory database to reflect that the specific product offering has been allocated, modified or cancelled;
- assigning and tracking customer provisioning activities;
- managing customer provisioning jeopardy conditions; and
- reporting progress on customer orders to customer and other processes.

Problem handling

Process identifier: 1.1.1.6.

Brief description

Responsible for receiving trouble reports from customers, resolving them to the customer's satisfaction and providing meaningful status on repair and/or restoration activity to the customer.

Extended description

Problem handling processes are responsible for the management of problems reported by customers and associated with purchased product offerings. The objective of these processes is to receive reports from customers, resolving them to the customer's satisfaction and providing meaningful status on repair and/or recovery activity to the customer. They are also responsible for customer contact and support in relation to any customer-affecting problems detected by other processes or through analysis, including proactively informing the customer and resolving these specific problems to the customer's satisfaction.

Responsibilities of the problem handling processes include, but are not limited to:

- capturing, analysing, managing and reporting on customer-reported problems associated with purchased product offerings;
- initiating and managing customer problem reports;
- correcting customer problems;

- reporting progress on customer problem reports to customer and other processes;
- assigning and tracking customer problem recovery activities; and
- managing customer problem jeopardy conditions.

Problem handling processes perform analysis, decide on the appropriate actions/responses and carry them out with the intent of restoring normal operation on specific purchased product offerings.

Customer QoS/SLA management

Process identifier: 1.1.1.7.

Brief description

Monitoring, managing and reporting of delivered vs contractual quality of service (QoS), as defined in the enterprise's service descriptions, customer contracts or product catalogue.

Extended description

Customer QoS/SLA management processes encompass monitoring, managing and reporting of delivered vs contractual quality of service (QoS), as defined in the enterprise's service descriptions, customer contracts or the catalogue of product offerings. They are also concerned with the performance of the enterprise and its products in relation to its service level agreements (SLAs) for specific product instances, and other service-related documents. They include operational parameters such as resource performance and availability, but also encompass performance across all of a product's contractual or regulatory parameters, e.g., percentage completion on time for order requests, time to repair commitments, customer contact performance. Failure to meet a contracted SLA may lead to billing adjustments, which are handled by billing and collections management.

Billing and collections management

Process identifier: 1.1.1.8 (this process ID has been deliberately unused).

Brief description

[Not available].

Extended description

[Not available].

Retention and loyalty

Process identifier: 1.1.1.9.

Brief description

Manage all functionalities related to the retention of acquired customers and the use of loyalty schemes in the potential acquisition of customers.

Extended description

Retention and loyalty processes deal with all functionalities related to the retention of acquired customers and the use of loyalty schemes in the potential acquisition of customers. They establish a complete understanding of the needs of the customer, a determination of the value of the customer to the enterprise, determination of opportunities and risks for specific customers, etc. These processes collect and analyse data from all enterprise and customer contact.

Bill invoice management

Process identifier: 1.1.1.10.

Brief description

Ensure the bill invoice is created, physically and/or electronically produced, and distributed to customers, and that the appropriate taxes, discounts, adjustments, rebates and credits for the products and services delivered to customers have been applied.

Extended description

Bill invoice management processes ensure the bill invoice is created, physically and/or electronically produced, and distributed to customers, and that the appropriate taxes, discounts, adjustments, rebates and credits for the products and services delivered to customers have been applied. These processes are accountable for assuring that enterprise revenue is billed and invoices delivered appropriately to customers.

These processes are responsible for, but not limited to:

• establishment and application of taxes and charges to the services delivered to customers;

• application of the adjustment (adjustment decision done in bill inquiry handling);

• creation of accurate bill invoices including all adjustments, rebates, discounts, credits, etc.;

• production and distribution of bills in physical and/or electronic form to customers in accordance with the billing cycle;

• forecasting of physical resources associated with bill production, such as paper and envelope quantities;

• alignment and management of promotional material insertion into distributed bills; and

• establishment and management of third party arrangements to support bill invoice generation, production and distribution.

Bill payments and receivables management

Process identifier: 1.1.1.11.

Brief description

Ensure that enterprise revenue is collected through pre-established collection channels and put in place procedures to recover past due payments.

Extended description

The purpose of the bill payments and receivables management processes is to ensure that enterprise revenue is collected through pre-established collection channels and put in place procedures to recover past due payments. These processes are responsible for managing customer's billing accounts, processing their payments, performing payment collections and monitoring the status of the account balance.

These processes are responsible for, but not limited to:

• establishment and management of customer payment processes and channels;

• establishment and management of debt collection processes; and

• establishment and management of third party arrangements to support collection and recovery of past due payments.

Bill inquiry handling
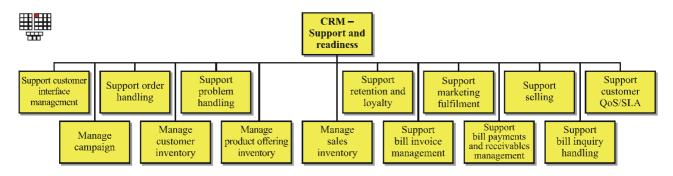
Process identifier: 1.1.1.12.

Brief description

Ensure the timely and effective fulfilment of all customer bill inquiries and complaints.

Extended description

The purpose of bill inquiry handling processes is to ensure the timely and effective fulfilment of all customer bill inquiries and complaints. This process is responsible for managing customer interaction as it relates to a customer's billing relationship to a service provider. This includes the creation of inquiries against the customer's billing account(s), and management of changes to customer billing account structure and details, the managing of all customer bill inquiry lifecycles, reporting changes and updates, and closing of customer bill inquiries when all activities are accomplished. This process can be viewed via traditional means, with a service representative managing the customer or via e-business means. In the latter case, inquiries, complaints and changes to details would be handled via electronic media without the intervention of a representative.

7.1.1   CRM – Support and readiness

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Figure 2 – CRM support and readiness decomposition into level 3 processes

CRM – Support and readiness

Process identifier: 1.1.1.1.

Brief description

CRM support and readiness processes manage classes of products, ensuring that all CRM processes in fulfilment, assurance and billing are supported and able to manage interactions with customers promptly and efficiently.

Extended description

CRM support and readiness processes ensure the support capability is in place to allow the CRM fulfilment, assurance and billing processes to operate effectively. The support capability covers infrastructure to support customers and customer interactions, sales activity and product offerings, and for monitoring and reporting on the capabilities and costs of the individual CRM FAB processes. They undertake longer-term trend analysis on product classes in order to establish the extent to which enterprise targets for these product classes are being achieved. These processes support the operational introduction of new product classes and of additional features and enhancements to existing product classes, and are responsible for conducting operations readiness testing and acceptance. They develop the procedures for the specific fulfilment, assurance and

billing processes and keep them up to date. After successful testing, these processes accept the new or enhanced product class and perform a full-scale introduction for general availability.

Support customer interface management

Process identifier: 1.1.1.1.1.

Brief description

Ensure that all information, materials, systems and resources are available so that the customer interface management processes can operate effectively when contact with a customer occurs.

Extended description

The purpose of the support customer interface management processes is to ensure that there is capability (for example, information, materials, systems and resources) so that the customer interface management processes can operate effectively when contact with a customer occurs. Examples include information on how to handle unusual requests based on temporary situations, systems needed to accept and track customer contacts, requests for the provisioning of additional resources where it has been identified that current levels will impact on timely contact handling.

These processes are responsible for implementing generic and specific changes to customer interfaces. This support could be in updating agent scripts, IVR announcements, web pages, etc. Customer interface support processes keep up to date all information concerning customers. These processes undertake trend analysis on customer contacts, e.g., type, frequency, duration, outcome.

Support order handling

Process identifier: 1.1.1.1.2.

Brief description

Ensure that new and/or modified order handling related infrastructure is deployed effectively, and to ensure that order handling processes can operate effectively.

Extended description

The purpose of the support order handling processes is twofold – to ensure that new and/or modified order handling related infrastructure is deployed effectively and to ensure that order handling processes can operate effectively.

For the order handling processes, the role of the support order handling processes is to make sure that there is sufficient process capacity and capability (for example, information, materials, systems and resources) so that the order handling processes can operate effectively. Examples include information on how to process orders for specific product offerings, information needed to carry out designs, materials needed to confirm customer order requests, systems needed to validate product offering availability.

The responsibilities of these processes include, but are not limited to:

• forecasting, at an operational level, customer order handling volume requirements;

• the capacity planning associated with the deployment of new and/or modified customer order handling infrastructure;

• establishment and monitoring of organizational arrangements to support deployment and operation of new and/or modified customer order handling infrastructure;

• creation, deployment, modification and/or upgrading of customer order handling infrastructure deployment support tools (including customer inventory and product offer inventory) and processes for new and/or modified customer order handling infrastructure;

- authoring, reviewing and approving operational procedures developed by marketing and offer management processes prior to customer order handling infrastructure deployment;
- the testing and acceptance of new and/or modified customer order handling infrastructure as part of the handover procedure from the marketing and offer management processes to operations;
- detecting customer order handling infrastructure operational limitations and/or deployment incompatibilities and providing requirements to address these aspects to marketing and offer management processes;
- coordination and roll-out, in accordance with approved plans, of the approved new and/or modified customer order handling infrastructure;
- monitoring capacity utilization of deployed customer order handling infrastructure to provide early detection of potential customer order handling infrastructure shortfalls;
- reconfiguration and re-arrangement of under-utilized deployed customer order handling infrastructure;
- managing recovery and/or removal of obsolete or unviable customer order handling infrastructure;
- reporting on deployed customer order handling infrastructure capacity;
- tracking and monitoring of the customer order handling infrastructure deployment processes and costs (including where customer order handling infrastructure is deployed and managed by third parties);
- reporting on the capability of the customer order handling infrastructure deployment processes; and
- establishing and managing customer order handling notification facilities and lists to support the order handling notification and reporting processes.

The processes undertake trend analysis on order handling, such as time taken to complete a customer order, frequency and type of order handling process issues involved, and cancelled orders.

Support problem handling

Process identifier: 1.1.1.1.3.

Brief description

Assist problem handling processes by proactively undertaking statistically driven preventative and scheduled purchased product offering maintenance activities and monitoring, managing and reporting on the capability of the problem handling processes.

Extended description

The responsibilities of the support problem handling processes are twofold – assist problem handling processes by proactively undertaking statistically driven preventative and scheduled purchased product offering maintenance activities and monitoring, managing and reporting on the capability of the problem handling processes.

These processes are responsible for ensuring that the purchased product offerings are working effectively and efficiently.

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

- extracting and analysing, including undertaking trend analysis, historical and current customer problem reports and performance reports to identify potential customer purchased product offerings requiring proactive maintenance and/or replacement;

- requesting scheduling of additional customer purchased product offering data collection to assist in the analysis activity;
- requesting scheduling of customer purchased product offering performance testing to assist in analysis activity;
- developing and managing customer purchased product offering proactive maintenance programmes;
- requesting customer provisioning activity to prevent anticipated customer problems associated with purchased product offerings identified in the analysis activities;
- reporting outcomes of trend analysis to market and offer management processes to influence new and/or modified customer product offering development;
- tracking and monitoring of the problem handling processes and associated costs (including where customer infrastructure is deployed and managed by third parties), and reporting on the capability of the problem handling processes; and
- establishing and managing customer problem notification facilities and lists to support the problem handling notification and reporting processes.

These processes undertake trend analysis on problem handling.

Support billing and collections

Process identifier: 1.1.1.1.4 (this process ID has been deliberately unused).

Brief description

[Not available].

Extended description

[Not available].

Support retention and loyalty

Process identifier: 1.1.1.1.5.

Brief description

Ensure that all information, materials, systems and resources are available so that the retention and loyalty processes can be completed without delay when a request is received from a customer.

Extended description

The purpose of the support retention and loyalty processes is to make sure that there is capability (for example, information, materials, systems and resources) so that the retention and loyalty processes can operate effectively. Examples include information on current requests for analysis and collection of customer profile information, materials needed to analyse customer retention and loyalty information, systems needed to analyse customer retention and loyalty information, requests for the provisioning of additional resources where it has been identified that current levels will impact on timely retention and loyalty information collection and delivery. These processes undertake trend analysis on retention and loyalty, including customer acquisitions and churn, and the effectiveness of loyalty schemes.

Support marketing fulfilment

Process identifier: 1.1.1.1.6.

Brief description

Ensure that there is capability to support the expected demand for the marketing fulfilment response processes so that they can operate effectively.

Extended description

The purpose of the support marketing fulfilment processes is to ensure that there is capability (for example, information, materials, systems and resources) so that the marketing fulfilment response processes can operate effectively. These processes monitor planned product launches and current marketing fulfilment activity, then redistribute existing capability or enable new capability (people, facilities, infrastructure). These processes undertake trend analysis on marketing, including problems occurring and launch effectiveness.

Support selling

Process identifier: 1.1.1.1.7.

Brief description

Ensure capability to support the expected demand for the selling processes so that they can respond to customers according to agreed targets.

Extended description

The purpose of the support selling processes is to ensure that there is capability (for example, information, materials, systems and resources) to support the selling processes so that they can operate effectively. These processes monitor planned marketing campaigns and current selling trends, then redistribute existing capability or enable new capability (people, facilities, infrastructure).

Support selling processes deal with the administration of the selling processes and the effectiveness of the channels to support new and existing products, as well as existing and potential customers. The processes ensure the effectiveness of the sales staff and channels both in terms of skill sets available, but also in terms of demand forecasting and management of utilization.

Support selling works in concert with all other marketing processes to determine the appropriate selling route or channel, and the required selling method and mechanism for specific market segments and channels, by product or product family, e.g., face-to-face contact, telemarketing, etc.

The support selling processes manage the processes associated with distribution of the enterprise's products (but they are, however, not responsible for day-to-day product distribution and logistics of product shipping and supply). Channels may be retail storefronts, e.g., a third-party retailer or an enterprise's own storefront, various web sites or ISPs, B2B marketplaces or direct relationships with external parties, distributors for that product family, etc. These processes undertake trend analysis on selling, including problems, successes, profit and loss.

Support customer QoS/SLA

Process identifier: 1.1.1.1.8.

Brief description

These support customer QoS/SLA management processes by proactively monitoring and assessing the performance of purchased product offerings as a group against agreed QoS/SLA parameters, and monitoring, managing and reporting on the capability of the customer QoS/SLA management processes.

Extended description

The responsibilities of the support customer QoS/SLA management processes are twofold – support customer QoS/SLA management processes by proactively monitoring and assessing the performance of purchased product offerings as a group against agreed QoS/SLA parameters, and monitoring, managing and reporting on the capability of the customer QoS/SLA management processes.

Proactive management is undertaken using a range of performance parameters, whether technical, time, economic or process related.

The responsibilities of the processes include, but are not limited to:

- undertaking proactive monitoring regimes of groups of similar purchased product offerings as required to ensure ongoing performance within agreed parameters over time;
- developing and maintaining, in the product offering repository, acceptable and/or commercially agreed performance threshold standards for purchased product offerings to support the customer QoS/SLA management processes;
- undertaking trend analysis, and producing reports, of the QoS performance of groups of like purchased product offerings to identify any longer term deterioration;
- monitoring and analysing the purchased product offering performance analyses produced by the customer QoS/SLA management processes to identify problems that may be applicable to purchased product offerings as a whole;
- aggregate analysis of QoS performance across groups of customers or aggregate analysis of SLA types;
- sourcing details relating to purchased product offerings performance and analysis from the product offering inventory to assist in the development of trend analyses;
- logging the results of the analysis into the product offering inventory repository;
- establishing and managing facilities to inform customers of, and negotiate agreement for, planned service outages;
- tracking and monitoring of the customer QoS/SLA management processes and associated costs, and reporting on the capability of the customer QoS/SLA management processes;
- establishing and managing customer notification facilities and lists to support the customer QoS/SLA management notification and reporting processes; and
- supporting the support customer QoS/SLA management process.

Support bill inquiry handling

Process identifier: 1.1.1.1.15.

Brief description

Ensure that all information, systems and resources are available so that the bill inquiry handling processes can be completed without delay.

Extended description

The purpose of the support bill inquiry handling processes is to make sure that there is capability (for example, information, systems and resources) so that the bill inquiry handling processes can operate effectively. Examples include information on how to respond to current billing issues being raised by customers, systems needed to create customer bill inquiry and complaint reports, requests for provisioning of additional resources where it has been identified that current levels will impact on timely billing complaint handling.

These processes are responsible for managing billing policies associated with customer billing dispute settlements.

These processes undertake trend analysis on billing queries and complaints.

Manage campaign

Process identifier: 1.1.1.1.9.

Brief description

Manage individual marketing campaigns developed by product marketing communications and promotion processes.

Extended description

The purpose of the manage campaign processes is to manage individual marketing campaigns developed by product marketing communications and promotion processes. These processes monitor and undertake trend analysis on the effectiveness of the campaigns, make modifications and report results. Manage campaign processes ensure that marketing fulfilment response is staffed, trained and equipped appropriately to support the specific campaign, whether direct mail, TV ad, etc.

Manage customer inventory

Process identifier: 1.1.1.1.10.

Brief description

Establish, manage and administer the enterprise's customer inventory, as embodied in the customer inventory database, and monitor and report on the usage and access to the customer inventory, and the quality of the data maintained in it.

Extended description

The purpose of the manage customer inventory processes are twofold – establish, manage and administer the enterprise's customer inventory, as embodied in the customer inventory database, and monitor and report on the usage and access to the customer inventory, and the quality of the data maintained in it.

The customer inventory maintains records of all customers, their interactions with the enterprise, and any other customer-related information, required to support CRM and other processes.

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

- identifying the inventory-relevant information requirements to be captured for customers;
- identifying, establishing and maintaining customer inventory repository facilities;
- establishing and managing the customer inventory management and information capture processes;
- managing the registration and access control processes that enable processes to create, modify, update, delete and/or download customer data to and from the customer inventory;
- ensuring the customer inventory repository accurately captures and records all identified customer details, through use of automated or manual audits;
- tracking and monitoring of the usage of, and access to, the customer inventory repository and associated costs, and reporting on the findings; and
- identifying any technical driven shortcomings of the customer inventory repository, and providing input to resource development and management processes to rectify these issues.

Manage product offering inventory

Process identifier: 1.1.1.1.11.

Brief description

Establish, manage and administer the enterprise's product offering inventory, as embodied in the product offering inventory database, and monitor and report on the usage and access to the product offering inventory, and the quality of the data maintained in it.

Extended description

The purpose of the manage product offering inventory processes are twofold – establish, manage and administer the enterprise's product offering inventory, as embodied in the product offering inventory database, and monitor and report on the usage and access to the product offering inventory, and the quality of the data maintained in it.

The product offering inventory maintains records of all product offerings, their interactions with the enterprise, and any other product offering-related information required to support CRM and other processes.

The product offering inventory is also responsible for maintaining the association between customers and purchased product offering instances, created as a result of the order handling processes.

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

- identifying the inventory-relevant information requirements to be captured for product offerings;

- identifying, establishing and maintaining product offering inventory repository facilities;

- establishing and managing the product offering inventory management and information capture processes;

- managing the registration and access control processes that enable processes to create, modify, update, delete and/or download product offering data to and from the product offering inventory;

- ensuring the product offering inventory repository accurately captures and records all identified product offering details, through use of automated or manual audits;

- tracking and monitoring of the usage of, and access to, the product offering inventory repository and associated costs, and reporting on the findings; and

- identifying any technical driven shortcomings of the product offering inventory repository, and providing input to resource development and management processes to rectify these issues.

Manage sales inventory

Process identifier: 1.1.1.1.12.

Brief description

Establish, manage and administer the enterprise's sales prospects, actual sales, channel management and sales commissions, as embodied in the sales inventory database, and monitor and report on the usage and access to the sales inventory, and the quality of the data maintained in it.

Extended description

The purpose of the manage sales inventory processes are twofold – establish, manage and administer the enterprise's sales prospects, actual sales, channel management and sales commissions, as embodied in the sales inventory database, and monitor and report on the usage and access to the sales inventory, and the quality of the data maintained in it.

The sales inventory maintains records of all sales and sales leads, channel activity, sales commissions and any other sales-related information, required to support the selling processes.

The sales inventory is also responsible for maintaining the association between customers and sales instances, created as a result of the selling processes.

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

• Identifying the inventory-relevant information requirements to be captured for sales processes and sales commission management;

• Identifying, establishing and maintaining sales inventory repository facilities;

• Establishing and managing the sales inventory management and information capture processes;

• Managing the registration and access control processes that enable processes to create, modify, update, delete and/or download sales data to and from the sales inventory;

• Ensuring the sales inventory repository accurately captures and records all identified sales details, through use of automated or manual audits;

• tracking and monitoring of the usage of, and access to, the sales inventory repository and associated costs, and reporting on the findings; and

• identifying any technical driven shortcomings of the sales inventory repository, and providing input to resource development and management processes to rectify these issues.

Support bill invoice management

Process identifier: 1.1.1.1.13.

Brief description

Ensure that all information, materials, systems and resources are available so that the bill invoice management processes can be completed without delay.

Extended description

The purpose of the support bill invoice management processes is to make sure that there is capability (for example, information, materials, systems and resources) so that the bill invoice management processes can operate effectively. Examples include information needed to generate invoices such as taxes, charges, prices, etc., information needed to deliver bills to customers such as address formats and post/zip code structures, systems needed to create bills, requests for provisioning of additional resources where it has been identified that current levels will impact on timely bill preparation.

Where a commercial agreement has been established with a customer to present a billing invoice in a particular customer specific format, these processes are responsible for establishing and maintaining the customer specific billing invoice formats, and any interaction with specific customers to modify the format.

These processes maintain lists of customers who are eligible for receiving bills in electronic format, and maintain the form of electronic format to be used on a customer basis.

Support bill invoice management processes define the billing cycles and respective dates according to cash flow needs, as established by financial management processes.

These processes undertake trend analysis on invoice generation, production and distribution issues, including volume per billing cycle.

Support bill payments and receivables management

Process identifier: 1.1.1.1.14.

Brief description

Ensure that all information and systems are available so that the bill payments and receivables management processes can be completed without delay.

Extended description

The purpose of the support bill payments and receivables management processes is to make sure that there is capability (for example, established collection channels, information and systems) so that the bill payments and receivables management processes can operate effectively. Examples include collection channels capable of processing customer bill payments, information on payments done by customers, systems needed to process the payments and make the customer bill account balance.

These processes undertake trend analysis on customer billing debts, and alerting when pre-determined thresholds tend to be exceeded.
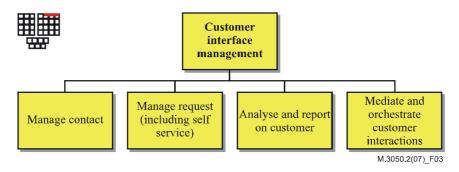
7.1.2 Customer interface management

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Figure 3 – Customer interface management decomposition into level 3 processes

Customer Interface Management

Process identifier: 1.1.1.2.

Brief description

Managing all interfaces between the enterprise and potential and existing customers.

Extended description

Customer interface management processes are responsible for managing all interfaces between the enterprise and potential and existing customers. They deal with contact management, understanding the reason for contact, directing customer contacts to the appropriate process, contact closure, exception management, contact results analysis and reporting. CRM contact may be related to one or several of service fulfilment, service assurance (service quality management and trouble or problem management) and billing related customer enquiries or contacts.

Manage contact

Process identifier: 1.1.1.2.1.

Brief description

Manage all contacts/requests between potential or existing customers and the enterprise.

Extended description

The purpose of this process is to manage all contacts between potential or existing customers and the enterprise. It deals with the identification of the contact, its development, enhancement and update.

Manage request (including self service)

Process identifier: 1.1.1.2.2.

Brief description

Manage all requests (inbound and outbound) made by potential and existing customers.

Extended description

The purpose of this process is to manage all requests (inbound and outbound) made by potential and existing customers. It receives the request and either enables its originator to automatically fulfil it, or identifies and activates the opportune process to accomplish the request; it manages the status of the request and is able to provide status information at any moment in which the request is active; it formally closes the request when all related activities have been terminated.

Analyse and report on customer

Process identifier: 1.1.1.2.3.

Brief description

Perform all necessary analysis on closed requests and on customer contacts and generate related reports.

Extended description

The purpose of this process is to perform all necessary analysis on closed (completed or unfulfilled) requests and on customer contacts and to generate related reports, to be utilized for process improvement activities, proactive problem prevention, up-sell opportunity definition, etc.

Mediate and orchestrate customer interactions

Process identifier: 1.1.1.2.4.

Brief description

Ensure that transaction message structure and interactions conform to agreed, externally defined standards used by the enterprise and its customers.

Extended description

The purpose of the mediate and orchestrate customer interactions is to ensure that transaction message structure and interactions conform to agreed, externally defined standards used by the enterprise and its customers. Increasingly, transactions with external parties (e.g., customers using RosettaNet or web services standards) will need to conform to message and data formats defined by third parties or third party organizations. Based on the specific transaction type and involved external party, this conformance will require the identification of the necessary data formats to be sent externally, and conversion of externally received messages into the required internal enterprise

formats. In addition, interactions with external parties may require that messages and transactions need to be undertaken with defined and agreed orchestration for message exchange. The actual agreement between the parties to use specific interaction standards is part of the support customer interface management and support selling level 3 processes.

7.1.3   Marketing fulfilment response

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Figure 4 – Marketing fulfilment response decomposition into level 3 processes

Marketing fulfilment response

Process identifier: 1.1.1.3.

Brief description

Responsible for the issue and distribution of marketing collateral directly to a customer and the subsequent tracking of resultant leads.

Extended description

Marketing fulfilment response processes are responsible for the issue and distribution of marketing collateral (i.e., coupon, premium, sample, toys, fliers, etc.,) directly to a customer and the subsequent tracking of resultant leads. These processes include campaign management activities from lead generation to product and literature fulfilment, and hand-off of leads to the selling processes.

Issue and distribute marketing collaterals

Process identifier: 1.1.1.3.1.

Brief description

Issue and distribute marketing collateral (i.e., coupon, premium, sample, toys, fliers, etc.,) directly to a customer.

Extended description

The purpose of this process is to handle the issuing and distribution of marketing collateral to customers, in line with marketing campaign needs. This can involve mailshots, leafleting and displays at events, inserts in newspapers, television and other media advertising and magazines, voice and text messaging to individuals, and so on. Where required, this process deals with customization of general campaign material for individual regions or customer groups. Direct marketing and sales through shop premises, in-store franchises, etc., are also included, and this process also manages distribution of marketing collaterals to such outlets.

Track leads

Process identifier: 1.1.1.3.2.

Brief description

Track leads generated through marketing or that arise in the course of business.

Extended description

The purpose of this process is to identify leads following on from marketing campaign advertising, or those that arise otherwise in the course of business and are collected there. Leads are tracked, evaluated and notified to other processes (e.g., selling) for further action.
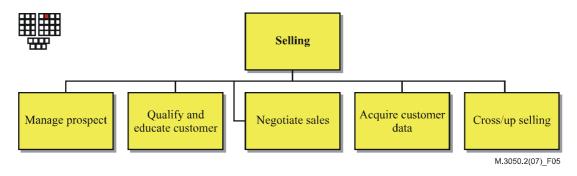
7.1.4 Selling

Figure 5 – Selling decomposition into level 3 processes

Selling

Process identifier: 1.1.1.4.

Brief description

Responsible for managing prospective customers, for qualifying and educating customers, and matching customer expectations.

Extended description

Selling processes are responsible for managing prospective customers, for the qualification and education of the customer, and for matching customer expectations to the enterprise's products and services and ability to deliver. These processes also manage the response to customer RFPs.

Manage prospect

Process identifier: 1.1.1.4.1.

Brief description

Match identified leads with the most appropriate products and ensure that these prospects are handled appropriately.

Extended description

The purpose of this process is to match identified leads with the most appropriate products and ensure that these prospects are handled appropriately. These prospects represent a "pipeline" of potential sales, each of which is expressed in terms of the probability of successful sales closure and an estimate of the total attainable revenue. The needs of each potential prospect are analysed. Based on these needs, potential solutions are identified from the service provider's product portfolio. Each prospect is tracked through these processes and the outcome (win or loss) of each prospect is reported. Prospects are assigned to the appropriate sales channel.

Qualify and educate customer

Process identifier: 1.1.1.4.2.

Brief description

Ensure that the business agreement between the customer and service provider is based upon mutual understanding.

Extended description

The purpose of this process is to ensure that the business agreement between the customer and service provider is based upon mutual understanding. The customer is qualified in terms of any associated risk and the amount of effort required (e.g., response to a request for proposal [RFP]). Alternative solutions may be developed and customized to the specific customer's requirements. The solution alternatives must be available (e.g., capacity) or scheduled on a product roadmap.

Negotiate sales

Process identifier: 1.1.1.4.3.

Brief description

Close the sale with terms that are mutually agreeable to both the customer and the service provider.

Extended description

The purpose of this process is to close the sale with terms that are mutually agreeable to both the customer and the service provider. One specific solution is selected and its details are described in a sales proposal. The sale is concluded through negotiations of features, service levels, pricing and discounts, resulting in a sign-off formal agreement between the customer and service provider. The formal agreement could include a purchase order.

Acquire customer data

Process identifier: 1.1.1.4.4.

Brief description

Record all pertinent customer data.

Extended description

The purpose of this process is to record all pertinent customer data.

Cross/up selling

Process identifier: 1.1.1.4.5.

Brief description

Ensure that the value of the relationship between the customer and service provider is maximized by selling additional, or more of the existing, products.

Extended description

The purpose of this process is to ensure that the value of the relationship between the customer and service provider is maximized by selling additional, or more of the existing, products. The ongoing analysis of customer trends (e.g., usage, problems, complaints) is used to identify when the current offerings may no longer be appropriate for the customer, or when the opportunity for a larger sale arises. Based on the data collected, more appropriate offerings should be recommended to the customer.
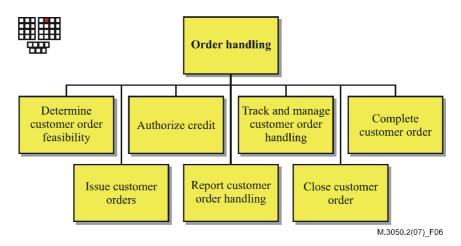
7.1.5 Order handling

Figure 6 – Order handling decomposition into level 3 processes

Order handling

Process identifier: 1.1.1.5.

Brief description

Responsible for accepting and issuing orders.

Extended description

Order handling processes are responsible for accepting and issuing orders. They deal with pre-order feasibility determination, credit authorization, order issuance, order status and tracking, customer update on order activities and customer notification on order completion. Responsibilities of the order handling processes include, but are not limited to:

• issuing new customer orders, modifying open customer orders or cancelling open customer orders;

• verifying whether specific non-standard offerings sought by customers are feasible and supportable;

• checking the credit worthiness of customers as part of the customer order process;

• testing the completed offering to ensure it is working correctly;

• updating of the customer inventory database to reflect that the specific product offering has been allocated, modified or cancelled;

• assigning and tracking customer provisioning activities;

• managing customer provisioning jeopardy conditions; and

• reporting progress on customer orders to customer and other processes.

Determine customer order feasibility

Process identifier: 1.1.1.5.1.

Brief description

Check the availability and/or the feasibility of providing and supporting non-standard product offerings and/or special solutions on standard product offerings to a customer.

Extended description

The purpose of the determine customer order feasibility process is to check the availability and/or the feasibility of providing and supporting non-standard product offerings and/or special solutions on standard product offerings to a customer. These processes invoke requests to SM&O provisioning processes to determine the availability and supportability of non-standard product offerings to a customer. These processes are also responsible for determining whether the non-standard offering can be supported by other CRM processes.

Authorize credit

Process identifier: 1.1.1.5.2.

Brief description

Assess a customer's credit worthiness in support of managing customer risk and company exposure to bad debt.

Extended description

The purpose of the authorize credit processes is to assess a customer's credit worthiness in support of managing customer risk and company exposure to bad debt. This process is responsible for initiating customer credit checks and for authorizing credit and credit terms in accordance with established enterprise risk and policy guidelines.

Track and manage customer order handling

Process identifier: 1.1.1.5.4.

Brief description

Ensure customer provisioning activities are assigned, managed and tracked efficiently to meet the agreed committed availability date.

Extended description

The objective of the track and manage customer order handling processes is to ensure customer provisioning activities are assigned, managed and tracked efficiently to meet the agreed committed availability date.

Responsibilities of these processes include, but are not limited to:
- scheduling, assigning and coordinating customer provisioning related activities;
- generating the respective service order creation request(s) to issue service orders based on specific customer orders;
- escalating status of customer orders in accordance with local policy;
- undertaking necessary tracking of the execution process;
- adding additional information to an existing customer order;
- modifying information in an existing customer order;
- modifying the customer order status;
- cancelling a customer order when the initiating sales request is cancelled;
- monitoring the jeopardy status of customer orders, and escalating customer orders as necessary; and
- indicating completion of a customer order by modifying the customer order status.

Note that some specific product components may be delivered directly by suppliers/partners. In these cases, the track and manage customer order handling process is responsible for initiating

requests, through S/P requisition management, for the delivery by the supplier/partner of the specific product components.

Complete customer order

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.

Extended description

The purpose of the complete customer order processes is to manage customer information and interactions after customer contracts or associated service orders have been finalized and during the order completion phase. The customer may participate in commissioning or end-to-end testing and then satisfactory delivery. The customer is trained in the functionality and benefits of the solution. These processes are responsible for ensuring that any customer information required by other CRM processes is updated as part of the customer order completion.

Issue customer orders

Process identifier: 1.1.1.5.6.

Brief description

Issue correct and complete customer orders.

Extended description

The purpose of the issue customer orders processes is to issue correct and complete customer orders. These processes ensure that all necessary information about the customer order (for example, type of product, install address, special requirements, etc.) is available. The customer orders may be required to satisfy pertinent customer requests from the selling processes (in particular, taking into account the purchase order from negotiate sales), may arise as a result of requests for customer provisioning activity to satisfy customer problem restoration activities, may arise to alleviate customer performance issues. These processes assess the information contained in the customer order relating to the sales request or initiating customer process request to determine the associated customer orders that need to be issued. The issued customer order may require a feasibility assessment, may require new provisioning activities, may require a change to a previously issued customer order, or may require cancellation of a previously initiated customer order. The customer order may also relate to the cancellation of previously purchased specific services. Where the initiating request for a purchased product offering has a standard customer order, this process is responsible for issuing the customer order and for creating a record of the relevant initiating sales request and the associated customer order. Where the initiating request for a purchased product offering has special or unusual requirements, and a specific feasibility assessment has been previously undertaken, this process is responsible for issuing the customer order, and for creating a record of the relevant initiating request information and the associated customer order. Where the initiating request for a purchased product offering has special or unusual requirements, and a specific feasibility assessment has not been previously undertaken, this process marks the issued customer order as requiring special handling, and passes management for further processing to the track and manage customer order handling process. The orchestration, if required, and tracking of the customer order progress is the responsibility of the track and manage customer order handling processes.

Report customer order handling

Process identifier: 1.1.1.5.7.

Brief description

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

Extended description

The objective of the report customer order handling processes is to monitor the status of customer orders, provide notifications of any changes and provide management reports. These processes are responsible for continuously monitoring the status of customer 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 support order handling processes. These processes record, analyse 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. These specialized summaries could be specific reports required by specific customers.

Close customer order

Process identifier: 1.1.1.5.8.

Brief description

Close a customer order when the customer provisioning activities have been completed.

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.

Receive PO and issue orders

Process identifier: 1.1.1.5.3 (this process ID has been deliberately unused).

Brief description

[Not available].

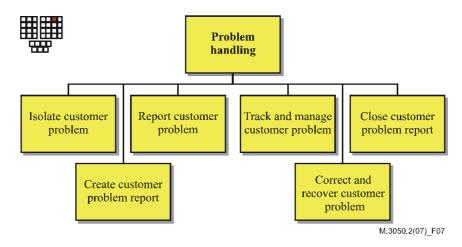**Extended description**

[Not available].

7.1.6 Problem handling

Figure 7 – Problem handling decomposition into level 3 processes

Problem Handling

Process identifier: 1.1.1.6.

Brief description

Responsible for receiving trouble reports from customers, resolving them to the customer's satisfaction and providing meaningful status on repair and/or restoration activity to the customer.

Extended description

Problem handling processes are responsible for the management of problems reported by customers and associated with purchased product offerings. The objective of these processes is to receive reports from customers, resolving them to the customer's satisfaction and providing meaningful status on repair and/or recovery activity to the customer. They are also responsible for customer contact and support in relation to any customer-affecting problems detected by other processes or through analysis, including proactively informing the customer and resolving these specific problems to the customer's satisfaction.

Responsibilities of the problem handling processes include, but are not limited to:
*   capturing, analysing, managing and reporting on customer reported problems associated with purchased product offerings;
*   initiating and managing customer problem reports;
*   correcting customer problems;
*   reporting progress on customer problem reports to customers and other processes;
*   assigning and tracking customer problem recovery activities; and
*   managing customer problem jeopardy conditions.

Problem handling processes perform analysis, decide on the appropriate actions/responses and carry them out with the intent of restoring normal operation on specific purchased product offerings.

Isolate customer problem

Process identifier: 1.1.1.6.1.

Brief description

Identify the root cause of the customer problem.

Extended description

The purpose of the isolate customer problem processes is to identify the root cause of the customer problem. The responsibilities of these processes include, but are not limited to:

- verifying whether the customer is using the purchased product offering correctly; and
- performing diagnostics based on the customer provided information to determine whether the root cause of the customer problem is linked to the underlying services.

The isolate customer problem processes will make the results of the root cause analysis available to other processes. The isolate customer problem processes will update open customer problem reports, as required during the assessment, and when the root cause has been identified. The isolate customer problem processes will notify the track and manage customer problem processes when the analysis is complete.

Report customer problem

Process identifier: 1.1.1.6.2.

Brief description

Monitor the status of customer problem reports, provide notifications of any changes, and provide management reports.

Extended description

The objective of the report customer problem processes is to monitor the status of customer problem reports, provide notifications of any changes, and provide management reports. These processes are responsible for continuously monitoring the status of customer problem reports and managing notifications to processes and other parties registered to receive notifications of any status changes. Notification lists are managed and maintained by the support problem handling processes. These processes record, analyse and assess the customer problem report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall problem handling process. These specialized summaries could be creation of specific reports required by customers and/or other specific audiences. These processes will make the necessary reports about the problem that occurred, the root cause and the activities carried out for recovery of normal operation.

Track and manage customer problem

Process identifier: 1.1.1.6.3.

Brief description

Ensure that recovery activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open customer problem reports in jeopardy.

Extended description

The purpose of the track and manage customer problem processes is to ensure that recovery activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open customer problem reports in jeopardy. Responsibilities of these processes include, but are not limited to:

- scheduling, assigning and coordinating the tracking of any recovery activities and any repair and restoration activities delegated to other processes;
- generating the respective service trouble report creation request(s) to create service trouble report based on specific customer problem reports;
- undertake necessary tracking of the execution progress;

- modifying information in an existing customer problem report based on assignments;
- modifying the customer problem report status;
- cancelling a customer problem report when the specific problem was related to an incorrect customer problem report; and
- monitoring the jeopardy status of open customer problem reports, and escalating customer problem reports as necessary.

Note that some specific product and/or service components may be owned and managed by suppliers/partners. In these cases the track and manage customer problem process is responsible for initiating requests through S/P problem reporting and management processes for restoration and recovery by the supplier/partner of the specific service components. These processes coordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence. The track and manage customer problem processes will also inform the close customer problem processes by modifying the customer problem report status to clear when the customer problem has been resolved.

Close customer problem report

Process identifier: 1.1.1.6.4.

Brief description

Ensure that a problem affecting the customer is solved.

Extended description

The purpose of the close customer problem report processes is to close a customer problem report when the problem affecting the customer is solved. These processes are also responsible for possibly contacting the customer to inquire about the customer's satisfaction with resolution of the problem. These processes monitor the status of all open customer problem reports and recognize that a customer problem report is ready to be closed when the status is changed to cleared.

Create customer problem report

Process identifier: 1.1.1.6.5.

Brief description

Create a new customer problem report.

Extended description

The objective of the create customer problem report process is to create a new customer problem report.

A new customer problem report may be created as a result of customer contacts indicating a problem with their purchased product offerings, or at the request of analysis undertaken by other processes in the CRM or SM&O horizontal process layers, which detect a failure or degradation which may be impacting customers.

These processes are responsible for capturing all the necessary customer information to be included in the new customer problem report.

Correct and recover customer problem

Process identifier: 1.1.1.6.6.

Brief description

Restore the service to a normal operational state as efficiently as possible.

Extended description

The objective of the correct and recover customer problem processes is to restore the purchased product offerings to a normal operational state as efficiently as possible. Depending on the nature of the specific reported failure, or incorrect operation, of the purchased product offerings, these processes may possibly lead to:

* educational interaction with the customer to ensure correct usage of the purchased facilities;

* re-assessment of the customers needs and withdrawal, upgrade, renewal of the purchased product offerings;

* requests for activities to be undertaken by other processes in the CRM process layer; or

* identification that restorative activities need to be undertaken in the SM&O processes.

They will also report successful restoration of normal service operation, restoration through temporary work-arounds, or an unsuccessful attempt at restoration to track and manage customer problem through updates to the associated customer problem report.
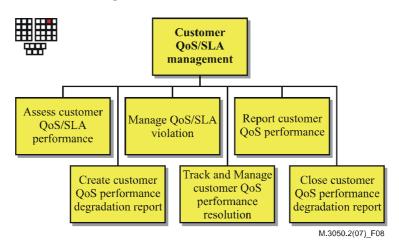
7.1.7   Customer QoS/SLA management

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Figure 8 – Customer QoS/SLA management decomposition into level 3 processes

Customer QoS/SLA management

Process identifier: 1.1.1.7.

Brief description

Monitoring, managing and reporting of delivered vs contractual quality of service (QoS), as defined in the enterprise's service descriptions, customer contracts or product catalogue.

Extended description

Customer QoS/SLA management processes encompass monitoring, managing and reporting of delivered vs contractual quality of service (QoS), as defined in the enterprise's service descriptions, customer contracts or the catalogue of product offerings. They are also concerned with the performance of the enterprise and its products in relation to its service level agreements (SLAs) for specific product instances, and other service-related documents. They include operational parameters such as resource performance and availability, but also encompass performance across all of a product's contractual or regulatory parameters, e.g., percentage completion on time for order requests, time to repair commitments, customer contact performance. Failure to meet a contracted SLA may lead to billing adjustments, which are handled by billing and collections management.

Assess customer QoS/SLA performance

Process identifier: 1.1.1.7.1.

Brief description

Manage the overall assessment of the customer QoS/SLA performance.

Extended description

The purpose of the assess customer QoS/SLA performance processes is to manage the overall assessment of the customer QoS/SLA performance.

These processes are responsible for ensuring that the QoS received by the customer meets the contractual obligations agreed with the customer. They check that the QoS data that they receive from other processes and entities meet the required QoS thresholds and that they alert other processes and entities if this is not the case.

These processes are responsible for collecting service and resource performance information analysed and reported by the report service quality performance and report resource performance processes, and converting it into a form suitable for determining whether the contractual obligations with the customer are being met. The actual reporting of the results of the assessments is managed in the report customer QoS performance processes.

They are responsible for maintaining an overview of the quality of the customer's purchased product offering and for carrying out QoS performance reviews with the customer, as well as for undertaking any preparatory and/or follow-up steps with other processes/entities in conjunction with such reviews.

Manage QoS/SLA violation

Process identifier: 1.1.1.7.2.

Brief description

Ensure that the customer and the relevant internal processes are informed of service quality degradations and violations, and that action is undertaken to resolve the degradation or violation.

Extended description

The purpose of the manage QoS/SLA violation processes is to ensure that the customer and the relevant internal processes are informed of service quality degradations and violations, and that action is undertaken to resolve the degradation or violation. They analyse all the information related to a QoS/SLA degradation or violation and take the appropriate actions when a soft threshold is crossed or the agreed QoS is violated. They follow up the actions to ensure that the customer is satisfied with the resolution of the problem. They ensure that the customer is informed of any planned maintenance or other scheduled events likely to impact delivery of the customer's service.

Report customer QoS performance

Process identifier: 1.1.1.7.3.

Brief description

Report on the customer's QoS/SLA performance.

Extended description

The objective of the report customer QoS performance processes is to monitor the status of customer QoS performance degradation reports, provide notifications of any changes, and provide management reports.

These processes are responsible for continuously monitoring the status of customer QoS performance degradation reports and managing notifications to other processes and to other parties, including customers, registered to receive notifications of any status changes. Notification lists are managed and maintained by the support customer QoS/SLA management processes.

These processes record, analyse and assess the customer QoS performance degradation report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall customer QoS/SLA management process. These specialized summaries could be specific reports required by specific audiences and/or customers.

These processes also report any identified constraints that can affect customer related quality standards to other processes. These constraints may include specific resource failures, capacity shortages due to unexpected demand peaks, etc.

Create customer QoS performance degradation report

Process identifier: 1.1.1.7.4.

Brief description

Create a new customer QoS performance degradation report.

Extended description

The objective of the create customer QoS performance degradation report process is to create a new customer QoS performance degradation report, modify existing customer QoS performance degradation reports, and request cancellation of existing customer QoS performance degradation reports.

A new customer QoS performance degradation report may be created as a result of specific customer initiated QoS performance degradation notifications, or at the request of analysis undertaken by other CRM or SM&O processes which detect that some form of deterioration or failure has occurred requiring an assessment of the performance of the specific customer purchased product offering.

If the customer QoS performance degradation report is created as a result of a notification from customers or as a result of a request from other processes, the create customer QoS performance degradation report processes are responsible for converting the received information into a form suitable for the customer QoS/SLA management processes, and for requesting additional information if required.

Track and manage customer QoS performance resolution

Process identifier: 1.1.1.7.5.

Brief description

Efficiently assign, coordinate and track specific customer purchased product offering related performance analysis, restoration and improvement activities, and escalate any open customer QoS performance degradation reports in jeopardy.

Extended description

The objective of the track and manage customer QoS performance resolution processes is to efficiently assign, coordinate and track specific customer purchased product offering related performance analysis, restoration and improvement activities, and escalate any open customer QoS performance degradation reports in jeopardy. Responsibilities of these processes include, but are not limited to:

• adding additional information to an open customer QoS performance degradation report based on the first-in and on-going analysis;

- scheduling, assigning and coordinating analysis and specific customer QoS performance restoration activities and/or repair activities delegated to other processes;

- generating the respective service trouble report creation request(s) to create service trouble report, based on specific customer QoS performance degradation reports where analysis shows that the root cause is related to services;

- modifying information in an existing customer QoS performance degradation report, based on assignments;

- modifying the customer QoS performance degradation report status;

- cancelling a customer QoS performance degradation report when the specific request was related to a false performance event; and

- monitoring the jeopardy status of open customer QoS performance degradation reports, and escalating customer QoS performance degradation reports, as necessary.

Note that some specific product and/or service components may be owned and managed by suppliers/partners. In these cases the track and manage customer QoS performance resolution process is responsible for initiating requests, through S/P performance management, for resolution by the supplier/partner of the specific service components.

These processes will coordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence.

The track and manage customer QoS performance resolution processes will also inform the close customer QoS performance degradation report processes by modifying the customer QoS performance degradation report status to cleared when the specific customer purchased product offering performance quality issues have been resolved.

Close customer QoS performance degradation report

Process identifier: 1.1.1.7.6.

Brief description

Close a customer QoS performance degradation report when the performance of the customer purchased product offerings has been resolved.

Extended description

The objective of the close customer QoS performance degradation report processes is to close a customer QoS performance degradation report when the performance of the customer purchased product offerings has been resolved.

These processes monitor the status of all open customer QoS performance degradation reports, and recognize that a customer QoS performance degradation report is ready to be closed when the status is changed to cleared.
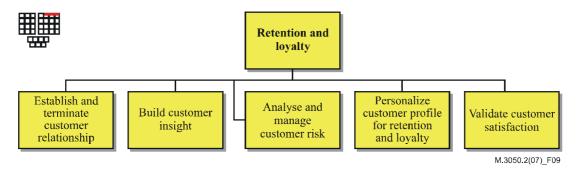
7.1.8 Retention and loyalty

Figure 9 – Retention and loyalty decomposition into level 3 processes

Retention and loyalty

Process identifier: 1.1.1.9.

Brief description

Manage all functionalities related to the retention of acquired customers, and the use of loyalty schemes in the potential acquisition of customers.

Extended description

Retention and loyalty processes deal with all functionalities related to the retention of acquired customers, and the use of loyalty schemes in the potential acquisition of customers. They establish a complete understanding of the needs of the customer, a determination of the value of the customer to the enterprise, determination of opportunities and risks for specific customers, etc. These processes collect and analyse data from all enterprise and customer contact.

Establish and terminate customer relationship

Process identifier: 1.1.1.9.1.

Brief description

Verify the customer identity, manage the customer identity across the enterprise, and manage termination, as appropriate.

Extended description

The purpose of this process is to verify that the customer is who they claim they are. To ensure only one customer identity exists across the enterprise, which can be referenced across the whole enterprise and allows the customer to quickly and easily identify himself. The customer relationship is terminated only if actually appropriate, the wishes of the customer are complied with where possible, records are kept in case the relationship with the customer is re-established, legal and ethical requirements for customer information are complied with. Before establishing an identity for a new customer, it is essential to check that the customer does not already have an identity with the enterprise. Establish and verify the identity, issue a unique identifier and authentication information.

Significant customer life-stage events or business decisions by the service provider cause one or both parties to terminate the relationship. The need for complete termination of relationships needs to be differentiated from just terminating all services. The principles behind this include the service provider ending a relationship only if the customer ceases to exist, the customer is fraudulent, or the enterprise decides that it no longer wishes to do business with the customer.

This process is also used to 'clean-up' duplicates of customer-identifying information that may exist within the organization.

Profile and preference information for terminated customer relationships is archived if acceptable to the customer. All relevant parties are informed of the ended relationship. Other processes are triggered to dismantle the customer solution and servicing arrangements, as necessary.

Build customer insight

Process identifier: 1.1.1.9.2.

Brief description

Ensure that the service provider and the customer feel confident that the relationship is founded on up-to-date, accurate and legally compliant information.

Extended description

The purpose of this process is to ensure that the service provider and the customer feel confident that the relationship is founded on up-to-date, accurate and legally compliant information. The service provider will incorporate into the customer profile all relevant information gathered through all contacts with the customer (usage pattern, demographics, life stage, household, community of interest, business direction). Customer and market information from other sources may be gathered, which will build a better understanding of the customer. Customer information must be made available to any process that needs to access it. This customer information will be used to continually refine the means and style of interaction, and the solution sets and customer experience offered.

Analyse and manage customer risk

Process identifier: 1.1.1.9.3.

Brief description

Ensure that a consistent customer risk assessment is used across the enterprise and ensure that risk analysis is based on information collected from all processes.

Extended description

The purpose of this process is to ensure that risk analysis is based on information collected from all processes and that consistent risk assessment is used across the enterprise. Its purpose is also to track and improve operations, target and win the right customers, and improve sales conversion rate. It determines the credit risk, fraud risk, influence risk, and churn risk. It identifies treatments to manage these risks and focuses on using customer information.

Personalize customer profile for retention and loyalty

Process identifier: 1.1.1.9.4.

Brief description

Provide the personalization opportunities for customers that will encourage them not to switch to another service provider.

Extended description

The purpose of this process is to provide the personalization opportunities for customers that will encourage them not to switch to another service provider. Personalization allows delivery of services that more closely match the customer's need. Collection of personalization information also discourages switching since the customer would have to build up the same personalized experience with the next service provider.

Business planning is essential to allow the service provider to match the customer's future retention needs and potential acquisition needs, rather than just continuing with today's known needs.

Loyalty schemes allow tangible benefits to be offered to good customers in a mass-market.

The process aims to ensure that all information is gathered and used to make the best decisions to retain those customers that the service provider wants to retain, heighten satisfaction and maintain profitability.

This process provides a source of data for performing loyalty and retention marketing campaigns for retaining existing customers, promoting customer loyalty, winning back customers who have left. It utilizes predictive modelling software to analyse an account, and to return relevant scores, such as: churn score, up-sell score, cross-sell score, bad debt score and customer lifetime value score. Moreover, it utilizes scores for customer analysis and marketing campaign purposes.

Validate customer satisfaction

Process identifier: 1.1.1.9.5.

Brief description

Validate that predicted/expected value is delivered by the solution and initialize the after-sales processes (billing and assurance).

Extended description

The purpose of this process is to validate that predicted/expected value is delivered by the solution and that the after-sales processes (billing and assurance) are initialized. It validates that the customer is capable of realizing maximum value from the operation or use of the solution and that intense provider involvement is no longer needed to manage the solution.

This process ensures that the customer is satisfied that the solution that was actually delivered meets original or updated expectations and agreements and that the solution is operable by the customer.
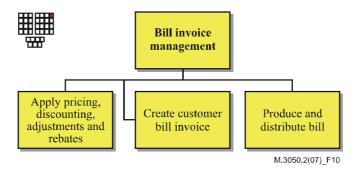
7.1.9   Bill invoice management

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Figure 10 – Bill invoice management decomposition into level 3 processes

Bill invoice management

Process identifier: 1.1.1.10.

Brief description

Ensure the bill invoice is created, physically and/or electronically produced and distributed to customers, and that the appropriate taxes, discounts, adjustments, rebates and credits for the products and services delivered to customers have been applied.

Extended description

Bill invoice management processes ensure the bill invoice is created, physically and/or electronically produced and distributed to customers, and that the appropriate taxes, discounts, adjustments, rebates and credits for the products and services delivered to customers have been

applied. These processes are accountable for assuring that enterprise revenue is billed and invoices delivered appropriately to customers.

These processes are responsible for, but not limited to:

- establishment and application of taxes and charges to the services delivered to customers;
- application of the adjustment (adjustment decision done in bill inquiry handling);
- creation of accurate bill invoices including all adjustments, rebates, discounts, credits, etc.;
- production and distribution of bill in physical and/or electronic form to customers in accordance with the billing cycle;
- forecasting of physical resources associated with bill production, such as paper and envelope quantities;
- alignment and management of promotional material insertion into distributed bills; and
- establishment and management of third party arrangements to support bill invoice generation, production and distribution.

Apply pricing, discounting, adjustments and rebates

Process identifier: 1.1.1.10.1.

Brief description

Ensure that the bill invoice is reflective of all the commercially agreed billable events and any bill invoice adjustments agreed between the service provider and the customer.

Extended description

The purpose of the apply pricing, discounting, adjustments and rebates process is to ensure that the bill invoice is reflective of all the commercially agreed billable events and any bill invoice adjustments agreed between the service provider and the customer. In addition, it ensures that the appropriate taxes, rebates (i.e., missed customer commitments) and credits are applied to the customer's bill invoice(s). This process contains the account and customer specific pricing, charges, discounting, credits and taxation for services delivered to the customer by the service provider. It accepts events that have been collected, translated, correlated, assembled, guided and service rated. It takes these events and determines the account or customer specific pricing, charges, discounts, and taxation that should be delivered to the invoice(s) for the customer. It reviews any agreed adjustments agreed in the previous billing period and includes these to the bill invoice. This process can occur in real-time as events are service rated, or can be scheduled on a periodic basis at the service provider's discretion.

Create customer bill invoice

Process identifier: 1.1.1.10.2.

Brief description

Production of a timely and accurate invoice in accordance with the specific billing cycles and reflective of the final charges for services, together with any adjustments, delivered to the customer by the service provider and respective trading partners.

Extended description

The primary purpose of the create customer bill invoice process is the production of a timely and accurate invoice in accordance with the specific billing cycles and reflective of the final charges for services, together with any adjustments, delivered to the customer by the service provider and respective trading partners.

This process contains the invoicing components of the service provider's business. This includes the design and development of the service provider's invoicing process, the rendering/formatting of an invoice, the delivery of an electronic copy of an invoice to customers and the processes that verify invoice quality prior to distribution to the customer in electronic form, or to the process responsible for physical invoice production and distribution. The flow of this process can be viewed as an extension of the company's e-business strategy. In this case, the service provider would render an invoice electronically, via the Internet for example.

Furthermore, this process provides specifications for the formatting of invoices in different ways and to achieve different publishing possibilities, and supports the creation of different invoice formats for different publication media. The process is further responsible for splitting and re-arranging invoices for customers (particularly customers with complex account structures) according to agreements made with these customers.

Additionally, these processes store the customer invoice for a period of time to address regulation and/or internal requirements, during which they can be accessed to support any customer or regulator agency inquiries on bill invoices.

Produce and distribute bill

Process identifier: 1.1.1.10.3.

Brief description

Physical production and distribution of bills to customers in accordance with the specified billing cycle.

Extended description

The purpose of the produce and distribute customer bill invoice process is the physical production and distribution of bills to customers in accordance with the specified billing cycle. This process is responsible for all activities associated with ensuring a physical bill is delivered to customers.

The responsibilities of the process include, but are not limited to:

- establishing and managing the physical bill production cycle;
- establishing the requirements for, and managing the agreed commercial arrangements with, appropriate outsourced suppliers of the production and distribution capabilities;
- delivery of invoice information to the physical production processes;
- coordinating with promotional processes for any billing insertions to be included with the bill;
- if internal processes are used, managing availability of paper and envelope volumes to meet the needs of the physical production process;
- if internal production facilities are used, managing the production runs to create the bills; and
- quality management of the physical production and distribution processes.

Note that in the above processes for establishing arrangements with outsourced suppliers, the supply chain capability delivery processes are used as the vehicle for creating the commercial agreements.
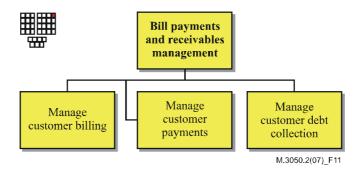
7.1.10 Bill payments and receivables management

Figure 11 – Bill payments and receivables management decomposition into level 3 processes

Bill payments and receivables management

Process identifier: 1.1.1.11.

Brief description

Ensure that enterprise revenue is collected through pre-established collection channels and put in place procedures to recover past due payments.

Extended description

The purpose of the bill payments and receivables management processes is to ensure that enterprise revenue is collected through pre-established collection channels and put in place procedures to recover past due payments. These processes are responsible for managing a customer's billing account, processing their payments, performing payment collections and monitoring the status of the account balance.

These processes are responsible for, but not limited to:

• establishment and management of customer payment processes and channels;

• establishment and management of debt collection processes; and

• establishment and management of third party arrangements to support collection and recovery of past due payments.

Manage customer billing

Process identifier: 1.1.1.11.1.

Brief description

Ensure effective management of the customer's billing account as it relates to the products purchased and consumed throughout the appropriate billing cycle.

Extended description

The primary purpose of this process pertains to effective management of the customer's billing account as it relates to the products purchased and consumed throughout the appropriate billing cycle. This process focuses on managing changes to the customer's billing account (for example, customer billing address, etc.) as it relates to the customer's service portfolio, such as ensuring that the correct purchased products are assigned to the customer's billing account for accurate billing.

Manage customer payments

Process identifier: 1.1.1.11.2.

Brief description

Collect payments made by the customer and reconcile the payments to the invoices.

Extended description

The purpose of the manage customer payments process is to collect payments made by the customer and reconcile the payments to the invoices. This process is meant to match these payments with the services/invoices delivered to this customer. In addition, these processes are responsible for establishing, managing and, if required, operating the various payment processes that the service provider chooses to establish. These processes can include credit/debit/EFT payments using various channels, either directly or through third parties, and cash or cheque payments, either directly or through third parties.

In all the above cases, these processes are responsible for the processes interacting with the customers and/or the third parties. The processes are also responsible for establishing back-end bank accounts for receipt of the customer payments and for the transfer of funds collected by third parties. These processes are responsible for reconciling the money received into the bank accounts against the payments expected in the invoices. Additionally, these processes inform the financial management on all those payments for updating the ledger.

These processes are responsible for establishing the requirements for, and managing any commercial arrangements agreed with, third party suppliers. Note that the supply chain capability delivery process is used to deliver the commercial agreements.

To the extent that processing of any payments is undertaken internally, i.e., cheque processing, these processes are responsible for managing the operation and quality of the internal processing.

Where payments do not match invoices, this process is responsible for informing the manage debt management processes of any underpayments, and the bill inquiry handling processes for any over-payments. Underpayments and overpayments are handled appropriately by these separate processes.

Manage customer debt collection

Process identifier: 1.1.1.11.3.

Brief description

Collect past due payments from the customer.

Extended description

The purpose of the manage customer debt collection process is to collect past due payments from the customer. This process monitors the amount due from the customer, i.e., checks whether the payments are made on time, and implements necessary activities and policies to recover amounts overdue.

The responsibilities of this process include, but are not limited to:
• identifying invoices which are overdue for payment;
• initiating and managing follow-up with customers having overdue amounts;
• arranging and monitoring payment plans to allow customers to pay overdue amounts in instalments;
• initiating debt recovery activities in accordance with appropriate commercial practice and policies;
• managing the aged customer debt portfolio;

- establishing and managing customer debt profiles to assist in managing debt recovery and debt risk on a customer, product or customer group basis;
- establishing and managing commercial arrangements with third parties for the recovery of aged debt, and/or for the write-off and selling of parts of the debt portfolio to third parties.

Note that these processes may initiate a direct enquiry to the customer and attempt to manage the initial recovery through the bill inquiry handling processes. These processes use policies established by the support bill payments and receivables management process to direct any escalation of the recovery processes being employed.

Note that where third party arrangements need to be put in place, these processes are responsible for establishing the requirements for, and managing any commercial arrangements agreed with, third party suppliers. The supply chain capability delivery process is used to deliver the commercial agreements.
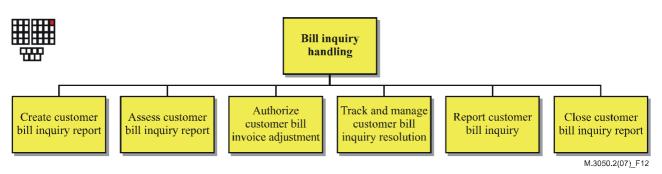
7.1.11 Bill inquiry handling

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Figure 12 – Bill inquiry handling decomposition into level 3 processes

Bill inquiry handling

Process identifier: 1.1.1.12.

Brief description

Ensure the timely and effective fulfilment of all customer bill inquiries and complaints.

Extended description

The purpose of the bill inquiry handling process is to ensure the timely and effective fulfilment of all customer bill inquiries and complaints. This process is responsible for managing customer interaction as it relates to a customer's billing relationship to a service provider. This includes the creation of inquiries against the customer's billing account(s), management of changes to customer billing account structure and details, the managing of the whole customer bill inquiry lifecycle, reporting changes and updates, and closing of customer bill inquiry when all activities were accomplished. This process can be viewed via traditional means, with a service representative managing the customer, or via e-business means. In the latter case, inquiries, complaints and changes to details would be handled via electronic media without the intervention of a representative.

Create customer bill inquiry report

Process identifier: 1.1.1.12.1.

Brief description

Create a new customer bill inquiry report.

Extended description

The objective of the create customer bill inquiry report process is to create a new customer bill inquiry report, modify existing customer bill inquiry reports, and request cancellation of existing customer bill inquiry reports.

A new customer bill inquiry report may be created as a result of specific customer-initiated bill inquiry or complaint notifications.

If the customer bill inquiry report is created, the create customer bill inquiry report processes are responsible for converting the received information into a form suitable for the bill inquiry handling processes, and for requesting additional information, if required.

Assess customer bill inquiry report

Process identifier: 1.1.1.12.2.

Brief description

Assess the bill inquiry report to determine the nature of the inquiry and to determine whether the inquiry has arisen due to circumstances originating in other process areas.

Extended description

The purpose of the assess customer bill inquiry report processes is to assess the bill inquiry report to determine the nature of the inquiry, and to determine whether the inquiry has arisen due to circumstances originating in other process areas.

The responsibilities of these processes include, but are not limited to:
- verifying whether the information supplied by the customer is correct; and
- performing assessment and investigation based on the customer-provided information to determine whether the circumstances leading to the bill inquiry is linked to the underlying services, or other processes.

The assess customer bill inquiry report processes will make the results of the investigation available to other processes. The assess customer bill inquiry report processes will update the customer bill inquiry report as required during the assessment and when the root cause has been identified.

The assess customer bill inquiry report processes will notify the track and manage bill inquiry resolution processes when the investigation and assessment is complete.

Authorize customer bill invoice adjustment

Process identifier: 1.1.1.12.3.

Brief description

Adjust the customer's bill invoice based on detailed assessment and/or policy.

Extended description

The purpose of the authorize customer bill invoice adjustment processes is to adjust the customer's bill invoice based on detailed assessment and/or policy.

The responsibilities of this process include, but are not limited to:
- determination of whether policy allows for automated adjustment of the customer bill invoice, and approving any resultant adjustments;
- undertaking more detailed analysis and investigation to determine whether a bill adjustment is acceptable, including gaining appropriate management authority to make the adjustment; and

- recording the results of the adjustment, if approved, into the records relating to the customer's bill invoice.

These processes rely on the availability of appropriate adjustment policies, which are created within the support bill inquiry handling processes, for the timely resolution of minor billing disputes.

The resolution processes may require investigation of the billing processes themselves to determine whether the disputed bills are the result of quality errors within the service provider processes.

Track and manage customer bill inquiry resolution

Process identifier: 1.1.1.12.4.

Brief description

Efficiently assign, coordinate and track specific customer bill inquiry analysis, bill adjustments, and ensuring that appropriate credits and/or other agreed adjustments are made available to the adjustments processes activities, and escalate any open customer bill inquiry reports in jeopardy.

Extended description

The objective of the track and manage customer bill inquiry resolution processes is to efficiently assign, coordinate and track specific customer bill inquiry analysis, bill adjustments, and ensuring that appropriate credits and/or other agreed adjustments are made available to the adjustments processes activities, and escalate any open customer bill inquiry reports in jeopardy.

Responsibilities of these processes include, but are not limited to:
- scheduling, assigning and coordinating analysis and specific customer bill inquiry/complaint adjustment activities;
- modifying the customer bill inquiry/complaint report status;
- cancelling a customer bill inquiry report when the specific request is related to a false billing event; and
- monitoring the jeopardy status of open customer bill inquiry reports, and escalating customer bill inquiry reports as necessary.

Note that some specific product and/or service components may be owned and managed by suppliers/partners. In these cases, the track and manage customer bill inquiry resolution process is responsible for initiating requests, through S/P settlements and payments management for resolution by the supplier/partner of the specific bill inquiries/complaints.

These processes will coordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence.

The track and manage bill inquiry resolution processes will also inform the close customer bill inquiry report processes by modifying the customer bill inquiry report status to cleared when the specific customer bill inquiry/complaint issues have been resolved.

Report customer bill inquiry

Process identifier: 1.1.1.12.5.

Brief description

Report on the customer's bill inquiry.

Extended description

The objective of the report customer bill inquiry processes is to monitor the status of customer bill inquiry reports, provide notifications of any changes, and provide management reports.

These processes are responsible for continuously monitoring the status of customer bill inquiry reports and managing notifications to other processes and to other parties, including customers, registered to receive notifications of any status changes. Notification lists are managed and maintained by the support bill inquiry handling processes.

These processes record, analyse and assess the customer bill inquiry report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall bill inquiry handling processes. These specialized summaries could be specific reports required by specific audiences and/or customers.

These processes also report any identified constraints that can affect customer billing quality standards to other processes. These constraints may include specific resource (billing application and/or database, for example) failures, etc.

Close customer bill inquiry report

Process identifier: 1.1.1.12.6.

Brief description

Close a customer bill inquiry report when the bill inquiry/complaint has been resolved.

Extended description

The objective of the close customer bill inquiry report processes is to close a customer bill inquiry report when the bill inquiry/complaint has been resolved.

These processes monitor the status of all open customer bill inquiry reports, and recognize that a customer bill inquiry report is ready to be closed when the status is changed to cleared.
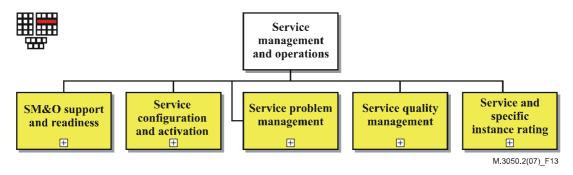
7.2   Service management and operations

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Figure 13 – Service management and operations decomposition into level 2 processes

Service management and operations

Process identifier: 1.1.2.

Brief description

This horizontal functional process grouping focuses on the knowledge of services (access, connectivity, content, etc.) and includes all functionalities necessary for the management and operations of communications and information services required by, or proposed to, customers.

Extended description

This horizontal functional process grouping focuses on the knowledge of services (access, connectivity, content, etc.) and includes all functionalities necessary for the management and operations of communications and information services required by, or proposed to, customers. The focus is on service delivery and management as opposed to the management of the underlying

network and information technology. Some of the functions involve short-term service capacity planning for a service instance, the application of a service design to specific customers, or managing service improvement initiatives. These functions are closely connected with the day-to-day customer experience.

The processes in this horizontal functional process grouping are accountable to meet, at a minimum, targets set for service quality, including process performance and customer satisfaction at a service level, as well as service cost.

The eTOM framework differentiates day-to-day operations and support from planning and development and other strategy and lifecycle processes. This better depicts the structure of an enterprise, especially in an e-business era.

SM&O support and readiness

Process identifier: 1.1.2.1.

Brief description

Manage service infrastructure, ensuring that the appropriate service capacity is available and ready to support the SM&O fulfilment, assurance and billing processes.

Extended description

SM&O support and readiness processes manage service infrastructure, ensuring that the appropriate service capacity is available and ready to support the SM&O fulfilment, assurance and billing processes in instantiating and managing service instances, and for monitoring and reporting on the capabilities and costs of the individual SM&O FAB processes.

The responsibilities of these processes include, but are not limited to:

- supporting the operational introduction of new and/or modified service infrastructure;
- managing and ensuring the ongoing quality of the service inventory;
- applying service capacity rules from infrastructure lifecycle management processes;
- analysing availability and quality over time on service infrastructure and service instances, including trend analysis and forecasting;
- ensuring the operational capability of the SM&O processes; and
- maintaining rating and tariff information for service infrastructure and service instances.

Service configuration and activation

Process identifier: 1.1.2.2.

Brief description

Allocation, implementation, configuration, activation and testing of specific services to meet customer requirements.

Extended description

Service configuration and activation processes encompass allocation, implementation, configuration, activation and testing of specific services to meet customer requirements, or in response to requests from other processes to alleviate specific service capacity shortfalls, availability concerns or failure conditions. Where included in the service provider offering, these processes extend to cover customer premises equipment.

Responsibilities of the service configuration and activation processes include, but are not limited to:

- verifying whether specific service designs sought by customers are feasible as part of pre-order feasibility checks;

- allocating the appropriate specific service parameters to support service orders or requests from other processes;

- reserving specific service parameters (if required by the business rules) for a given period of time until the initiating customer order is confirmed, or until the reservation period expires (if applicable);

- implementing, configuring and activating specific services, as appropriate;

- testing the specific services to ensure the service is working correctly;

- recovery of specific services;

- updating of the service inventory database to reflect that the specific service has been allocated, modified or recovered;

- assigning and tracking service provisioning activities;

- managing service provisioning jeopardy conditions; and

- reporting progress on service orders to other processes.

Service problem management

Process identifier: 1.1.2.3.

Brief description

Respond immediately to customer-affecting service problems or failures in order to minimize their effects on customers, and to invoke the restoration of the service or provide an alternate service as soon as possible.

Extended description

Service problem management processes are responsible for the management of problems associated with specific services. The objective of these processes is to respond immediately to reported service problems or failures in order to minimize their effects on customers, and to invoke the restoration of the service or provide an alternate service as soon as possible.

Responsibilities of the service problem management processes include, but are not limited to:

- detecting, analysing, managing and reporting on service alarm event notifications;

- initiating and managing service trouble reports;

- performing service problem localization analysis;

- correcting and resolving service problems;

- reporting progress on service trouble reports to other processes;

- assigning and tracking service problem testing and recovery activities; and

- managing service problem jeopardy conditions.

Service problem management processes perform analysis, decide on the appropriate actions/responses and carry them out with the intent of restoring normal operation on specific services.

However, these activities need to interact with the problem handling processes, as the latter have a view on customer impact. Service problem management processes are responsible for informing problem handling processes of any potential customer problems. Where the original report arose as a result of customer problems, the service problem management processes may be coordinated by problem handling processes.

Service quality management

Process identifier: 1.1.2.4.

Brief description

Managing, tracking, monitoring, analysing, improving and reporting on the performance of specific services.

Extended description

Managing, tracking, monitoring, analysing, improving and reporting on the performance of specific services.

Service and specific instance rating

Process identifier: 1.1.2.5.

Brief description

Manage service events by correlating and formatting them into a useful format.

Extended description

Service and specific instance rating processes manage service events by correlating and formatting them into a useful format. These processes include the service level rating of usage information. Investigation of service related billing event problems is also part of these processes. These processes provide information on customer-related and service-related events to other process areas. This includes reports on non-chargeable events and overcharged events and analysis of event records to identify fraud and prevent further occurrences.
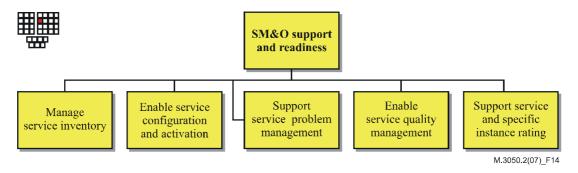
7.2.1 SM&O support and readiness

Figure 14 – SM&O support and readiness decomposition into level 3 processes

SM&O support and readiness

Process identifier: 1.1.2.1.

Brief description

Manage service infrastructure, ensuring that the appropriate service capacity is available and ready to support the SM&O fulfilment, assurance and billing processes.

Extended description

SM&O support and readiness processes manage service infrastructure, ensuring that the appropriate service capacity is available and ready to support the SM&O fulfilment, assurance and billing processes in instantiating and managing service instances, and for monitoring and reporting on the capabilities and costs of the individual SM&O FAB processes.

The responsibilities of these processes include, but are not limited to:

- supporting the operational introduction of new and/or modified service infrastructure;
- managing and ensuring the ongoing quality of the service inventory;
- applying service capacity rules from infrastructure lifecycle management processes;
- analysing availability and quality over time on service infrastructure and service instances, including trend analysis and forecasting;
- ensuring the operational capability of the SM&O processes; and
- maintaining rating and tariff information for service infrastructure and service instances.

Manage service inventory

Process identifier: 1.1.2.1.1.

Brief description

Establish, manage and administer the enterprise's service inventory, as embodied in the service inventory database, and monitor and report on the usage and access to the service inventory, and the quality of the data maintained in it.

Extended description

The responsibilities of the manage service inventory processes are twofold – establish, manage and administer the enterprise's service inventory, as embodied in the service inventory database, and monitor and report on the usage and access to the service inventory, and the quality of the data maintained in it.

The service inventory maintains records of all service infrastructure and service instance configuration, version and status details. It also records test and performance results and any other service-related information required to support SM&O and other processes.

The service inventory is also responsible for maintaining the association between customer purchased product offering instances and service instances, created as a result of the service configuration and activation processes.

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

- identifying the inventory-relevant information requirements to be captured for service infrastructure and service instances;
- identifying, establishing and maintaining service inventory repository facilities;
- establishing and managing the service inventory management and information capture processes;
- managing the registration and access control processes that enable processes to create, modify, update, delete and/or download service data to and from the service inventory;
- ensuring the service inventory repository accurately captures and records all identified service infrastructure and service instance details, through use of automated or manual audits;
- tracking and monitoring of the usage of, and access to, the service inventory repository and associated costs, and reporting on the findings; and
- identifying any technical driven shortcomings of the service inventory repository, and providing input to resource development and management processes to rectify these issues.

Enable service configuration and activation

Process identifier: 1.1.2.1.2.

Brief description

Planning and deployment of service infrastructure, and for ensuring availability of sufficient service infrastructure to support the service configuration and activation processes.

Extended description

The enable service configuration and activation processes are responsible for planning and deployment of service infrastructure, and for ensuring availability of sufficient service infrastructure to support the service configuration and activation processes.

The responsibilities of these processes include, but are not limited to:

- forecasting at an operational level service infrastructure volume requirements and run-out time-frames;
- the capacity planning associated with the deployment of new and/or modified service infrastructure;
- establishment and monitoring of organizational arrangements to support deployment and operation of new and/or modified service infrastructure;
- creation, deployment, modification and/or upgrading of service infrastructure deployment support tools (including service inventory) and processes for new and/or modified service infrastructure;
- development and promulgation of service infrastructure capacity deployment rules and controls;
- authoring, reviewing and approving operational procedures developed by service development and management processes prior to service infrastructure deployment;
- the testing and acceptance of new and/or modified service infrastructure as part of the handover procedure from the service development and management processes to operations;
- detecting service infrastructure operational limitations and/or deployment incompatibilities, and providing requirements to address these aspects to service development and management processes;
- coordination and roll-out, in accordance with approved plans, of the approved new and/or modified service infrastructure;
- monitoring capacity utilization of deployed service infrastructure to provide early detection of potential service infrastructure shortfalls;
- reconfiguration and re-arrangement of under-utilized deployed service infrastructure;
- managing recovery and/or removal of obsolete or unviable service infrastructure;
- reporting on deployed service infrastructure capacity;
- tracking and monitoring of the service infrastructure deployment processes and costs (including where service infrastructure is deployed and managed by third parties), and reporting on the capability of the service infrastructure deployment processes;
- establishing and managing service provisioning notification facilities and lists to support the service configuration and activation notification and reporting processes; and
- updating the service inventory of any changes to the available service infrastructure capacity.

Support service problem management

Process identifier: 1.1.2.1.3.

Brief description

Assist service problem management processes by proactively undertaking statistically driven preventative and scheduled service infrastructure maintenance activities and monitoring, managing and reporting on the capability of the service problem management processes.

Extended description

The responsibilities of the support service problem management processes are twofold – assist service problem management processes by proactively undertaking statistically driven preventative and scheduled service infrastructure maintenance activities, and monitoring, managing and reporting on the capability of the service problem management processes.

These processes are responsible for ensuring that the service infrastructure is working effectively and efficiently.

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

- extracting and analysing, including undertaking trend analysis, historical and current service instance problem reports and performance reports to identify potential service infrastructure or service instances requiring proactive maintenance and/or replacement;

- requesting scheduling of additional service instance data collection to assist in the analysis activity;

- requesting scheduling of service instance performance testing to assist in analysis activity;

- developing and managing service infrastructure and service instance proactive maintenance programmes;

- requesting service provisioning activity to prevent anticipated service problems associated with capacity limitations identified in the analysis activities;

- reporting outcomes of trend analysis to service development and management processes to influence new and/or modified service infrastructure development;

- tracking and monitoring of the service problem management processes and associated costs (including where service infrastructure is deployed and managed by third parties), and reporting on the capability of the service problem management processes; and

- establishing and managing service problem notification facilities and lists to support the service problem management notification and reporting processes.

Enable service quality management

Process identifier: 1.1.2.1.4.

Brief description

Support service quality management processes by proactively monitoring and assessing service infrastructure performance and monitoring, managing and reporting on the capability of the service quality management processes.

Extended description

The responsibilities of the enable service quality management processes are twofold – support service quality management processes by proactively monitoring and assessing service infrastructure performance and monitoring, managing and reporting on the capability of the service quality management processes.

Proactive management is undertaken using a range of performance parameters, whether technical, time, economic or process related.

The responsibilities of the processes include, but are not limited to:

• undertaking proactive monitoring regimes of service infrastructure as required to ensure ongoing performance within agreed parameters over time;

• developing and maintaining a repository of acceptable performance threshold standards for service instances to support the service quality management processes;

• undertaking trend analysis, and producing reports, of the performance of service infrastructure to identify any longer term deterioration;

• monitoring and analysing the service instance analyses produced by the service quality management processes to identify problems that may be applicable to the service infrastructure as a whole;

• sourcing details relating to service instance performance and analysis from the service inventory to assist in the development of trend analyses;

• logging the results of the analysis into the service inventory repository;

• establishing and managing service quality data collection schedules, including managing the collection of the necessary information from the resource data collection and distribution processes, to support proactive monitoring and analysis activity, and requests from service quality management processes for additional data to support service instance performance analysis;

• establishing and managing facilities to support management of planned service infrastructure and service instance outages;

• establishing, maintaining and managing the testing of service quality control plans to cater for anticipated service quality disruptions;

• proactively triggering the instantiation of control plans to manage performance through programmed and/or foreseen potentially disruptive events, i.e., anticipated traffic loads on Christmas day, planned outages, etc.;

• tracking and monitoring of the service quality management processes and associated costs (including where service infrastructure is deployed and managed by third parties), and reporting on the capability of the service quality management processes;

• establishing and managing service quality notification facilities and lists to support the service quality management notification and reporting processes; and

• supporting the support customer QoS/SLA management process.

Support service and specific instance rating

Process identifier: 1.1.2.1.5.

Brief description

Ensure that rating and tariff information is maintained for each service class, for use by service and specific instance rating.

Extended description

The purpose of the support service and specific instance rating processes is to ensure that rating and tariff information is maintained for each service class for use by service and specific instance rating. They are also responsible for the processing of this information related to administration of the services.
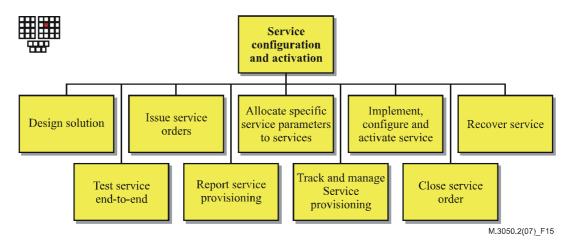
7.2.2 Service configuration and activation

Figure 15 – Service configuration and activation decomposition into level 3 processes

Service configuration and activation

Process identifier: 1.1.2.2.

Brief description

Allocation, implementation, configuration, activation and testing of specific services to meet customer requirements.

Extended description

Service configuration and activation processes encompass allocation, implementation, configuration, activation and testing of specific services to meet customer requirements, or in response to requests from other processes to alleviate specific service capacity shortfalls, availability concerns or failure conditions. Where included in the service provider offering, these processes extend to cover customer premises equipment.

Responsibilities of the service configuration and activation processes include, but are not limited to:

• verifying whether specific service designs sought by customers are feasible as part of pre-order feasibility checks;

• allocating the appropriate specific service parameters to support service orders or requests from other processes;

• reserving specific service parameters (if required by the business rules) for a given period of time until the initiating customer order is confirmed, or until the reservation period expires (if applicable);

• implementing, configuring and activating specific services, as appropriate;

• testing the specific services to ensure the service is working correctly;

• recovery of specific services;

• updating of the service inventory database to reflect that the specific service has been allocated, modified or recovered;

• assigning and tracking service provisioning activities;

• managing service provisioning jeopardy conditions; and

• reporting progress on service orders to other processes.

Design solution

Process identifier: 1.1.2.2.1.

Brief description

Develop an end-to-end specific service design which complies with a particular customer's requirements.

Extended description

The purpose of the design solution processes is to develop an end-to-end specific service design which complies with a particular customer's requirements.

These processes are invoked when a customer order requires special or unusual end-to-end service arrangements, which are not able to be satisfied using standard service arrangements. These processes may be invoked as part of a service feasibility assessment, or as a result of a confirmed customer order.

The responsibilities of these processes include, but are not limited to:

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

- developing 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; and

- developing a detailed design identifying the relevant service orders to be issued to the implement, configure and activate service process and the allocate specific service parameters to services processes.

A specific service design may require inclusion of some or all of the above aspects depending on whether the service design is being undertaken as part of a feasibility assessment, or is being developed as a result of a committed customer order.

These processes invoke requests to RM&O provisioning processes to determine the availability of suitable specific resources, or to suppliers/partners through the S/PRM process in the event that the service design requires either the inclusion of outsourced or partner-provided specific services.

Issue service orders

Process identifier: 1.1.2.2.7.

Brief description

Issue correct and complete service orders.

Extended description

The purpose of the issue service orders processes is to issue correct and complete service orders.

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 relation to specific services.

These processes assess 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.

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.

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 and manage service provisioning process.

The orchestration, if required, and tracking of the service order progress is the responsibility of the track and manage service provisioning processes.

Allocate specific service parameters to services

Process identifier: 1.1.2.2.2.

Brief description

Issue service identifiers for new services.

Extended description

The purpose of the allocate specific service parameters to services processes is to issue service identifiers for new services.

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. 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, releasing them when the time period has expired. These processes are responsible for creating a response to the initiating processes with respect to the feasibility assessment.

Where the allocate specific service parameters to services processes are requested by a service order issued in response to a confirmed customer order, these processes are responsible for allocating the specific service parameters required to satisfy the initiating service order. Any previously reserved specific service parameters are marked as allocated.

Implement, configure and activate service

Process identifier: 1.1.2.2.4.

Brief description

Implement, configure and activate the specific services allocated against an issued service order.

Extended description

The purpose of the implement, configure and activate service processes is to implement, configure and activate the specific services allocated against an issued service order.

These processes are responsible for, but not limited to:

- assessing and planning the approach to be undertaken for implementation, configuration and activation;
- re-using standard implementation, configuration and activation processes applicable to specific services;
- implementing, configuring and reconfiguring specific services, including customer premises equipment, if part of the service provider offering;
- providing notifications as required if the implementation, configuration and activation activity requires a planned outage or is likely to initiate false specific service alarm event notifications; and
- updating the information contained in the service inventory as to the configuration of specific services and their status.

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

Recover service

Process identifier: 1.1.2.2.10.

Brief description

Recover specific services that are no longer required by customers.

Extended description

The responsibility of the recover service processes is to recover specific services that are no longer required by customers.

These processes follow recovery plans specified by the supplier/partner, or against recovery plans developed by the service provider.

Where appropriate recovery plans are not available, these processes are responsible for developing appropriate recovery plans.

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 and ensuring authorization is received to proceed with the recovery plan. When the recovery activity is about to commence, these processes are responsible for notifying when recovery work is commencing and when it is completed.

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

Test service end-to-end

Process identifier: 1.1.2.2.5.

Brief description

Test specific services to ensure all components are operating within normal parameters and that the service is working to agreed performance levels.

Extended description

The responsibility of the test service end-to-end processes is to test specific services to ensure all components are operating within normal parameters and that the service is working to agreed performance levels before its activation for the customer.

This purpose is performed through testing the service end-to-end as far as possible.

These processes test specific services against supplier/partner defined test plans, or against test plans developed by the service provider.

Where appropriate test plans are not available, these processes are responsible for developing appropriate test plans. These processes are also responsible for capturing and storing the test results for historical and downstream testing comparison purposes.

If these tests succeed, the specific services will be marked as in-service, which means that the specific services are available for use by customers.

Report service provisioning

Process identifier: 1.1.2.2.8.

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 and activation processes.

These processes record, analyse 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 and activation process. These specialized summaries could be specific reports required by specific audiences.

Track and manage service provisioning

Process identifier: 1.1.2.2.3.

Brief description

Ensure service provisioning activities are assigned, managed and tracked efficiently.

Extended description

The objective of the track and manage service provisioning processes is to ensure service provisioning activities are assigned, managed and tracked efficiently.

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

- scheduling, assigning and coordinating service provisioning related activities;

- generating the respective resource order creation request(s) to issue resource orders based on specific service orders;

- escalating status of service orders in accordance with local policy;

- undertaking necessary tracking of the execution process;

- adding additional information to an existing service order;

- modifying information in an existing service order;

- modifying the service order status;

- cancelling a service order when the initiating customer order is cancelled;

- monitoring the jeopardy status of service orders, and escalating service orders as necessary; and

- indicating completion of a service order by modifying the service order status.

Note that some specific service components may be delivered by suppliers/partners. In these cases, the track and 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.

Close service order

Process identifier: 1.1.2.2.9.

Brief description

Close a service order when the service provisioning activities have been completed.

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.

Activate service

Process identifier: 1.1.2.2.6 (this process ID has been deliberately unused).

Brief description

[Not available].

Extended description

[Not available].
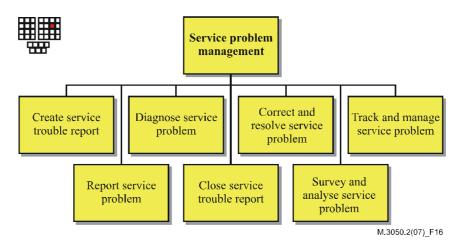
7.2.3 Service problem management

Figure 16 – Service problem management decomposition into level 3 processes

Service problem management

Process identifier: 1.1.2.3.

Brief description

Respond immediately to customer-affecting service problems or failures in order to minimize their effects on customers, and to invoke the restoration of the service or provide an alternate service as soon as possible.

Extended description

Service problem management processes are responsible for the management of problems associated with specific services. The objective of these processes is to respond immediately to reported service problems or failures in order to minimize their effects on customers, and to invoke the restoration of the service or provide an alternate service as soon as possible.

Responsibilities of the service problem management processes include, but are not limited to:
- detecting, analysing, managing and reporting on service alarm event notifications;
- initiating and managing service trouble reports;
- performing service problem localization analysis;
- correcting and resolving service problems;
- reporting progress on service trouble reports to other processes;
- assigning and tracking service problem testing and recovery activities; and
- managing service problem jeopardy conditions.

Service problem management processes perform analysis, decide on the appropriate actions/responses and carry them out with the intent of restoring normal operation on specific services.

However, these activities need to interact with the problem handling processes, as the latter have a view on customer impact. Service problem management processes are responsible for informing problem handling processes of any potential customer problems. Where the original report arose as a result of customer problems, the service problem management processes may be coordinated by problem handling processes.

Create service trouble report

Process identifier: 1.1.2.3.1.

Brief description

Create a new service trouble report.

Extended description

The objective of the create service trouble report process is to create a new service trouble report.

A new service trouble report may be created as a result of service alarm event notification analysis, and subsequent creation of new service alarm event records, undertaken by the survey and analyse service problem processes, or at the request of analysis undertaken by other processes in the CRM (in particular a customer problem report can generate one or more service trouble reports), RM&O, SM&O or S/PRM layers which detect that some form of failure has occurred for which service restoration activity is required to restore normal operation.

If the service trouble report is created as a result of a notification or request from processes other than the survey and analyse service problem processes, the create service trouble report processes are responsible for converting the received information into a form suitable for the service problem management processes, and for requested additional information if required.

These processes will make estimates of the time to restore service which will be included in the new service trouble report so that other processes can gain access to this information.

Diagnose service problem

Process identifier: 1.1.2.3.2.

Brief description

Identify the root cause of the specific service problem.

Extended description

The objective of the diagnose service problem processes is to identify the root cause of the specific service problem. These processes are invoked by the track and manage service problem processes.

The responsibilities of these processes include, but are not limited to:
• verifying whether the service configuration matches the appropriate product features;
• performing diagnostics against the specific services;
• running tests against the specific services;
• starting and stopping audits against specific services; and
• scheduling routine testing of the specific services.

The diagnose service problem processes will make the results of the root cause analysis available to other processes. The diagnose service problem processes will update the open service trouble report, as required during the assessment and when the root cause has been identified.

When the process is complete, the diagnose service problem processes will notify the track and manage service problem processes.

Correct and resolve service problem

Process identifier: 1.1.2.3.3.

Brief description

Restore the service to a normal operational state as efficiently as possible.

Extended description

The objective of the correct and resolve service problem processes is to restore the service to a normal operational state as efficiently as possible.

Based on the nature of the service failure leading to the associated service alarm event notification, automatic restoration procedures might be triggered. Manual restoration activity is assigned to the correct and resolve service problem processes from the track and manage service problem processes.

Depending on the nature of the specific service failure, these processes may possibly re-assign services or re-configure service parameters.

For large service failures requiring extensive re-assignment and/or re-configuration activity to restore normal operation, these processes will attempt to implement work-arounds to recover the specific service operation. In these circumstances, recovery of normal operation may require invocation of the support service problem management processes.

They will also report successful restoration of normal service operation, restoration through temporary work-arounds, or an unsuccessful attempt at service restoration to track and manage service problem through updates to the associated service trouble report.

Track and manage service problem

Process identifier: 1.1.2.3.4.

Brief description

Ensure that testing, repair and restoration activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open service trouble reports in jeopardy.

Extended description

The purpose of the track and manage service problem processes is to ensure that testing, repair and restoration activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open service trouble reports in jeopardy.

Responsibilities of these processes include, but are not limited to:
- initiating first-in testing using automated remote testing capabilities;
- adding additional information to an open service trouble report based on the first-in testing;
- scheduling, assigning and coordinating repair and restoration activities;
- generating the respective resource trouble report creation request(s) to create resource trouble report based on specific service trouble reports;
- initiate any final testing to confirm clearance of the service problem;
- undertake necessary tracking of the execution progress;
- modifying information in an existing service trouble report based on assignments;
- modifying the service trouble report status;
- cancelling a service trouble report when the specific problem was related to a false service alarm event; and
- monitoring the jeopardy status of open service trouble reports, and escalating service trouble reports as necessary.

Note that some specific resource components may be owned and managed by suppliers/partners. In these cases, the track and manage service problem process is responsible for initiating requests,

through S/P problem reporting and management processes for restoration and recovery by the supplier/partner of the specific resource components.

These processes will coordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence.

The track and manage service problem processes are responsible for engaging external suppliers/partners in correction and recovery activities when:

• higher level expertise and/or higher level support is required to resolve the service problem, (which may be automatic in the case of highest priority service problems);

• the specific service has been purchased from an external supplier (as in an interconnect service); or

• the specific service is delivered by an external partner.

Where the engagement with an external supplier/partner is for purchased or delivered services, as the case may be, the tracking and management of the supplier/partner problem resolution activity is actually performed by the S/P problem reporting and management processes, with the track and manage service problem processes relegated to an overall coordination role. The track and manage service problem processes will also inform the close service problem processes by modifying the service trouble report status to cleared when the service problem has been resolved.

Report service problem

Process identifier: 1.1.2.3.5.

Brief description

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

Extended description

The objective of the report service problem processes is to monitor the status of service trouble reports, provide notifications of any changes and provide management reports.

These processes are responsible for continuously monitoring the status of service trouble reports and managing notifications to processes and other parties registered to receive notifications of any status changes, for example, service quality management and customer QoS/SLA management processes. Notification lists are managed and maintained by the support service problem management processes.

These processes record, analyse and assess the service trouble report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall service problem management process. These specialized summaries could be specific reports required by specific audiences.

These processes will make the necessary reports about the problem that occurred, the root cause and the activities carried out for restoration.

Close service trouble report

Process identifier: 1.1.2.3.6.

Brief description

Close a service trouble report when the service problem has been resolved.

Extended description

The objective of the close service trouble report processes is to close a service trouble report when the service problem has been resolved.

These processes monitor the status of all open service trouble reports, and recognize that a service trouble report is ready to be closed when the status is changed to cleared.

Survey and analyse service problem

Process identifier: 1.1.2.3.7.

Brief description

Monitor service alarm event notifications and manage service alarm event records in real-time.

Extended description

The objective of the survey and analyse service problem processes is to monitor service alarm event notifications and manage service alarm event records in real-time.

Responsibilities of the survey and analyse service problem processes include, but are not limited to:
• detecting and collecting service alarm event notifications;
• initiating and managing service alarm event records;
• performing service alarm event notification localization analysis;
• correlating and filtering service alarm event records;
• reporting service alarm event record status changes to other processes; and
• managing service alarm event record jeopardy conditions.

Service alarm event notification analysis encompasses the identification of the service alarm event in terms of reporting entity and nature of the service alarm event. It will then analyse the service alarm events based on a number of criteria and then suppress redundant, transient or implied service alarm events by means of filtering and correlation. It includes the notification of new service alarm event records, or status changes of previously reported service alarm event records, as well as abatement messages when service alarm event records have been cleared.

The analysis will correlate service alarm event notifications to planned outage notifications to remove false service alarm event notifications arising as a result of the planned outage activity.

These processes may determine that a service alarm event notification may represent a customer impacting condition. In these circumstances this process is responsible for indicating a potential customer problem to the problem handling processes. As a part of this indication, this process is responsible for identifying the impacted deployed product instances associated with the service instances presenting alarm event notifications and passing this information to the problem handling processes.

Service alarm event record correlation and filtering encompasses the correlation of redundant, transient or implied service alarm event notifications with a specific "root cause" service alarm event notification and associated service alarm event record.

The survey and analyse service problem processes might trigger a well-defined action based on specific service alarm event notification information as well as the non-arrival of service alarm event notification information after a specific time interval has elapsed.

These processes are also responsible for monitoring and triggering the appropriate action when a service alarm event record is not cleared within a pre-defined period of time.
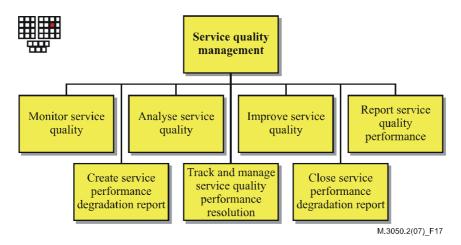
7.2.4 Service quality management

Figure 17 – Service quality management decomposition into level 3 processes

Service quality management

Process identifier: 1.1.2.4.

Brief description

Managing, tracking, monitoring, analysing, improving and reporting on the performance of specific services.

Extended description

Managing, tracking, monitoring, analysing, improving and reporting on the performance of specific services.

Monitor service quality

Process identifier: 1.1.2.4.1.

Brief description

Monitor received service quality information and undertake first-in detection.

Extended description

The objective of the monitor service quality processes is to monitor received service quality information and undertake first-in detection.

The responsibilities of the processes include, but are not limited to:
- undertake the role of first-in detection and collection by monitoring and logging the received specific service performance quality data;
- comparing the received specific service performance quality data to performance quality standards set for each specific service (available from the service inventory);
- assessing and recording received specific service performance quality data which is within tolerance limits for performance quality standards, and for which continuous monitoring and measuring of performance is required;
- recording the results of the continuous monitoring for reporting through the report service quality performance processes;
- detect performance quality threshold violations that represent specific service failures due to abnormal performance;

- pass information about specific service failures due to performance quality threshold violations to service problem management to manage any necessary restoration activity as determined by that process;

- pass information about potential specific customer SLA/QoS performance degradations arising from specific service quality performance degradations (using knowledge about service to purchased product offering linkages) to problem handling to manage any necessary restoration activity as determined by that process;

- detect performance degradation for specific services which provide early warning of potential issues;

- forward service performance degradation notifications to other service quality management processes, which manage activities to restore normal specific service performance quality; and

- log specific service performance quality degradation and violation details within the repository in the manage service inventory processes to ensure historical records are available to support the needs of other processes.

The processes also perform automated service testing using simulated calls simulating standard user behaviour, and collect data related to service usage which may supply information to other processes (e.g., marketing, service cost, etc.) and identify abnormal usage by the service users (i.e., bad passwords, terminal configurations, etc.).

Analyse service quality

Process identifier: 1.1.2.4.2.

Brief description

Analyse and evaluate the service quality performance of specific services.

Extended description

The purpose of the analyse service quality processes is to analyse the information received from the monitor service quality process to evaluate the service quality performance of specific services.

Using the data from monitor service quality, these processes will correlate events in order to filter repetitive alarms and failure events that do not affect the quality delivered, and they will calculate key service quality indicators (such as mean time between failures and other chronic problems).

The responsibilities of the processes include, but are not limited to:

- undertaking analysis as required on specific service performance information received from the monitor service quality processes;

- initiating, modifying and cancelling continuous performance data collection schedules for specific services required to analyse specific service performance. These schedules are established through requests sent to the enable service quality management processes;

- determining the root causes of specific service performance degradations and violations;

- recording the results of the analysis and intermediate updates in the service inventory for historical analysis and for use as required by other processes; and

- undertaking specific detailed analysis (if the original request came from customer QoS/SLA management processes) to discover the root cause of customer QoS performance degradations that may be arising due to interactions between service instances, without any specific service instance having an unacceptable performance in its own right.

Improve service quality

Process identifier: 1.1.2.4.3.

Brief description

Restore the service quality to a normal operational state as efficiently as possible.

Extended description

The objective of the improve service quality processes is to restore the service quality to a normal operational state as efficiently as possible.

These processes follow service improvement plans specified by the supplier/partner, or use service improvement plans developed by the service provider. Where appropriate service improvement plans are not available, these processes are responsible for developing appropriate service improvement plans.

Where activity to improve service quality performance is likely to impact other in-use specific services, this process is responsible for providing appropriate notification of the improvement proposal and ensuring authorization is received to proceed with the service improvement plan. When the service improvement activity is about to commence, these processes are responsible for notifying when service improvement activity is commencing and when it is completed.

Based on the information determined within the analyse service quality processes and the nature of the specific service degradation, these processes may possibly re-assign services or re-configure service parameters.

Report service quality performance

Process identifier: 1.1.2.4.4.

Brief description

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

Extended description

The objective of the report service quality performance processes is to monitor the status of service performance degradation reports, provide notifications of any changes and provide management reports.

These processes are responsible for continuously monitoring the status of service performance degradation reports and managing notifications to other processes in the SM&O and other process layers, and to other parties registered to receive notifications of any status changes. Notification lists are managed and maintained by the enable service quality management processes.

These processes record, analyse and assess the service performance degradation report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall service quality management process. These specialized summaries could be specific reports required by specific audiences.

These processes also report any identified constraints that can affect service quality standards to other processes. These constraints may include specific resource failures, capacity shortages due to unexpected demand peaks, etc.

Create service performance degradation report

Process identifier: 1.1.2.4.5.

Brief description

Create a new service performance degradation report.

Extended description

The objective of the create service performance degradation report process is to create a new service performance degradation report, modify existing service performance degradation reports, and request cancellation of existing service performance degradation reports.

A new service performance degradation report may be created as a result of specific service performance notifications undertaken by the monitor service performance processes, or at the request of analysis undertaken by other CRM, SM&O or RM&O processes which detect that some form of deterioration or failure has occurred requires an assessment of the specific service performance.

If the service performance degradation report is created as a result of a notification or request from processes other than monitor service performance processes, the create service performance degradation report processes are responsible for converting the received information into a form suitable for the service performance management processes, and for requesting additional information if required.

Track and manage service quality performance resolution

Process identifier: 1.1.2.4.6.

Brief description

Efficiently assign, coordinate and track specific service performance analysis, restoration and improvement activities, and escalate any open service performance degradation reports in jeopardy.

Extended description

The objective of the track and manage service quality performance resolution processes is to efficiently assign, coordinate and track specific service performance analysis, restoration and improvement activities, and escalate any open service performance degradation reports in jeopardy.

Responsibilities of these processes include, but are not limited to:
- adding additional information to an open service performance degradation report based on the first-in and on-going analysis;
- scheduling, assigning and coordinating analysis and specific service performance restoration activities and/or repair activities delegated to other processes;
- generating the respective resource trouble report creation request(s) to create resource trouble report based on specific service performance degradation reports where analysis the root cause is related to resources;
- modifying information in an existing service performance degradation report based on assignments;
- modifying the service performance degradation report status;
- cancelling a service performance degradation report when the specific request was related to a false service failure event; and
- monitoring the jeopardy status of open service performance degradation reports, and escalating service performance degradation reports, as necessary.

Note that some specific resource components may be owned and managed by suppliers/partners. In these cases, the track and manage service quality performance process is responsible for initiating requests, through S/P Performance Management for resolution by the supplier/partner of the specific resource components.

These processes will coordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence.

The track and manage service quality performance resolution processes will also inform the close service performance degradation report processes by modifying the service performance degradation report status to cleared when the specific service performance quality issues have been resolved.

Close service performance degradation report

Process identifier: 1.1.2.4.7.

Brief description

Close a service performance degradation report when the service performance has been resolved.

Extended description

The objective of the close service performance degradation report processes is to close a service performance degradation report when the service performance has been resolved.

These processes monitor the status of all open service performance degradation reports, and recognize that a service performance degradation report is ready to be closed when the status is changed to cleared.

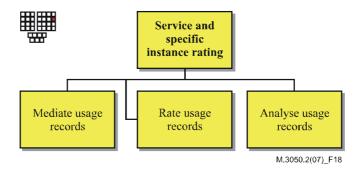### 7.2.5   Service and specific instance rating

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Figure 18 – Service and specific instance rating decomposition into level 3 processes

Service and specific instance rating

Process identifier: 1.1.2.5.

Brief description

Manage service events by correlating and formatting them into a useful format.

Extended description

Service and specific instance rating processes manage service events by correlating and formatting them into a useful format. These processes include the service level rating of usage information. Investigation of service-related billing event problems is also part of these processes. These processes provide information on customer-related and service-related events to other process areas. This includes reports on non-chargeable events and overcharged events, and analysis of event records to identify fraud and prevent further occurrences.

Mediate usage records

Process identifier: 1.1.2.5.1.

Brief description

Validate, normalize, convert and correlate usage records collected from the resource layer.

Extended description

The purpose of the mediate usage records processes is to validate, normalize, convert and correlate usage records collected from the resource layer. These processes also group usage records that relate to a specific service usage.

Rate usage records

Process identifier: 1.1.2.5.2.

Brief description

Identify and apply tariffs and charging algorithms to specific parameters encapsulated in usage records.

Extended description

The purpose of the rate usage records processes is to identify and apply tariffs and charging algorithms to specific parameters encapsulated in usage records in order to produce a charge that is then inserted in the usage record.

Analyse usage records

Process identifier: 1.1.2.5.3.

Brief description

Generate reports on usage records based on requests from other processes.

Extended description

The purpose of the analyse usage record processes is to generate reports on usage records based on requests from other processes. These processes produce reports that may identify abnormalities, which may be caused by fraudulent activity or related to customer complaints.

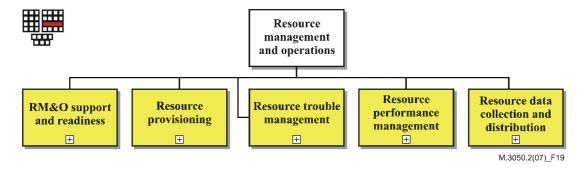## 7.3   Resource management and operations

Figure 19 – Resource management and operations decomposition into level 2 processes

Resource management and operations

Process identifier: 1.1.3.

Brief description

Maintains knowledge of resources (application, computing and network infrastructures) and is responsible for managing all these resources (e.g., networks, IT systems, servers, routers, etc.) utilized to deliver and support services required by or proposed to customers.

Extended description

This horizontal functional process grouping maintains knowledge of resources (application, computing and network infrastructures) and is responsible for managing all these resources (e.g., networks, IT systems, servers, routers, etc.) utilized to deliver and support services required by or proposed to customers. It also includes all functionalities responsible for the direct management of all such resources (network elements, computers, servers, etc.) utilized within the enterprise. These processes are responsible for ensuring that the network and information technologies infrastructure supports the end-to-end delivery of the required services. The purpose of these processes is to ensure that infrastructure runs smoothly, is accessible to services and employees, is maintained and is responsive to the needs, whether directly or indirectly, of services, customers and employees. RM&O also has the basic function to assemble information about the resources (e.g., from network elements and/or element management systems), and then integrate, correlate, and in many cases, summarize that data to pass on the relevant information to service management systems, or to take action in the appropriate resource.

In an e-business world, application and computing management are as important as management of the network resources. Moreover, network, computing and applications resources must increasingly be managed in a joint and integrated fashion. To cope with these needs, the eTOM framework includes the resource management and operations process grouping (together with the corresponding resource development and management grouping within SIP), to provide integrated management across these three sets of resources: applications, computing and network. These areas also encompass processes involved with traditional network element management, since these processes are actually critical components of any resource management process, as opposed to a separate process layer.

The RM&O processes thus manage the complete service provider network and sub-network and information technology infrastructures.

The eTOM framework differentiates day-to-day operations and support from planning and development, and other strategy and lifecycle processes. This better depicts the structure of an enterprise, especially in an e-business era.

RM&O support and readiness

Process identifier: 1.1.3.1.

Brief description

Manage resource infrastructure to ensure that appropriate application, computing and network resources are available and ready to support the fulfilment, assurance and billing processes in instantiating and managing resource instances, and for monitoring and reporting on the capabilities and costs of the individual FAB processes.

Extended description

RM&O support and readiness processes are responsible for managing resource infrastructure to ensure that appropriate application, computing and network resources are available and ready to support the fulfilment, assurance and billing processes in instantiating and managing resource

instances, and for monitoring and reporting on the capabilities and costs of the individual FAB processes.

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

- supporting the operational introduction of new and/or modified resource infrastructure and conducting operations readiness testing and acceptance;

- managing planned outages;

- managing and ensuring the ongoing quality of the resource inventory;

- analysing availability and performance over time on resources or groups of resources, including trend analysis and forecasting;

- demand balancing in order to maintain resource capacity and performance;

- performing pro-active maintenance and repair activities;

- establishing and managing the workforce to support the eTOM processes; and

- managing spares, repairs, warehousing, transport and distribution of resources and consumable goods.

Resource provisioning

Process identifier: 1.1.3.2.

Brief description

Allocation, installation, configuration, activation and testing of specific resources to meet the service requirements, or in response to requests from other processes to alleviate specific resource capacity shortfalls, availability concerns or failure conditions.

Extended description

Resource provisioning processes encompass allocation, installation, configuration, activation and testing of specific resources to meet the service requirements, or in response to requests from other processes to alleviate specific resource capacity shortfalls, availability concerns or failure conditions.

Responsibilities of the resource provisioning processes include, but are not limited to:

- verifying whether appropriate specific resources are available as part of pre-order feasibility checks;

- allocating the appropriate specific resources to support service orders or requests from other processes;

- reserving specific resources (if required by the business rules) for a given period of time until the service order is confirmed;

- possibly initiating delivery of specific resources to the central office, to site or to the customer premises;

- installation and commissioning of specific resources after delivery;

- configuring and activating physical and/or logical specific resources, as appropriate;

- testing the specific resources to ensure the resource is working correctly;

- recovery of resources;

- updating of the resource inventory database to reflect that the specific resource has been allocated to specific services, modified or recovered;

- assigning and tracking resource provisioning activities;

- managing resource provisioning jeopardy conditions; and
- reporting progress on resource orders to other processes.

Resource trouble management

Process identifier: 1.1.3.3.

Brief description

Responsible for the management of troubles with specific resources.

Extended description

Resource trouble management processes are responsible for the management of troubles associated with specific resources. The objectives of these processes are to efficiently and effectively manage reported resource trouble, isolate the root cause and act to resolve the resource trouble.

Responsibilities of the resource trouble management processes include, but are not limited to:
- detecting, analysing, managing and reporting on resource alarm event notifications;
- initiating and managing resource trouble reports;
- performing resource trouble localization analysis;
- correcting and resolving resource trouble;
- reporting progress on resource trouble reports to other processes;
- assigning and tracking resource trouble testing and repair activities; and
- managing resource trouble jeopardy conditions.

On one hand, resource troubles may relate to problems in the service domain and, therefore, also potentially in the customer domain. On the other hand, they may relate to specific resource failures or performance degradations, which are caused by resource faults.

As such, the resource trouble management processes work with specific resource alarm event notifications received from resource data collection and distribution, specific resource performance notifications from resource performance management, and potential specific resource trouble notifications from service problem management processes.

Resource trouble management processes perform analysis, decide on the appropriate actions/responses and carry them out with the intent of restoring normal operation on specific resources.

However, these activities need to interact with the service problem management processes, as the latter have a view on service impact. Resource trouble management processes are responsible for informing service problem management of any potential service problems. Where the original report arose as a result of service problems, the resource trouble management processes may be coordinated by service problem management processes.

Resource performance management

Process identifier: 1.1.3.4.

Brief description

Managing, tracking, monitoring, analysing, controlling and reporting on the performance of specific resources.

Extended description

Resource performance management processes encompass managing, tracking, monitoring, analysing, controlling and reporting on the performance of specific resources. They work with basic information received from the resource data collection and distribution processes.

If the analysis identifies a resource performance violation or a potential service performance violation, information will be passed to resource trouble management and/or service quality management, as appropriate. The latter processes are responsible for deciding on and carrying out the appropriate action/response. This may include requests to the resource performance management processes to install controls to optimize the specific resource performance.

The resource performance management processes will continue to track the resource performance problem, ensuring that resource performance is restored to a level required to support services.

Resource data collection and distribution

Process identifier: 1.1.3.5.

Brief description

Collect and/or distribute management information and data records between resource and service instances and other enterprise processes.

Extended description

Resource data collection and distribution processes are responsible for collection and/or distribution of management information and data records between resource and service instances and other enterprise processes. Resource data collection and distribution processes interact with the resource and service instances to intercept and/or collect usage, network and information technology events and other management information for distribution to other processes within the enterprise, and with enterprise processes to accept command, query and other management information for distribution to resource and service instances. The responsibilities of these processes also include processing of the data and/or management information through activities such as filtering, aggregation, formatting, transformation and correlation of the information before presentation to other processes, resource instances or service instances. Client processes for this management information perform usage reporting and billing activities, as well as fault and performance analysis of resources and services. These include resource performance management, service quality management and service and specific instance rating. Client resource and service instances for this management information use the management information for configuration, or use the management information to trigger activities within the resource or service instances.
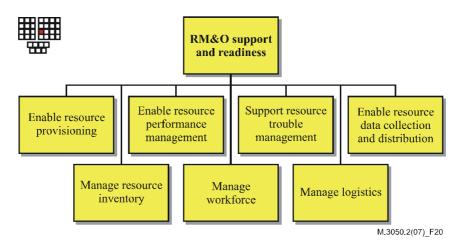
7.3.1 RM&O support and readiness

Figure 20 – RM&O support and readiness decomposition into level 3 processes

RM&O support and readiness

Process identifier: 1.1.3.1.

Brief description

Manage resource infrastructure to ensure that appropriate application, computing and network resources are available and ready to support the fulfilment, assurance and billing processes in instantiating and managing resource instances, and for monitoring and reporting on the capabilities and costs of the individual FAB processes.

Extended description

RM&O support and readiness processes are responsible for managing resource infrastructure to ensure that appropriate application, computing and network resources are available and ready to support the fulfilment, assurance and billing processes in instantiating and managing resource instances, and for monitoring and reporting on the capabilities and costs of the individual FAB processes.

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

- supporting the operational introduction of new and/or modified resource infrastructure, and conducting operations readiness testing and acceptance;
- managing planned outages;
- managing and ensuring the ongoing quality of the resource inventory;
- analysing availability and performance over time on resources or groups of resources, including trend analysis and forecasting;
- demand balancing in order to maintain resource capacity and performance;
- performing pro-active maintenance and repair activities;
- establishing and managing the workforce to support the eTOM processes; and
- managing spares, repairs, warehousing, transport and distribution of resources and consumable goods.

Enable resource provisioning

Process identifier: 1.1.3.1.1.

Brief description

Planning and deployment of new and/or modified resource infrastructure to ensure availability of sufficient resource infrastructure to support the resource provisioning processes, and monitoring, managing and reporting on the capability of the resource provisioning processes.

Extended description

The responsibilities of the enable resource provisioning processes are twofold – planning and deployment of new and/or modified resource infrastructure to ensure availability of sufficient resource infrastructure to support the resource provisioning processes, and monitoring, managing and reporting on the capability of the resource provisioning processes.

The responsibilities of these processes include, but are not limited to:

- forecasting, at an operational level, resource infrastructure volume requirements and run-out time-frames;
- managing capacity planning associated with the deployment of new and/or modified resource infrastructure;
- establishing and monitoring of organizational arrangements to support deployment and operation of new and/or modified resource infrastructure;
- creating, deploying, modifying and/or upgrading of resource infrastructure deployment support tools (including resource inventory) and processes for new and/or modified resource infrastructure;
- developing and promulgating resource infrastructure capacity deployment rules and controls;
- authoring, reviewing and approving operational procedures developed by resource development and management processes prior to resource infrastructure deployment;
- testing and acceptance of new and/or modified resource infrastructure as part of the handover procedure from the resource development and management processes to operations;
- detecting resource infrastructure operational limitations and/or deployment incompatibilities and providing requirements to address these aspects to resource development and management processes;
- scheduling, managing, tracking and monitoring of the roll-out, in accordance with approved plans, of the approved new and/or modified resource infrastructure;
- monitoring capacity utilization of deployed resource infrastructure to provide early detection of potential resource infrastructure shortfalls;
- monitoring of, and reporting on, resource infrastructure and resource instance currency and version management;
- reconfiguring and re-arranging under-utilized deployed resource infrastructure;
- managing recovery and/or removal of obsolete or unviable resource infrastructure;
- reporting on deployed resource infrastructure capacity;
- tracking and monitoring of the resource provisioning management processes and associated costs (including where resource infrastructure is deployed and managed by third parties), and reporting on the capability of the resource provisioning management processes;
- establishing and managing resource provisioning notification facilities and lists to support the resource provisioning notification and reporting processes; and

- updating the resource inventory of any changes to the available resource infrastructure capacity.

Enable resource performance management

Process identifier: 1.1.3.1.2.

Brief description

Proactively monitoring and maintaining resource infrastructure, and monitoring, managing and reporting on the capability of the resource performance management processes.

Extended description

The responsibilities of the enable resource performance management processes are twofold – support resource performance management processes by proactively monitoring and assessing resource infrastructure performance, and monitoring, managing and reporting on the capability of the resource performance management processes.

Proactive management is undertaken using a range of performance parameters, whether technical, time, economic or process related.

The responsibilities of the processes include, but are not limited to:

- undertaking proactive monitoring regimes of resource infrastructure, as required, to ensure ongoing performance within agreed parameters over time;
- developing and maintaining a repository of acceptable performance threshold standards for resource instances to support the resource performance management processes;
- undertaking trend analysis, and producing reports, of the performance of resource infrastructure to identify any longer term deterioration;
- monitoring and analysing the resource instance analyses produced by the resource performance management processes to identify problems that may be applicable to the resource infrastructure as a whole;
- sourcing details relating to resource instance performance and analysis from the resource inventory to assist in the development of trend analyses;
- logging the results of the analysis into the resource inventory repository;
- establishing and managing resource performance data collection schedules, including managing the collection of the necessary information from the resource data collection and distribution processes, to support proactive monitoring and analysis activity, and requests from resource performance;
- management processes for additional data to support resource instance performance analysis;
- establishing and managing facilities to support management of planned resource infrastructure and resource instance outages;
- establishing, maintaining and managing the testing of resource performance control plans to cater for anticipated resource performance disruptions;
- proactively triggering the instantiation of control plans to manage performance through programmed and/or foreseen potentially disruptive events, i.e., anticipated traffic loads on Christmas day, planned outages, etc.;
- tracking and monitoring of the resource performance management processes and associated costs (including where resource infrastructure is deployed and managed by third parties), and reporting on the capability of the resource performance management processes;

- establishing and managing resource performance notification facilities and lists to support the resource performance management notification and reporting processes; and

- supporting the support service quality management process.

Support resource trouble management

Process identifier: 1.1.3.1.3.

Brief description

Proactively undertaking statistically driven preventative and scheduled resource infrastructure maintenance activities and repair activities, and monitoring, managing and reporting on the capability of the resource trouble management processes.

Extended description

The responsibilities of the support resource trouble management processes are twofold – support resource trouble management processes by proactively undertaking statistically driven preventative and scheduled resource infrastructure maintenance activities and repair activities, and monitoring, managing and reporting on the capability of the resource trouble management processes.

These processes are responsible for ensuring that the resource infrastructure is working effectively and efficiently.

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

- extracting and analysing, including undertaking trend analysis, historical and current resource instance trouble reports and performance reports to identify potential resource infrastructure or resource instances requiring proactive maintenance and/or replacement;

- requesting scheduling of additional resource instance data collection to assist in the analysis activity;

- requesting scheduling of resource instance performance testing to assist in analysis activity;

- developing and managing resource infrastructure and resource instance proactive maintenance programmes;

- requesting resource provisioning activity to prevent anticipated resource troubles associated with capacity limitations identified in the analysis activities;

- reporting outcomes of trend analysis to resource development and management processes to influence new and/or modified resource infrastructure development;

- establishing and managing resource instance spares holding facilities, including arrangements with suppliers/partners for vendor-managed spares (the actual commercial agreement is negotiated using supply chain development and management processes);

- management of issuing and re-stocking of spares;

- establishing and managing resource instance return and repair programmes and associated processes, including both service provider and supplier/partner repair activities;

- tracking and monitoring of the resource trouble management processes and associated costs (including where resource infrastructure is deployed and managed by third parties) and reporting on the capability of the resource trouble management processes;

- establishing and managing resource trouble notification facilities and lists to support the resource trouble management notification and reporting processes; and

- supporting the support service problem management process.

Enable resource data collection and distribution

Process identifier: 1.1.3.1.4.

Brief description

Administering and managing of the processes which enable the effective operation of the resource data collection and data distribution network, and monitoring, managing and reporting on the capability of the resource data collection and distribution processes.

Extended description

The responsibilities of the enable resource data collection and distribution processes are twofold – administering and managing of the processes which enable the effective operation of the resource data collection and data distribution infrastructure, and monitoring, managing and reporting on the capability of the resource data collection and distribution processes.

The resource data collection and distribution processes may be either scheduled activities, or may be triggered as a result of ad-hoc events.

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

- administering and managing the scheduling of resource data collection and resource data distribution;

- managing the registration and access control processes used by other processes to gain access to the collected resource data;

- managing the registration and access control processes that enable processes to download resource data to be distributed to identified resource instances;

- establishing and managing resource data storage facilities, and associated management processes, within the resource data collection and resource data distribution infrastructure, to be used as temporary data holding facilities, as required;

- tracking and monitoring of the resource data collection and distribution processes and associated costs, and reporting on the capability of the resource data collection and distribution processes; and

- identifying any technical driven shortcomings of the resource data collection and resource data distribution infrastructures, and providing input to resource development and management processes to rectify these issues.

Note that the underlying resource infrastructure used for the actual transport of resource data is managed as appropriate by other processes within the RM&O and RD&M horizontal process groupings.

Manage resource inventory

Process identifier: 1.1.3.1.5.

Brief description

Establish, manage and administer the enterprise's resource inventory, as embodied in the resource inventory database, and monitor and report on the usage and access to the resource inventory, and the quality of the data maintained in it.

Extended description

The responsibilities of the manage resource inventory processes are twofold – establish, manage and administer the enterprise's resource inventory, as embodied in the resource inventory database, and monitor and report on the usage and access to the resource inventory, and the quality of the data maintained in it.

The resource inventory maintains records of all resource infrastructure and resource instance configuration, version and status details. It also records test and performance results and any other resource-related information required to support RM&O and other processes.

The resource inventory is also responsible for maintaining the association between service instances and resource instances, created as a result of the resource provisioning management processes.

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

- identifying the inventory-relevant information requirements to be captured for resource infrastructure and resource instances;
- identifying, establishing and maintaining resource inventory repository facilities;
- establishing and managing the resource inventory management and information capture processes;
- managing the registration and access control processes that enable processes to create, modify, update, delete and/or download resource data to and from the resource inventory;
- ensuring the resource inventory repository accurately captures and records all identified resource infrastructure and resource instance details, through use of automated or manual audits;
- tracking and monitoring of the usage of, and access to, the resource inventory repository and associated costs, and reporting on the findings; and
- identifying any technical driven shortcomings of the resource inventory repository, and providing input to resource development and management processes to rectify these issues.

Manage workforce

Process identifier: 1.1.3.1.6.

Brief description

Plan, assign, dispatch and manage the activities of staff (directly or indirectly) employed by, or operating as part of, the enterprise (i.e., technicians, clerks, managers, etc.), and monitoring, managing and reporting on the capability of the manage workforce processes.

Extended description

The responsibilities of the manage workforce processes are twofold – plan, assign, dispatch and manage the activities of staff (directly or indirectly) employed by, or operating as part of, the enterprise (i.e., technicians, clerks, managers, etc.), and monitoring, managing and reporting on the capability of the manage workforce processes.

The staff directly managed by these processes includes all employees and contractors who are paid by the enterprise. The staff indirectly managed by these processes includes all employees, consultants and contractors paid by third parties who have commercial arrangements with the enterprise.

In the cases where the third parties own and manage the service and/or resource infrastructure, the manage workforce processes are responsible for requesting activities to be performed rather than directly assigning specific staff.

The manage workforce processes also enable reporting and monitoring of assigned activities.

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

- establishing and managing work assignment queues through which requests for work activities are received from eTOM processes;
- establishing and managing staff lists, containing details about assignable staff such as location, skills, availability for assignment etc.;

- establishing, managing and distributing individuals work assignments to staff outlining the daily, or other time breadth, work assignments;
- establishing and managing fast-track and jeopardy re-assignment capabilities to allow for modification of work assignments as required to meet jeopardy or other high priority conditions;
- forecasting assignable staffing requirements on a daily, weekly and longer period basis, based on historic work volume records, and forecast activity volumes;
- determining work activity time estimates for all known work activities, based on actual historic results or on forward estimates, to be used as a parameter for scheduling work rosters;
- establishing and managing recall capabilities to allow for out-of-hours staff recall in the event of unforeseen circumstances;
- managing the registration and access control processes that enable processes to create, modify, update, delete and/or download scheduling and work assignment data to and from the workforce management system(s);
- establishing and managing information transfer between the enterprise workforce management system(s) and those of external third parties (when the infrastructure is owned and operated by third parties);
- ensuring workforce management system(s) accurately captures and records all assignment and work scheduling details, through use of automated or manual audits;
- tracking and monitoring of the usage of, and access to, the workforce management system(s) and associated costs of the manage workforce processes, and reporting on the findings; and
- identifying any technical driven shortcomings of the workforce management system(s), and providing input to resource development and management processes to rectify these issues.

Manage logistics

Process identifier: 1.1.3.1.7.

Brief description

Manage and control warehousing, stock level management, physical distribution and transport of purchased resources and consumable goods.

Extended description

The responsibility of the manage logistics processes is twofold – manage and control warehousing, stock management, physical distribution and transport of purchased resources and consumable goods, and monitoring, managing and reporting on the capability of the manage logistics processes.

These processes are applicable for both resources managed by the processes in the RM&O processes as well as the myriad of consumable goods used by the enterprise in its day-to-day activities, such as paper, stationery, etc.

These processes manage all operational processes associated with the storage and distribution of purchased resources and consumable goods from the supplier. In addition, these processes are responsible for initiating orders for consumable goods, spare parts and for monitoring and reporting on progress of consumable goods orders. The actual order placed is managed through the appropriate S/PRM processes.

These purchased items may be temporarily stored in enterprise, vendor or third party managed warehouses before being delivered to smaller distribution points, or being delivered directly to site. Or, alternatively, they may be delivered directly to site from suppliers' facilities.

These processes are responsible for determining the distribution path for individual resources and consumable goods.

These processes are responsible for the internal operational processes associated with managing a warehouse, including aspects such as yard management, dock management, pick management, etc. These processes track all goods stored in the warehouse from the time of inward delivery to outwards dispatch.

These processes manage the coordination and control of transport infrastructure, including land, air and sea transport capabilities. The transport may be owned and managed by the enterprise, the vendor or a third-party. Different parties may be responsible for different aspects of the overall end-end transport requirements, i.e., a vendor may deliver to a warehouse, and a third party from the warehouse to site. These processes are responsible for determining truck loads, distribution routes, etc.

To the extent that the above processes are managed by either the supplier, or by third parties, the enterprise processes are responsible for initiating requests, and for monitoring, tracking and reporting on the operation of the supplier, and/or third party.

Each of the above processes has sub-processes responsible for:

• managing the registration and access control processes that enable enterprise processes to create, modify, update, delete and/or download individual requests into supplier and/or third party systems associated with any of the above processes;

• managing the registration and access control processes that enable supplier and/or third party processes to create, modify, update, delete and/or download relevant details into enterprise systems associated with any of the above processes;

• managing of issuing and re-stocking of spares;

• tracking and monitoring of the usage of, and access to, the specific process and associated costs of the specific processes, and reporting on the findings; and

• identifying any technical driven shortcomings of the specific automated support capabilities, and providing input to resource development and management processes to rectify these issues.
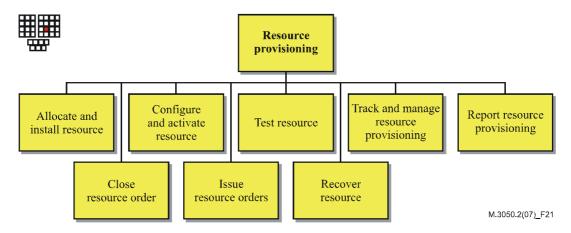
7.3.2 Resource provisioning

Figure 21 – Resource provisioning decomposition into level 3 processes

Resource provisioning

Process identifier: 1.1.3.2.

Brief description

Allocation, installation, configuration, activation and testing of specific resources to meet the service requirements, or in response to requests from other processes to alleviate specific resource capacity shortfalls, availability concerns or failure conditions.

Extended description

Resource provisioning processes encompass allocation, installation, configuration, activation and testing of specific resources to meet the service requirements, or in response to requests from other processes to alleviate specific resource capacity shortfalls, availability concerns or failure conditions.

Responsibilities of the resource provisioning processes include, but are not limited to:

- verifying whether appropriate specific resources are available as part of pre-order feasibility checks;
- allocating the appropriate specific resources to support service orders or requests from other processes;
- reserving specific resources (if required by the business rules) for a given period of time until the service order is confirmed;
- possibly initiating delivery of specific resources to the central office, to site or to the customer premises;
- installation and commissioning of specific resources after delivery;
- configuring and activating physical and/or logical specific resources, as appropriate;
- testing the specific resources to ensure the resource is working correctly;
- recovery of resources;
- updating of the resource inventory database to reflect that the specific resource has been allocated to specific services, modified or recovered;
- assigning and tracking resource provisioning activities;
- managing resource provisioning jeopardy conditions; and
- reporting progress on resource orders to other processes.

Allocate and install resource

Process identifier: 1.1.3.2.1.

Brief description

Allocate specific resources required to support a specific service.

Extended description

The objective of the allocate and install resource processes is to allocate specific resources required to support a specific service.

These activities include, but are not limited to:

- investigating the ability to be able to satisfy specific service orders as a part of a feasibility check;
- reserving or allocating specific resources in response to issued resource orders;

- confirming availability of, or initiating an order for, equipment or software with a supplier/partner; and
- installing and commissioning specific resources following delivery.

Where the allocate and install resource processes are requested by a resource order issued as part of a pre-order feasibility check, these processes determine whether there are adequate specific resources available to fulfil the request. Where there are not sufficient specific resources available, these processes may initiate enquiries using the relevant S/PRM and/or resource support and readiness processes to determine lead times for specific resource availability. Depending on business rules, and on any specific levels of commitment contained in the initiating service order, these processes may reserve specific resources linked to the initiating service order for a period of time, and releasing them when the time period has expired. These processes are responsible for creating a response to the initiating processes with respect to the feasibility assessment.

Where the allocate and install resource processes are requested by a resource order issued in response to a confirmed service order, these processes are responsible for allocating the specific resources required to satisfy the initiating service order. Any previously reserved specific resources are marked as allocated.

These processes are responsible for initiating, using the S/PRM processes, resource requisition orders for any specific resources in shortfall. Sufficient information is supplied with the resource requisition orders to ensure that the appropriate specific resources are delivered to the appropriate location for installation and configuration. This may include, for example, a central office, a transmission room, or the customer premises.

Following delivery, these processes are responsible for installing and commissioning specific resources, and updating the resource inventory as part of these processes. Where installation of the specific resources requires an upfront major resource infrastructure, the installation of both the resource infrastructure and specific resources may be undertaken under the control of the support resource provisioning processes.

The allocate and install resource processes will closely interact with the manage resource inventory processes to determine availability of physical and logical specific resources to select from, thereby applying specific selection criteria.

Configure and activate resource

Process identifier: 1.1.3.2.2.

Brief description

Configure and activate the specific resources allocated against an issued resource order.

Extended description

The objective of the configure and activate resource processes is to configure and activate the specific resources allocated against an issued resource order. These processes are responsible for, but not limited to:

- assessing and planning the approach to be undertaken for configuration and activation;
- re-use standard configuration and activation processes applicable to specific resources;
- providing notifications as required if the activation activity requires a planned outage or is likely to initiate false specific resource alarm event notifications; and
- updating the information contained in the resource inventory as to the configuration of specific resources and their status.

At the successful conclusion of these activities, the status of the specific resources will be changed from allocated to activated, which means they are in use.

Test resource

Process identifier: 1.1.3.2.3.

Brief description

Test specific resources to ensure they are operating within normal parameters.

Extended description

The responsibility of the test resource processes is to test specific resources to ensure they are operating within normal parameters. The objective is to verify whether the resources are working correctly and meet the appropriate performance levels.

These processes test specific resources against supplier/partner defined test plans, or against test plans developed by the service provider. Where appropriate test plans are not available, these processes are responsible for developing appropriate test plans. These processes are also responsible for capturing and storing the test results for historical and downstream testing comparison purposes.

If these tests succeed, the specific resources will be marked as in-service, which means the specific resources are available for use.

Track and manage resource provisioning

Process identifier: 1.1.3.2.5.

Brief description

Ensure resource provisioning activities are assigned, managed and tracked efficiently.

Extended description

The objective of the track and manage resource provisioning process is to ensure resource provisioning activities are assigned, managed and tracked efficiently.

Responsibilities of these processes include, but are not limited to:
- scheduling, assigning and coordinating resource provisioning related activities;
- escalating status of resource orders in accordance with local policy;
- undertaking necessary tracking of the execution process;
- adding additional information to an existing resource order;
- modifying information in an existing resource order;
- modifying the resource order status;
- cancelling a resource order when the initiating service order is cancelled;
- monitoring the jeopardy status of resource orders, and escalating resource orders as necessary; and
- indicating completion of a resource order by modifying the resource order status.

These processes will coordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence.

The track and manage resource provisioning processes are responsible for engaging external suppliers in provisioning activities when these have been outsourced or contracted to external parties.

The track and manage resource provisioning processes will also inform the close resource order processes by modifying the resource order status to complete when the resource order has been fulfilled.

Report resource provisioning

Process identifier: 1.1.3.2.6.

Brief description

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

Extended description

The objective of the report resource provisioning processes is to monitor the status of resource orders, provide notifications of any changes and provide management reports.

These processes are responsible for continuously monitoring the status of resource 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 resource provisioning processes.

These processes record, analyse and assess the resource order status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall resource provisioning process. These specialized summaries could be specific reports required by specific audiences.

Close resource order

Process identifier: 1.1.3.2.7.

Brief description

Close a resource order when the resource provisioning activities have been completed.

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.

Issue resource orders

Process identifier: 1.1.3.2.8.

Brief description

Issue correct and complete resource orders.

Extended description

The purpose of the issue resource orders processes is to issue correct and complete resource orders.

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

These processes assess 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.

The issued resource order may require a feasibility assessment to be undertaken, may require new provisioning activities for specific resources, may require a change to a previously issued resource order or may require the deletion/recovery of previously delivered specific resources.

Where the initiating request or service order 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 service order information and the associated resource orders.

Where the initiating request or service order has special or unusual requirements, and a specific feasibility assessment has not been previously undertaken, this process marks the issued resource order as requiring special handling, and passes management for further processing to the track and manage resource provisioning process.

Where the initiating request or service order has special or unusual requirements, and a specific feasibility assessment has been previously undertaken, this process issues the previously determined resource orders.

The orchestration, if required, and tracking of the progress of a resource order is the responsibility of the track and manage resource provisioning processes.

Recover resource

Process identifier: 1.1.3.2.9.

Brief description

Recover specific resources that are no longer required.

Extended description

The responsibility of the recover resource processes is to recover specific resources that are no longer required.

These processes follow recovery plans specified by the supplier/partner, or follow recovery plans developed by the service provider. Where appropriate recovery plans are not available, these processes are responsible for developing appropriate recovery plans.

Where recovery of resources is likely to impact other in-use specific resources or specific services, this process is responsible for providing appropriate notification of the recovery proposal and ensuring authorization is received to proceed with the recovery plan. When the recovery activity is about to commence, these processes are responsible for notifying when recovery work is commencing and when it is completed.

When recovered, the specific resources will be marked as unallocated.

Collect, update and report resource configuration data

Process identifier: 1.1.3.2.4 (this process ID has been deliberately unused)

Brief description

[Not available].

Extended description

[Not available].
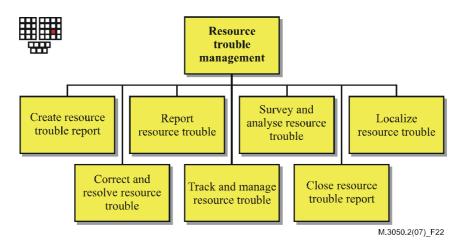
7.3.3 Resource trouble management

Figure 22 – Resource trouble management decomposition into level 3 processes

Resource trouble management

Process identifier: 1.1.3.3.

Brief description

Responsible for the management of troubles with specific resources.

Extended description

Resource trouble management processes are responsible for the management of troubles associated with specific resources. The objectives of these processes are to efficiently and effectively manage reported resource trouble, isolate the root cause and act to resolve the resource trouble.

Responsibilities of the resource trouble management processes include, but are not limited to:

• detecting, analysing, managing and reporting on resource alarm event notifications;

• initiating and managing resource trouble reports;

• performing resource trouble localization analysis;

• correcting and resolving resource trouble;

• reporting progress on resource trouble reports to other processes;

• assigning and tracking resource trouble testing and repair activities; and

• managing resource trouble jeopardy conditions.

On one hand, resource troubles may relate to problems in the service domain and, therefore, also potentially in the customer domain. On the other hand, they may relate to specific resource failures or performance degradations, which are caused by resource faults.

As such, the resource trouble management processes work with specific resource alarm event notifications received from resource data collection and distribution, specific resource performance notifications from resource performance management, and potential specific resource trouble notifications from service problem management processes.

Resource trouble management processes perform analysis, decide on the appropriate actions/responses and carry them out with the intent of restoring normal operation on specific resources.

However, these activities need to interact with the service problem management processes, as the latter have a view on service impact. Resource trouble management processes are responsible for

informing service problem management of any potential service problems. Where the original report arose as a result of service problems, the resource trouble management processes may be coordinated by service problem management processes.

Create resource trouble report

Process identifier: 1.1.3.3.7.

Brief description

Create a new resource trouble report.

Extended description

The objective of the create resource trouble report process is to create a new resource trouble report.

A new resource trouble report may be created as a result of resource alarm event notification analysis, and subsequent creation of new resource alarm event records, undertaken by the survey and analyse resource trouble processes, or at the request of analysis undertaken by other processes in the RM&O, SM&O (in particular, a service trouble report can generate one or more resource trouble reports) or S/PRM layers which detect that some form of failure has occurred for which resource restoration activity is required to restore normal operation.

If the resource trouble report is created as a result of a notification or request from processes other than the survey and analyse resource trouble processes, the create resource trouble report processes are responsible for converting the received information into a form suitable for the resource trouble management processes, and for requesting additional information if required.

These processes will make estimates of the time to restore resource which will be included in the new resource trouble report so that other processes can gain access to this information.

Report resource trouble

Process identifier: 1.1.3.3.5.

Brief description

Monitor the status of resource trouble reports, provide notifications of any changes and provide management reports.

Extended description

The objective of the report resource trouble processes is to monitor the status of resource trouble reports, provide notifications of any changes and provide management reports.

These processes are responsible for continuously monitoring the status of resource trouble reports and managing notifications to processes and other parties registered to receive notifications of any status changes, for example, resource performance management and service quality management. Notification lists are managed and maintained by the support resource trouble management processes.

These processes record, analyse and assess the resource trouble report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall resource trouble management process. These specialized summaries could be specific reports required by specific audiences.

These processes will make the necessary reports about the resource trouble that occurred, the root cause and the activities carried out for restoration.

Survey and analyse resource trouble

Process identifier: 1.1.3.3.1.

Brief description

Monitor resource alarm event notifications and manage resource alarm event records in real-time.

Extended description

The objective of the survey and analyse resource trouble processes is to monitor resource alarm event notifications and manage resource alarm event records in real-time.

Responsibilities of the survey and analyse resource trouble processes include, but are not limited to:

- detecting and collecting resource alarm event notifications;
- initiating and managing resource alarm event records;
- performing resource alarm event notification localization analysis;
- correlating and filtering resource alarm event records;
- reporting resource alarm event record status changes to other processes; and
- managing resource alarm event record jeopardy conditions.

Resource alarm event notification analysis encompasses the identification of the resource alarm event in terms of reporting entity and nature of the resource alarm event. It will then analyse the resource alarm events based on a number of criteria and then suppress redundant, transient or implied resource alarm events by means of filtering and correlation. It includes the notification of new resource alarm event records, or status changes of previously reported resource alarm event records, as well as abatement messages when resource alarm event records have been cleared.

The analysis will correlate resource alarm event notifications to planned outage notifications to remove false resource alarm event notifications arising as a result of the planned outage activity.

These processes may determine that a resource alarm event notification may represent a service impacting condition. In these circumstances, this process is responsible for indicating a potential service problem to the service problem management processes. As a part of this indication, this process is responsible for identifying the impacted service instances associated with the resource instances presenting alarm event notifications and passing this information to the service problem management processes.

Resource alarm event record correlation and filtering encompasses the correlation of redundant, transient or implied resource alarm event notifications with a specific "root cause" resource alarm event notification and associated resource alarm event record.

The survey and analyse resource trouble processes might trigger a well-defined action based on specific resource alarm event notification information as well as the non-arrival of resource alarm event notification information after a specific time interval has elapsed.

These processes are also responsible for monitoring and triggering the appropriate action when a resource alarm event record is not cleared within a pre-defined period of time.

Localize resource trouble

Process identifier: 1.1.3.3.2.

Brief description

Identify the root cause of the specific resource trouble.

Extended description

The objective of the localize resource trouble processes is to identify the root cause of the specific resource trouble. These processes are invoked by the track and manage resource trouble processes.

The responsibilities of these processes include, but are not limited to:
- verifying whether the resource configuration matches the appropriate service features;
- performing diagnostics against the specific resources;
- running tests against the specific resources;
- starting and stopping audits against specific resources; and
- scheduling routine testing of the specific resources.

The localize resource trouble processes will make the results of the root cause analysis available to other processes. The localize resource trouble processes will update the open resource trouble report, as required during the assessment, and when the root cause has been identified.

When the process is complete, the localize resource trouble processes will notify the track and manage resource trouble processes.

Correct and resolve resource trouble

Process identifier: 1.1.3.3.3.

Brief description

Restore or replace resources that have failed as efficiently as possible.

Extended description

The objective of the correct and resolve resource trouble processes is to restore or replace resources that have failed as efficiently as possible.

Based on the nature of the resource failure leading to the associated resource alarm event notification, automatic restoration procedures might be triggered. Manual restoration activity is assigned to the correct and resolve resource trouble processes from the track and manage resource trouble processes.

Depending on the nature of the specific resource failure, these processes may possibly repair or replace the failed unit or specific resource. These processes are also responsible for isolating a unit with a fault and managing the redundant resource units (e.g., hot standby).

For large resource failures requiring extensive repair and/or replacement activity to restore normal operation, these processes will attempt to implement work-arounds to recover the specific resource operation. In these circumstances, recovery of normal operation may require invocation of the support resource trouble management processes.

They will also report successful restoration of normal operation, restoration through temporary work-arounds or an unsuccessful attempt at restoration to track and manage resource trouble through updates to the associated resource trouble report.

Track and manage resource trouble

Process identifier: 1.1.3.3.4.

Brief description

Ensure testing, repair and restoration activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open resource trouble reports in jeopardy.

Extended description

The objective of the track and manage resource trouble is to ensure testing, repair and restoration activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open resource trouble reports in jeopardy.

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

- initiating first-in testing using automated remote testing capabilities;
- adding additional information to an open resource trouble report based on the first-in testing;
- scheduling, assigning and coordinating repair and restoration activities;
- initiate any final testing to confirm clearance of the service problem;
- undertake necessary tracking of the execution progress;
- modifying information in an existing resource trouble report based on assignments;
- modifying the resource trouble report status;
- cancelling a resource trouble report when the specific trouble was related to a false alarm event; and
- monitoring the jeopardy status of open resource trouble reports, and escalating resource trouble reports as necessary.

These processes will coordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence.

The track and manage resource trouble processes are responsible for engaging external suppliers in correction and recovery activities when higher level expertise and/or higher level support is required to resolve the resource trouble. This engagement can be linked to the priority of the resource trouble report, and could occur automatically for highest priority resource trouble reports.

The track and manage resource trouble processes will also inform the close resource trouble processes by modifying the resource trouble report status to cleared when the resource trouble has been resolved.

Close resource trouble report

Process identifier: 1.1.3.3.6.

Brief description

Close a resource trouble report when the resource trouble has been resolved.

Extended description

The objective of the close resource trouble report processes is to close a resource trouble report when the resource trouble has been resolved.

These processes monitor the status of all open resource trouble reports, and recognize that a resource trouble report is ready to be closed when the status is changed to cleared.
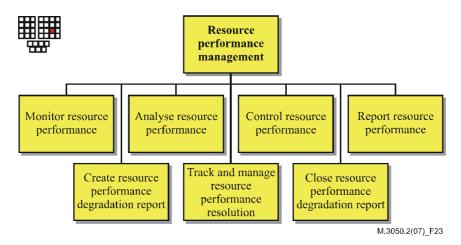
7.3.4 Resource performance management

Figure 23 – Resource performance management decomposition into level 3 processes

Resource performance management

Process identifier: 1.1.3.4.

Brief description

Managing, tracking, monitoring, analysing, controlling and reporting on the performance of specific resources.

Extended description

Resource performance management processes encompass managing, tracking, monitoring, analysing, controlling and reporting on the performance of specific resources. They work with basic information received from the resource data collection and distribution processes.

If the analysis identifies a resource performance violation or a potential service performance violation, information will be passed to resource trouble management and/or service quality management, as appropriate. The latter processes are responsible for deciding on and carrying out the appropriate action/response. This may include requests to the resource performance management processes to install controls to optimize the specific resource performance.

The resource performance management processes will continue to track the resource performance problem, ensuring that resource performance is restored to a level required to support services.

Monitor resource performance

Process identifier: 1.1.3.4.1.

Brief description

Monitor received resource performance information and undertake first-in detection.

Extended description

The objective of the monitor resource performance processes is to monitor received resource performance information and undertake first-in detection.

The responsibilities of the processes include, but are not limited to:

• undertaking the role of first-in detection by monitoring the received specific resource performance data;

- comparing the received specific resource performance data to performance standards set for each specific resource (available from the resource inventory);

- assessing and recording received specific resource performance data which is within tolerance limits for performance standards, and for which continuous monitoring and measuring of specific resource performance is required;

- recording the results of the continuous monitoring for reporting through the report resource performance processes;

- detecting performance threshold violations which represent specific resource failures due to abnormal performance;

- passing information about resource failures due to performance threshold violations to resource trouble management to manage any necessary restoration activity as determined by that process;

- passing information about potential specific service performance degradations arising from specific resource degradations to service quality management to manage any necessary restoration activity as determined by that process;

- detecting performance degradation for specific resources which provide early warning of potential issues;

- forwarding resource performance degradation notifications to other resource performance management processes, which manage activities to restore normal specific resource performance; and

- logging specific resource performance degradation and violation details within the repository in the manage resource inventory processes to ensure historical records are available to support the needs of other processes.

Analyse resource performance

Process identifier: 1.1.3.4.2.

Brief description

Analyse and evaluate the performance of specific resources.

Extended description

The objective of the analyse resource performance processes is to analyse the information received from the monitor resource performance process to evaluate the performance of a specific resource.

The responsibilities of the processes include, but are not limited to:

- undertaking analysis, as required, on specific resource performance information received from the monitor resource performance processes;

- initiating, modifying and cancelling continuous performance data collection schedules for specific resources required to analyse specific resource performance. These schedules are established through requests sent to the enable resource data collection and distribution processes;

- determining the root causes of specific resource performance degradations and violations;

- recording the results of the analysis and intermediate updates in the resource inventory for historical analysis and for use, as required, by other processes; and

- undertaking specific detailed analysis (if the original requested came from service quality management processes) to discover the root cause of service performance degradations that may be arising due to interactions between resource instances, without any specific resource instance having an unacceptable performance in its own right.

Control resource performance

Process identifier: 1.1.3.4.3.

Brief description

Apply controls to resources in order to optimize the resource performance.

Extended description

The objective of the control resource performance processes is to apply controls to resource instances in order to optimize the resource performance.

The responsibilities of the processes include, but are not limited to:

• instantiating controls to attempt to restore resource instances to normal operation, at the request of analyse resource performance processes. These controls may be based on established control plans, or the controls may be developed within the control resource performance processes, depending on circumstances;

• instantiating controls to attempt to restore failed resource instances to normal operation, at the request of resource trouble management or service quality management processes. These controls may be based on established control plans, or the controls may be developed within the control resource performance process, depending on circumstances.

Report resource performance

Process identifier: 1.1.3.4.4.

Brief description

Monitor the status of resource performance degradation reports, provide notifications of any changes and provide management reports.

Extended description

The objective of the report resource performance processes is to monitor the status of resource performance degradation reports, provide notifications of any changes and provide management reports.

These processes are responsible for continuously monitoring the status of resource performance degradation reports and managing notifications to other processes in the RM&O and other layers, and to other parties registered to receive notifications of any status changes. Notification lists are managed and maintained by the enable resource performance management processes.

These processes record, analyse and assess the resource performance degradation report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall resource performance management process. These specialized summaries could be specific reports required by specific audiences.

Create resource performance degradation report

Process identifier: 1.1.3.4.5.

Brief description

Create a new resource performance degradation report.

Extended description

The objective of the create resource performance degradation report process is to create a new resource performance degradation report, modify existing resource performance degradation reports, and request cancellation of existing resource performance degradation reports.

A new resource performance degradation report may be created as a result of specific resource performance notifications undertaken by the monitor resource performance processes, or at the request of analysis undertaken by other RM&O, SM&O or S/PRM processes, which detect that some form of deterioration or failure has occurred and requires an assessment of the specific resource performance.

If the resource performance degradation report is created as a result of a notification or request from processes other than monitor resource performance processes, the create resource performance degradation report processes are responsible for converting the received information into a form suitable for the resource performance management processes, and for requesting additional information, if required.

Track and manage resource performance resolution

Process identifier: 1.1.3.4.6.

Brief description

Ensure testing, repair and restoration activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open resource performance degradation reports in jeopardy.

Extended description

The objective of the track and manage resource performance resolution processes is to efficiently assign, coordinate and track specific resource performance analysis and control activities, and escalate any open resource performance degradation reports in jeopardy.

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

• adding additional information to an open resource performance degradation report based on the first-in and on-going analysis;

• scheduling, assigning and coordinating analysis and specific resource performance restoration activities and/or repair activities delegated to other processes;

• generating the respective S/P problem report creation request(s) to initiate S/P problem report processes based on specific resource performance degradation reports where analysis of the root cause is related to S/P products;

• modifying information in an existing resource performance degradation report based on assignments;

• modifying the resource performance degradation report status;

• cancelling a resource performance degradation report when the specific request was related to a false resource failure event; and

• monitoring the jeopardy status of open resource performance degradation reports, and escalating resource performance degradation reports, as necessary.

These processes will coordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence.

The track and manage resource performance resolution processes will also inform the close resource performance degradation report processes by modifying the resource performance degradation report status to cleared when the specific resource performance issues have been resolved.

Close resource performance degradation report

Process identifier: 1.1.3.4.7.

Brief description

Close a resource performance degradation report when the resource performance has been resolved.

Extended description

The objective of the close resource performance degradation report processes is to close a resource performance degradation report when the resource performance has been resolved.

These processes monitor the status of all open resource performance degradation reports, and recognize that a resource performance degradation report is ready to be closed when the status is changed to cleared.
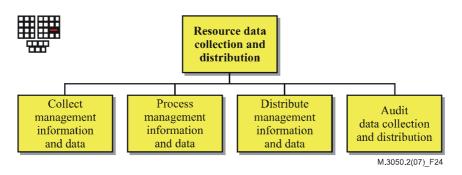
7.3.5   Resource data collection and distribution

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Figure 24 – Resource data collection and distribution decomposition into level 3 processes

Resource data collection and distribution

Process identifier: 1.1.3.5.

Brief description

Collect and/or distribute management information and data records between resource and service instances and other enterprise processes.

Extended description

Resource data collection and distribution processes are responsible for collection and/or distribution of management information and data records between resource and service instances and other enterprise processes. Resource data collection and distribution processes interact with the resource and service instances to intercept and/or collect usage, network and information technology events and other management information for distribution to other processes within the enterprise, and with enterprise processes to accept command, query and other management information for distribution to resource and service instances. The responsibilities of these processes also include processing of the data and/or management information through activities such as filtering, aggregation, formatting, transformation and correlation of the information before presentation to other processes, resource instances or service instances. Client processes for this management information perform usage reporting and billing activities, as well as fault and performance analysis of resources and services. These include resource performance management, service quality management and service and specific instance rating. Client resource and service instances for this management information use the management information for configuration, or use the management information to trigger activities within the resource or service instances.

Collect management information and data

Process identifier: 1.1.3.5.1.

Brief description

Collection of management information and data records from resource and service instances and other enterprise processes.

Extended description

The collect management information and data processes are responsible for collection of management information and data records from resource and service instances and other enterprise processes. These processes interact with the resource and service instances to intercept and/or collect usage, network and information technology events, and performance and other management information for distribution to other processes within the enterprise, and with enterprise processes to accept command, query and other management information for distribution to resource and service instances.

Process management information and data

Process identifier: 1.1.3.5.2.

Brief description

Process the management information and/or data into a form suitable for the intended recipient processes, resource instances or service instances.

Extended description

The process management information and data processes are responsible for processing the management information and/or data into a form suitable for the intended recipient processes, resource instances or service instances.

The responsibilities of this process include, but are not limited to:

- identifying the intended recipient processes, resource instances or service instances to determine the appropriate processing required;
- filtering and/or low level correlation of the management information and/or data based on well-defined criteria;
- aggregating or disaggregating the management information and/or data to provide summarized versions; and
- formatting the management information and/or data into a form suitable for the intended recipient before distribution.

Distribute management information and data

Process identifier: 1.1.3.5.3.

Brief description

Distribute processed management information and/or data to resource instances, service instances or other processes within the enterprise for further analysis and/or reporting.

Extended description

The distribute management information and data processes are responsible for distributing processed management information and/or data to resource instances, service instances or other processes within the enterprise for further analysis and/or reporting.

These processes also manage any orchestration required for distribution of the management information and/or data. Upon successful delivery, these processes are responsible for informing the original sending process or instance that the information has been successfully distributed (if required), and for deleting the locally stored information from any local repositories.

Audit data collection and distribution

Process identifier: 1.1.3.5.4.

Brief description

Audit the management information and data collection, processing and distribution activities in order to identify possible anomalies.

Extended description

The audit data collection and distribution processes are responsible for auditing the management information and data collection activities in order to identify possible anomalies such as loss of management information and/or data in the different collection, processing and distribution steps.
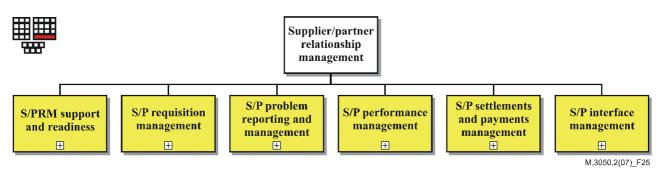
7.4 Supplier/partner relationship management

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Figure 25 – Supplier/partner relationship management decomposition into level 2 processes

Supplier/partner relationship management

Process identifier: 1.1.4.

Brief description

[Not available].

Extended description

This horizontal functional process grouping supports the core operational processes, both the customer instance processes of fulfilment, assurance and billing, and the functional operations processes. Supplier/partner relationship management (S/PRM) processes align closely with a supplier's or partner's customer relationship management processes. The inclusion of distinct supplier/partner relationship management processes in the eTOM framework enables the direct interface with the appropriate lifecycle, end-to-end customer operations or functional processes with suppliers and/or partners. The processes include issuing purchase orders and tracking them through to delivery, mediation of purchase orders as required to conform to external processes, handling problems, validating billing and authorizing payment, as well as quality management of suppliers and partners. It is important to note that when the enterprise sells its products to a partner or supplier, this is done through the enterprise CRM processes, which act on behalf of the supplier or the enterprise in such cases. Supplier/partner processes only cover the buying of S/P supplied products by the enterprise.

S/PRM support and readiness

Process identifier: 1.1.4.1.

Brief description

S/PRM support and readiness processes are responsible for ensuring that all necessary facilities related to the interaction with suppliers and partners are ready and functioning. Moreover, these processes are responsible for the resolution of problems related to these facilities.

Extended description

S/PRM support and readiness processes are responsible for ensuring that management processes are in place to engage suppliers/partners who own and manage infrastructure, and provide infrastructure capabilities to the service provider. They are also responsible for ensuring that necessary facilities related to the interaction with suppliers/partners in delivering S/P products and/or services to support service provider owned and managed infrastructure are ready and functioning.

External suppliers/partners are engaged by the service provider in infrastructure level activities when the service provider has outsourced the relevant infrastructure ownership and management to suppliers/partners (i.e., outsourced network or IT bureau arrangements).

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

- developing the procedures for the specific S/PRM processes supporting the fulfilment, assurance and billing processes and keeping them up-to-date;

- undertaking, and reporting on, trend analysis on S/PRM processes, including types of associated requests, response duration, delays and other process measures;

- establishing and managing S/P requisition processes for obtaining S/P products and/or services;

- establishing and managing S/P problem and performance resolution processes for S/P products and/or services;

- establishing and managing payments and settlements processes to manage S/P invoices for S/P products and/or services (as well as for purchased S/P product offerings where the supplier/partner owns and manages the infrastructure);

- arranging and administering supplier/partner access to service provider support tools and facilities, and vice versa;

- monitoring and reporting on requests made to suppliers/partners where the supplier/partner owns and manages the particular infrastructure;

- establishing and managing automated interfaces between the service provider and supplier/partner; and

- maintaining the currency and quality of the supplier/partner inventory to support the S/PRM and other processes.

S/P requisition management

Process identifier: 1.1.4.2.

Brief description

Track, monitor and report on the service provider initiated product and/or service provisioning engagements to ensure that the interactions are in accordance with the agreed commercial arrangements between the service provider and the supplier/partner.

Extended description

The S/P requisition management processes track, monitor and report on the service provider initiated product, service and/or resource provisioning engagements to ensure that the interactions are in accordance with the agreed commercial arrangements between the service provider and the supplier/partner.

External suppliers/partners are engaged by the service provider in provisioning activities when:

•   specific resources need to be purchased and delivered to satisfy resource orders;

•   the service provider has outsourced specific activities to suppliers/partners that are required to be utilized as part of provisioning activity (i.e., outsourced installation activities);

•   the specific service is purchased from an external supplier (as in an interconnect service);

•   the specific product and/or service, or specific product and/or service component, is owned and delivered by an external partner; or

•   previously issued requisitions for specific resources or services need to be modified or cancelled.

In all of the above cases, the actual engagement in the provisioning processes is initiated by the specific track and manage process of either the RM&O or SM&O process layer.

Where S/P requisition management processes are engaged to manage requisitions of specific resources or outsourced product and/or services from partners/suppliers, these processes are responsible to ensure on-time and correct delivery of the specific resource or outsourced product and/or service. If several suppliers are available, these processes are responsible for selecting between the alternative suppliers with whom a relationship exists. A specification for the S/P supplied resource or product and/or service component is received from the RM&O, SM&O or CRM processes and the range of contracted suppliers surveyed to select the most cost-effective (cost/time trade-off) or to meet pre-agreed volume commitment targets.

Where the engagement with an external supplier/partner is for purchased or delivered specific products, services and/or resources, as the case may be, these processes create and close S/P requisition orders, undertake tracking and management of the supplier/partner provisioning activity, and provide reporting.

S/P problem reporting and management

Process identifier: 1.1.4.3.

Brief description

Track, monitor and report on the service provider initiated problem engagements to ensure that the interactions are in accordance with the agreed commercial arrangements between the service provider and the supplier/partner.

Extended description

The S/P problem reporting and management processes track, monitor and report on the service provider initiated problem engagements to ensure that the interactions are in accordance with the agreed commercial arrangements between the service provider and the supplier/partner.

In addition, external suppliers/partners may report S/P discovered problems to the service provider which may impact resources, services and/or customers.

External suppliers/partners are engaged by the service provider in correction and recovery activities when:

- higher level expertise and/or higher level support is required to resolve the service problem or resource trouble (which may be automatic in the case of highest priority service problems or resource troubles);
- the service provider has outsourced specific activities to a supplier/partner which are needed as part of problem management resolution (i.e., outsourced field maintenance);
- the specific service has been purchased from an external supplier (as in an interconnect service); or
- the specific product and/or service, or specific product and/or service component, is owned and maintained by an external partner.

In all of the above cases, the actual engagement in the correction and recovery processes is initiated by the specific track and manage process of the RM&O, SM&O or CRM process layer.

Where the engagement with an external supplier/partner is for purchased or delivered product, services and/or resources, as the case may be, these processes create and close S/P problem reports, undertake tracking and management of the supplier/partner problem resolution activity, and provide reporting.

S/P performance management

Process identifier: 1.1.4.4.

Brief description

Track, monitor and report on the service provider initiated performance engagements to ensure that the interactions are in accordance with the agreed commercial arrangements between the service provider and the supplier/partner.

Extended description

The S/P performance management processes track, monitor and report on the service provider initiated performance engagements to ensure that the interactions are in accordance with the agreed commercial arrangements between the service provider and the supplier/partner.

External suppliers/partners are engaged by the service provider in performance related activities when:

- higher level expertise and/or higher level support is required to resolve the product performance, service performance or resource performance issues;
- the service provider has outsourced specific activities to a supplier/partner which are needed as part of performance improvement activity (i.e., outsourced field maintenance);
- the specific product and/or service is purchased from an external supplier (as in an interconnect service); or
- the specific product and/or service, or specific product and/or service component, is owned and delivered by an external partner.

In all of the above cases, the actual engagement in the performance-related activities is initiated by the specific track and manage process of either the RM&O or SM&O process layer.

Where the engagement with an external supplier/partner is for purchased or delivered product and/or services, as the case may be, these processes create and close S/P performance degradation reports, undertake tracking and management of the supplier/partner performance improvement activity, and provide reporting.

S/P settlements and payments management

Process identifier: 1.1.4.5

Brief description

S/P settlements and payments management processes manage all settlements and payments for the enterprise, including invoice validation and verification, and payment authorization.

Extended description

For a value network, and particularly for service providers, settlements and payments management is complex. In many cases, the supplier cost can be the largest single cost and incorrect settlement or payments can mean the difference between profit and loss. S/P settlements and payments management processes manage all settlements and payments for the enterprise, including invoice validation and verification, and payment authorization. These S/P settlements and payments management processes interface with the supplier's customer relationship management process of billing and collection management.

S/P interface management

Process identifier: 1.1.4.6.

Brief description

S/P interface management processes manage the contacts between the enterprise and its current or future suppliers/partners for S/P supplied products.

Extended description

S/P interface management processes manage the contacts between the enterprise and its current or future suppliers/partners for products or services. These processes are basically contact management and tracking processes. These S/P interface management processes interface with the CRM process of customer interface management.
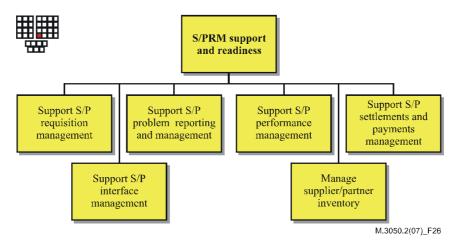
7.4.1   S/PRM support and readiness

Figure 26 – S/PRM support and readiness decomposition into level 3 processes

S/PRM support and readiness

Process identifier: 1.1.4.1.

Brief description

S/PRM support and readiness processes are responsible for ensuring that all necessary facilities related to the interaction with suppliers and partners are ready and functioning. Moreover, these processes are responsible for the resolution of problems related to these facilities.

Extended description

S/PRM support and readiness processes are responsible for ensuring that management processes are in place to engage suppliers/partners who own and manage infrastructure, and provide infrastructure capabilities to the service provider. They are also responsible for ensuring that necessary facilities related to the interaction with suppliers/partners in delivering S/P products and/or services to support service provider owned and managed infrastructure are ready and functioning.

External suppliers/partners are engaged by the service provider in infrastructure level activities when the service provider has outsourced the relevant infrastructure ownership and management to suppliers/partners (i.e., outsourced network or IT bureau arrangements).

Responsibilities of these processes include, but are not limited to:
- developing the procedures for the specific S/PRM processes supporting the fulfilment, assurance and billing processes and keeping them up-to-date;
- undertaking, and reporting on, trend analysis on S/PRM processes, including types of associated requests, response duration, delays and other process measures;
- establishing and managing S/P requisition processes for obtaining S/P products and/or services;
- establishing and managing S/P problem and performance resolution processes for S/P products and/or services;
- establishing and managing payments and settlements processes to manage S/P invoices for S/P products and/or services (as well as for purchased S/P product offerings where the supplier/partner owns and manages the infrastructure);
- arranging and administering supplier/partner access to service provider support tools and facilities, and vice versa;
- monitoring and reporting on requests made to suppliers/partners where the supplier/partner owns and manages the particular infrastructure;
- establishing and managing automated interfaces between the service provider and supplier/partner; and
- maintaining the currency and quality of the supplier/partner inventory to support the S/PRM and other processes.

Support S/P requisition management

Process identifier: 1.1.4.1.1.

Brief description

Manage engagement with suppliers/partners who own and manage outsourced infrastructure, and to ensure that the S/P requisition management processes are operating effectively.

Extended description

The purpose of the support S/P requisition management processes is twofold – to manage requisition activity with suppliers/partners who own and manage outsourced infrastructure, and to ensure that the S/P requisition management processes can operate effectively.

External suppliers/partners are engaged by the service provider in infrastructure level provisioning-related activities when the service provider has outsourced the relevant infrastructure ownership and management to suppliers/partners (i.e., outsourced network or IT bureau arrangements).

The actual engagement with the supplier/partner is initiated by the specific fulfilment or provisioning enablement processes of the CRM, RM&O or SM&O process layers.

Where enable S/P requisition management processes are engaged to manage new and/or modified infrastructure deployment and/or capacity availability, these processes are responsible to ensure on-time and correct deployment and delivery of the requested infrastructure.

For the S/P requisition management processes, the role of the support S/P requisition management processes is to make sure that there is sufficient process capacity and capability (for example, information, materials, systems and resources) so that the S/P requisition management processes can operate effectively. Examples include: information on how to process requisitions for specific S/P products, materials needed to confirm requisition requests, systems needed to validate supplier/partner product and service availability.

The responsibilities of these processes include, but are not limited to:

- arranging and managing supplier/partner access to appropriate service provider infrastructure deployment support tools (including any appropriate inventories) and processes;
- arranging and managing service provider access to appropriate supplier/partner infrastructure deployment support tools (including any appropriate inventories) and processes;
- overseeing of supplier/partner roll-out, in accordance with approved plans, of the approved new and/or modified infrastructure;
- reporting on deployed supplier/partner resource infrastructure capacity;
- tracking and monitoring of the requested supplier/partner infrastructure deployment;
- reporting on supplier/partner deployment capability;
- establishing and managing supplier/partner requisition notification facilities and lists to support the S/P requisition management notification and reporting processes;
- updating the supplier/partner inventory of any changes to the supplier/partner infrastructure deployment requests and progress;
- updating supplier/partner product and/or service information, etc., to support the S/PRM processes; and
- undertaking, and reporting on, trend analysis on S/P requisition management processes, including types of associated requisition requests, response duration, delays and other process measures.

Support S/P problem reporting and management

Process identifier: 1.1.4.1.2.

Brief description

Manage problem resolution activity with suppliers/partners who own and manage outsourced infrastructure, and to ensure that the S/P problem reporting and management processes can operate effectively.

Extended description

The purpose of the support S/P problem reporting and management processes is twofold – to manage problem resolution activity with suppliers/partners who own and manage outsourced infrastructure, and to ensure that the S/P problem reporting and management processes can operate effectively.

External suppliers/partners are engaged by the service provider in infrastructure level problem-related activities when the service provider has outsourced the relevant infrastructure ownership and management to suppliers/partners (i.e., outsourced network or IT bureau arrangements).

The actual engagement with the supplier/partner is initiated by the specific problem or trouble management support processes of the CRM, RM&O or SM&O process layers. Where support S/P problem reporting and management processes are engaged to manage infrastructure-level problems, these processes are responsible to ensure on-time and correct resolution and recovery.

For the S/P problem reporting and management processes, the role of the support S/P problem reporting and management processes is to ensure that there is capability (for example, information, materials, systems and resources) so that the S/P problem reporting and management processes can operate effectively.

The responsibilities of these processes include, but are not limited to:

- arranging and managing supplier/partner access to appropriate service provider problem and/or trouble management support tools (including any appropriate inventories) and processes;
- arranging and managing service provider access to appropriate supplier/partner problem management support tools (including any appropriate inventories) and processes;
- monitoring and reporting on supplier/partner progress towards resolving reported S/P infrastructure problems;
- initiating reviews and recommendations for S/P infrastructure performance improvements;
- updating the supplier/partner inventory of any changes to the supplier/partner infrastructure problem reports and progress; and
- undertaking, and reporting on, trend analysis on S/P problem reporting and management processes, including types of associated problem reports, response duration, delays and other process measures.

Support S/P performance management

Process identifier: 1.1.4.1.3.

Brief description

Manage performance restoration activity with suppliers/partners who own and manage outsourced infrastructure, and to ensure that the S/P performance management processes can operate effectively.

Extended description

The purpose of the support S/P performance management processes is twofold – to manage performance restoration activity with suppliers/partners who own and manage outsourced infrastructure, and to ensure that the S/P performance management processes can operate effectively.

External suppliers/partners are engaged by the service provider in infrastructure level performance-related activities when the service provider has outsourced the relevant infrastructure ownership and management to suppliers/partners (i.e., outsourced network or IT bureau arrangements).

The actual engagement with the supplier/partner is initiated by the specific performance support processes of the CRM, RM&O or SM&O process layers. Where support S/P performance management processes are engaged to resolve infrastructure level performance issues, these processes are responsible to ensure on-time and correct resolution and re-establishment of normal infrastructure operation.

For the S/P performance management processes, the role of the support S/P performance management processes is to ensure that there is capability (for example, information, materials, systems and resources) so that the S/P performance management processes can operate effectively.

The responsibilities of these processes include, but are not limited to:

- arranging and managing supplier/partner access to appropriate service provider performance management support tools (including any appropriate inventories) and processes;

- arranging and managing service provider access to appropriate supplier/partner performance management support tools (including any appropriate inventories) and processes;

- monitoring and reporting on supplier/partner progress towards resolving reported infrastructure performance issues;

- initiating reviews and recommendations for S/P infrastructure performance improvements;

- updating the supplier/partner inventory of any changes to the supplier/partner infrastructure performance resolution requests and progress;

- updating supplier/partner product and/or service performance information, etc., to support the S/PRM processes; and

- undertaking, and reporting on, trend analysis on S/P performance management processes, including types of associated performance resolution requests, response duration, delays and other process measures.

Support S/P settlements and payments management

Process identifier: 1.1.4.1.4.

Brief description

Ensure that there is capability (for example, information, materials, systems and resources) so that the S/P settlements and payments management processes can operate effectively.

Extended description

The purpose of the support S/P settlements and payments management processes is to ensure that there is capability (for example, information, materials, systems and resources) so that the S/P settlements and payments management processes can operate effectively. Examples include information on how to respond to current settlements and payment issues with suppliers and partners, materials needed to process payments and invoices with suppliers and partners, systems

needed to create payments, handle invoices or analyse supplier/partner payment and settlement concerns, requests for provisioning of additional resources where it has been identified that current levels will impact on timely payment preparation, and complaint handling.

External suppliers/partners are engaged by the service provider in infrastructure level payment and settlement-related activities when the service provider has outsourced the relevant infrastructure ownership and management to suppliers/partners (i.e., outsourced network or IT bureau arrangements).

These processes undertake trend analysis on payment and invoicing, including problems, delays and complaints.

Support S/P interface management

Process identifier: 1.1.4.1.5.

Brief description

Ensure that there is capability so that the S/P interface management processes can operate effectively.

Extended description

The purpose of the support S/P interface management processes is to ensure that there is capability (for example, information, materials, systems and resources) so that the S/P interface management processes can operate effectively. Examples include information on how to handle unusual requests based on temporary situations, systems needed to accept and track supplier/partner contacts, requests for the provisioning of additional resources where it has been identified that current levels will impact on timely contact handling.

These processes are responsible for implementing generic and specific changes to supplier/partner interfaces. This support could be in updating agent scripts, Web pages, etc. Support S/P interface management processes keep up to date all information concerning suppliers and partners.

These processes undertake trend analysis on supplier/partner contacts, e.g., type, frequency, duration, outcome.

Manage supplier/partner inventory

Process identifier: 1.1.4.1.6.

Brief description

Manage the administration of the enterprise's supplier/partner inventory.

Extended description

The purpose of the manage supplier/partner inventory processes are twofold – establish, manage and administer the enterprise's supplier/partner inventory, as embodied in the supplier/partner inventory database, and monitor and report on the usage and access to the supplier/partner inventory, and the quality of the data maintained in it.

The supplier/partner inventory maintains records of all commercial arrangements with supplier/partners, and any modifications to them. It also records all details of contacts with suppliers/partners as well as commercial information, including details of S/P products and services, required to support S/PRM and other processes.

The supplier/partner inventory is also responsible for maintaining the association between product instances, service instances, resource instances and S/P product instances, created as a result of the S/P requisition management processes.

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

- identifying the inventory-relevant information requirements to be captured to support the S/P relationship management and other processes;

- identifying, establishing and maintaining supplier/partner inventory repository facilities;

- establishing and managing the supplier/partner inventory management and information capture processes;

- managing the registration and access control processes that enable processes to create, modify, update, delete and/or download supplier/partner data to and from the supplier/partner inventory;

- ensuring the supplier/partner inventory repository accurately captures and records all identified supplier/partner details, through use of automated or manual audits;

- tracking and monitoring of the usage of, and access to, the supplier/partner inventory repository and associated costs, and reporting on the findings; and

- identifying any technical driven shortcomings of the supplier/partner inventory repository, and providing input to resource development and management processes to rectify these issues.
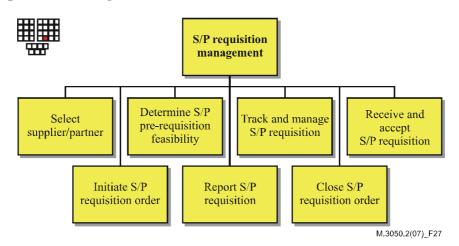
7.4.2 S/P requisition management

Figure 27 – S/P requisition management decomposition into level 3 processes

S/P requisition management

Process identifier: 1.1.4.2.

Brief description

Track, monitor and report on the service provider initiated product and/or service provisioning engagements to ensure that the interactions are in accordance with the agreed commercial arrangements between the service provider and the supplier/partner.

Extended description

The S/P requisition management processes track, monitor and report on the service provider initiated product, service and/or resource provisioning engagements to ensure that the interactions are in accordance with the agreed commercial arrangements between the service provider and the supplier/partner.

External suppliers/partners are engaged by the service provider in provisioning activities when:

- specific resources need to be purchased and delivered to satisfy resource orders;
- the service provider has outsourced specific activities to suppliers/partners that are required to be utilized as part of provisioning activity (i.e., outsourced installation activities);
- the specific service is purchased from an external supplier (as in an interconnect service);
- the specific product and/or service, or specific product and/or service component, is owned and delivered by an external partner; or
- previously issued requisitions for specific resources or services need to be modified or cancelled.

In all of the above cases, the actual engagement in the provisioning processes is initiated by the specific track and manage process of either the RM&O or SM&O process layer.

Where S/P requisition management processes are engaged to manage requisitions of specific resources or outsourced product and/or services from partners/suppliers, these processes are responsible to ensure on-time and correct delivery of the specific resource or outsourced product and/or service. If several suppliers are available, these processes are responsible for selecting between the alternative suppliers with whom a relationship exists. A specification for the S/P-supplied resource or product and/or service component is received from the RM&O, SM&O or CRM processes and the range of contracted suppliers surveyed to select the most cost-effective (cost/time trade-off) or to meet pre-agreed volume commitment targets.

Where the engagement with an external supplier/partner is for purchased or delivered specific products, services and/or resources, as the case may be, these processes create and close S/P requisition orders, undertake tracking and management of the supplier/partner provisioning activity, and provide reporting.

Select supplier/partner

Process identifier: 1.1.4.2.1.

Brief description

Identify the most appropriate supplier/partner or suppliers/partners amongst those with whom a supply arrangement exists.

Extended description

The responsibility of the select supplier/partner processes is to identify the most appropriate supplier/partner or suppliers/partners amongst those with whom a supply arrangement exists.

Based on the particular product, service and/or resource component requirements, select the most appropriate supplier or partner from the range of S/Ps with whom a supply arrangement exists.

Determine S/P pre-requisition feasibility

Process identifier: 1.1.4.2.2.

Brief description

Determine the ability of suppliers/partners to deliver the specific resources, services or products, within the specified requirements.

Extended description

The determine S/P pre-requisition feasibility processes are responsible for determining the ability of suppliers/partners to deliver the specific resources, services or products, within the specified requirements.

These processes query a set of candidate suppliers to check for S/P specific resource, service or product availability and ability to meet delivery volumes, delivery time-scales and schedules, locations, specific technical and other requirements (including relevant standards), etc. The candidate suppliers will have been defined during the select supplier/partner processes.

Once a supplier/partner is chosen, it must be established that the specific resource, service or product is available (in stock/or that sufficient capacity is available), and that the delivery volumes and conditions can be met. There may be some negotiation with the supplier regarding delivery scheduling and S/P specific resource, service or product availability.

There may be a number of suppliers who, in principle, can meet the business need and so, within the confines of existing commercial agreements, there may be a process of evaluating each supplier's specific resource, service or product offering (and options) against the business need.

Track and manage S/P requisition

Process identifier: 1.1.4.2.3.

Brief description

Ensure S/P requisition orders are being processed and delivered efficiently and effectively.

Extended description

The objective of the track and manage S/P requisition processes is to ensure S/P requisition orders are being processed and delivered efficiently and effectively, and that escalation is being invoked as required for any open S/P requisition orders in jeopardy.

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

- managing regular interaction with the supplier/partner to establish progress of S/P requisition orders;
- modifying information in an existing S/P requisition order based on feedback of progress from the supplier/partner;
- modifying the S/P requisition order status;
- cancelling a S/P requisition order when the specific requisition requirements are no longer required as notified by the RM&O, the SM&O or the CRM processes; and
- monitoring the jeopardy status of open S/P requisition orders and initiating escalation of S/P requisition orders, as necessary.

These processes track progress with the supplier/partner, either periodically, or at defined points according to a project or programme plan. This tracking may be driven from the enterprise, or triggered by reports from the supplier/partner (e.g., periodically or at key events). These processes also initiate jeopardy and risk management in relation to the supplied specific resources, services and products, their availability and delivery schedule.

These processes also manage notifications or requests from suppliers regarding forced or requested changes to the S/P requisition specification or delivery schedule. These change requests may be caused by the supplier/partner or may be outside their control. Change requests are notified to the originating RM&O, SM&O or CRM processes where a resolution is agreed.

The track and manage S/P requisition processes will also inform the close S/P requisition order processes by modifying the S/P requisition order status to completed when the S/P requisition has been successfully delivered.

Receive and accept S/P requisition

Process identifier: 1.1.4.2.4.

Brief description

Records delivery of S/P requisitions, and arranges for any acceptance testing or commissioning required.

Extended description

Receive and accept S/P requisition records delivery of S/P requisitions, and arranges for any acceptance testing or commissioning required.

These processes facilitate and support coordination of internal activities with activities performed by the supplier/partner that are required to:

•   configure a bought-in S/P product;

•   bring a bought-in S/P product into service; or

•   restore a bought-in S/P product to service.

The actual performance of any acceptance testing and/or commissioning activities by the service provider is managed within the appropriate RM&O or SM&O processes as required.

These processes also manage negotiations with a supplier/partner where there have been problems with a S/P product's supply and determine, through dialogue with the supplier/partner, how best to resolve such issues.

This S/P delivery acceptance may involve coordination with internal SM&O or RM&O processes, where the supplied specific resource, service or product forms part of a larger system, or is to be onward shipped.

These processes report and document on acceptance, and record final acceptance of S/P deliveries.

Initiate S/P requisition order

Process identifier: 1.1.4.2.5.

Brief description

Generate a correctly formatted and specified S/P requisition order, and issue this to the selected supplier/partner.

Extended description

The initiate S/P requisition order processes are responsible for generating a correctly formatted and specified S/P requisition order, and issuing this to the selected supplier/partner. Requests for S/P requisition orders are passed to the S/P requisition management processes from the track and manage processes in the RM&O, the SM&O or the CRM process layer. The initiate S/P requisition order contains the originating request identifier to allow for appropriate linking to the processes that originally caused the S/P requisition order to be initiated. Requests received may be for the initiation of new S/P requisition orders, for modifications to previously issued S/P requisition orders or for cancellation of previously issued S/P requisition orders.

Report S/P requisition

Process identifier: 1.1.4.2.6.

Brief description

Monitor the status of S/P requisition orders, provide notifications of any changes and provide management reports.

Extended description

The objective of the report S/P requisition processes is to monitor the status of S/P requisition orders, provide notifications of any changes and provide management reports.

These processes are responsible for continuously monitoring the status of S/P requisition 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 support S/P requisition management processes.

These processes record, analyse and assess the S/P requisition order status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall S/P requisition management process. These specialized summaries could be specific reports required by specific audiences.

Close S/P requisition order

Process identifier: 1.1.4.2.7.

Brief description

Close a S/P requisition order when the S/P requisition has been successfully completed.

Extended description

The objective of the close S/P requisition order processes is to close a S/P requisition order when the S/P requisition has been successfully completed.

These processes monitor the status of all open S/P requisition orders, and recognize that a S/P requisition order is ready to be closed when the status is changed to completed.
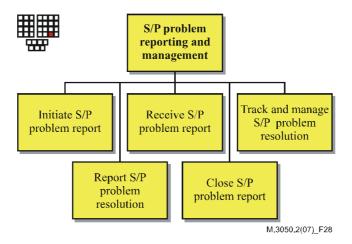
7.4.3   S/P problem reporting and management

Figure 28 – S/P problem reporting and management decomposition into level 3 processes

S/P problem reporting and management

Process identifier: 1.1.4.3.

Brief description

Track, monitor and report on the service provider initiated problem engagements to ensure that the interactions are in accordance with the agreed commercial arrangements between the service provider and the supplier/partner.

Extended description

The S/P problem reporting and management processes track, monitor and report on the service provider initiated problem engagements to ensure that the interactions are in accordance with the agreed commercial arrangements between the service provider and the supplier/partner.

In addition, external suppliers/partners may report S/P discovered problems to the service provider which may impact resources, services and/or customers.

External suppliers/partners are engaged by the service provider in correction and recovery activities when:

- higher level expertise and/or higher level support is required to resolve the service problem or resource trouble (which may be automatic in the case of highest priority service problems or resource troubles);

- the service provider has outsourced specific activities to a supplier/partner which are needed as part of problem management resolution (i.e., outsourced field maintenance);

- the specific service has been purchased from an external supplier (as in an interconnect service); or

- the specific product and/or service, or specific product and/or service component, is owned and maintained by an external partner.

In all of the above cases, the actual engagement in the correction and recovery processes is initiated by the specific track and manage process of the RM&O, SM&O or CRM process layer.

Where the engagement with an external supplier/partner is for purchased or delivered product, services and/or resources, as the case may be, these processes create and close S/P problem reports, undertake tracking and management of the supplier/partner problem resolution activity, and provide reporting.

Initiate S/P problem report

Process identifier: 1.1.4.3.1.

Brief description

Report specific problems to the supplier/partner.

Extended description

The initiate S/P problem report processes are responsible for reporting specific problems to the supplier/partner. These problems are passed to the S/P problem reporting and management processes from either the RM&O or the SM&O track and manage processes.

The S/P problem report contains the originating resource trouble report or service trouble report identifier to allow for appropriate linking to the processes which originally caused the S/P problem report to be initiated.

Receive S/P problem report

Process identifier: 1.1.4.3.2.

Brief description

Receive notification of problems detected by the supplier/partner, and notifies other processes of this.

Extended description

Receive notification of problems detected by the supplier/partner, and notifies other processes of this. These notifications will be passed on to the appropriate track and manage processes in the RM&O and/or SM&O process layers depending on the nature of the notified problem.

Track manage S/P problem resolution

Process identifier: 1.1.4.3.3.

Brief description

Track progress of the problem resolution as advised by the supplier/partner.

Extended description

The objective of the track and manage S/P problem resolution processes is to ensure testing, repair and restoration activities are being assigned, coordinated and tracked efficiently, and that escalation is being invoked as required for any open S/P problem reports in jeopardy.

Responsibilities of these processes include, but are not limited to:
•   managing regular interaction with the supplier/partner to establish resolution progress for S/P problem reports;
•   modifying information in an existing S/P problem report based on feedback of progress from the supplier/partner;
•   modifying the S/P problem report status;
•   cancelling a S/P problem report when the specific problem is discovered to not be related to the supplier/partner; and
•   monitoring the jeopardy status of open S/P problem reports, and initiating escalation of S/P problem reports as necessary.

The track and manage S/P problem resolution processes will also inform the close S/P problem report processes by modifying the S/P problem report status to cleared when the S/P problem has been resolved.

Report S/P problem resolution

Process identifier: 1.1.4.3.4.

Brief description

Monitor the status of S/P problem reports, provide notifications of any changes and provide management reports.

Extended description

The objective of the report S/P problem resolution processes is to monitor the status of S/P problem reports, provide notifications of any changes and provide management reports.

These processes are responsible for continuously monitoring the status of S/P problem reports and managing notifications to processes and other parties registered to receive notifications of any status changes. Notification lists are managed and maintained by the support S/P problem reporting and management processes.

These processes record, analyse and assess the S/P problem report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall S/P problem reporting and management process.

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

Close S/P problem report

Process identifier: 1.1.4.3.5.

Brief description

Close a S/P problem report when the S/P problem has been resolved.

Extended description

The objective of the close S/P problem report processes is to close a S/P problem report when the S/P problem has been resolved.

These processes monitor the status of all open S/P problem reports, and recognize that a S/P problem report is ready to be closed when the status is changed to cleared.
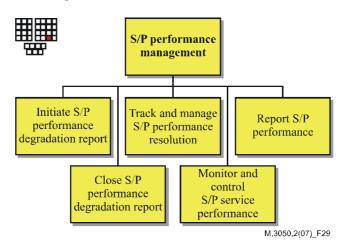
7.4.4 S/P performance management

M.3050.2(07)_F29

Figure 29 – S/P performance management decomposition into level 3 processes

S/P performance management

Process identifier: 1.1.4.4.

Brief description

Track, monitor and report on the service provider initiated performance engagements to ensure that the interactions are in accordance with the agreed commercial arrangements between the service provider and the supplier/partner.

Extended description

The S/P performance management processes track, monitor and report on the service provider initiated performance engagements to ensure that the interactions are in accordance with the agreed commercial arrangements between the service provider and the supplier/partner.

External suppliers/partners are engaged by the service provider in performance-related activities when:

• higher level expertise and/or higher level support is required to resolve the product performance, service performance or resource performance issues;

• the service provider has outsourced specific activities to a supplier/partner that are needed as part of performance improvement activity (i.e., outsourced field maintenance);

• the specific product and/or service is purchased from an external supplier (as in an interconnect service); or

- the specific product and/or service, or specific product and/or service component, are owned and delivered by an external partner.

In all of the above cases, the actual engagement in the performance-related activities is initiated by the specific track and manage process of either the RM&O or SM&O process layer.

Where the engagement with an external supplier/partner is for purchased or delivered product and/or services, as the case may be, these processes create and close S/P performance degradation reports, undertake tracking and management of the supplier/partner performance improvement activity, and provide reporting.

Initiate S/P performance degradation report

Process identifier: 1.1.4.4.5.

Brief description

Report specific performance issues to the supplier/partner.

Extended description

The initiate S/P performance degradation report processes are responsible for reporting specific performance issues to the supplier/partner. These performance issues are passed to the S/P performance management processes from either the RM&O or the SM&O track and manage processes as well as from monitor and control S/P service performance.

The S/P performance degradation report contains the originating resource performance degradation report or performance degradation report identifier to allow for appropriate linking to the processes which originally caused the S/P performance degradation report to be initiated.

Track and manage S/P performance resolution

Process identifier: 1.1.4.4.2.

Brief description

Track progress of the performance resolution as advised by the supplier/partner.

Extended description

The objective of the track and manage S/P performance resolution processes is to ensure improvement and restoration activities are being assigned, coordinated and tracked efficiently, and that escalation is being invoked as required for any open S/P performance degradation reports in jeopardy.

Responsibilities of these processes include, but are not limited to:
- managing regular interaction with the supplier/partner to establish resolution progress for S/P performance degradation reports;
- modifying information in an existing S/P performance degradation report based on feedback of progress from the supplier/partner;
- modifying the S/P performance degradation report status;
- cancelling a S/P performance degradation report when the specific performance issue is discovered to not be related to the supplier/partner; and
- monitoring the jeopardy status of open S/P performance degradation reports, and initiating escalation of S/P performance degradation reports, as necessary.

The track and manage S/P performance resolution processes will also inform the close S/P performance degradation report processes by modifying the S/P performance degradation report status to cleared when the S/P performance issue has been resolved.

Report S/P performance

Process identifier: 1.1.4.4.3.

Brief description

Monitor the status of S/P performance degradation reports, provide notifications of any changes and provide management reports.

Extended description

The objective of the report S/P performance processes is to monitor the status of S/P performance degradation reports, provide notifications of any changes and provide management reports.

These processes are responsible for continuously monitoring the status of S/P performance degradation reports and managing notifications to processes and other parties registered to receive notifications of any status changes. Notification lists are managed and maintained by the support S/P performance management processes.

These processes record, analyse and assess the S/P performance degradation report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall S/P performance management process. These specialized summaries could be specific reports required by specific audiences.

Monitor and control S/P service performance

Process identifier: 1.1.4.4.1.

Brief description

Collect and analyse performance of services delivered by suppliers and partners.

Extended description

Monitor and control S/P service performance processes control the performance measurement activities, collect performance data on a specified S/P service, analyse this against the relevant SLA for the supplier/partner and report performance data and any S/P SLA violations to other processes. These processes also carry out impact analysis on any S/P SLA violations and initiate corrective actions.

Close S/P performance degradation report

Process identifier: 1.1.4.4.4.

Brief description

Close a S/P performance degradation report when the performance of the S/P service has been restored.

Extended description

The objective of the close S/P performance degradation report processes is to close a S/P performance degradation report when the performance of the S/P service has been restored.

These processes monitor the status of all open S/P performance degradation reports, and recognize that a S/P performance degradation report is ready to be closed when the status is changed to cleared.
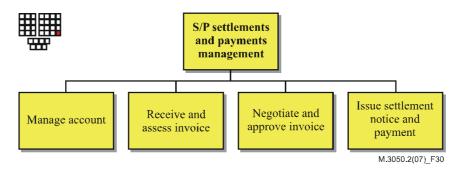
7.4.5 S/P settlements and payments management

M.3050.2(07)_F30

Figure 30 – S/P settlements and payments management decomposition into level 3 processes

S/P settlements and payments management

Process identifier: 1.1.4.5.

Brief description

S/P settlements and payments management processes manage all settlements and payments for the enterprise, including invoice validation and verification, and payment authorization.

Extended description

For a value network, and particularly for service providers, settlements and payments management is complex. In many cases, the supplier cost can be the largest single cost and incorrect settlement or payments can mean the difference between profit and loss. S/P settlements and payments management processes manage all settlements and payments for the enterprise, including invoice validation and verification and payment authorization. These S/P settlements and payments management processes interface with the supplier's customer relationship management process of billing and collection management.

Manage account

Process identifier: 1.1.4.5.1.

Brief description

Manage account processes administer the internal record of usage of supplier/partner's services in support of invoice reconciliation and reciprocal usage settlement.

Extended description

[Not available].

Receive and assess invoice

Process identifier: 1.1.4.5.2.

Brief description

Receive and assess invoice processes compare invoices against usage records and offsets, and manage the interactions between the supplier/partner and the enterprise to confirm usage records and resolve account differences.

Extended description

[Not available].

Negotiate and approve invoice

Process identifier: 1.1.4.5.3.

Brief description

Negotiate and approve invoice processes manage the interactions between the supplier/partner and the enterprise in relation to enquiries about the billing account, handling disputes and any subsequent negotiations.

Extended description

[Not available].

Issue settlement notice and payment

Process identifier: 1.1.4.5.4.

Brief description

Issue settlement notice and payment processes apply where suppliers/partners are entitled to revenue sharing, where the enterprise initiates the settlement cycle.

Extended description

Issue settlement notice and payment processes apply where suppliers/partners are entitled to revenue sharing, where the enterprise initiates the settlement cycle.
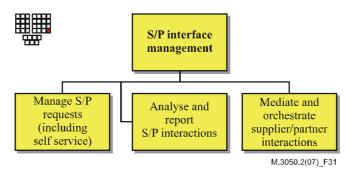
7.4.6   S/P interface management

Figure 31 – S/P interface management decomposition into level 3 processes

S/P interface management

Process identifier: 1.1.4.6.

Brief description

S/P interface management processes manage the contacts between the enterprise and its current or future suppliers/partners for S/P supplied products.

Extended description

S/P interface management processes manage the contacts between the enterprise and its current or future suppliers/partners for products or services. These processes are basically contact management and tracking processes. These S/P interface management processes interface with the CRM process of customer interface management.

Manage S/P requests (including self service)

Process identifier: 1.1.4.6.1.

Brief description

Accept requests and enable the supplier/partner to obtain the desired information from the enterprise, or identify and activate the appropriate process area to accomplish the request.

Extended description

Manage S/P requests (including self service) processes accept requests and enable the supplier/partner to obtain the desired information from the enterprise, or identify and activate the appropriate process area to accomplish the request.

They also initiate interactions and manage the process of the supplier/partner obtaining information. Alternatively, they interact with the appropriate process area to accomplish the request.

Analyse and report S/P interactions

Process identifier: 1.1.4.6.2.

Brief description

Analyse and report S/P interactions processes analyse interactions and generate reports for tracking and managing interactions or improving procedures for supplier/partner processes.

Extended description

[Not available].

Mediate and orchestrate supplier/partner interactions

Process identifier: 1.1.4.6.3.

Brief description

Ensure that transaction message structure and interactions conform to agreed, externally defined standards used by the enterprise and its suppliers/partners.

Extended description

The purpose of the mediate and orchestrate supplier/partner interactions is to ensure that transaction message structure and interactions conform to agreed, externally defined standards used by the enterprise and its suppliers/partners. Increasingly, transactions with external parties (e.g., suppliers using RosettaNet or ebXML standards) will need to conform to message and data formats defined by third parties or third party organizations. Based on the specific transaction type and involved external party, this conformance will require the identification of the necessary data formats to be sent externally, and conversion of externally received messages into the required internal enterprise formats. In addition, interactions with external parties may require that messages and transactions need to be undertaken with defined and agreed orchestration for message exchange. The actual agreement between the parties to use specific interaction standards is part of the support S/P interface management and manage supplier/partner engagement level 3 processes.

8 SIP level 2 and 3 processes
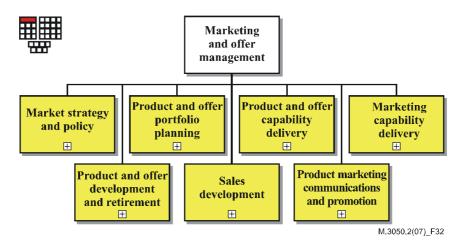
8.1 Marketing and offer management

Figure 32 – Marketing and offer management decomposition into level 2 processes

Marketing and offer management

Process identifier: 1.2.1.

Brief description

[Not available].

Extended description

This horizontal functional process grouping focuses on the knowledge of running and developing the core business for an information and communication service provider enterprise. It includes functionalities necessary for defining strategies, developing new products, managing existing products and implementing marketing and offering strategies especially suitable for information and communications products. Marketing and offer management are well known business processes, especially in the more competitive e-business environment, where the rate of innovation and brand recognition determine success. Although most companies carry out all these activities, depending upon the size of the company, they are combined in a variety of ways. These processes are enabling processes, but also the key processes that are accountable for commitment to the enterprise for revenue, overall product results and profit and loss. These processes deal with the creation of product, markets and channels; they manage market and product strategies, pricing, sales, channels, new product development (and retirement), marketing communications and promotion.

Market strategy and policy

Process identifier: 1.2.1.1.

Brief description

Enable the development of a strategic view of an enterprise's existing and desired market-place.

Extended description

Market strategy and policy processes enable the development of a strategic view of an enterprise's existing and desired market-place, activities and aims. Market segmentation and analysis is performed to determine an enterprise's target and addressable markets, along with the development of marketing strategies for each market segment or set of target customers. The decision is made as to which markets the enterprise wants or needs to be in, and how it plans to enter or grow in these

markets and market segments. This will be achieved through multiple inputs: including enterprise strategies, market research and market analysis.

Product and offer portfolio planning

Process identifier: 1.2.1.2.

Brief description

Develop strategies for products at the portfolio level.

Extended description

Product and offer portfolio planning processes develop strategies for products at the portfolio level. The decision is made as to which product types the enterprise wants or needs to offer, and how it plans to enter or grow in these sectors. This will be done based on multiple inputs: including enterprise strategies, market research and market analysis.

Product and offer capability delivery

Process identifier: 1.2.1.3.

Brief description

Manage the delivery and build of new or changed product and offer and delivery capabilities within an enterprise.

Extended description

Based on the product strategy for the enterprise, the product and offer capability delivery processes manage the delivery and build of new or changed product offering and delivery capabilities within an enterprise. It also handles their requisite infrastructure, where the technologies, scope or type/depth of infrastructure is significantly different to that currently employed in the enterprise, e.g., introduction of third-generation mobile telephony networks.

Marketing capability delivery

Process identifier: 1.2.1.4.

Brief description

Manage the delivery and build of new or changed market capabilities or customer-related capabilities.

Extended description

Based on the market strategy for the enterprise, the marketing capability delivery processes manage the delivery and build of new or changed market capabilities (e.g., on-line channels and sales channels) or customer-related capabilities (e.g., ability to identify, save, manipulate and retrieve and apply new types of knowledge about customers). These capabilities are created and delivered in line with the market strategy, for example, one strategy may be to create more on-line channels to allow for customer self-service.

Product and offer development and retirement

Process identifier: 1.2.1.5.

Brief description

Develop and deliver new products and product enhancements and new features, ready for implementation by the operations processes.

Extended description

Product development and retirement processes develop and deliver new products or services and product or service enhancements and new features, ready for implementation by the operations processes. Additionally, they handle the withdrawal of product offerings from the marketplace. Product development and retirement processes are project oriented (day-to-day management of product offerings are handled by the operations processes). The key measures of this process are how effectively the enterprise's products and services are broadened, and the time to market for new products and services or features. These processes also manage major product and service updates and enhancement. Business case development tracking and commitment are key elements of this process, as are project management discipline with defined quality gates.

Sales development

Process identifier: 1.2.1.6.

Brief description

Develop the sales support and response for new and existing products, as well as existing and potential customers.

Extended description

Sales development processes develop the sales support and response for new and existing products and services, as well as existing and potential customers.

Sales development processes develop product-related compensation plans, define product revenue targets, develop product-related sales training, develop prospective customer identification methodology, develop selling processes/methods and procedures for new products.

As an aspect of this sales development processes, define channels for selling the enterprise's products. It develops or ensures development of channel ability to sell and support products, including negotiating for the specific channel, defining or updating the account management process, developing pricing for a specific channel, etc.

Product marketing communications and promotion

Process identifier: 1.2.1.7.

Brief description

Develop and manage communications to the market, prospective and existing customers.

Extended description

Product marketing communications and promotion processes deal with overall communication to customers and markets. Product marketing communications processes develop and manage communications to the market, prospective and existing customers. Communications involves both the message and the media. Product marketing communications can develop a message and manage its delivery through a bill insert, phone communication with customers, a magazine advertisement, or any other appropriate mechanism. Product marketing communications develops and manages interfaces with press/news, e.g., schedules press interviews, manages an editorial calendar to plan placements, etc.

Product marketing promotion, on the other hand, is the development of specific promotions to sell products, retain customers and bring in new customers. Product marketing promotion processes create the promotional campaigns and advertising to reach the market, customers and channels. They develop the campaigns and collateral, whether direct mail, newspaper ad, etc. Product marketing promotion processes work with all other processes of marketing, sales and offer, brand management, market research and advertising management, to design marketing promotions and

advertising, to determine trade show participation and presence, to support product introductions, etc. Product marketing promotions processes interface with marketing fulfilment response processes in customer relationship management to execute the campaign. One of the key roles of these processes is to position the product in the market, especially versus competitive products.
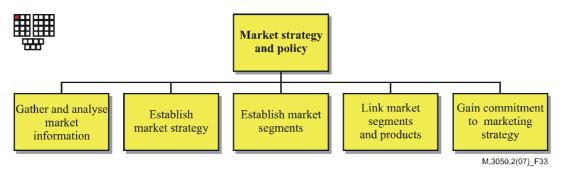
8.1.1 Market strategy and policy

Figure 33 – Market strategy and policy decomposition into level 3 processes

Market strategy and policy

Process identifier: 1.2.1.1.

Brief description

Enable the development of a strategic view of an enterprise's existing and desired market-place.

Extended description

Market strategy and policy processes enable the development of a strategic view of an enterprise's existing and desired market-place, activities and aims. Market segmentation and analysis is performed to determine an enterprise's target and addressable markets, along with the development of marketing strategies for each market segment or set of target customers. The decision is made as to which markets the enterprise wants or needs to be in and how it plans to enter or grow in these markets and market segments. This will be achieved through multiple inputs: including enterprise strategies, market research and market analysis.

Gather and analyse market information

Process identifier: 1.2.1.1.1.

Brief description

Research market information and develop market forecasts.

Extended description

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

Establish market strategy

Process identifier: 1.2.1.1.2.

Brief description

Develop and document the enterprise market strategy.

Extended description

Establish market strategy processes result in agreement across the enterprise with respect to the markets in which the enterprise will participate, the objectives to be achieved, and the broad strategies to be followed to achieve the objectives. A key subset of the market strategy is the development of appropriate sales strategies to support the market strategy. These processes also identify the areas across the enterprise responsible for the achievement of specific objectives.

Establish market segments

Process identifier: 1.2.1.1.3.

Brief description

Establish the market segmentation to be used across the enterprise.

Extended description

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

Link market segments and products

Process identifier: 1.2.1.1.4.

Brief description

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

Extended description

The link market segment and products processes analyse the basic consumption profiles of market segments and associate these with the product families available, as well as identify potential new product families for the market segments. The processes analyse segment purchase and decision issues, and their geographic locations.

Gain commitment to marketing strategy

Process identifier: 1.2.1.1.5.

Brief description

Gain enterprise commitment to the market strategy and segmentation.

Extended description

The gain commitment to market strategy processes gain enterprise commitment to the market strategy and segmentation. These processes include all aspects of identification of stakeholders and negotiation to gain stakeholder approval.
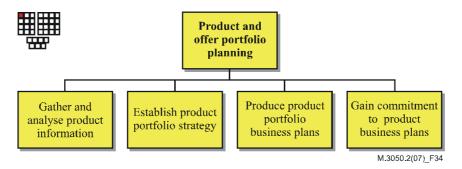
8.1.2 Product and offer portfolio planning

Figure 34 – Product and offer portfolio planning decomposition into level 3 processes

Product and offer portfolio planning

Process identifier: 1.2.1.2.

Brief description

Develop strategies for products at the portfolio level.

Extended description

Product and offer portfolio planning processes develop strategies for products at the portfolio level. The decision is made as to which product types the enterprise wants or needs to offer, and how it plans to enter or grow in these sectors. This will be done based on multiple inputs: including enterprise strategies, market research and market analysis.

Gather and analyse product information

Process identifier: 1.2.1.2.1.

Brief description

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

Extended description

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

Establish product portfolio strategy

Process identifier: 1.2.1.2.2.

Brief description

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

Extended description

The establish product portfolio strategy processes define the overall structure of the product portfolios to be used across the enterprise, or between or within business units. These products and product portfolios form the basis of offers made to customers. It includes the agreement on and implementation of cross-portfolio and cross-product coordination and management functions.

Produce product portfolio business plans

Process identifier: 1.2.1.2.3.

Brief description

Develop annual and multi-year product and product portfolio business plans to guide product development within the enterprise.

Extended description

The produce product portfolio business plans processes develop annual and multi-year product and product portfolio business plans to guide new product development and enhancements for existing products within the enterprise. These plans include portfolio forecasts, negotiation for required level of resources, outlines of the strategy for offering of the products into the market, anticipated pricing strategies, projected revenues and costs, product performance requirements, operational requirements, gaining interdepartmental, process, infrastructure and supply chain commitment and executive approval, as well as communicating the plans.

The portfolio plans can be developed top-down from the overall enterprise business strategy, or can be developed as a bottom-up amalgamation and summary of individual product plans contained within the portfolio, or some combination of the two approaches.

Gain commitment to product business plans

Process identifier: 1.2.1.2.4.

Brief description

Gain enterprise commitment to the product portfolio strategy and individual product plans.

Extended description

The gain commitment to product business plans processes gain enterprise commitment to the product portfolio strategy and individual product plans. These processes include all aspects of identification of stakeholders and negotiation to gain stakeholder approval.
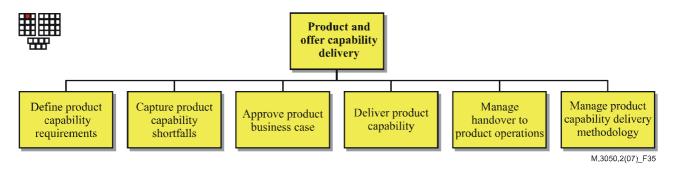
8.1.3   Product and offer capability delivery

Figure 35 – Product and offer capability delivery into level 3 processes

Product and offer capability delivery

Process identifier: 1.2.1.3.

Brief description

Manage the delivery and build of new or changed product and offer and delivery capabilities within an enterprise.

Extended description

Based on the product strategy for the enterprise, the product and offer capability delivery processes manage the delivery and build of new or changed product offering and delivery capabilities within an enterprise. It also handles their requisite infrastructure, where the technologies, scope or type/depth of infrastructure is significantly different to that currently employed in the enterprise, e.g., introduction of third-generation mobile telephony networks.

Define product capability requirements

Process identifier: 1.2.1.3.1.

Brief description

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

Extended description

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

These processes provide input into the requirements capture processes in the service and supply chain and, potentially, the resource horizontal process groupings.

Capture product capability shortfalls

Process identifier: 1.2.1.3.2.

Brief description

Identify specific or imminent product capacity, product performance and/or product operational support shortfalls.

Extended description

The capture product capability shortfalls processes identify specific or imminent product capacity, product performance and/or product operational support shortfalls. These processes take information available from the customer relationship management processes to establish detailed views of anticipated product capacity and performance shortfalls and support process issues.

Approve product business case

Process identifier: 1.2.1.3.3.

Brief description

Develop and gain approval for a business case to develop and deliver the required capabilities, including identification of potential suppliers/partners.

Extended description

The approve product business case processes capture all activities required to develop and gain the necessary level of approval for a business case to develop and deliver the required capabilities, including identification of potential suppliers/partners. The business case should identify any required product infrastructure components, development costs and anticipated benefits, including

revenue gains, productivity gains, performance improvements and/or operational cost improvements. The business case should also include a general view of the types of product offers which could be developed and deployed using the product infrastructure, but would not necessarily include a specific proposal to launch a specific product. This latter activity is managed by the PLM processes. The processes include any cross-enterprise coordination and management functions to ensure that the business case is supported by all stakeholders.

Deliver product capability

Process identifier: 1.2.1.3.4.

Brief description

Manage the coordinated delivery in line with the approved business case of all required product infrastructure capabilities for that business case across the enterprise.

Extended description

The deliver product capability processes ensure the coordinated delivery in line with the approved business case of all required product infrastructure capabilities for that business case across the enterprise. It is predominantly a programme/project management function, with the detailed management of individual infrastructure component delivery managed through separate processes. The processes track and ensure that the business case cost parameters are met, and anticipated benefits and ongoing operational costs are likely to be achieved.

Manage handover to product operations

Process identifier: 1.2.1.3.5.

Brief description

Manage the processes involved in handover of deployed product infrastructure to operational control.

Extended description

The manage handover to product operations processes manage the processes involved in handover of deployed product infrastructure to operational control. These processes ensure that all performance and operational design requirements have been met by the installed product infrastructure, and that all tools, test equipment, operational procedures, support groups and training is in place to allow for successful operation. These processes include the management and coordination of all stakeholders required to gain approval and acceptance of the handover to operational control.

Manage product capability delivery methodology

Process identifier: 1.2.1.3.6.

Brief description

Define and manage the methodology to be adopted for product capability delivery across the enterprise.

Extended description

The manage product capability delivery methodology processes define and manage the methodology to be adopted for product capability delivery across the enterprise. The processes define the procedures and steps to follow to ensure that all project activities across the enterprise to develop infrastructure capability are coordinated, visible and controlled. These processes define the steps in the methodology, and approval process or gates to be passed by individual product

capability delivery projects, and may maintain a repository of all activities as a part of the coordination aspects.
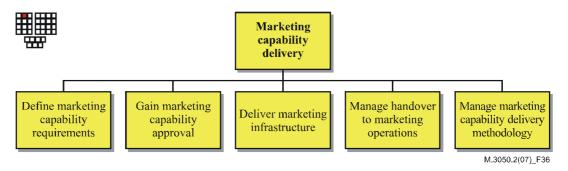
8.1.4   Marketing capability delivery

Figure 36 – Marketing capability delivery decomposition into level 3 processes

Marketing capability delivery

Process identifier: 1.2.1.4.

Brief description

Manage the delivery and build of new or changed market capabilities or customer-related capabilities.

Extended description

Based on the market strategy for the enterprise, the marketing capability delivery processes manage the delivery and build of new or changed market capabilities (e.g., on-line channels and sales channels) or customer-related capabilities (e.g., ability to identify, save, manipulate and retrieve and apply new types of knowledge about customers). These capabilities are created and delivered in line with the market strategy, for example, one strategy may be to create more on-line channels to allow for customer self-service.

Define marketing capability requirements

Process identifier: 1.2.1.4.1.

Brief description

Define and agree the marketing infrastructure capability requirements.

Extended description

The define marketing capability requirements processes define and agree the marketing infrastructure capability requirements. The processes define and obtain agreement to the detailed infrastructure requirements to support the marketing strategies and forecasts. The define marketing capability requirements processes provide requirements, including process performance targets, for the development of new and/or enhancement of existing marketing infrastructure which are captured by this process. These processes include any cross-enterprise coordination and management functions to ensure that the requirements capture the needs of all stakeholders.

These processes provide input into the requirements capture processes in the resource and supply chain horizontal process groupings.

Gain marketing capability approval

Process identifier: 1.2.1.4.2.

Brief description

Develop and gain the necessary level of approval for a business case to develop and deliver the required capabilities.

Extended description

The gain marketing capability approval processes capture all activities required to develop and gain the necessary level of approval for a business case to develop and deliver the required capabilities, including identification of potential suppliers/partners. The business case developed by these processes should identify development costs and anticipated benefits, including productivity gains and/or operational cost improvements. These processes include any cross-enterprise coordination and management functions to ensure that the business case is supported by all stakeholders.

Deliver marketing infrastructure

Process identifier: 1.2.1.4.3.

Brief description

Manage the coordinated delivery of all marketing infrastructure deliverables across the enterprise.

Extended description

The deliver marketing infrastructure processes manage the coordinated delivery of all marketing infrastructure deliverables across the enterprise. The processes ensure the coordinated delivery in line with the approved business case of all required infrastructure capabilities for that business case across the enterprise. The processes track and ensure that the business case cost parameters and anticipated benefits are achieved. The deliver marketing infrastructure processes are predominantly programme/project management processes, with the detailed management of individual infrastructure component delivery managed through separate processes in the relevant eTOM horizontal process groupings.

Manage handover to marketing operations

Process identifier: 1.2.1.4.4.

Brief description

Manage the processes involved in handover of deployed marketing infrastructure to operational control.

Extended description

The manage handover to marketing operations processes manage the processes involved in handover of deployed marketing infrastructure to operational control. These processes ensure that all operational and process performance design requirements have been met by the installed marketing infrastructure, and that all tools, test equipment, operational procedures, support groups, and training is in place to allow for successful operation. These processes include the management and coordination of all stakeholders required to gain approval and acceptance of the handover to operational control.

Manage marketing capability delivery methodology

Process identifier: 1.2.1.4.5.

Brief description

Define and manage the methodology to be adopted for marketing capability delivery across the enterprise.

Extended description

The manage marketing capability delivery methodology processes define and manage the methodology to be adopted for marketing capability delivery across the enterprise. The processes define the procedures and steps to follow to ensure that all project activities across the enterprise to develop infrastructure capability are coordinated, visible and controlled. These processes define the steps in the methodology, and approval process or gates to be passed by individual marketing capability delivery projects, and may maintain a repository of all activities as a part of the coordination aspects.

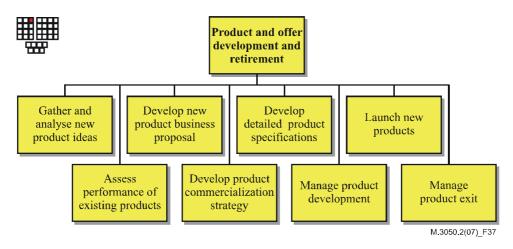### 8.1.5 Product and offer development and retirement

M.3050.2(07)_F37

Figure 37 – Product and offer development and retirement decomposition into level 3 processes

Product and offer development and retirement

Process identifier: 1.2.1.5.

Brief description

Develop and deliver new products and product enhancements and new features, ready for implementation by the Operations processes.

Extended description

Product development and retirement processes develop and deliver new products or services and product or service enhancements and new features, ready for implementation by the operations processes. Additionally, they handle the withdrawal of product offerings from the marketplace. Product development and retirement processes are project oriented (day-to-day management of product offerings are handled by the operations processes). The key measures of this process are how effectively the enterprise's products and services are broadened and the time to market for new products and services or features. These processes also manage major product and service updates and enhancement. Business case development tracking and commitment are key elements of this process, as are project management discipline with defined quality gates.

Gather and analyse new product ideas

Process identifier: 1.2.1.5.1.

Brief description

Research and analyse demographic, customer, technology and marketing information to identify new product and offer opportunities.

Extended description

The gather and analyse new product ideas processes research and analyse demographic, customer, technology and marketing information to identify new product and offer opportunities. These processes undertake the necessary analysis to identify potential opportunities, compare current capabilities with the identified opportunities and, as a result of the analysis, develop new opportunity concepts. Requirements from the sales organization relating to enhancements to support their desired offers are also captured by these processes. The concepts include an analysis of the customer value proposition.

Develop new product business proposal

Process identifier: 1.2.1.5.3.

Brief description

Develop and document business proposals for the identified new product concept.

Extended description

The develop new product business proposal processes develop and document business proposals for the identified new product concept (including, if necessary, a business case). The business proposal (or business case) identifies the new product requirements, including the specific service components, which constitute the product. The business proposal also identifies the development costs and anticipated benefits, including forecast demand, revenue gains, productivity gains, performance improvements and/or operational cost improvements. In addition, these processes define the attributes of the product which form the basis for product advertising and sales. The business proposal also includes an assessment of the risks and the competitive positioning of the product proposal. As a part of the business proposal development, a feasibility assessment can be produced. Potential suppliers/partners who can assist in the development of the product are also identified. As a part of the process, the business proposal is appropriately approved, and as a result of the approval, necessary resources are made available.

Develop detailed product specifications

Process identifier: 1.2.1.5.5.

Brief description

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

Extended description

The develop detailed product specifications processes develop and document the detailed product-related technical, performance and operational specifications, and customer manuals. These processes develop and document the required product features, the specific service and resource requirements and selections, the specific performance and operational requirements and support activities, 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.

Launch new products

Process identifier: 1.2.1.5.7.

Brief description

Manage the initial introduction of new and enhanced products into the market and handover to operations for ongoing roll-out.

Extended description

The launch new products processes manage the initial introduction of new and enhanced products into the market and handover to operations for ongoing roll-out. The initial introduction could be through commercial pilots or market trials, in which case the commercial negotiations for the pilot and/or trial are managed through these processes. These processes identify the shortcomings or issues, and manage the necessary improvements to the product to allow full roll-out. 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.

Once accepted as a stable product offering, roll-out and/or expansion of the product to subsequent customers is managed by the operations support and readiness processes.

Assess performance of existing products

Process identifier: 1.2.1.5.2.

Brief description

Analyse the performance of existing products to identify inadequacies and required improvements.

Extended description

The assess performance of existing products processes analyse the performance of existing products to identify inadequacies and required improvements. These processes use information from customers and from operational activities to identify required improvements.

Develop product commercialization strategy

Process identifier: 1.2.1.5.4.

Brief description

Ensure that product-specific pricing, sales channel support and regulatory approvals are identified and agreed.

Extended description

The develop product commercialization strategy processes ensure that product-specific pricing, sales channel support and regulatory approvals are identified and agreed. These processes ensure that all commercialization aspects of the product development process associated with selling the product to the market, including pricing, rating, identification of sales support and sales channels features, are developed and agreed.

Additionally, these processes manage the enterprise cross-product pricing approval processes.

Manage product development

Process identifier: 1.2.1.5.6.

Brief description

Ensure the coordinated delivery in line with the approved business case of all required product capabilities for that business case across the enterprise.

Extended description

The manage product development processes ensure the 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 and network infrastructure developments, specific channel developments, specific operational procedures, etc., required to support the new product. It is predominantly a programme/project management function, with the detailed management of individual capability delivery managed through separate processes in other horizontal process groupings.

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 and offer development is managed within the product and offer capability delivery process.

Manage product exit

Process identifier: 1.2.1.5.8.

Brief description

Identify existing products which are unviable and manage the processes to exit the product from the market.

Extended description

The manage product exit processes identify existing products which are unviable and manage the process to exit the product from the market. The processes analyse existing products and sales offers to identify economically or strategically unviable products, identify customers impacted by any exit, develop customer-specific or market segment exit or migration strategies, develop infrastructure transition and/or replacement strategies, and manage the operational aspects of the exit process. A business proposal identifying the competitive threats, risks and costs may be required as part of developing the exit strategy. It includes any cross-enterprise coordination and management functions to ensure that the needs of all stakeholders are identified and managed.
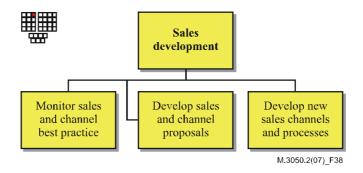
8.1.6 Sales development

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Figure 38 – Sales development decomposition into level 3 processes

Sales development

Process identifier: 1.2.1.6.

Brief description

Develop the sales support and response for new and existing products, as well as existing and potential customers.

Extended description

Sales development processes develop the sales support and response for new and existing products and services, as well as existing and potential customers.

Sales development processes develop product-related compensation plans, define product revenue targets, develop product-related sales training, develop prospective customer identification methodology, develop selling processes/methods and procedures for new products.

As an aspect of this, sales development processes define channels for selling the enterprise's products. It develops or ensures development of channel ability to sell and support products, including negotiating for the specific channel, defining or updating the account management process, developing pricing for a specific channel, etc.

Monitor sales and channel best practice

Process identifier: 1.2.1.6.1.

Brief description

Ensure that the enterprise keeps abreast of sales and channel practices and capabilities in the wider environment.

Extended description

The monitor sales and channel best practice processes ensure that the enterprise keeps abreast of sales and channel practices and capabilities in the wider environment. These processes can involve externally provided research, as well as monitoring of various activities within the enterprise. These processes develop the requirements for the introduction of new sales approaches and sales channels, as well as provide requirements for enhancements to existing sales approaches and channels. This monitoring ensures that the enterprise can provide sales and channel capabilities as effectively as possible at all times. The monitoring captures issues such as compensation plans, product-related sales training approaches and techniques, prospective customer identification methodologies, selling processes/methods and procedures for new products.

Develop sales and channel proposals

Process identifier: 1.2.1.6.2.

Brief description

Create and document proposals for sales processes and sales channels, and gain approval for them.

Extended description

The develop sales and channel proposals processes create and document proposals for sales processes and sales channels, and gain approval for them. The processes define proposals to change existing sales processes and/or channels, or to develop new sales processes and/or channels. These processes undertake the necessary identification of the needs of products, and an analysis of the existing or proposed enterprise sales process and/or channel capabilities. Depending on the proposal, a business case process may be required to gain the necessary approval.

The proposals can be based on industry analysis from the monitoring sales and channel best practice processes, on feedback of the effectiveness of existing sales channels from the selling processes, or on specific requirements associated with the development of new or enhanced products.

These processes include defining product sales targets for each channel, as well as sales and sales personnel performance indicators for each channel.

Develop new sales channels and processes

Process identifier: 1.2.1.6.3.

Brief description

Develop and implement new or adapted sales processes and/or channels to support new or enhanced products.

Extended description

The develop new sales channels and processes processes develop and implement new or adapted sales processes and/or channels to support new or enhanced products. These processes include the development of external relationships if required to provide the necessary sales channel capability. The development and implementation may require management of the coordination and integration of existing and new sales processes and channels to ensure effective operations. These processes include the definition of commercialization manpower profile, training programme development and sales methods and procedures, compensation plans, identification of product potential customers to each channel and sale method.

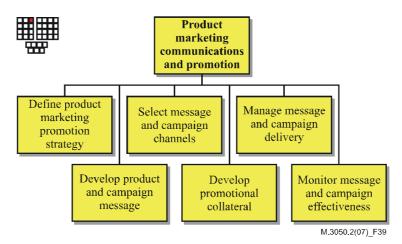### 8.1.7 Product marketing communications and promotion

Figure 39 – Product marketing communications and promotion decomposition into level 3 processes

Product marketing communications and promotion

Process identifier: 1.2.1.7.

Brief description

Develop and manage communications to the market, prospective and existing customers.

Extended description

Product marketing communications and promotion processes deal with overall communication to customers and markets. Product marketing communications processes develop and manage communications to the market, prospective and existing customers. Communications involves both the message and the media. Product marketing communications can develop a message and manage its delivery through a bill insert, phone communication with customers, a magazine advertisement, or any other appropriate mechanism. Product marketing communications develops and manages interfaces with press/news, e.g., schedules press interviews, manages an editorial calendar to plan placements, etc.

Product marketing promotion, on the other hand, is the development of specific promotions to sell products, retain customers and bring in new customers. Product marketing promotion processes create the promotional campaigns and advertising to reach the market, customers and channels. They develop the campaigns and collateral, whether direct mail, newspaper ad, etc. Product marketing promotion processes work with all other processes of marketing, sales and offer, brand management, market research and advertising management, to design marketing promotions and advertising, to determine trade show participation and presence, to support product introductions, etc. Product marketing promotions processes interface with marketing fulfilment response processes in customer relationship management to execute the campaign. One of the key roles of these processes is to position the product in the market, especially versus competitive products.

Define product marketing promotion strategy

Process identifier: 1.2.1.7.1.

Brief description

Defines the specific communications and promotions strategy to be used for positioning the product in the marketplace.

Extended description

The define product marketing promotion strategy defines the specific communications and promotions strategy to be used for positioning the product in the marketplace, especially in relation to competitive products. The establish market strategy processes (S&C) define the overall umbrella, and these processes operate within that umbrella to target the messages for specific products. The processes define a set of arguments and information needed for creating and developing specific promotional campaigns for each product.

Select message and campaign channels

Process identifier: 1.2.1.7.3.

Brief description

Manage the selection of the appropriate channel or channels to support the message delivery and/or campaign.

Extended description

The select message and campaign channel(s) processes manage the selection of the appropriate channel or channels to support the message delivery and/or campaign. A particular promotion may require selection of one or several delivery channels.

Manage message and campaign delivery

Process identifier: 1.2.1.7.5.

Brief description

Manage and coordinate the delivery of the messages and campaigns into the selected channels.

Extended description

The manage message and campaign delivery processes manage and coordinate the delivery of the messages and campaigns into the selected channels. They ensure that the channels (owned and/or contracted) are adequately trained and/or informed to manage the message and/or campaign delivery, and that sufficient resources are available in the selected channel(s) to support the delivery.

Develop product and campaign message

Process identifier: 1.2.1.7.2.

Brief description

Manage all activities and stakeholder engagement to develop and agree the specific campaign or promotion message.

Extended description

The develop product and campaign message processes manage all activities and stakeholder engagement to develop and agree the specific campaign or promotion message. Any particular promotion or campaign may require the coordination of multiple stakeholders to produce and agree a specific message. These stakeholders could include media management, all impacted product managers, brand management, marketing management, owners of the potential channels, etc.

Develop promotional collateral

Process identifier: 1.2.1.7.4.

Brief description

Ensure that all associated collateral is produced to support the market message and/or campaign.

Extended description

The develop promotional collateral processes ensure that all associated collateral is produced to support the market message and/or campaign. Collateral could include production of pamphlets, trade displays, call centre scripts, etc. These processes arrange and manage the delivery through the suppliers or producers of the associated collateral.

Note that the actual contractual relationship with the supplier may be established through supplier chain development and management processes.

Monitor message and campaign effectiveness

Process identifier: 1.2.1.7.6.

Brief description

Establish metrics and monitoring and reporting processes to gauge the effectiveness of market messages and product promotional campaigns.

Extended description

The monitor message and campaign effectiveness processes establish metrics and monitoring and reporting processes to gauge the effectiveness of market messages and product promotional campaigns. Based on analysis, these processes feedback suggested changes to re-enforce the message or to adapt the message to become more effective.
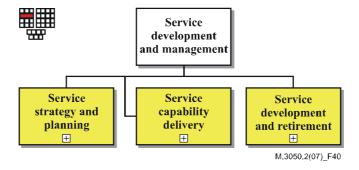
8.2   Service development and management

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Figure 40 – Service development and management decomposition into level 2 processes

Service development and management

Process identifier: 1.2.2.

Brief description

[Not available].

Extended description

Responsibilities of the development and management processes include, but are not limited to:

Service strategy and planning

Process identifier: 1.2.2.1.

Brief description

Enable the development of a strategic view and a multi-year business plan for the enterprise's services and service directions, and the parties who will supply the required services.

Extended description

Service strategy and planning processes enable the development of a strategic view and a multi-year business plan for the enterprise's services and service directions, and the parties who will supply the required services. Research and analysis is performed to determine service targets as well as strategies to reach the defined targets. This research may be obtained from the external market, or developed internally through research programmes and activities, or leverage of other internal knowledge. A key input to the service strategy arises from the enterprise's market and product portfolio strategy and forecasts. A focus is placed on the expansion of the existing service capabilities and the identification of new service capabilities required.

These processes deliver and develop annual and multi-year service plans in support of products and offers that include volume forecasts, negotiation for required levels of resources, gaining service development and management as well as supply chain commitment and executive approval for the plans.

Forecasting of service demand, and capturing of new opportunities, are both essential to ensure that the enterprise can implement the services necessary for the future needs of their customers and potential customers.

These processes define the service standards sought, key new service capabilities required, service support levels and approaches required, service design elements to be developed, as well as service cost parameters and targets. These processes also define the policies relating to technical services and their implementation.

Service capability delivery

Process identifier: 1.2.2.2.

Brief description

Plan and deliver the total capabilities required to deliver changes to service.

Extended description

Service capability delivery processes plan and deliver the total capabilities required to deliver changes to service, as necessary. This involves integration of capability delivered from within the enterprise, and capability delivered from a partner/supplier.

Service demand forecasting and capturing of new opportunities are both essential to ensure that the enterprise can implement the services necessary for the future needs of their customers and potential customers.

Service development and retirement

Process identifier: 1.2.2.3.

Brief description

Develop and deliver new or enhanced service types.

Extended description

Service development and retirement processes are project-oriented in that they develop and deliver new or enhanced service types. These processes include process and procedure implementation, systems changes and customer documentation. They also undertake roll-out and testing of the service type, capacity management and costing of the service type. It ensures the ability of the enterprise to deliver service types according to requirements.

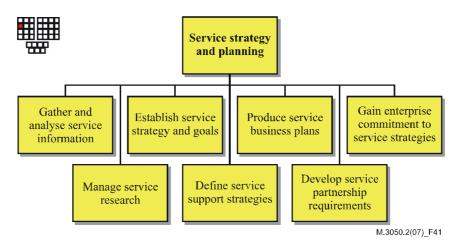### 8.2.1 Service strategy and planning

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Figure 41 – Service strategy and planning decomposition into level 3 processes

Service strategy and planning

Process identifier: 1.2.2.1.

Brief description

Enable the development of a strategic view and a multi-year business plan for the enterprise's services and service directions, and the parties who will supply the required services.

Extended description

Service strategy and planning processes enable the development of a strategic view and a multi-year business plan for the enterprise's services and service directions, and the parties who will supply the required services. Research and analysis is performed to determine service targets as well as strategies to reach the defined targets. This research may be obtained from the external market, or developed internally through research programmes and activities, or leverage of other internal knowledge. A key input to the service strategy arises from the enterprise's market and product portfolio strategy and forecasts. A focus is placed on the expansion of the existing service capabilities and the identification of new service capabilities required.

These processes deliver and develop annual and multi-year service plans in support of products and offers that include volume forecasts, negotiation for required levels of resources, gaining service development and management as well as supply chain commitment and executive approval for the plans.

Forecasting of service demand, and capturing of new opportunities, are both essential to ensure that the enterprise can implement the services necessary for the future needs of their customers and potential customers.

These processes define the service standards sought, key new service capabilities required, service support levels and approaches required, service design elements to be developed, as well as service

cost parameters and targets. These processes also define the policies relating to technical services and their implementation.

Gather and analyse service information

Process identifier: 1.2.2.1.1.

Brief description

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

Extended description

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

These processes include the establishment and management of relationships with external providers of service information, and the management of internal resources used for providing service information.

A key source of input to this analysis is derived from the marketing and product strategy and planning processes.

Establish service strategy and goals

Process identifier: 1.2.2.1.3.

Brief description

Establish the service strategies based on market trends, future product needs, technical capabilities, and addressing shortcomings in existing service performance and support.

Extended description

The establish service strategy and goals processes establish the service strategies based on market trends, future product needs, technical capabilities, and addressing shortcomings in existing service performance and support. These processes accept the changing service requirements and develop appropriate service strategies based on the changing needs of the enterprise and increasing expectations of the market. They establish realistic service goals for the enterprise and for the products they support. They highlight shortcomings in existing support strategies, including issues associated with resourcing and skill sets.

Produce service business plans

Process identifier: 1.2.2.1.5.

Brief description

Develop and deliver annual and multi-year service plans in support of products and offers.

Extended description

The produce service business plans processes develop and deliver annual and multi-year service plans in support of products and offers that include volume forecasts, negotiation for required levels

of resources and budgets, gaining service development and management as well as supply chain commitment and executive approval for the plans.

Forecasting of service demand, and capturing of new opportunities, are both essential to ensure that the enterprise can implement the services necessary for the future needs of their customers and potential customers. The processes assess the impacts that new or modified service requirements will cause on the installed service infrastructure and workforce, and supporting resource infrastructure, and establish the functions and benefits that new or modified service will provide to users.

These processes identify the timetables and logistics for new service capability introduction.

Gain enterprise commitment to service strategies

Process identifier: 1.2.2.1.7.

Brief description

Gain enterprise commitment to the service strategy and service plans.

Extended description

The gain commitment to service plans processes gain enterprise commitment to the service strategy and service plans. These processes include all aspects of identification of stakeholders and negotiation to gain stakeholder approval.

Manage service research

Process identifier: 1.2.2.1.2.

Brief description

Manage internally driven research investigations and activities which are used to provide detailed assessment or investigation of new and emerging service capabilities.

Extended description

The manage service research processes manage internally driven research investigations and activities which are used to provide detailed assessment or investigation of new and emerging service capabilities. The actual research activity may be totally internally delivered, or may be outsourced to external parties to perform the actual research activity. These processes manage the administration of the research activity, management of any research prioritization processes, define the assessment methodologies, administer any actual research contracts with external parties, and develop and manage any intellectual property and patent administration required for the service research activity.

Note that the commercial arrangements with external parties are developed within the supply chain development and management processes.

Note that the actual legal arrangements, analysis and litigation surrounding intellectual property is managed within the legal management processes in the enterprise management process area.

Define service support strategies

Process identifier: 1.2.2.1.4.

Brief description

Define the principles, policies and performance standards for the operational organization providing service support.

Extended description

The define service support strategies processes define the principles, policies and performance standards for the operational organization providing service support. Over time, the requirements for service levels and service quality on existing services, and the challenges introduced by new services, require changes to the support requirements. These processes define the targets, and operational requirements, in this changing environment. The required performance standards are driven by community expectations, internal processes and technology capabilities and competitive offerings. A major input to these processes arises from the gather and analyse service information processes, and from the product portfolio, resource strategy and market strategy processes. These processes also provide the feedback point from analyses undertaken in the service management and operations process to determine bottlenecks and problems associated with existing service support activities.

Develop service partnership requirements

Process identifier: 1.2.2.1.6.

Brief description

Identify the requirements for service aspects sourced from partners or suppliers, and the service aspects to be delivered internally to the enterprise.

Extended description

The develop service partnership requirements processes identify the requirements for service aspects sourced from partners or suppliers, and the service aspects to be delivered internally to the enterprise. The processes determine the extent to which service aspects need to be sourced externally or delivered from internal capabilities, they scan external availability and make recommendations about the specific external partners or suppliers who should be used to provide the service aspects.

Note that the processes used to actually source any external suppliers occur with the supply chain development and management processes.
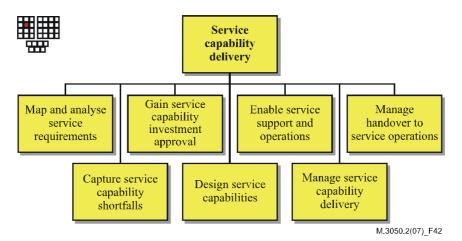
8.2.2 Service capability delivery

Figure 42 – Service capability delivery decomposition into level 3 processes

Service capability delivery

Process identifier: 1.2.2.2.

Brief description

Plan and deliver the total capabilities required to deliver changes to service.

Extended description

Service capability delivery processes plan and deliver the total capabilities required to deliver changes to service, as necessary. This involves integration of capability delivered from within the enterprise, and capability delivered from a partner/supplier.

Service demand forecasting and capturing of new opportunities are both essential to ensure that the enterprise can implement the services necessary for the future needs of their customers and potential customers.

Map and analyse service requirements

Process identifier: 1.2.2.2.1.

Brief description

Define the detailed service infrastructure requirements to support the product capabilities required by the enterprise.

Extended description

The map and analyse service requirements processes define the detailed service infrastructure requirements to support the product capabilities required by the enterprise. The processes provide detailed analysis of new service demand forecasts linked to service-relevant geographic distributions. The processes also establish the detailed performance requirements. These processes take the forecast information available from the produce service business plans and requirements information from the define product capability requirements processes, as well as service infrastructure requirements developed by the develop detailed service specifications processes, to establish detailed views of anticipated service demand and performance requirements.

The processes include any cross-enterprise coordination and management functions to ensure that the demand distributions capture the needs of all stakeholders.

These processes provide input into the requirements capture processes in the resource and supply chain horizontal process groupings.

Gain service capability investment approval

Process identifier: 1.2.2.2.3.

Brief description

Capture all activities required to develop and gain necessary approval for investment proposals to develop and deliver the required service capabilities.

Extended description

The gain service capability investment approval processes capture all activities required to develop and gain necessary approval for business proposals to develop and deliver the required service capabilities, including identification of potential suppliers/partners. These processes take the input from the map and analyse service requirements, the capture service capability shortfalls and the define product capability requirements processes to develop and gain approval for any business proposals arising. In some cases, the business proposal may require the creation and approval of a formal business case, in other cases, the business proposal approval may be delegated to local

management. In any event, requirements for the service infrastructure, identification of required resource infrastructure capabilities, the cost estimates for delivering the service and supporting resource infrastructure, including costs for materials (equipment and tools), labour and training, are part of the investment proposal.

The rules and procedures outlining the necessary approval process to be used are also part of these processes.

The processes include any cross-enterprise coordination and management functions to ensure that the investment proposals capture the needs of, and are supported by, all stakeholders.

Enable service support and operations

Process identifier: 1.2.2.2.5.

Brief description

Manage the design of any improvements or changes required to the service operational support processes to support the investment proposals and new service capabilities and infrastructure.

Extended description

The enable service support and operations processes manage the design of any improvements or changes required to the service operational support processes to support the investment proposals and new service capabilities and infrastructure. The processes ensure the identification of operational support groups, required skill sets, and availability of appropriate training programmes. These processes ensure the identification, collation and coordination of support requirements from all approved investment proposals, and from any operational support shortfalls identified in the capture service capability shortfalls processes.

Manage handover to service operations

Process identifier: 1.2.2.2.7.

Brief description

Manage the processes involved in handover of deployed service infrastructure to operational control.

Extended description

The manage handover to service operations processes manage the processes involved in handover of deployed service infrastructure to operational control. These processes ensure that all operational and performance design requirements have been met by the installed service infrastructure, and that all tools, test equipment, operational procedures, support groups, and training is in place to allow for successful operation. These processes include the management and coordination of all stakeholders required to gain approval and acceptance of the handover to operational control.

Capture service capability shortfalls

Process identifier: 1.2.2.2.2.

Brief description

Identify specific or imminent service capacity, service performance and/or service operational support shortfalls.

Extended description

The capture service capability shortfalls processes identify specific or imminent service capacity, service performance and/or service operational support shortfalls. These processes take information

available from the service management and operations processes to establish detailed views of anticipated service capacity and performance shortfalls and support process issues.

Design service capabilities

Process identifier: 1.2.2.2.4.

Brief description

Manage the design of the service infrastructure to meet the requirements in any approved investment proposals.

Extended description

The design service capabilities processes manage the design of the service infrastructure to meet the requirements in any approved investment proposals approved through the gain service capability investment approval processes. These processes ensure the collation and coordination of requirements from all approved investment proposals, assess the most appropriate service infrastructure, develop the tactical/solution architecture and design specifications to be used to build or source the necessary service infrastructure components, and select the most appropriate service infrastructure suppliers/partners to support the service requirements.

Note that the actual management of the sourcing process is handled within the supply chain development and management processes.

Manage service capability delivery

Process identifier: 1.2.2.2.6.

Brief description

Manage the provision, implementation and roll-out of the new or enhanced service capability, and associated operational support processes.

Extended description

The manage service capability delivery processes manage the provision, implementation and roll-out of the new or enhanced service capability and associated operational support processes. These processes are predominantly programme/project management process functions, and require the detailed management and coordination of the delivery of individual service infrastructure components, and any underlying resource infrastructure capability delivery, to achieve the delivery of the overall service capability. These processes are responsible for ensuring that the quality of the implemented service capability meets the design specifications. These processes leverage the supply chain development and management processes, as necessary, to establish any new sourcing arrangements for the delivery of service components.

These processes develop the detailed delivery, implementation and roll-out timetables, and track the expenditure and staff resource usage to deliver the service components, and provide any reporting necessary to keep stakeholders informed of progress. They are responsible for ensuring that the financial aspects of the approved business proposals are met.
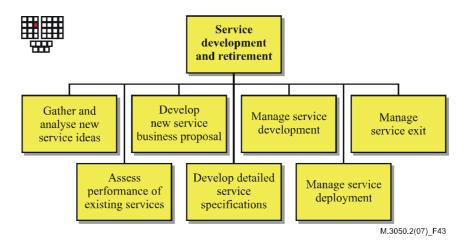
8.2.3 Service development and retirement

Figure 43 – Service development and retirement decomposition into level 3 processes

Service development and retirement

Process identifier: 1.2.2.3.

Brief description

Develop and deliver new or enhanced service types.

Extended description

Service development and retirement processes are project-oriented in that they develop and deliver new or enhanced service types. These processes include process and procedure implementation, systems changes and customer documentation. They also undertake roll-out and testing of the service type, capacity management and costing of the service type. It ensures the ability of the enterprise to deliver service types according to requirements.

Gather and analyse new service ideas

Process identifier: 1.2.2.3.1.

Brief description

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

Extended description

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

Develop new service business proposal

Process identifier: 1.2.2.3.3.

Brief description

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

Extended description

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

Manage service development

Process identifier: 1.2.2.3.5.

Brief description

Ensure the 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.

Extended description

The manage service development processes ensure the 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. 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 are identified and developed. These processes ensure that the necessary documentation and training packages are produced to support the operation of the new service class. These processes also ensure that the required service level agreements and operational level agreements to support the detailed service specifications are developed and agreed for each service class deployed, and that any supplier/partner operational support has been identified and agreed. These processes have both programme/project management aspects and technical/operational specification aspects, with the detailed management of individual service class deployment managed by the manage service deployment processes.

As well as developing new service classes, these processes manage upgrades or enhancements to existing service classes, as the need to review operational and other support is also relevant for upgrading existing classes/components.

Note that management of major new or enhanced infrastructure delivery to support service development is managed within the service capability delivery process.

Manage service exit

Process identifier: 1.2.2.3.7.

Brief description

Identify existing services which are unviable and manage the processes to exit the service class from the market.

Extended description

The manage service exit processes identify existing service classes which are unviable and manage the processes to exit the service from the products they support. The processes analyse existing service classes to identify economically or strategically unviable classes, identify products and customers impacted by any exit, develop product and customer specific exit or migration strategies, develop service infrastructure transition and/or replacement strategies, and manage the operational aspects of the exit process. A business proposal identifying the competitive threats, risks and costs may be required as a part of developing the exit strategy. These processes include any cross-enterprise coordination and management functions to ensure that the needs of all stakeholders are identified and managed.

Assess performance of existing services

Process identifier: 1.2.2.3.2.

Brief description

Analyse the performance of existing services to identify inadequacies and required improvements.

Extended description

The assess performance of existing services processes analyse the performance of existing services to identify inadequacies and required improvements. These processes use information from customers and from operational activities to identify required improvements.

Develop detailed service specifications

Process identifier: 1.2.2.3.4.

Brief description

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

Extended description

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

Manage service deployment

Process identifier: 1.2.2.3.6.

Brief description

Ensure the coordinated deployment in line with the approved business case of all required service classes/components for that business case across the enterprise.

Extended description

The manage service deployment processes ensure the coordinated deployment in line with the approved business case of all required service classes/components for that business case across the enterprise. 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. These processes ensure that appropriate operational staff are identified and have received the necessary training. These processes ensure that the agreed supplier/partner operational support has been implemented. These processes also ensure that acceptance testing is successfully performed to assure that the new or enhanced services comply with the specifications. These processes have both programme/project and management aspects.
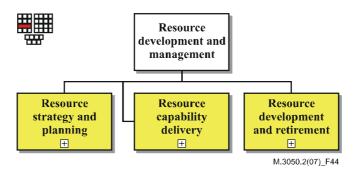
8.3 Resource development and management

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Figure 44 – Resource development and management decomposition into level 2 processes

Resource development and management

Process identifier: 1.2.3.

Brief description

The resource development and management grouping focuses on planning, developing and delivering the resources needed to support services and products to the operations domain. It includes functionalities necessary for defining the strategies for development of the network and other physical and non-physical resources, introduction of new technologies and inter-working with existing ones, managing and assessing the performance of existing resources and ensuring that capabilities are in place to meet future service needs.

Extended description

This horizontal functional process focuses on planning, developing and delivering the resources needed to support services and products to the operations domain. It includes processes necessary for defining the strategies for development of the network and other physical and non-physical resources, introduction of new technologies and interworking with existing ones, managing of existing resources and ensuring that capabilities are in place to meet future service needs.

Resource strategy and planning

Process identifier: 1.2.3.1.

Brief description

Develop resource strategies, policies and plans for the enterprise, based on the long-term business, market, product and service directions of the enterprise.

Extended description

Resource strategy and planning processes develop resource strategies, policies and plans for the enterprise, based on the long-term business, market, product and service directions of the enterprise. These processes understand the capabilities of the existing enterprise infrastructure, capture the requirements on the infrastructure based on market, product and service strategies of the enterprise, manage the capabilities of the suppliers and partners to develop and deliver new resource capabilities, and define the way that new or enhanced infrastructure may be deployed.

Research and analysis is performed to determine resource targets as well as strategies to reach the defined targets. This research may be obtained from the external market and resource suppliers and partners, or developed internally through research programmes and activities, or leverage of other internal knowledge. A key input to the resource strategy arises from the enterprise's market, product portfolio and service strategy and forecasts. A focus is placed on the expansion of the existing resource capabilities and the identification of new resource capabilities required.

These processes deliver and develop annual and multi-year resource plans in support of services, products and offers that include volume forecasts, negotiation for required levels of resources, gaining resource development and management as well as supply chain commitment and executive approval for the plans.

Forecasting of resource demand, and capturing of new opportunities, are both essential to ensure that the enterprise can construct and implement the resources necessary for the future needs of their customers and potential customers.

These processes define the resource implementation standards sought, key new resource capabilities required, resource support levels and approaches required, resource design elements to be developed, as well as resource cost parameters and targets. These processes also define the policies relating to technical resources and their implementation.

Resource capability delivery

Process identifier: 1.2.3.2.

Brief description

Use the capability definition or requirements to deploy new and/or enhanced technologies and associated resources.

Extended description

Resource capability delivery processes use the capability definition or requirements to deploy new and/or enhanced technologies and associated resources.

The objectives of these processes is to ensure that network, application and computing resources are deployed, according to the plans set by resource development. They deliver the physical resource capabilities necessary for the ongoing operations, and long-term well-being of the enterprise, and ensure the basis on which all resources and services will be built.

Responsibilities of the resource capability delivery processes include, but are not limited to:

• planning resource supply logistics (warehousing, transport, etc.);

- planning the resource installation;
- contracting and directing the resource construction where needed;
- verifying the resource installation;
- handover the resource capability to operations through interactions with the manage resource class configuration.

Logical network configurations (such as resource elements integration) are as important to the network resources as the physical aspects. All aspects must be planned and considered in the design and implementation of the network, including infrastructure owned by the enterprise and by supplier/partners, other physical resources and logical elements.

Resource development and retirement

Process identifier: 1.2.3.3.

Brief description

Develop new, or enhance existing technologies and associated resource types, so that new services can be developed.

Extended description

Resource development and retirement processes develop new, or enhance existing technologies and associated resource types, so that new products are available to be sold to customers. They use the capability definition or requirements defined by resource strategy and planning. They also decide whether to acquire resources from outside, taking into account the overall business policy in that respect. These processes also retire or remove technology and associated resource types, which are no longer required by the enterprise.

Resource types may be built, or in some cases leased from other SPs or suppliers. To ensure the most efficient and effective solution can be used, negotiations on network level agreements with suppliers or partners are paramount for both building and leasing.

These processes interact strongly with product and supply chain development processes.

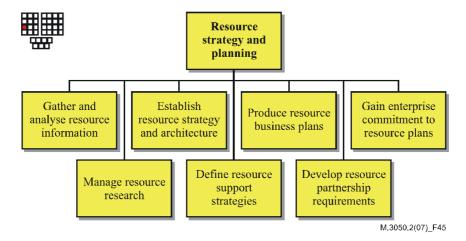### 8.3.1 Resource strategy and planning

Figure 45 – Resource strategy and planning decomposition into level 3 processes

Resource strategy and planning

Process identifier: 1.2.3.1.

Brief description

Develop resource strategies, policies and plans for the enterprise, based on the long-term business, market, product and service directions of the enterprise.

Extended description

Resource strategy and planning processes develop resource strategies, policies and plans for the enterprise, based on the long-term business, market, product and service directions of the enterprise. These processes understand the capabilities of the existing enterprise infrastructure, capture the requirements on the infrastructure based on market, product and service strategies of the enterprise, manage the capabilities of the suppliers and partners to develop and deliver new resource capabilities, and define the way that new or enhanced infrastructure may be deployed.

Research and analysis is performed to determine resource targets as well as strategies to reach the defined targets. This research may be obtained from the external market and resource suppliers and partners, or developed internally through research programmes and activities, or leverage of other internal knowledge. A key input to the resource strategy arises from the enterprise's market, product portfolio and service strategy and forecasts. A focus is placed on the expansion of the existing resource capabilities and the identification of new resource capabilities required.

These processes deliver and develop annual and multi-year resource plans in support of services, products and offers that include volume forecasts, negotiation for required levels of resources, gaining resource development and management as well as supply chain commitment and executive approval for the plans.

Forecasting of resource demand, and capturing of new opportunities, are both essential to ensure that the enterprise can construct and implement the resources necessary for the future needs of their customers and potential customers.

These processes define the resource implementation standards sought, key new resource capabilities required, resource support levels and approaches required, resource design elements to be developed, as well as resource cost parameters and targets. These processes also define the policies relating to technical resources and their implementation.

Gather and analyse resource information

Process identifier: 1.2.3.1.1.

Brief description

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

Extended description

The gather and analyse resource information processes research and analyse customer, technology, competitor and marketing information to identify new resource requirements and industry resource capabilities and availability. These processes undertake the necessary analysis to identify potential opportunities, compare current capabilities with the identified opportunities and, as a result of the analysis, develop new resource requirements or enhancements to existing requirements. The new or enhanced resource requirements include an analysis of the customer value proposition.

These processes include the establishment and management of relationships with external providers of resource information, and the management of internal groups used for providing resource information.

A key source of input to this analysis is derived from the business, marketing, service and product strategy and planning processes.

Establish resource strategy and architecture

Process identifier: 1.2.3.1.3.

Brief description

Establish the resource strategies based on market trends, future products needs, technical capabilities, and addressing shortcomings in existing resource support.

Extended description

The establish resource strategy and architecture processes establish the resource strategies based on market trends, future products needs, available and emerging resource capabilities, and addressing shortcomings in existing resource performance and operational support. These processes accept the changing resource requirements and develop appropriate resource strategies and strategic resource architectures based on the changing needs of the enterprise, and increasing expectations of the market. They establish realistic resource development and delivery goals for the enterprise and services to be delivered to the market. They establish implementation policies which act as a set of guidelines to be followed in the resource capability delivery processes. They highlight shortcomings in existing resource performance and operational support arrangements and processes, including issues associated with resourcing and skill sets.

Major inputs to these processes are derived from the gather and analyse resource information and the manage resource research processes.

Produce resource business plans

Process identifier: 1.2.3.1.5.

Brief description

Develop and deliver annual and multi-year resource plans in support of services, products and offers.

Extended description

The produce resource business plans processes develop and deliver annual and multi-year resource plans in support of services, products and offers that include volume forecasts, negotiation for required levels of resources and budgets, gaining resource development and management as well as supply chain commitment and executive approval for the plans.

Forecasting of aggregate or high level resource demand, and capturing of new opportunities, are both essential to ensure that budgets are assigned which allow the enterprise to implement the resource capabilities and capacity necessary for the future needs of their customers and potential customers.

The processes assess the impacts that new or modified resource infrastructure will cause on the installed infrastructure and workforce, and establish the functions and benefits that new or modified resource will provide to users. These processes identify the timetables and logistics for new resource capability introduction.

Gain enterprise commitment to resource plans

Process identifier: 1.2.3.1.7.

Brief description

Gains enterprise commitment to the resource strategy and business plans.

Extended description

The gain entreprise commitment to resource plans processes gains enterprise commitment to the resource strategy and business plans. These processes include all aspects of identification of stakeholders and negotiation to gain stakeholder approval.

Manage resource research

Process identifier: 1.2.3.1.2.

Brief description

Manage internally driven research investigations and activities which are used to provide detailed technical assessment or investigation of new and emerging resource capabilities.

Extended description

The manage resource research processes manage internally driven research investigations and activities which are used to provide detailed technical assessment or investigation of new and emerging resource capabilities. The actual research activity may be totally internally delivered, or may be outsourced to external parties to perform the actual research activity. These processes manage the administration of the research activity, manage any research prioritization processes, define the assessment methodologies, administer any actual research contracts with external parties, and develop and manage any intellectual property and patent administration required for the resource research activity.

Note that the commercial arrangements with external parties are developed within the supply chain development and management processes.

Note that the actual legal arrangements, analysis and litigation surrounding intellectual property is managed within the legal management processes in the enterprise management process area.

Define resource support strategies

Process identifier: 1.2.3.1.4.

Brief description

Define the principles, policies and performance standards for the operational organization providing resource support.

Extended description

The define resource support strategies processes define the principles, policies and performance standards for the operational organization providing resource support. Over time, requirements for service levels and quality on existing resources change and operational challenges are introduced by new resources. These processes define the targets, and operational requirements, in this changing environment. The required performance standards are driven by community and regulatory expectations, internal process and technology capabilities and competitive offerings. A major input to these processes arises from the gather and analyse resource information processes, and from the product portfolio, resource strategy and market strategy processes. These processes also provide the feedback point from analyses undertaken in the resource management and operations processes to determine bottlenecks and problems associated with existing resource operational support activities.

Develop resource partnership requirements

Process identifier: 1.2.3.1.6.

Brief description

Identify the requirements for resource capabilities to be sourced from partners or suppliers, and any resource capabilities to be delivered internally to the enterprise.

Extended description

The develop resource partnership requirements processes identify the requirements for resource capabilities sourced from partners or suppliers, and any resource capabilities to be delivered internally to the enterprise. The processes determine the extent to which resource capabilities need to be sourced externally or delivered from internal capabilities, they scan external availability and make recommendations about the specific external partners or suppliers who should be used to provide the resource capabilities.

Note that the processes used to actually source any external suppliers occur with the supply chain development and management processes.
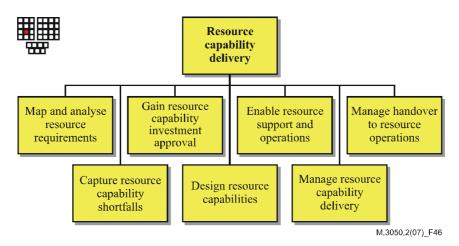
8.3.2 Resource capability delivery

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Figure 46 – Resource capability delivery decomposition into level 3 processes

Resource capability delivery

Process identifier: 1.2.3.2.

Brief description

Use the capability definition or requirements to deploy new and/or enhanced technologies and associated resources.

Extended description

Resource capability delivery processes use the capability definition or requirements to deploy new and/or enhanced technologies and associated resources.

The objectives of these processes is to ensure that network, application and computing resources are deployed, according to the plans set by resource development. They deliver the physical resource capabilities necessary for the ongoing operations and long-term well-being of the enterprise, and ensure the basis on which all resources and services will be built.

Responsibilities of the resource capability delivery processes include, but are not limited to:

- planning resource supply logistics (warehousing, transport, etc.);
- planning the resource installation;
- contracting and directing the resource construction where needed;
- verifying the resource installation;
- handover the resource capability to operations through interactions with the manage resource class configuration.

Logical network configurations (such as resource elements integration) are as important to the network resources as the physical aspects. All aspects must be planned and considered in the design and implementation of the network, including infrastructure owned by the enterprise, and by supplier/partners, other physical resources and logical elements.

Map and analyse resource requirements

Process identifier: 1.2.3.2.1.

Brief description

Define the detailed resource infrastructure requirements to support the service capabilities required by the enterprise.

Extended description

The map and analyse resource requirements processes define the detailed resource infrastructure requirements to support the service capabilities required by the enterprise. The processes provide detailed analysis of new resource requirements linked to relevant geographic distributions. These processes also establish the detailed performance requirements. These processes take the forecast information available from the produce resource business plans and requirements information from the map and analyse service requirements processes, as well as resource infrastructure requirements developed by the develop detailed resource specifications processes, to establish detailed views of anticipated resource demand and performance requirements.

These processes manage the capacity planning for the resource infrastructure, and identify capacity requirements based on service forecasts and appropriate resource related metrics, i.e., transaction volumes, storage requirements, traffic volumes, port availabilities, etc.

The processes include any cross-enterprise coordination and management functions to ensure that the demand distributions capture the needs of all stakeholders.

Gain resource capability investment approval

Process identifier: 1.2.3.2.3.

Brief description

Capture all activities required to develop and gain necessary approval for investment proposals to develop and deliver the required resource capabilities.

Extended description

The gain resource capability investment approval processes capture all activities required to develop and gain necessary approval for investment proposals to develop and deliver the required resource capabilities, including identification of potential suppliers/partners. These processes take the input from the map and analyse resource requirements, the capture resource capability shortfalls and the map and analyse service requirements processes to develop and gain approval for any business proposals arising. In some cases, the business proposal may require the creation and approval of a formal business case, in other cases the business proposal approval may be delegated to local

management. In any event, the cost estimates for delivering the resource infrastructure, including costs for materials (equipment and tools), labour and training are part of the investment proposal.

The rules and procedures outlining the necessary approval process to be used are also part of these processes.

The processes include any cross-enterprise coordination and management functions to ensure that the investment proposals capture the needs of, and are supported by, all stakeholders.

Enable resource support and operations

Process identifier: 1.2.3.2.5.

Brief description

Manage the design of any improvements or changes required to the resource operational support processes to support the investment proposals and new resource capabilities and infrastructure.

Extended description

The enable resource support and operations processes manage the design of any improvements or changes required to the resource operational support processes to support the investment proposals and new resource capabilities and infrastructure. The processes ensure the identification of operational support groups, required skill sets and availability of appropriate training programmes. These processes ensure the identification, collation and coordination of support requirements from all approved investment proposals, and from any operational support shortfalls identified in the capture resource capability shortfalls processes.

Manage handover to resource operations

Process identifier: 1.2.3.2.7.

Brief description

Manage the processes involved in handover of deployed resource infrastructure to operational control.

Extended description

The manage handover to resource operations processes manage the processes involved in handover of deployed resource infrastructure to operational control. These processes ensure that all operational and performance design requirements have been met by the installed resource infrastructure, and that all tools, test equipment, operational procedures, support groups and training is in place to allow for successful operation. These processes include the management and coordination of all stakeholders required to gain approval and acceptance of the handover to operational control.

Capture resource capability shortfalls

Process identifier: 1.2.3.2.2.

Brief description

Identify specific or imminent resource capacity, resource performance and/or resource operational support shortfalls.

Extended description

The capture resource capability shortfalls processes identify specific or imminent resource capacity, resource performance and/or resource operational support shortfalls. These processes take information available from the resource management and operations processes to establish detailed views of anticipated resource and shortfalls and support process issues.

Design resource capabilities

Process identifier: 1.2.3.2.4.

Brief description

Manage the design of the resource infrastructure to meet the requirements in any approved investment proposals.

Extended description

The design resource capabilities processes manage the design of the resource infrastructure to meet the requirements in any approved investment proposals. These processes ensure the collation and coordination of requirements from all approved investment proposals, assess the most appropriate resource infrastructure, develop the tactical/solution architecture and design specifications to be used to build or source the necessary resource infrastructure components, and select the most appropriate resource infrastructure suppliers/partners to support the resource requirements. A key element of the overall design is the integration approach between the existing legacy resource infrastructure and any proposed new resource infrastructure. This integration design is managed within the architecture and specification processes.

Note that the actual management of the sourcing process is handled within the supply chain development and management processes.

Manage resource capability delivery

Process identifier: 1.2.3.2.6.

Brief description

Manage the provision, implementation, commissioning and roll-out of the new or enhanced resource capability and associated operational support processes.

Extended description

The manage resource capability delivery processes manage the provision, implementation, commissioning and roll-out of the new or enhanced resource capability and associated operational support processes. These processes are predominantly programme/project management process functions, and require the detailed management and coordination of the delivery of individual resource infrastructure components to achieve the delivery of the overall resource capability. Within the manage resource capability delivery processes, separate suppliers/partners may be responsible for the delivery of the resource capability, and other suppliers/partners for the installation and construction. The manage resource capability delivery processes ensure that the roles and responsibilities of all parties are identified, managed and coordinated.

These processes are responsible for ensuring that the quality of the implemented resource capability meet the design specifications. These processes manage the commissioning of the new resource infrastructure by ensuring the availability of test programmes and specifications against which to test the new resource infrastructure meets the design requirements.

These processes leverage the supply chain development and management processes as necessary to establish any new sourcing arrangements for the delivery of resource components.
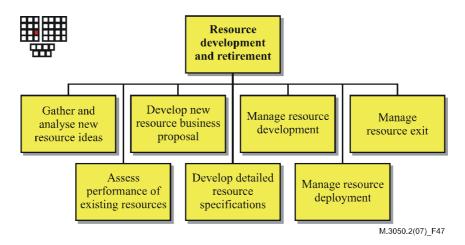
8.3.3   Resource development and retirement

Figure 47 – Resource development and retirement decomposition into level 3 processes

Resource development and retirement

Process identifier: 1.2.3.3.

Brief description

Develop new, or enhance existing technologies and associated resource types, so that new services can be developed.

Extended description

Resource development and retirement processes develop new, or enhance existing technologies and associated resource types, so that new products are available to be sold to customers. They use the capability definition or requirements defined by resource strategy and planning. They also decide whether to acquire resources from outside, taking into account the overall business policy in that respect. These processes also retire or remove technology and associated resource types, which are no longer required by the enterprise.

Resource types may be built or, in some cases, leased from other SPs or suppliers. To ensure the most efficient and effective solution can be used, negotiations on network level agreements with suppliers or partners are paramount for both building and leasing.

These processes interact strongly with product and supply chain development processes.

Gather and analyse new resource ideas

Process identifier: 1.2.3.3.1.

Brief description

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

Extended description

The gather and analyse new resource ideas processes combine specific product and service class requirements with demographic, customer, technology and marketing information to identify specific new resource classes/components, or enhancements to existing resource classes/components. These processes undertake the necessary analysis to identify potential resource

classes, compare current resource classes with the identified required resource classes and, as a result of the analysis, develop new resource class ideas.

Develop new resource business proposal

Process identifier: 1.2.3.3.3.

Brief description

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

Extended description

The develop new resource business proposal processes develop and document business proposals for the identified new or enhanced resource ideas (including, if necessary, a business case). The business proposal (or business case) identifies the resource development (e.g., network and/or IT resources), management and operations costs and anticipated benefits, including forecast demand, performance gains, productivity gains and/or operational cost improvements specifically associated with the resource business proposal. The business proposal also includes an assessment of the risks and the competitive positioning of the proposal. As a part of the business proposal development, a feasibility assessment can be produced. Potential suppliers/partners who can assist in the development of the resource classes are also identified (note that commercial arrangements may already be in place with these potential suppliers/partners). As a part of the process, the business proposal is appropriately approved, and as a result of the approval, necessary staff and other resources are made available.

Manage resource development

Process identifier: 1.2.3.3.5.

Brief description

Ensure the coordinated delivery in line with the approved business case of all required resource classes/components capabilities for that business case across the enterprise.

Extended description

The manage resource development processes ensure the coordinated development in line with the approved business case of all required resource classes/components for that business case across the enterprise. 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 and developed. These processes ensure that the necessary documentation and training packages are produced to support the operation of the new resource class. These processes also 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 and agreed. These processes have both programme/project management aspects and technical/operational specification aspects, with the detailed management of individual resource class deployment managed by the manage resource deployment processes.

Note that management of major new or enhanced infrastructure delivery to support product and offer development is managed within the resource capability delivery process.

Note that delivery of resource classes/components 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.

Manage resource exit

Process identifier: 1.2.3.3.7.

Brief description

Identify existing resource classes which are unviable and manage the processes to exit the resource from the market.

Extended description

The manage resource exit processes identify existing resource classes which are unviable and manage the process to exit the resource from the services they support. The processes analyse existing resource classes to identify economically or strategically unviable classes, identify products, services classes and customers impacted by any exit, develop specific exit or migration strategies, develop resource infrastructure transition and/or replacement strategies, and manage the operational aspects of the exit process. A business proposal identifying the competitive threats, risks and costs may be required as a part of developing the exit strategy. These processes include any cross-enterprise coordination and management functions to ensure that the needs of all stakeholders are identified and managed.

Assess performance of existing resources

Process identifier: 1.2.3.3.2.

Brief description

Analyse the performance of existing resources to identify inadequacies and required improvements.

Extended description

The assess performance of existing resources processes analyse the performance of existing resources to identify inadequacies and required improvements. These processes use information from customers and from operational activities to identify required improvements.

Develop detailed resource specifications

Process identifier: 1.2.3.3.4.

Brief description

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

Extended description

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

Manage resource deployment

Process identifier: 1.2.3.3.6.

Brief description

Ensure the coordinated deployment in line with the approved business proposal of all required resource classes/components for that business proposal across the enterprise.

Extended description

The manage resource deployment processes ensure the coordinated deployment in line with the approved business case of all required resource classes/components for that business case across the enterprise. 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 have been implemented. These processes ensure that appropriate operational staff are identified and have received the necessary training. These processes ensure that the agreed supplier/partner operational support has been implemented. These processes also ensure that acceptance testing is successfully performed to assure that the new or enhanced resources comply with the specifications. These processes have both programme/project and management aspects.
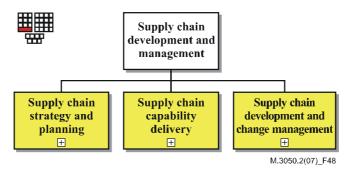
8.4 Supply chain development and management

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Figure 48 – Supply chain development and management decomposition into level 2 processes

Supply chain development and management

Process identifier: 1.2.4.

Brief description

[Not available].

Extended description

This horizontal functional process focuses on the interactions required by the enterprise with suppliers and partners, who are involved in maintaining the supply chain. The supply chain is a complex network of relationships that a service provider manages to source and deliver products. In the e-business world, companies are increasingly working together with suppliers and partners (synergistic clusters, coalitions and business ecosystems) in order to broaden the products they offer and improve their productivity. These processes ensure that the best suppliers and partners are chosen as part of the enterprise supply chain. They help to support sourcing decisions made by the enterprise, and ensure that the capabilities are in place for interaction between the enterprise and its suppliers and partners. They ensure that the contribution of suppliers and partners to the supply chain is timely and delivers the required support, and that their overall performance and contribution is as good as or better than for vertically integrated enterprises. These processes

include establishing and maintaining all the information and financial flows between the provider and supplier.

Supply chain strategy and planning

Process identifier: 1.2.4.1.

Brief description

Develop the supply chain strategies and policies of the enterprise.

Extended description

Supply chain strategy and planning processes develop the supply chain strategies and policies of the enterprise, and the enterprise policies for supplier/partner engagement and interaction. E.g., the enterprise decides that it will outsource the supply of all mobiles networks. Both the functional processes, as well as infrastructure and product lifecycle management processes, drive the supply chain strategy and policy processes.

Supply chain capability delivery

Process identifier: 1.2.4.2.

Brief description

Manage the evaluation of new supplier/partners to determine those with the products that best meet the enterprise's needs.

Extended description

Supply chain capability delivery processes manage the evaluation of new supplier/partners to determine those with the goods and services that best meet the enterprise's needs. These processes also initiate and complete business agreements with the supply chain to allow the delivery of business and technical capabilities required by the enterprise. For example, through these processes, the enterprise might contract with a supplier of a third-generation mobile network and put in place links between the IT systems of the supplier and the enterprise, ready to allow specific processes and products to be developed. Another example might be contracts for the supply of personal computers or office supplies for the enterprise. Supply chain capability delivery processes manage the sourcing of infrastructure components, consumables, etc., required to support the capability requirements of the enterprise, evaluate and select new supplier/partners, and establish commercial arrangements with selected suppliers/partners. The processes manage the specific evaluation of new supplier/partners to determine those with the best capabilities to meet the enterprise's specific needs (for infrastructure, consumables, etc.), and establish commercial arrangements with selected suppliers/partners. These processes manage the activities associated with developing tender documents, running tender processes, gaining enterprise agreement to tender decisions, and negotiating commercial arrangements as a result of the tender decisions.

On completion of the contract arrangements, these processes can manage supply of the contracted goods and services (infrastructure, consumables, etc.) or can ensure that other processes are able to make requisitions against the contract (e.g., during fulfilment), according to the appropriate policy and practices of the enterprise. Managing supply includes tracking of the goods and services to be supplied, interaction with the supplier/partner over any delays or problems, and acceptance on completion of the supply.

These processes are also responsible for the establishment of commercial agreements between the enterprise and external parties/providers on B2B frameworks and interactions.

The tender process for the sourcing activity can be used not only for managing the sourcing of infrastructure of various types, but is also applicable for use in outsourcing tender processes, and for the sourcing of commodity items used within a business. The actual depth to which the sourcing

process is used is dependent on such factors as the value of the sourced items. Note that these processes can also be used for the negotiated agreements between the enterprise and its competitors as a part of regulated inter-carrier agreements. While tender processes are not used in such a case, the processes for determining appropriate commercial arrangements and for gaining enterprise agreement are used for these regulated and competitive activities.

Supply chain development and change management

Process identifier: 1.2.4.3.

Brief description

Support the development of a supply chain, to support S/P product catalogue extension or modification.

Extended description

Supply chain development and change management processes support the development of a supply chain, to support service catalogue extension or modification. New suppliers may be required to broaden the services a service provider offers its customers, to improve performance, for outsourcing and out-tasking requirements, etc. These project-oriented processes identify new suppliers or partners, develop agreements and implement with the supplier or partner. In addition, these processes drive automation and change management for the supply chain, e.g., new/modified processes and IT applications may be needed so that mobile number portability for third-generation mobiles can be offered. Supply chain development and change management processes manage the on-going commercial arrangements and processes between the enterprise and the selected supplier/partner, and manage the periodic agreement on specifications for deliverables within the context of the negotiated commercial agreement.

These processes recognize that the initial commercial arrangements may need to be varied over the course of the commercial agreement and manage the processes which deliver this commercial variation. These processes also manage regular agreement between the enterprise and the supplier/partner on product deliverables, their specification, pricing and delivery timetable.

In addition, the end-to-end commercial, delivery and operational processes between the enterprise and supplier/partner need to be monitored, reviewed and changed to improve their effectiveness.

These processes particularly apply when the commercial arrangements between the two parties exist over an extended period, and the commercial agreement allows for the on-going specification of deliverables within the period of the commercial agreement. Shorter-term commercial agreements are unlikely to require the comprehensive level of commercial administration that these processes bring (but note that S/P support and readiness processes may have a role in this case).
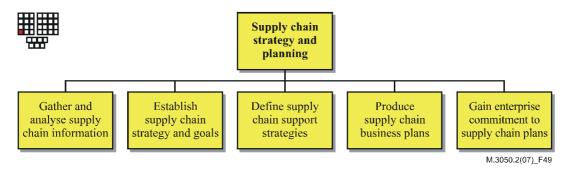
8.4.1   Supply chain strategy and planning

M.3050.2(07)_F49

Figure 49 – Supply chain strategy and planning decomposition into level 3 processes

Supply chain strategy and planning

Process identifier: 1.2.4.1.

Brief description

Develop the supply chain strategies and policies of the enterprise.

Extended description

Supply chain strategy and planning processes develop the supply chain strategies and policies of the enterprise, and the enterprise policies for supplier/partner engagement and interaction. E.g., the enterprise decides that it will outsource the supply of all mobiles networks. Both the functional processes, as well as infrastructure and product lifecycle management processes, drive the supply chain strategy and policy processes.

Gather and analyse supply chain information

Process identifier: 1.2.4.1.1.

Brief description

Research and analyse the supplier/partner industry to understand availability, performance and competencies of potential suppliers and partners, and appropriate best practice commercial framework establishment and management.

Extended description

The gather and analyse supply chain information processes research and analyse the supplier/partner industry to understand availability, performance and competencies of potential suppliers and partners, and appropriate best practice commercial framework establishment and management. These processes undertake the necessary analysis to identify potential commercial approaches, compare current approaches and practices with the identified approaches and, as a result of the analysis, develop new commercial practices. In addition, these processes monitor the potential and existing industry suppliers and partners, and produce assessments of the risks of establishing relationships with the industry players.

These processes include the establishment and management of relationships with external providers of supply chain information, and the management of internal groups used for providing supply chain information.

Establish supply chain strategy and goals

Process identifier: 1.2.4.1.2.

Brief description

Establish the supply chain strategies based on market trends, future products and service needs, technical capabilities, and addressing shortcomings in existing sourcing support.

Extended description

The establish supply chain strategy and goals processes establish the sourcing strategies and commercial practices to be used by the enterprise based on market trends, future products and service needs, available and emerging resource capabilities, and addressing identified shortcomings in existing sourcing and commercial operational activities and practices. These processes accept the changing supply chain requirements and develop appropriate strategies based on the changing needs of the enterprise. They establish realistic supply chain development and delivery goals for the enterprise. They establish implementation policies which act as a set of guidelines to be followed in the supply chain capability delivery processes. They highlight shortcomings in existing

supplier/partner relationship management operational support arrangements and processes, including issues associated with resourcing and skill sets.

Major inputs to these processes are derived from the gather and analyse supply chain information processes.

Define supply chain support strategies

Process identifier: 1.2.4.1.3.

Brief description

Define the principles, policies and performance standards for the operational organization providing supply chain management support.

Extended description

The define supply chain support strategies processes define the principles, policies and performance standards for the operational organization providing supply chain management support. Over time, requirements for service levels and quality levels on existing supply chain process change and operational challenges are introduced by new resource introduction. These processes define the targets and operational requirements in this changing environment. The required performance standards are driven by competitive response expectations, internal process and technology capabilities and competitive offerings. A major input to these processes arises from the gather and analyse supply chain information processes, and from the product portfolio, resource strategy, service strategy and market strategy processes.

These processes also provide the feedback point from analyses undertaken in the supplier/partner relationship management processes to determine bottlenecks and problems associated with existing supply chain operational support and management activities.

Produce supply chain business plans

Process identifier: 1.2.4.1.4.

Brief description

Develop and deliver annual and multi-year supply chain business plans in support of delivery and sourcing for services, products and offers.

Extended description

The produce supply chain business plans processes develop and deliver annual and multi-year supply chain business plans in support of delivery and sourcing for resources, services, products and outsourced capabilities that include supply chain improvement forecasts, negotiation for required levels of resources, gaining supply chain development and management, as well as supply chain commitment and executive approval for the plans. The product portfolio business plans, service business plans and resource business plans provide a primary source of obtaining a view on forecasts within the supply chain.

These processes identify alternative sourcing opportunities within the supply chain for critical items in the event of unforeseen events causing disruption. Note that the actual business continuity plans are developed within the processes defined by the business continuity management process in enterprise management.

Forecasting of commercial transaction volumes and sourcing demand, and capturing of new approaches, are both essential to ensure that the enterprise can implement the supply chain capabilities and capacity necessary for the future sourcing needs to support customers and potential customers.

Gain enterprise commitment to supply chain plans

Process identifier: 1.2.4.1.5.

Brief description

Gain enterprise commitment to the supply chain sourcing strategy and business plans.

Extended description

The gain enterprise commitment to supply chain plans processes gain enterprise commitment to the supply chain sourcing strategy and business plans. These processes include all aspects of identification of stakeholders and negotiation to gain stakeholder approval.
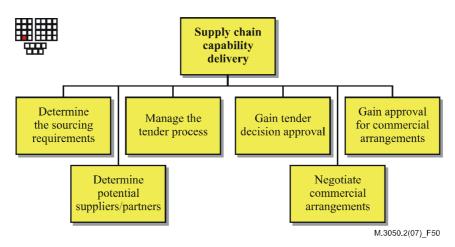
8.4.2 Supply chain capability delivery

Figure 50 – Supply chain capability delivery decomposition into level 3 processes

Supply chain capability delivery

Process identifier: 1.2.4.2.

Brief description

Manage the evaluation of new supplier/partners, to determine those with the products that best meet the enterprise's needs.

Extended description

Supply chain capability delivery processes manage the evaluation of new supplier/partners, to determine those with the goods and services that best meet the enterprise's needs. These processes also initiate and complete business agreements with the supply chain, to allow the delivery of business and technical capabilities required by the enterprise. For example, through these processes, the enterprise might contract with a supplier of a third-generation mobile network and put in place links between the IT systems of the supplier and the enterprise, ready to allow specific processes and products to be developed. Another example might be contracts for the supply of personal computers or office supplies for the enterprise. Supply chain capability delivery processes manage the sourcing of infrastructure components, consumables, etc., required to support the capability requirements of the enterprise, evaluate and select new supplier/partners, and establish commercial arrangements with selected suppliers/partners. The processes manage the specific evaluation of new supplier/partners to determine those with the best capabilities to meet the enterprise's specific needs (for infrastructure, consumables, etc.), and establish commercial arrangements with selected suppliers/partners. These processes manage the activities associated with developing tender

documents, running tender processes, gaining enterprise agreement to tender decisions, and negotiating commercial arrangements as a result of the tender decisions.

On completion of the contract arrangements, these processes can manage supply of the contracted goods and services (infrastructure, consumables, etc.) or can ensure that other processes are able to make requisitions against the contract (e.g., during fulfilment), according to the appropriate policy and practices of the enterprise. Managing supply includes tracking of the goods and services to be supplied, interaction with the supplier/partner over any delays or problems, and acceptance on completion of the supply.

These processes are also responsible for the establishment of commercial agreements between the enterprise and external parties/providers on B2B frameworks and interactions.

The tender process for the sourcing activity can be used not only for managing the sourcing of infrastructure of various types, but is also applicable for use in outsourcing tender processes, and for the sourcing of commodity items used within a business. The actual depth to which the sourcing process is used is dependent on such factors as the value of the sourced items. Note that these processes can also be used for the negotiated agreements between the enterprise and its competitors as a part of regulated inter-carrier agreements. While tender processes are not used in such a case, the processes for determining appropriate commercial arrangements and for gaining enterprise agreement are used for these regulated and competitive activities.

Determine the sourcing requirements

Process identifier: 1.2.4.2.1.

Brief description

Manage the collection and finalization of the specific requirements to be achieved from the sourcing process.

Extended description

The determine the sourcing requirements processes manage the collection and finalization of the specific requirements to be achieved from the sourcing process, including a chronological timetable for anticipated sourcing activities. These requirements take into account the required functional, technical and/or operational specifications produced by the area seeking the sourcing activity and assuring that appropriately aligned commercial aspects (such as special commercial terms, tender timing, cost parameters, etc.) are catered for. The requirements will be determined from the requirements specified in the various business or investment proposals, and any subsequent detailed specifications developed as a part of the architecture design activity, within the product, market, service or resource capability delivery processes. The actual range of requirements is dependent on the needs of the sourcing initiator, but is likely to include, at a minimum, technical, operational, training and specific supplier support requirements.

The supply chain strategy and planning processes will also provide a set of enterprise level requirements that the sourcing process will need to satisfy.

The processes include any cross-enterprise coordination and management functions to ensure that the requirements meet the needs of all stakeholders.

Manage the tender process

Process identifier: 1.2.4.2.3.

Brief description

Manage and administer the mechanics of the tender process.

Extended description

The manage the tender process processes manage and administer the mechanics of the tender process. The processes determine the engagement interactions with potential suppliers/partners, the timing of the process, bring together the commercial and functional requirements into the tender documentation, the analysis and scoring mechanisms for tender analysis based on the functional, technical, operational and commercial requirements, and manage the tender analysis team engagement approach.

These processes are invoked by the S/P requisition management processes in the event that the requisition process requires a tender to select between previously contracted suppliers.

These processes also manage the analysis of the strategic sourcing factors used at the commencement of the process, including the industry and competitive analysis, and a determination of the minimum acceptable outcomes from the sourcing process.

Gain tender decision approval

Process identifier: 1.2.4.2.4.

Brief description

Capture all activities required to develop and gain necessary approval for investment proposals to develop and deliver the required resource capabilities.

Extended description

The gain tender decision approval processes capture all activities required to provide management oversight on the tender process and gain approval for the sourcing decision and supplier/partner selection. These processes cover the establishment of any tender selection boards, the reporting processes and timetables, and the final approval of the tender decisions.

The processes include any cross-enterprise coordination and management functions to ensure that the tender decisions are supported by all stakeholders.

Gain approval for commercial arrangements

Process identifier: 1.2.4.2.6.

Brief description

Gain enterprise commitment to the negotiated commercial arrangements, and provide authorization to sign commercial agreements.

Extended description

The gain approval for commercial arrangements processes gain enterprise commitment to the negotiated commercial arrangements, and provide authorization to sign commercial agreements. These processes include all aspects of identification of stakeholders and regular reporting to gain stakeholder approval.

Determine potential suppliers/partners

Process identifier: 1.2.4.2.2.

Brief description

Determine the appropriate short list of suppliers to meet the specific enterprise requirements.

Extended description

The determine potential suppliers/partners processes determine the appropriate short list of suppliers to meet the specific enterprise requirements (for example, expected technical capability,

anticipated delivery time-frames, anticipated costs, etc.). The processes provide detailed analysis of potential partners/suppliers, leveraging information available from the gather and analyse supply chain information processes, as well as other specific inputs available from within the enterprise or from external supplier research organizations at the specific time the need arises.

The processes include any cross-enterprise coordination and management functions to ensure that the selected short list meets the needs of all stakeholders.

Negotiate commercial arrangements

Process identifier: 1.2.4.2.5.

Brief description

Manage the commercial negotiations between the enterprise negotiation team and the selected supplier/partner, or with competitors in a regulated market.

Extended description

The negotiate commercial arrangements processes manage the commercial negotiations between the enterprise negotiation team and the selected supplier/partner, or with competitors in a regulated market. These processes manage the establishment of the commercial negotiating strategy and the determination of the negotiating parameters. The processes also manage the negotiating timetables and determination of the enterprise negotiating team.

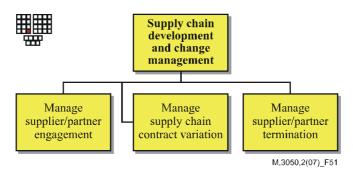### 8.4.3 Supply chain development and change management

M.3050.2(07)_F51

Figure 51 – Supply chain development and change management decomposition into level 3 processes

Supply chain development and change management

Process identifier: 1.2.4.3.

Brief description

Support the development of a supply chain, to support S/P product catalogue extension or modification.

Extended description

Supply chain development and change management processes support the development of a supply chain, to support service catalogue extension or modification. New suppliers may be required to broaden the services that a service provider offers its customers, to improve performance, for outsourcing and out-tasking requirements, etc. These project-oriented processes identify new suppliers or partners, develop agreements and implement with the supplier or partner. In addition, these processes drive automation and change management for the supply chain, e.g., new/modified processes and IT applications may be needed so that mobile number portability for third-generation mobiles can be offered. Supply chain development and change management processes manage the

on-going commercial arrangements and processes between the enterprise and the selected supplier/partner, and manage the periodic agreement on specifications for deliverables within the context of the negotiated commercial agreement.

These processes recognize that the initial commercial arrangements may need to be varied over the course of the commercial agreement and manage the processes which deliver this commercial variation. These processes also manage regular agreement between the enterprise and the supplier/partner on product deliverables, their specification, pricing and delivery timetable.

In addition, the end-to-end commercial, delivery and operational processes between the enterprise and supplier/partner need to be monitored, reviewed and changed to improve their effectiveness.

These processes particularly apply when the commercial arrangements between the two parties exist over an extended period, and the commercial agreement allows for the on-going specification of deliverables within the period of the commercial agreement. Shorter-term commercial agreements are unlikely to require the comprehensive level of commercial administration that these processes bring (but note that S/P support and readiness processes may have a role in this case).

Manage supplier/partner engagement

Process identifier: 1.2.4.3.1.

Brief description

Establish and manage the on-going processes to support the commercial, strategic, delivery and operational interactions between the enterprise and supplier/partner.

Extended description

The manage supplier/partner engagement processes establish and manage the on-going processes to support the commercial, strategic, delivery and operational interactions between the enterprise and supplier/partner. They monitor, review and agree changes to the commercial, strategic and operational interaction processes to improve their effectiveness.

These processes provide oversight and administer any agreed joint management and/or process improvement activities between the enterprise and the supplier/partner. These joint activities could include operations monitoring and management, project related build and implementation activities, joint strategic management meetings, etc.

Manage supply chain contract variation

Process identifier: 1.2.4.3.2.

Brief description

Manage changes to the commercial terms of a contract during its term of agreement.

Extended description

The manage supply chain contract variation processes manage changes to the commercial terms of a contract during its term of agreement. Variations can occur to the commercial terms themselves (i.e., prices), or to the technical, functional and operational specifications on which the contract was agreed. In addition, changes can occur to the list of items (modification, expansion or reduction) within the contract upon which the S/PRM operational processes can place orders. These processes manage all activities which result in a joint commercial agreement to vary the terms of the original negotiated agreement.

In addition, these processes also manage any agreements between the enterprise and the supplier/partner of "within agreement" product volumes, their specification, pricing and delivery timetable.

Manage supplier/partner termination

Process identifier: 1.2.4.3.3.

Brief description

Manage the removal of current suppliers and partners from the enterprises supply chain.

Extended description

The manage supplier/partner termination processes manage the removal of current suppliers and partners from the enterprises supply chain, based on the continued inadequate performance based on monitoring and analysis performed by the supplier/partner performance management processes, and unsuccessful resolution through manage supplier/partner engagement processes.

In the event that new suppliers or partners need to be established to replace the terminated supplier/partner, the supply chain capability delivery processes should be used.

9 Enterprise management level 2 processes

9.1 Strategic and enterprise planning

M.3050.2(07)_F52

Figure 52 – Strategic and enterprise planning decomposition into level 2 processes

Strategic and enterprise planning

Process identifier: 1.3.1.

Brief description

[Not available].

Extended description

The strategic and enterprise planning process grouping focuses on the processes required to develop the strategies and plans for the service provider enterprise. This process grouping includes the discipline of strategic planning that determines the business and focus of the enterprise, including which markets the enterprise will address, what financial requirements must be met, what acquisitions may enhance the enterprise's financial or market position, etc. Enterprise planning develops and coordinates the overall plan for the business working with all key units of the enterprise. These processes drive the mission and vision of the enterprise. Enterprise architecture management for the enterprise is also a key process within this process grouping. The enterprise architecture management process directs IT across the enterprise, provides IT guidelines and policies, funding approval, etc. (note that IT development and management processes are managed within the resource development and management horizontal functional process grouping).

Strategic business planning

Process identifier: 1.3.1.1.

Brief description

Provide strategic business direction to the enterprise.

Extended description

Strategic business planning processes provide strategic business direction to the enterprise. These processes encompass all of the functions required to provide strategic business direction to the enterprise, to create actionable plans based on the business strategy and to provide high-level program management of their implementation.

Business development

Process identifier: 1.3.1.2.

Brief description

Broaden the scope of the enterprise activities through expansion, or sharpening of the enterprise's focus through divestment or outsourcing of non-critical activities.

Extended description

Business development processes develop concepts for new revenue streams, diversification of revenue streams and focusing or broadening of the customer base via investigating new markets, as well as different products and services for the enterprise. The focus is on broadening the scope of the enterprise activities through expansion, or sharpening the enterprise focus through divestment or outsourcing of non-critical activities. The marketing and offer management processes are responsible for the development of markets and products within the existing scope of the enterprise. Business development processes understand what processes are critical to the identity of the enterprise as priority processes and look for higher quality and lower cost solutions for these high priority processes. In many cases, these processes would identify the opportunity for a 'surgical' outsourcing of a function or process that is not a priority of the enterprise, or is a process that the enterprise cannot deliver at competitive benchmarks. Business development processes are closely related to strategic planning. To realize certain enterprise strategies, business development processes manage investigation of potential merger and acquisition options and facilitate negotiation and implementation of mergers or acquisitions.

Enterprise architecture management

Process identifier: 1.3.1.3.

Brief description

Define, develop, manage and maintain the enterprise architecture.

Extended description

Enterprise architecture management processes define, develop, manage and maintain the enterprise architecture, which is the model describing the enterprise in all its facets. These processes define/select, develop and deploy the enterprise architecture methodology, which is a framework that identifies the reference models, their relationships to each other, and the architecture management processes used to establish and maintain the enterprise architecture. The framework contains the policies, guidelines, documentation templates and approaches to be used throughout the enterprise. In addition, enterprise architecture management details the processes used to capture, modify, communicate and review the enterprise architecture and manage exceptions to it. These processes define and select the toolsets used to capture the enterprise architecture (e.g., UML tools),

and develop any required standards or reference framework to be used with the tools. The processes define, develop and maintain the repositories and associated repository meta-models to be used to capture architecture details, and manage and administer the capture processes.

In addition, enterprise architecture management processes define the skill sets required for architects, develop training programs and manage any certification process for architects across the enterprise.

Enterprise architecture management provides the reference source for the enterprise standard operating environment that is the collection of applications, hardware, software and network components that have been standardized for use across the enterprise.

Lastly, enterprise architecture management provides a point of review for strategy and tactical/solution architecture, and defines and manages the review processes.

The business strategies and plans provide a key starting point for the development and direction provided by the enterprise architecture management.

Note that enterprise architecture management covers both IT and network technologies.

The enterprise architecture management processes impact other areas within the eTOM model, such as knowledge management and process architecture management.

Group enterprise management

Process identifier: 1.3.1.4.

Brief description

Plan and manage coordination across business units within the enterprise, and between the enterprise and its subsidiaries.

Extended description

Group enterprise management processes are responsible for planning and management of coordination across business units within the enterprise, and between the enterprise and its subsidiaries (note that similar interactions concerning outsourcing involving suppliers and partners is handled elsewhere, through supply chain and supplier/partner processes). The focus is on processes concerned with the coordination within the enterprise's own organization, including subsidiaries, from an enterprise-wide point of view.

This includes planning and implementation of cross-business unit operations, harmonization of processes and communication systems; funding and cross-subsidies, investment for business development; and planning, execution and management of existing and new business activities.

9.2 Enterprise risk management

M.3050.2(07)_F53

Figure 53 – Enterprise risk management decomposition into level 2 processes

Enterprise risk management

Process identifier: 1.3.2.

Brief description

[Not available].

Extended description

The enterprise risk management process grouping focuses on assuring that risks and threats to the enterprise value and/or reputation are identified, and appropriate controls are in place to minimize or eliminate the identified risks. The identified risks may be physical or logical/virtual. Successful risk management ensures that the enterprise can support its mission critical operations, processes, applications, communications in the face of a serious incident, from security threats/violations and fraud attempts.

The enterprise risk management processes deal with issues surrounding business continuity, security and fraud. Where those risks can be managed within the context of the enterprise, they are managed. However, there are some risks that are outside of the ability of the enterprise to reduce. In those circumstances, external insurance can give some comfort to the enterprise, and so the area of insurance management is a key element.

A key aspect of risk management is an independent assessment that the identified controls are in place and working effectively. This independent assessment is provided by the audit management processes.

In many enterprises, the area of credit management can be incorporated within the enterprise risk management processes. In the information and communications technology industry, the issuing of credit and credit assessment is intimately tied with the operational processes surrounding the identification and management of customers. In the eTOM business process framework, credit management processes are therefore placed within the CRM horizontal process grouping.

Business continuity management

Process identifier: 1.3.2.1.

Brief description

Manage the development of strategies, policies, plans, organizational roles and responsibilities, and escalation procedures for ensuring continuation of business processes and activities in the event of serious and/or sustained interruption.

Extended description

Business continuity management processes manage the development of strategies, policies, plans, organizational roles and responsibilities, and escalation procedures for ensuring continuation of business processes and activities in the event of serious and/or sustained interruption. These processes ensure that appropriate plans and procedures are established and tested to provide continuous operation, or controlled re-establishment, of key business processes and activities, to provide for a controlled recovery of infrastructure capability to normal levels, and for determination of operational accountability and processes until the abnormal circumstances are resolved. These processes have four major aspects:

- business continuity planning, which provides for the proactive planning and testing of business and operational procedure continuity;

- infrastructure recovery planning, which provides for the proactive determination of recovery and backup procedures for all key infrastructure capabilities, and their proactive testing;

- serious incident management planning, which defines the operational roles and responsibilities, and proactively defines the operational procedures and escalation criteria that are initiated when abnormal operation circumstances occur; and

- business continuity management methodologies, which ensure consistent application of business continuity management across the enterprise.

Note that business continuity management is an extended process structure which incorporates disaster recovery planning.

Note that serious incident management is used instead of crisis management as serious disruption can occur to the business through events which would not normally be classified as a crisis.

Security management

Process identifier: 1.3.2.2.

Brief description

Assess threats to the enterprise and provide capabilities and controls to minimize the threats identified.

Extended description

Security management processes assess threats to the enterprise and provide capabilities and controls to minimize the threats identified. These processes are responsible for setting security management corporate policies, guidelines, best practices and auditing for compliance by the enterprise. Security management addresses internal and external sources of security violations.

Security management deals with enterprise exposure to loss of value or reputation through threats or security violations.

Proactive security management processes identify areas of threat to the enterprise (covering both internal and external sources of threat), and monitor industry trends and best practice approaches to ensure that the enterprise remains at the forefront of security management threat minimization. Areas of threat can be physical (e.g., break-ins or terrorist incident, inappropriate use of network) or logical (e.g., inappropriate access to and use of information technology). The processes support the categorization and prioritization of areas of threat. These processes define the policies, guidelines, practices and procedures to be followed and provide assistance to the enterprise operational areas to deploy appropriate physical infrastructure, procedures and monitoring capabilities.

Reactive security management processes deal with the establishment of tools and data collection capabilities to capture details of operation activity, analysis of monitored activity to detect potential threats/security violations, and forensic investigations to determine whether the potential threat is imminent or a security violation has occurred, and the potential or actual perpetrators.

Security management processes interface to external security, police and/or investigative organizations.

These processes strongly interact with fraud management and have common elements and information services and communications specific elements.

Security management processes are implemented at many levels of the enterprise and at the user, system/network, etc., levels.

Note that the actual security monitoring, control and management procedures and facilities are embedded in the operational infrastructure and processes defined and deployed within the SIP and operations process areas.

Note that audit management processes provide assurance that the necessary control structures are in place, and provide an estimate to the extent to which the procedures are followed and are effective.

Fraud management

Process identifier: 1.3.2.3.

Brief description

Define fraud management corporate policies, guidelines, best practices and control procedures to be deployed to ensure fraud minimization within the enterprise.

Extended description

Fraud management processes define fraud management corporate policies, guidelines, best practices and control procedures to be deployed to ensure fraud minimization within the enterprise. Fraud management deals with enterprise exposure to loss of value or reputation through fraudulent activity, and covers financial, intellectual property, identity theft, as well as other aspects.

Proactive fraud management processes identify areas of fraud risk within the enterprise (including internal and external sources of risk), and monitor industry trends and best practice approaches to ensure that the enterprise remains at the forefront of fraud management minimization. The processes support the categorization and prioritization of areas of fraud risk. These processes define the policies, guidelines, practices and procedures to be followed and provide assistance to the enterprise operational areas to deploy appropriate procedures and monitoring capabilities.

Reactive fraud management processes deal with the establishment of tools and data collection capabilities to capture details of operation activity, analysis of monitored activity to detect potential fraudulent concerns, and forensic investigations to determine whether fraud has occurred and the perpetrators of the fraud.

These processes strongly interact with security management and have common elements and information services and communications-specific elements.

Fraud processes are implemented at many levels of the enterprise and at the user, system/network, etc., levels.

Note that the actual fraud monitoring, control and management procedures and facilities are embedded in the operational processes defined and deployed within the operations process area.

Note that audit management processes provide assurance that the necessary control structures are in place, and provide an estimate to the extent to which the procedures are followed and are effective.

Audit management

Process identifier: 1.3.2.4.

Brief description

Provide assurance to senior management and the enterprise board that the enterprise processes and controls are effective and conform to relevant adopted standards.

Extended description

Audit management processes provide assurance to senior management and the enterprise board that the enterprise operational processes and controls are effective and conform to relevant adopted standards (which may be externally imposed or internally adopted). Audit management processes may be managed by external independent organizations, or by internal groups within the enterprise, but in either case are designed to support senior management/board assurance. They can also be used proactively to develop risk assessment methodologies, scoring systems and advice to operational groups who are responsible for the operations processes. However, the assurance role of the processes is more related to reactive assessment.

The processes identify, prioritize and manage audit programmes, define the audit policies and procedures, assess operational activities to ensure necessary or mandated control structures are in place, and provide an estimate to the extent to which the procedures are followed and are effective. The processes ensure that appropriate reports relating to compliance and capability are provided to senior management/board within appropriate defined time-frames. The processes define the audit approach to be used, depending on the circumstances, as well as the risk assessment methodology and scoring approach to be used.

Insurance management

Process identifier: 1.3.2.5.

Brief description

Assess and manage the insurable risks within an enterprise.

Extended description

Insurance management processes are responsible for assessing and managing the insurable risks within an enterprise. These processes identify areas and activities within the enterprise where risk aspects are insurable, and analyse the cost/benefits of undertaking specific insurance. These processes provide advice and consultancy to the enterprise relating to insurance of local activities and programmes. These processes manage the engagement with the external insurance industry, and administer insurance policies and portfolios. Depending on the nature of the risk being insured, the supply chain development and management processes are used to select an appropriate insurer, in other cases where the number of insurance providers is small, the negotiation process may be directly managed by these processes.

Revenue assurance management

Process identifier: 1.3.2.6.

Brief description

Establish an enterprise-wide revenue assurance policy framework, and an associated operational capability aimed at minimizing revenue leakage within the enterprise, without influencing demand.

Extended description

The objective of the revenue assurance management processes is to establish an enterprise-wide revenue assurance policy framework, and an associated operational capability to resolve any detected revenue assurance degradations and violations. Revenue assurance management processes identify areas of revenue leakage risk within the enterprise, and monitor industry trends and best practice approaches to ensure that the enterprise remains at the forefront of revenue leakage minimization. These processes support the categorization and prioritization of areas of revenue leakage risk. To achieve this, these processes define the policies, guidelines, practices and procedures to be followed and provide assistance to the enterprise operational areas to deploy appropriate procedures and monitoring capabilities.

Revenue assurance management processes deal with the establishment of tools and data collection capabilities to capture details of operation activity, analysis of monitored activity to detect and correct actual revenue leakage. These processes work in conjunction with operational and other process elements to guide them in supporting the specific needs of revenue assurance management. Where appropriate, revenue assurance management processes supplement the capabilities of these other process elements, to control and analyse the enterprise behaviour relevant to revenue assurance needs.

The responsibilities of these processes include, but are not limited to:

- establishing and managing a revenue assurance policy framework, including identification of controls and measures;

- establishing and managing an operational process capability able to detect and resolve revenue assurance degradations and violations;

- establishing and managing a capacity to regularly review the revenue assurance policy framework to ensure it meets the enterprise's changing objectives.
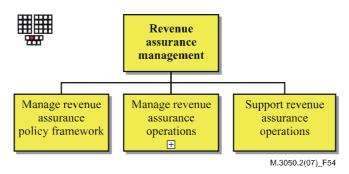
9.2.1 Revenue assurance management

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Figure 54 – Revenue assurance management decomposition into level 3 processes

Revenue assurance management

Process identifier: 1.3.2.6.

Brief description

Establish an enterprise-wide revenue assurance policy framework, and an associated operational capability aimed at minimizing revenue leakage within the enterprise, without influencing demand.

Extended description

The objective of the revenue assurance management processes is to establish an enterprise-wide revenue assurance policy framework, and an associated operational capability to resolve any detected revenue assurance degradations and violations. Revenue assurance management processes identify areas of revenue leakage risk within the enterprise, and monitor industry trends and best practice approaches to ensure that the enterprise remains at the forefront of revenue leakage minimization. These processes support the categorization and prioritization of areas of revenue leakage risk. To achieve this, these processes define the policies, guidelines, practices and procedures to be followed and provide assistance to the enterprise operational areas to deploy appropriate procedures and monitoring capabilities.

Revenue assurance management processes deal with the establishment of tools and data collection capabilities to capture details of operation activity, analysis of monitored activity to detect and correct actual revenue leakage. These processes work in conjunction with operational and other process elements to guide them in supporting the specific needs of revenue assurance management. Where appropriate, revenue assurance management processes supplement the capabilities of these other process elements to control and analyse the enterprise behaviour relevant to revenue assurance needs.

The responsibilities of these processes include, but are not limited to:

- establishing and managing a revenue assurance policy framework, including identification of controls and measures;

- establishing and managing an operational process capability able to detect and resolve revenue assurance degradations and violations;
- establishing and managing a capacity to regularly review the revenue assurance policy framework to ensure it meets the enterprise's changing objectives.

Manage revenue assurance policy framework

Process identifier: 1.3.2.6.1.

Brief description

Establish and manage a framework of policies and measurable controls that are used to manage the risk associated with revenue assurance.

Extended description

The objective of the manage revenue assurance policy framework processes is to establish and manage a framework of policies and measurable controls that are used to manage the risk associated with revenue assurance, and to optimize the enterprise's appetite for revenue assurance risk.

These processes are responsible for, but not limited to:
- establishing and managing a revenue assurance policy framework which is aligned with the overall enterprise goals and objectives;
- developing a framework of controls and KPIs that achieves the defined revenue assurance goals and objectives;
- gaining enterprise-wide commitment to and knowledge of the framework; and
- regularly reviewing the revenue assurance framework to ensure that its outcomes remain aligned with the enterprise's objectives.

The manage revenue assurance policy framework process has a specific responsibility in developing and defining controls and key performance indicators (KPIs) used for RA, in conjunction with operational and other processes elsewhere in the enterprise. Where processes elsewhere in the enterprise have an intrinsic capability to instrument their own performance and behaviour (as an aspect of operating effectively within the business), the manage revenue assurance policy framework process makes use of this capability, but can also provide guidance to these processes in the form of modified, or additional, KPIs, required to support the overall role of revenue assurance management. This can involve individual process elements throughout the enterprise (as appropriate for the various aspects of revenue assurance management that apply), or may involve coordination across a number of process elements where revenue assurance management acts to provide an integrated or coordinated view of the overall situation.

With regard to KPI definition, the manage revenue assurance policy framework process establishes the objectives used to identify the minimum level of satisfactory performance required for a given control point or a process from an RA perspective, and works with other process elements in the enterprise to effect this.

With regard to development of revenue assurance controls, the manage revenue assurance policy framework process applies policy-based rules that represent the logical definition of comparisons performed on entities, such as bills and call detail records. These are used together with revenue assurance KPIs to identify discrepancies from an RA perspective.

Manage revenue assurance operations

Process identifier: 1.3.2.6.2.

Brief description

Measure the actual revenue assurance performance at defined control points against the expected performance, report anomalies and manage resolution.

Extended description

Manage revenue assurance operations processes measure the actual revenue assurance performance at defined control points against the expected performance, report anomalies and manage resolution.

Manage revenue assurance operations processes encompass managing, tracking, monitoring, analysing, controlling and reporting on revenue assurance performance as determined by assessing defined KPIs measured against revenue assurance control points.

If the analysis identifies that a revenue assurance KPI violation has occurred, this causes a revenue assurance violation to be raised that may, in turn, raise a revenue assurance trouble report. Following on from this, processes are put in place to manage the resolution of the performance violation.

The manage revenue assurance operations processes will continue to track the revenue assurance trouble report, ensuring that performance is restored to a level required as defined by the acceptable range for the KPIs.

Support revenue assurance operations

Process identifier: 1.3.2.6.3.

Brief description

Support the manage revenue assurance operations processes by managing requirements for infrastructure to support the operational processes, and monitoring, managing and reporting on the capability of the manage revenue assurance operations processes.

Extended description

The objectives of the support revenue assurance operations processes are twofold:
- support the manage revenue assurance operations processes by managing requirements for infrastructure to support the operational processes; and
- monitoring, managing and reporting on the capability of the manage revenue assurance operations processes.

The responsibilities of the processes include, but are not limited to:
- developing and maintaining a repository of revenue assurance KPIs to support the manage revenue assurance operations processes;
- monitoring and analysing the report produced by operations processes to identify potential revenue assurance problems that may be arising across operational processes as a whole;
- establishing and managing revenue assurance data collection schedules, including managing the collecting of the necessary information from the resource data collection and distribution processes, to support proactive monitoring and analysis activity, and requests from manage revenue assurance operations processes for additional data to support revenue assurance performance analysis;
- monitoring of the manage revenue assurance operations processes and associated costs (including where the processes extend to infrastructure deployed and managed by third

parties), and reporting on the capability of the manage revenue assurance operations processes;

- establishing and managing resource performance notification facilities and lists to support the manage revenue assurance operations notification and reporting processes;

- creating, deploying, modifying and/or upgrading of revenue assurance infrastructure deployment support tools and processes for new and/or modified revenue assurance infrastructure;

- authoring, reviewing and approving operational procedures developed by resource development and management processes prior to resource infrastructure deployment;

- testing and acceptance of new and/or modified revenue assurance infrastructure support tools as part of the handover procedure from the resource development and management processes; and

- detecting revenue assurance infrastructure operational limitations and/or deployment incompatibilities and providing requirements to address these aspects to resource development and management processes.
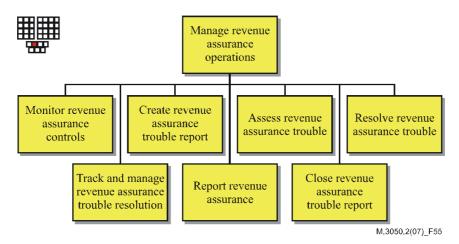
9.2.1.1 Manage revenue assurance operations

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Figure 55 – Manage revenue assurance operations decomposition into level 4 processes

Manage revenue assurance operations

Process identifier: 1.3.2.6.2.

Brief description

Measure the actual revenue assurance performance at defined control points against the expected performance, report anomalies and manage resolution.

Extended description

Manage revenue assurance operations processes measure the actual revenue assurance performance at defined control points against the expected performance, report anomalies and manage resolution.

Manage revenue assurance operations processes encompass managing, tracking, monitoring, analysing, controlling and reporting on revenue assurance performance as determined by assessing defined KPIs measured against revenue assurance control points.

If the analysis identifies that a revenue assurance KPI violation has occurred, this causes a revenue assurance violation to be raised, that may in turn raise a revenue assurance trouble report. Following on from this, processes are put in place to manage the resolution of the performance violation.

The manage revenue assurance operations processes will continue to track the revenue assurance trouble report, ensuring that performance is restored to a level required as defined by the acceptable range for the KPIs.

Monitor revenue assurance controls

Process identifier: 1.3.2.6.2.1.

Brief description

Monitor defined revenue assurance control points and undertake first-in detection of any violations or degradations of KPIs associated with the control points.

Extended description

The objective of the monitor revenue assurance controls processes is to monitor defined revenue assurance control points and undertake first-in detection of any violations or degradations of KPIs associated with the control points.

The responsibilities of the processes include, but are not limited to:

- undertaking the role of first-in detection by monitoring the defined revenue assurance control points;

- comparing the received specific revenue assurance related data received from the control points to the KPIs associated with the control points;

- assessing and recording received specific revenue assurance related data received from the control points which are within tolerance limits for the KPIs associated with the control points, and for which continuous monitoring and measuring of specific revenue assurance tolerances is required;

- prioritizing revenue assurance KPI violations on what is considered the most critical function of the system from a data integrity and revenue assurance perspective in circumstances where multiple revenue assurance violations are detected;

- recording the results of the continuous monitoring for reporting through the report revenue assurance processes;

- detecting revenue assurance threshold violations which represent specific revenue assurance failures due to abnormal performance;

- detecting KPI degradation for specific revenue assurance control points which provide early warning of potential issues;

- creating and forwarding event notifications for detected degradations and violations to the create revenue assurance trouble report processes; and

- logging specific revenue assurance performance degradation and violation details to ensure historical records are available to support the needs of other processes.

Note that the focus of the monitor revenue assurance controls is usually cross-process, as it supplements the process monitoring capabilities already established elsewhere within the eTOM business process framework.

Create revenue assurance trouble report

Process identifier: 1.3.2.6.2.2.

Brief description

Create a new revenue assurance trouble report.

Extended description

The objective of the create revenue assurance trouble report process is to create a new revenue assurance trouble report and, based on requests from other processes, either create and forward modification requests for existing revenue assurance trouble reports or create and forward cancellation requests for existing revenue assurance trouble reports.

A new revenue assurance trouble report may be created as a result of event notifications forwarded by the monitor revenue assurance controls process, or by requests arriving from other processes which have detected performance or fault conditions which may give rise to a revenue assurance leakage.

If the revenue assurance trouble report is created, the create revenue assurance trouble report processes are responsible for converting the received information into a form suitable for the revenue assurance processes, and for requesting additional information if required. Each revenue assurance trouble report should contain knowledge about the originator, the perceived severity level, the type of revenue assurance performance issue, any associated data on the revenue assurance performance issue, associated data on the possible cause and due date.

Resolve revenue assurance trouble

Process identifier: 1.3.2.6.2.4.

Brief description

Undertake actions as directed to resolve detected revenue assurance violations and degradations.

Extended description

The objective of the resolve revenue assurance trouble processes is to undertake actions as directed to resolve detected revenue assurance violations and degradations.

These processes undertake resolution activities within the bounds of the organizational capability associated with revenue assurance. The resolution activities are likely to lead to process and/or procedural changes which can be managed to fruition by these processes.

Where the analysis has indicated that resolution requires changes to specific resource and/or service configurations, these later resolution activities are managed by the specific resolution processes associated with these resources and services. They are outside the scope of this resolve revenue assurance trouble process.

Assess revenue assurance trouble

Process identifier: 1.3.2.6.2.3.

Brief description

Analyse the information received to determine the nature and the root cause of the revenue assurance violation or degradation.

Extended description

The objective of the assess revenue assurance trouble processes is to analyse the information received to determine the nature and the root cause of the revenue assurance violation or degradation.

The responsibilities of the processes include, but are not limited to:
- undertaking analysis, as required, on specific revenue assurance violation/degradation information received;
- developing and undertaking specific detailed analysis to discover the root cause;

- comparing the data received to baseline and historical data, including data associated with other open or historical revenue assurance trouble tickets;
- initiating, modifying and cancelling revenue assurance data collection as required to further analyse the revenue assurance degradation or violation;
- determining the root causes of the revenue assurance degradations and violations;
- recording the results of the analysis and intermediate updates for historical analysis and for use as required by other processes; and
- updating the results of the analysis, together with any recommendations as to further action, in the revenue assurance trouble report.

Close revenue assurance trouble report

Process identifier: 1.3.2.6.2.7.

Brief description

Close a revenue assurance trouble report when the issues leading to the revenue leakage have been resolved.

Extended description

The objective of the close revenue assurance trouble report processes is to close a revenue assurance trouble report when the issues leading to the revenue leakage have been resolved.

These processes monitor the status of all open revenue assurance trouble reports, and recognize that a revenue assurance trouble report is ready to be closed when the status is changed to cleared.

Track and manage revenue assurance trouble resolution

Process identifier: 1.3.2.6.2.5.

Brief description

Efficiently assign, coordinate and track specific revenue assurance trouble analysis, and resolution, and to manage escalation (functional or hierarchical) as required to resolve an open revenue assurance trouble report.

Extended description

The objective of the track and manage revenue assurance trouble resolution processes is to efficiently assign, coordinate and track specific revenue assurance trouble analysis, and resolution, and to manage escalation (functional or hierarchical) as required to resolve an open revenue assurance trouble report. To the extent that jeopardy management is associated with open revenue assurance trouble report, the track and manage revenue assurance trouble resolution process is responsible for detecting and escalating jeopardy conditions.

Responsibilities of these processes include, but are not limited to:
- scheduling, assigning and coordinating analysis and specific revenue assurance trouble resolution activities, including further analysis/reviews to ensure the success of the resolution activity;
- modifying the revenue assurance trouble report status;
- associating a money value to a RA trouble, when possible, in order to better understand its revenue impact;
- cancelling a revenue assurance trouble report when analysis indicates that the revenue assurance trouble report has been unnecessarily created; and

- monitoring the status of open revenue assurance trouble reports, and escalating revenue assurance trouble reports (either functionally or hierarchically) as necessary.

Note that some specific product and/or service components may be owned and managed by suppliers/partners. In these cases, the track and manage revenue assurance trouble resolution process is responsible for initiating requests, through S/P performance management for resolution by the supplier/partner of the specific revenue assurance leakage aspects attributed to the supplier/partner.

These processes will coordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence. The track and manage revenue assurance trouble resolution processes will also inform the close revenue assurance trouble report processes by modifying the revenue assurance trouble report status to cleared when the issues leading to the detected revenue leakage have been resolved.

Report revenue assurance

Process identifier: 1.3.2.6.2.6.

Brief description

Monitor and report on the status of continuous monitoring of revenue assurance control point performance, of revenue assurance trouble reports, to provide notifications of any changes and provide management reports.

Extended description

The objective of the report revenue assurance processes is to monitor and report on the status of continuous monitoring of revenue assurance control point performance, of revenue assurance trouble reports, to provide notifications of any changes and provide management reports.

These processes are responsible for continuously monitoring the status of revenue assurance trouble reports and managing notifications to other processes and to other parties registered to receive notifications of any status changes. Notification lists are managed and maintained by the support revenue assurance operations processes.

These processes record, analyse and assess the revenue assurance trouble report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall manage revenue assurance operations processes. These specialized summaries could be specific reports required by specific audiences and/or customers.
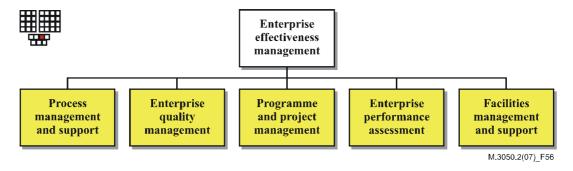
9.3 Enterprise effectiveness management

Figure 56 – Enterprise effectiveness management decomposition into level 2 processes

Enterprise effectiveness management

Process identifier: 1.3.3.

Brief description

[Not available].

Extended description

The enterprise effectiveness management process grouping focuses on defining and providing the tools, methodologies and training to ensure that the enterprise processes and activities are managed and run efficiently and effectively.

Any enterprise has a host of processes which are used to support the business of the enterprise and its customers and suppliers. By necessity, these processes need to evolve and change over time. Process management and support processes ensure that the enterprise has the capability to undertake this process evolution.

Across an enterprise, many activities occur to expand the capability of the enterprise to deliver products, provide other facilities, deliver new processes, etc. By the nature of the enterprise, these activities are complex and require a high degree of coordination, often across the enterprise. Programme and project management is a key competence of an enterprise, and the programme and project management processes establish and maintain this core competence.

Ensuring that the enterprise is both effective and efficient requires that activities undertaken are done correctly the first time. The enterprise quality planning and support processes establish the quality framework to be employed within the enterprise.

Effective management requires effective measurement, and the enterprise performance assessment processes provide the control framework for the establishment and management of appropriate enterprise performance measures.

Facilities management and support processes take care of environmental aspects within the enterprise's workplace, making sure the workplace facilities are adequate to guarantee optimal performance of the employees.

Process management and support

Process identifier: 1.3.3.1.

Brief description

Define and manage enterprise process management.

Extended description

Process management and support processes define and manage enterprise process management. These processes define the methodology to be employed by all process design, process change management or process re-engineering activities across the enterprise. As a part of this definition, the tools sets, if any, to be used as a part of the process design, process change management or process re-engineering activity are defined, sourced and deployed as required across the enterprise. The required skill sets to support the methodology are defined, appropriate training is developed or arranged, staff to be trained identified, and administration of the training undertaken. Any certification processes for the process methodologies are managed by these processes. If the selected methodology requires licensing from external parties, these processes manage the establishment and maintenance of the necessary licences. These processes ensure coordination of distributed process design, process change management or process re-engineering activities to ensure that duplication is minimized and that process reuse is achieved to the maximum extent

possible. These processes also define enterprise policies and guidelines for process management within the enterprise.

Cost and performance of individual process activities is the accountability of the operational area using the process. These processes monitor the value of the overall process management activities to ensure that the enterprise continues to gain value from using process management. Appropriate reports on performance at the enterprise level and lower levels are produced by these processes.

Enterprise quality management

Process identifier: 1.3.3.2.

Brief description

Define the enterprise quality management policies and the enterprise model for quality management.

Extended description

Enterprise quality management processes define the enterprise quality management policies and the enterprise model for quality management. They support all operations and lifecycle processes in the implementation and control of this model.

Note that quality is actually assessed within each area of the enterprise, but follows the guidelines defined by this process, which provides a template for specific applications of quality management in any areas of the enterprise.

Programme and project management

Process identifier: 1.3.3.3.

Brief description

Define and manage the programme and project management methodologies, skills and tools within the enterprise.

Extended description

Programme and project management processes define and manage the programme and project management methodologies, skills and tools within the enterprise. These processes document the programme and project methodologies to be used by all projects within the enterprise, and provide documentation templates and any project management tools required. The processes select any tools required to support project and programme management, using the supply chain development and management processes, as required. The skills sets and required levels of certification, if any, are defined and managed by these processes. If used, these processes may develop and manage an enterprise repository of programme and project information. Metrics associated with programme and project management are defined, collected and analysed by these processes.

Note that projects are actually managed within other areas of the enterprise but follow the guidelines defined by this process, which provides a template for specific applications of programme and project management in any area of the enterprise.

Enterprise performance assessment

Process identifier: 1.3.3.4.

Brief description

Check that the goals defined for the enterprise are on track and being met.

Extended description

Enterprise performance assessment processes check that the goals defined for the enterprise are on track and being met. These processes provide regular reporting to senior management and the board on the status of all defined performance metrics on a regular basis (usually monthly). The processes define and determine the most appropriate performance measures, collect and analyse the associated data, and produce summary reports. The measures may be internally developed, or may be based on externally produced or collected measures. Examples of external measures could be customer satisfaction surveys, within or across market segments, or benchmarking studies of particular aspects of the enterprise performance. Examples of internal performance measures can be based on financial performance (i.e., progress against budget), operational process performance-based metrics, or employee-related measures such as employee opinion surveys.

The enterprise performance assessment processes produce the enterprise balanced scorecard.

These processes establish and administer relationship with external survey companies if required to provide external measures or assist in developing internal measures.

Note that performance is actually assessed within each area of the enterprise, but follows the guidelines defined by this process, which provides a template for specific applications of performance assessment in any areas of the enterprise.

Facilities management and support

Process identifier: 1.3.3.5.

Brief description

Take care of environmental aspects within the enterprise's workplace.

Extended description

Facilities management and support processes take care of environmental aspects within the enterprise's workplace, making sure the workplace facilities are adequate to guarantee the optimal performance of the employees.
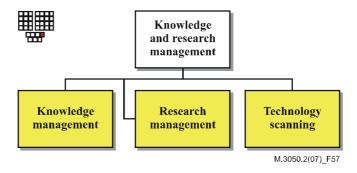
9.4 Knowledge and research management

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Figure 57 – Knowledge and research management decomposition into level 2 processes

Knowledge and research management

Process identifier: 1.3.4.

Brief description

[Not available].

Extended description

The knowledge and research management process grouping performs knowledge management and research management within the enterprise, including evaluation of potential technology acquisitions.

Knowledge management

Process identifier: 1.3.4.1.

Brief description

Manage the tacit and explicit knowledge contained within the enterprise.

Extended description

Knowledge management processes are responsible for managing the tacit and explicit knowledge contained with the enterprise. This includes establishing processes and capabilities to ensure that all staff have the necessary knowledge available to them to be effective in their work, and to ensure that knowledge captured through work activities is retained and made available as required across the enterprise. Some examples of knowledge management processes include processes associated with patent management, intellectual property rights management, standards for information and information capture and storage, assigning and providing direction for data stewardship, minimizing instances of the same data, etc. Other processes examples include establishment of policies and managing establishment of enterprise portals and intranet capabilities.

Research management

Process identifier: 1.3.4.2.

Brief description

The research management processes plan and prioritize research and development activities within the enterprise.

Extended description

The research management processes plan and prioritize research and development activities within the enterprise. These processes identify and evaluate the business value of R&D investment. These processes manage the commitment of financial and other resources to the pursuit of areas of R&D, and management of R&D programmes and ongoing assessment of their value and priority. These processes cooperate with technology acquisition for corporate-level decisions on "make vs buy" concerning internal or external research and development investment.

Technology scanning

Process identifier: 1.3.4.3.

Brief description

Perform scanning and initial assessment of emerging technology from external sources for the enterprise.

Extended description

Technology scanning processes perform scanning and initial assessment of emerging technology from external sources for the enterprise. This includes identification and evaluation of potential technologies, and sources of technologies, and comparison with the "in-house" research capabilities. It also includes determining the business value of potential technology acquisitions, and provides an initial assessment of any financial or other commitments to actually acquire specific technologies where this is appropriate.

These processes cooperates with research management processes for corporate-level decisions on "internally develop vs buy" concerning emerging technology, by providing expert assessment assistance in making the decision. Any sourcing of the proposed technology is delivered through the supply chain capability delivery processes.
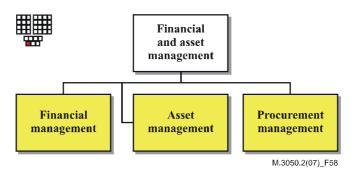
9.5 Financial and asset management

Figure 58 – Financial and asset management decomposition into level 2 processes

Financial and asset management

Process identifier: 1.3.5.

Brief description

The financial and asset management process grouping focuses on managing the finances and assets of the enterprise. Financial management processes include accounts payable, accounts receivable, expense reporting, revenue assurance, payroll, book closings, tax planning and payment, etc. Financial management collects data, reports and analyses the results of the enterprise. They are accountable for overall management of the enterprise income statement. Asset management processes set asset policies, track assets and manage the overall corporate balance sheet.

TM Forum does not intend to develop process models for these processes, since they are not processes that require significant specialization for information and communications service providers. It is hoped that cross-industry models can be referenced.

Extended description

The financial and asset management (F&AM) process grouping focuses on managing the finances and assets of the enterprise. Financial management processes include accounts payable, accounts receivable, expense reporting, revenue assurance, payroll, book closings, tax planning and payment, etc. Financial management processes collect data, report and analyse the results of the enterprise. They are accountable for overall management of the enterprise income statement. Asset Management processes set asset policies, track assets and manage the overall corporate balance sheet.

Financial management

Process identifier: 1.3.5.1.

Brief description

Manage the financial management aspects of the enterprise.

Extended description

Financial management processes manage the financial aspects of the enterprise such as treasury, banking, payroll, financial planning, and accounting operations functions, e.g., accounts receivable

and payable. These processes are accountable for the financial health of the enterprise, managing cash flow, etc.

Asset management

Process identifier: 1.3.5.2.

Brief description

Manage all financial and policy aspects of the physical assets of the enterprise.

Extended description

Asset management processes manage all financial and policy aspects of the physical assets of the enterprise (corporate real-estate, fleets, infrastructure, stocks, consumables, etc.); they set asset management policies, track assets using physical asset recording systems and manage the overall corporate balance sheet.

For each managed corporate asset, these processes plan for future needs and coordinate with the supply chain development and management processes for all aspects related to purchasing.

Procurement management

Process identifier: 1.3.5.3.

Brief description

Define corporate procurement and logistics policies and rules, for all purchases, warehousing, transport, stock level management and physical resource distribution, and supervise their application.

Extended description

Procurement management processes define corporate procurement and logistics policies and rules, for all purchases, warehousing, transport and physical resource distribution, and supervise their application. These processes manage and control the acceptance of goods from suppliers and any transport arrangements to deliver the goods to either warehouses or site. They define the warehousing structure (centralized and/or distributed) and the associated management policies to be applied to purchased goods. The logistics/transport processes develop policies related to transport of purchased material to warehousing, to site, etc. The stock/inventory management processes, in conjunction with asset management processes, which provide the inventory information resource, develop corporate policies relating to locations of, and levels of, stock/inventory holdings.
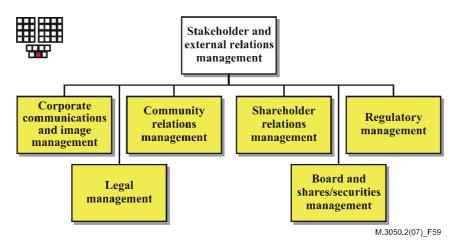
9.6 Stakeholder and external relations management

Figure 59 – Stakeholder and external relations management decomposition into level 2 processes

Stakeholder and external relations management

Process identifier: 1.3.6.

Brief description

[Not available].

Extended description

The stakeholder and external relations management processes grouping focuses on managing the enterprise's relationship with stakeholders and outside entities. Stakeholders include shareholders, employee organizations, etc. Outside entities include regulators and local community. Some of the processes within this grouping are shareholder relations, external affairs and public relations.

Corporate communications and image management

Process identifier: 1.3.6.1.

Brief description

Communicate the required messages to the market and industry about the overall enterprise, and handle enquiries and other interactions with the mass media.

Extended description

Corporate communications and image management processes are responsible for communicating the required messages to the market and industry about the overall enterprise. These include promotion of the desired corporate image for the enterprise and its general business and products. Areas such as sponsorship, corporate-level advertising and general contact with industry bodies, and government and regulatory agencies, are addressed here. These processes also assign spokespeople for marketing topics and any corporate issues, develop specific messages for topics of concern to the enterprise, manage message release approval, manage media interactions with spokespeople, and monitor market reaction to messages and implement any necessary changes or adaptations.

Community relations management

Process identifier: 1.3.6.2.

Brief description

Ensure the enterprise's position within the community, or communities, within which it operates.

Extended description

Community relations management processes are responsible for ensuring the enterprise's position within the community, or communities, within which it operates. This includes local activities with, and financial and other support for, schools, libraries, hospitals, emergency services, etc.; concern for the immediate environment; visibility at local events; etc. This area also communicates the desired messages about the enterprise to the community that the enterprise operates within, as well as to employees from a global enterprise standpoint. These processes also handle contact with customer interest groups and customer representatives, as well as dealing with public relations and community relations contacts made to the enterprise. These processes also influence the privacy policy for the enterprise.

Shareholder relations management

Process identifier: 1.3.6.3.

Brief description

Manage the relationship between the enterprise and its shareholders.

Extended description

Shareholder relations management processes manage the relationship between the enterprise and its shareholders, consistent with all business, financial, legal and regulatory requirements. This includes incoming and outgoing communication with shareholders.

Also included in these processes are the management and administration of employee share and/or option plans. Note that the structure and level of employee share and/or option plans is determined within the HR policies and practices processes.

Regulatory management

Process identifier: 1.3.6.4.

Brief description

Ensure that the enterprise complies with all existing government regulations.

Extended description

Regulatory management processes ensure that the enterprise complies with all existing government regulations. Additionally, this process is responsible for legally influencing pending regulations and statutes for the benefit of the enterprise and to inform the enterprise of potential consequences of pending legislation or regulations. In addition, these processes are responsible for tariff filings as required.

Legal management

Process identifier: 1.3.6.5.

Brief description

Ensure that the enterprise complies with all relevant legal requirements.

Extended description

Legal management processes are responsible for ensuring that the enterprise complies with all relevant legal requirements, including due diligence. They are also responsible for carrying out legal requests within the enterprise, supporting the enterprise by providing legal advice related to business decisions, and proactively notifying the enterprise of relevant changes or trends that can effect the legal environment that the enterprise operates within. These processes deal with any legal action taken on behalf of or against the enterprise.

Board and shares/securities management

Process identifier: 1.3.6.6.

Brief description

Manage all activities associated with board administration and securities regulation.

Extended description

The board and shares/securities management processes manage all activities associated with board administration and securities regulation. The board management processes manage board-related activities and communication of board decisions throughout the enterprise, as required. Shares/securities management manages all activities associated with securities/shares of the enterprise and any securities/company regulations impacting on the company, including the administration and management of continuous disclosure/announcements to the securities exchange and/or securities/company regulator. These processes manage all activities associated with modifying the capital/equity structure of the enterprise, including all logistics functions associated with approaching the market for capital/increased equity. These processes manage and administer the enterprise's share/stock registry.
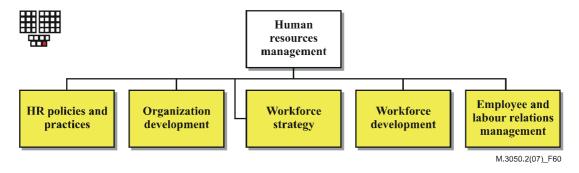
9.7 Human resources management

Figure 60 – Human resources management decomposition into level 2 processes

Human resources management

Process identifier: 1.3.7.

Brief description

[Not available].

Extended description

The human resources management process grouping provides the human resources infrastructure for the people resources that the enterprise uses to fulfil its objectives.

For example, human resources management processes provide salary structures by level, coordinate performance appraisal and compensation guidelines, and set policies in relation to people management, employee benefit programs, etc.

Moreover, it supports the definition of the organization of the enterprise and coordinates its reorganizations.

Note that human resources management processes are concerned with preparing people to carry out their assigned tasks (e.g., organizing training, remuneration, recruiting, etc.). The actual assignment of specific tasks is the responsibility of work force management processes.

HR policies and practices

Process identifier: 1.3.7.1.

Brief description

Support people management throughout the enterprise.

Extended description

HR policies and practices include the processes that support people management throughout the enterprise, e.g., performance appraisal, remuneration policies, remuneration levels, allowances, benefits, occupational health and safety, equal employment opportunity, compensation guidelines, code of conduct, hiring and termination guidelines, employee satisfaction measurement and management, etc.

Organization development

Process identifier: 1.3.7.2.

Brief description

Support the definition of the organization of the enterprise and coordinate its reorganizations.

Extended description

Organization development processes support the definition of the organization of the enterprise and coordinate its reorganizations. These processes can apply for the overall organization, can define the organization of single business units, or at least can ensure coherency and/or guarantee support to specific processes defining the organization of single business units elsewhere within the enterprise.

Workforce strategy

Process identifier: 1.3.7.3.

Brief description

Drives overall enterprise workforce strategies, including their development and execution at the individual business unit level.

Extended description

Workforce strategy processes drive overall enterprise workforce strategies, including their development and execution at the individual business unit level. Workforce strategy processes include understanding the requirements of the business and defining the competencies and skills required of the human resources. The processes define the requirements for competency modelling, application of profiling, overall job design, approach to employee satisfaction, etc. These processes create the strategies needed to ensure that the correct type, quantity and quality of employees will be available in the right locations for future business. These processes, working with all areas of the

enterprise, determine the changes required in the enterprise's workforce and the strategies required to make the necessary changes.

Workforce development

Process identifier: 1.3.7.4.

Brief description

Develop employees to meet the needs of the business.

Extended description

Workforce development processes focus on development of employees to meet the needs of the business. These processes include competency modelling, skills assessment, job and employee strength profiling, succession planning, training development and delivery, career development, work design, employee recruitment, etc. These processes support both the overall enterprise and the needs of individual business units or functions.

Employee and labour relations management

Process identifier: 1.3.7.5.

Brief description

Manage relationships with employees at an enterprise and employee group level.

Extended description

Employee and labour relations management processes focus on relationships with employees at an enterprise and employee group level. Labour relations processes include definition of terms of employment, labour contracts development, union contract negotiations, arbitration management, etc. Employee relations processes cover a variety of processes, e.g., counselling programmes, interface to employee groups, employee involvement in the community, and charities in the name of the company, etc.

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