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TELECOMMUNICATION
STANDARDIZATION SECTOR
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Supplement 1

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SERIES M: TELECOMMUNICATION MANAGEMENT, INCLUDING TMN AND NETWORK MAINTENANCE

Telecommunications management network

Enhanced Telecom Operations Map (eTOM)

Supplement 1 – Interim view of an interpreter's guide for eTOM and ITIL practitioners

ITU-T Recommendation M.3050 – Supplement 1

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ITU-T Recommendation M.3050

Enhanced Telecom Operations Map (eTOM)

Supplement 1

Interim view of an interpreter's guide for eTOM and ITIL practitioners

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 Supplement provides a mapping to the IT infrastructure library.

Source

Supplement 1 to ITU-T Recommendation M.3050 was agreed on 14 February 2007 by ITU-T Study Group 4 (2005-2008).

The ITU-T M.3050.x Recommendation sub-series is based on the Enhanced Telecom Operations Map® (eTOM) which has been developed by the TeleManagement Forum (TMF).

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

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Interim view of an interpreter's guide for eTOM and ITIL practitioners

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 Supplement is part of a series of ITU-T texts dealing with eTOM (Release 7.0), 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 an 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 Supplement provides a mapping to the IT infrastructure library.

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 Supplement uses the following term defined elsewhere:

3.1 eTOM: ITU-T Rec. M.3050.0.

4 Abbreviations and acronyms

This Supplement uses the following abbreviations and acronyms in addition to those defined in ITU-T Rec. M.3050.1:

CI Configuration Item

CMDB Configuration Management Database

DHS Definitive Hardware Store

IT Information Technology

ITIL IT Infrastructure Library

itSMF IT Service Management Forum

OGC Office of Government Commerce

OLA Operational Level Agreements

UC Underpinning Contracts

5 Introduction

This Supplement is intended to provide users of either eTOM or ITIL (or potential users for either or both of these) with an overview of how the eTOM and ITIL processes can be related, and information on mapping from one view to the other.

This Supplement is an interim report from the team, showing work in progress, and is intended to show the analysis carried out and to invite comments on the approach taken. Thus, the approach taken to the analysis is general, and the form of the detailed artefacts for each process is still to be decided.

It should be stated clearly to begin with that the analysis carried out supports the understanding that these two perspectives are compatible and that a common, integrated view can be derived so that either an eTOM-based or an ITIL-based solution can be understood in terms of the other perspective. This analysis is ongoing and so final results have not been developed in all areas as yet, but the general direction of the work done gives good grounds for optimism that no serious conflicts will arise in bringing together the two views.

It is important, in looking at this, to recognize that the two areas of work are not attempting to address exactly the same scope. The eTOM provides a top-down hierarchical view of business processes across the whole enterprise and does not itself address how these processes are supported by automated or human action (this is, however, addressed in the wider NGOSS programme of the TM Forum). The ITIL processes represent flows in a number of key operational areas, with a strong orientation towards how these processes will map onto IT support environments. Thus, the scope of ITIL is on a part of the enterprise business space, while eTOM looks more widely, but it focuses more directly on how these processes will operate in practice. Nevertheless, there is a large area of overlap of interest and this Supplement aims to define this more precisely and indicate how this overlap will work.

Potential audiences for this Supplement therefore include both eTOM and ITIL practitioners who want some grounding in how their area relates to the other, and also those actively seeking to manage the mapping between the two perspectives. This Supplement will not provide answers in every area and in full detail, but it provides an umbrella for further work that will progressively illuminate the issues involved.

It should also be noted that this work considers a generic mapping, and the implementation for specific service providers may differ in detail, depending on their particular use of eTOM and ITIL processes. Both eTOM and ITIL are intended as frameworks, and so will be further developed and specialized for individual applications. It therefore follows that the contents of this Supplement would then also require further development and specialization in line with the detail that emerges.

6 Document structure

This Supplement is structured in the following way:

- Background to the work and previous work carried out by TMF and itSMF.
- The goals of the TMF and itSMF, respectively the industry organizations responsible for the eTOM and promoting best practice in service management.
- History and business context of the eTOM and ITIL.
- Similarities and differences in approach and scope.
- The ITIL approach to service management.
- The business view of a combined approach, using eTOM and ITIL.
- Discussion on terminology differences and similarities (further information in Annex A).
- Presentation of mappings between the eTOM and ITIL frameworks (with further information in Annex B for incident management). Includes an explanation of how ITIL processes support eTOM processes.
- Flows for key scenarios in ITIL change management and incident management, showing how the eTOM process steps and ITIL process are related.
- Introduction to the business benefits of using a combined eTOM and ITIL approach (see Annex C).
- Next steps, discussing future work, standardization and certification.
- Annex A: Table of terminology comparisons.
- Annex B: Mapping between eTOM for incident management.
- Annex C: The business benefits of using a combined eTOM and ITIL process approach.

7 Background to this work

This Supplement builds on previous work carried out by the TM Forum to provide a very high-level view of the relationship between eTOM and ITIL. This previous work was published as Addendum L of the eTOM documentation, as [b-TMF GB921L] (eTOM-ITIL application note).

[b-TMF GB921L] provided only a first level of mapping detail, and this Supplement develops this further with mappings for each of the major ITIL processes (in this release, only incident management and change management have been addressed). [b-TMF GB921L] is superseded by this Supplement which incorporates relevant material from the earlier application note. Note that ITIL v2 has been used in preparing this Supplement.

8 Goals and business context

This Supplement develops further the first level of mapping detail provided by [b-TMF GB921L], with mappings from each of the major ITIL processes (in this interim release, only incident management and change management have been addressed).

8.1 The goals of TMF and itSMF

8.1.1 TMF

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

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

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

TeleManagement Forum supports several kinds of projects, including process automation and technology integration projects, as well as Catalyst projects that support both process automation and technology integration projects through real-product integration.

The TeleManagement Forum has existed since the late 1980s as an industry focus for OSS/BSS issues, with the aim of encouraging and facilitating easier interoperability between service providers and other enterprises (other SPs, customers, suppliers, partners, etc.), and also of easing integration of OSS/BSS solutions in the ICT arena. It is a non-profit global consortium, currently of some 400 companies with most of the major players and many others involved in and applying the work. TMF supports TeleManagement World, a twice-yearly industry expo and conference event focused specifically on OSS/BSS, as well as market-oriented analysis that feeds into a technical work programme, a Catalyst programme for members to collaborate on proof-of-concept, and increasingly early product, demonstrations, and a comprehensive website offering a range of resources for the industry. The technical work programme is member led and resourced, delivering specifications and designs across a range of high-priority areas, and notably includes the Enhanced Telecom Operations Map (eTOM) as the primary industry business process framework.

8.1.2 itSMF

The IT Service Management Forum is the only internationally recognized and independent organization dedicated to IT service management. It is a non-profit organization, wholly owned, and principally operated, by its membership.

The itSMF is a major influence on, and contributor to, industry "best practice" (represented by the IT Infrastructure Library – ITIL) and standards worldwide (BS15000, AS8018 and ISO/IEC 20000-1/2:2005), working in partnership with a wide range of governmental and standards bodies.

Formed in the UK in 1991, there are now national chapters in an ever-increasing number of countries. The aims are:

- to develop and promote industry best practice in service management;
- to engender professionalism within service management personnel;
- to provide a vehicle for helping members improve service performance;
- to provide members with a relevant forum in which to exchange information and share experiences with their peers on both sides of the industry.

Approximately 80% of the membership represents organizations striving to implement and sustain high quality IT service management solutions, with the remainder being organizations providing products and services to assist in those endeavours. Organizations range from large multi-nationals through small and medium local enterprises to individual consultants and cover both the public and private sectors.

While, broadly speaking, all chapters offer very similar services, the range and sophistication does vary according to the size and maturity of the chapter. To find out more about itSMF and its services go to www.itsmfi.org/.

8.2 History and business context of eTOM and ITIL

8.2.1 eTOM

The eTOM framework was originally developed in the early 1990s based on input from a range of service providers (SPs) to provide the original business process model that developed into the Telecom Operations Map (TOM). This concentrated on the real-time operations processes, under the general headings of fulfilment, assurance and billing. In the late 90s, this was expanded to provide a total enterprise model and the original "FAB" processes can still be observed as part of this Enhanced Telecom Operation Map, but the overall scope is now much wider and embraces areas such as strategy, infrastructure and product lifecycles, and the enterprise management processes that can be seen in any company.

The eTOM framework has been evolved through several TM Forum membership and then public releases. In 2004 the eTOM Framework was accepted by ITU-T in toto and is published as the ITU-T Recommendations M.3050.x series, which is part of the ITU-T TMN set of Recommendations.

Widely used in the industry as the most comprehensive view of SP processes, eTOM is applied by SPs themselves as a reference and a basis for internal and external discussion around business needs and interoperability, as well as by suppliers and others as a means of understanding and discussing SP behaviour and requirements. It includes a hierarchy of process definitions, offering a structure and model to understand and develop areas of process, and a repository of process elements at various levels of detail that can be combined and applied in specific applications. It also provides examples of process flows showing how the eTOM framework can be used, user guides, and information on relationships with other industry work (such as ITIL and the ITU-T TMN).

8.2.2 ITIL

The IT Infrastructure Library (ITIL) is a public domain 'standard' for IT/ICT production operations and is the most widely accepted approach to IT service management in the world. It provides a comprehensive and consistent set of best practices for IT service management, promoting a quality approach to achieving business effectiveness and efficiency in the use of information systems.

Developed in the UK during the 1980s and now being evolved by a global community, it is being adopted worldwide. ITIL took root during the challenge of client server, distributed, departmental computing and increasing IT operational complexity. It is now represented and revised by the itSMF, which has branches in about 30 countries. It has been adopted in North and South America,

UK and Europe as well as Africa, India, South East Asia, including Japan, Australia and New Zealand. However, the heartland for adoption remains Europe. While it remains a public domain standard, the copyright is owned by the UK Office of Government Commerce.

ITIL comprises a fairly simple set of logical processes and a standardized vocabulary. It replaces all other operational methods that may have been introduced into an IT service delivery environment, giving them a common definition of services. These are available as CDs or books.

The core set of processes is contained in a 6 book set: service support, service delivery, ICT, application, planning to implement and security management (ISO/IEC 17799-aligned). Also, separate publications deal with business management and software asset management aspects. There are about another 25 associated documents in the complete set. The two most popular publications are service delivery and service support.

These methods are size-, technology- and industry-independent and ITIL has been applied to small IT shops, huge multi-national companies' IT operations and government departments. Interestingly, it has also been adopted in a few organizations, such as UK area health organizations and London Underground transport operations purely for generic service management to the public.

The current release of ITIL is v2 and this has been used in this Supplement.

8.3 Approaches and distinctions

8.3.1 eTOM

- Business context is a total enterprise model for telcos.
- International standard through ITU.
- Constitutes the business view section of NGOSS, TMF's initiative on OSS/BSS solutions.
- A common language for business processes.
- A hierarchy of process definitions.
- A repository of process elements at various levels of detail that can be combined and applied in specific applications.
- Provides examples of process flows.
- Flow diagrams are used in eTOM to illustrate end-to-end processes, e.g., fulfilment.
- Technical content now mature, with an increasing emphasis on guidelines for its application and usage.

8.3.2 ITIL

- Business context is IT/ICT service management.
- Included in various national standards, and slated to be adopted by ISO in 2005/2006.
- A comprehensive and consistent set of best practices.
- A set of methods for delivering controlled and optimizable services.
- Common language, e.g., incident is used for any event which causes an interruption or reduction of service.
- Aim is to provide high quality services with a particular focus on customer relationships.
- Is built on agreements where the IT organization should provide whatever is mutually agreed with customers.
- Service delivery processes are partially concerned with setting up agreements and monitoring the targets within these agreements. On the operational level, the service support processes can be viewed as delivering service as laid down in these agreements.

- Flow charts are used in ITIL[1].
- Inclusion of closed feedback quality loops for continuous improvement.
- It supports and drives 'quality' or repeatability.
- The underlying philosophy is to know what you are doing, what you are doing it to, take control and optimize the service. It is for this reason that it can be applied to many circumstances, not just IT operations.
- ITIL applies and maps specifically to eTOM operations assurance and touches fulfilment and billing[2].

9 Service management in ITIL

The two "core" documents of the ITIL set are the two ITIL service management components: service support and service delivery. The decomposition of these components into processes and functions is covered below.

9.1 Service support

The content is adapted from the service support and service delivery guidebooks (© OGC).

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1 While flowcharts are used to illustrate some of the processes in the ITIL documents, ITIL does recognize the need to develop processes (Annex C to service support, for example).

2 It also maps to many of the SIP processes. Availability and capacity management are mainly concerned with ILM and PLM.

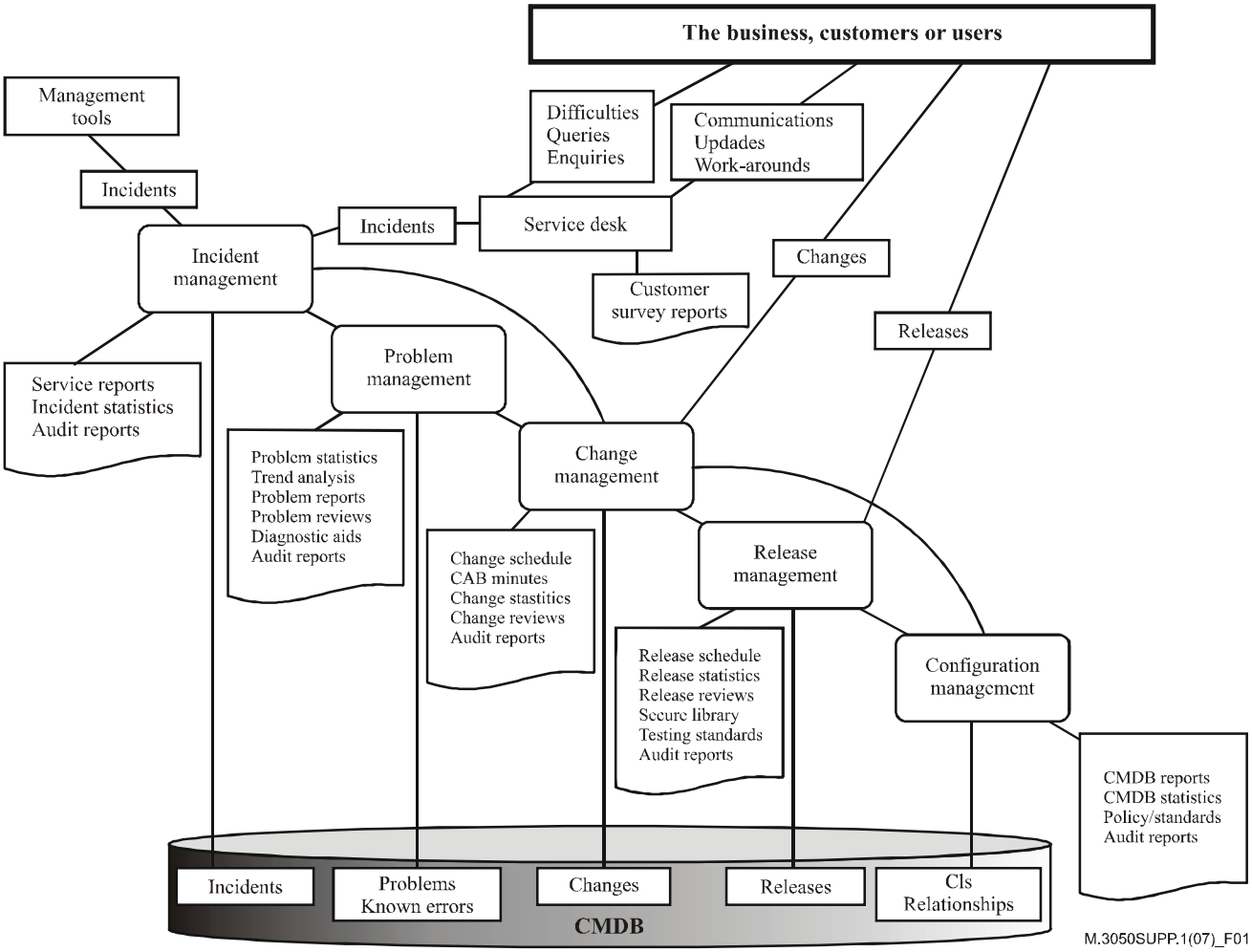


Figure 1 – ITIL service support diagram (© OGC)

Service support decomposes into the following functions and processes.

9.1.1 Service desk

The service desk is the only function within ITIL service management and provides a single point of contact between the IT service customer/user and all the other processes within the ITIL service management.

9.1.2 Incident management

The incident management process handles service requests (new service requests, change requests, etc.) as well as incidents. An incident is any event that affects the required service levels as defined by a relevant SLA. The aim of incident management is to return IT service delivery to the required service levels as quickly as possible while minimizing any negative impact upon business operations.

9.1.3 Problem management

The problem management process is comprised of two aspects; proactive problem management and reactive problem management. Proactive problem management involves the detecting and resolving of problems and known errors before they lead to Incidents. Reactive problem management responds to major incidents and problems as they occur, again providing problem resolution. There are two stages to the problem management process; the first, problem control, involves investigating and establishing a root cause of a problem and providing a resolution; the second,

error control, is the investigation and elimination of known errors so that they do not reoccur. Once the root cause of a problem has been identified and the problem resolved, then it becomes a known error.

9.1.4 Configuration management

The configuration management process is the underpinning discipline to all the other service management processes. The aim of the process is to document all the configuration items (CIs) within an organization and the relationship between them all in the configuration management database (CMDB). The configuration management process is also responsible for keeping the CMDB up to date. The CMDB is used by the other processes to hold reports, plans, records, etc., since these also can be related to CIs.

9.1.5 Change management

The change management process is responsible for the implementation of changes to both IT services and infrastructure. All changes should show a benefit to the business; be it the resolution of a problem, service improvement or cost reduction. The change management process provides a structured method for the approval and management of all changes. This approach allows the resources required to implement a change, the business impact of a change (both benefits and incidents that may arise because of the change).

9.1.6 Release management

The release management process is an output of the change management process since release management is the implementation of any change. The release management process is concerned with all types of IT service or system change and takes a wider view of a change so that all aspects of a change are considered. The release management process is also responsible for the definitive software library (DSL) and definitive hardware store (DHS) within the CMDB.

9.2 Service delivery

The content is adapted from the service support and service delivery guidebooks (© OGC).

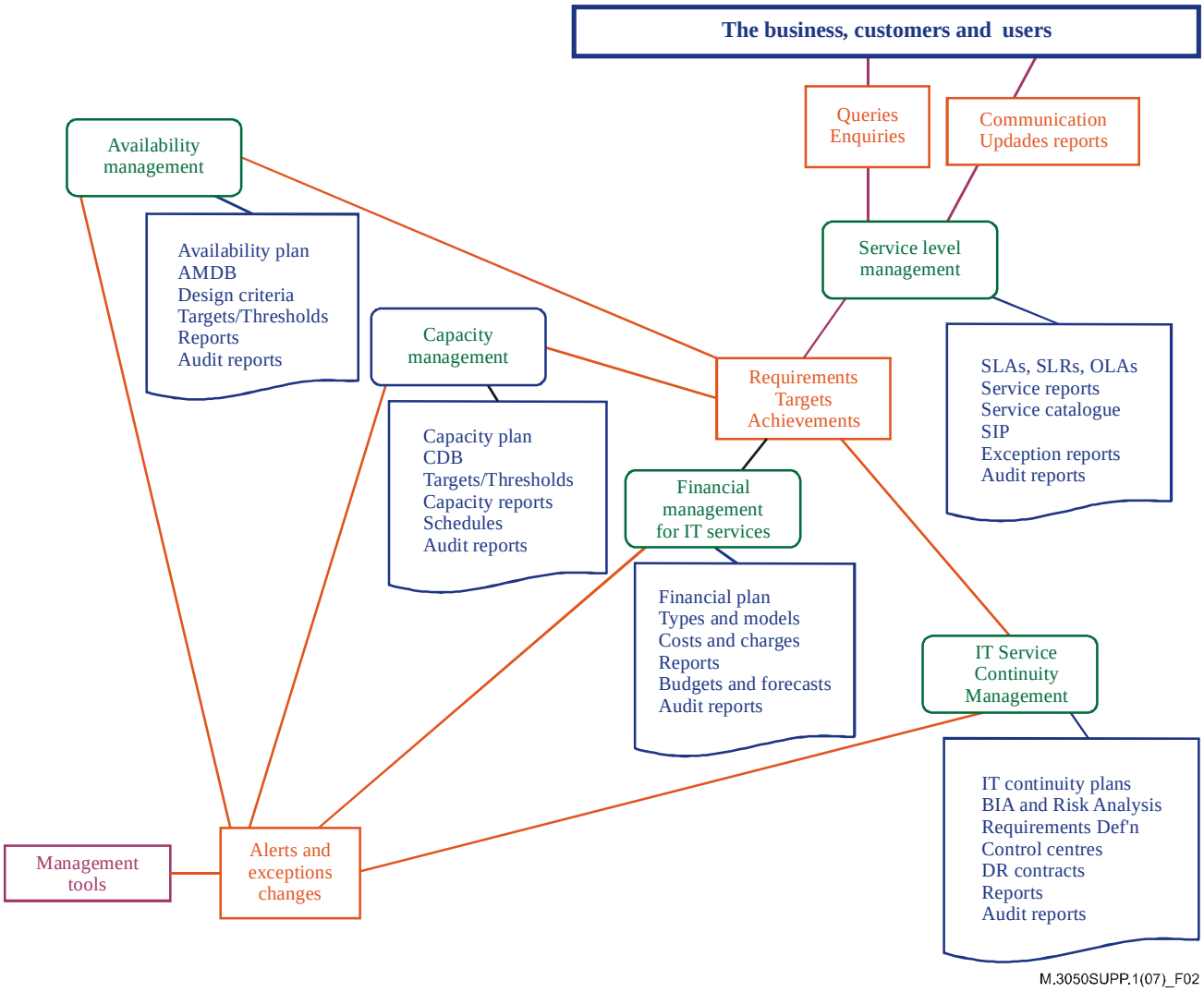


Figure 2 – ITIL service delivery diagram (© OGC)

Service delivery decomposes into the following main processes.

9.2.1 Service level management

The aim of the service level management process is to ensure that IT service quality is maintained and improved. The service level management maintains the relationship between the customer and the IT service provider (who can be either internal or external to the customer's organization) through service level agreements (SLAs), operational level agreements (OLAs) and underpinning contracts (UCs).

9.2.2 Financial management for IT services

The financial management for IT services process is concerned with the budgeting, accounting and charging of IT services. It considers both internal IT service provision and external third party providers.

9.2.3 Capacity management

The aim of the capacity management process is to ensure that the IT infrastructure can meet current and future IT service requirements and, consequently, business requirements can be met cost effectively. The capacity management process also looks at improving IT service delivery through the introduction of new technology and continuous monitoring and improvement of the IT service.

9.2.4 IT service continuity management

The IT service continuity management process underpins the organizations' business continuity requirements and is responsible for ensuring that the required IT services (including infrastructure, telecommunications, applications and support) can be restored in the required time to ensure business continuity.

9.2.5 Availability management

The aim of the availability management process is to ensure that the availability of the IT services meet the SLA and, consequently, the business requirements through the continuous monitoring of and improvement to the IT services. The availability management process is also responsible for the implementation of security policy.

9.3 Application management

Application management overlaps service management as shown in Figure 3 below and divides into two areas:

1) Application development – those activities needed to plan, design and build the application.
2) Service management – which sub-divides into:
   - service delivery;
   - service support.

Application management is split into six processes which are distributed between application development and service management as shown in Figure 3.

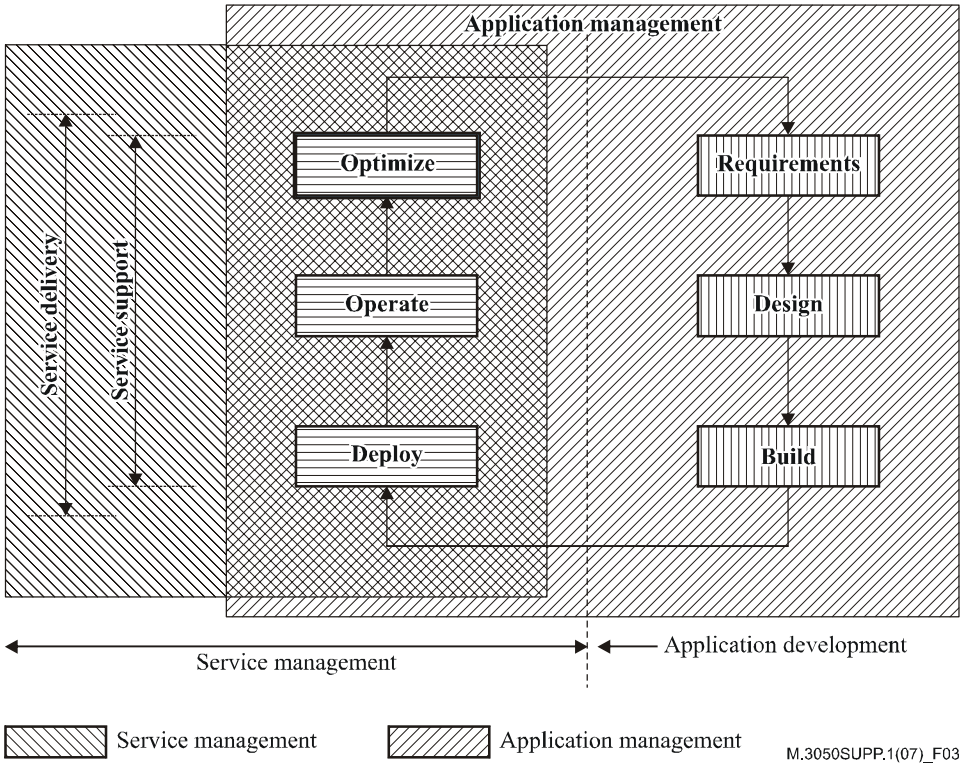


Figure 3 – Relationship between service and application management

An application is the software that is the embodiment of the service being delivered – a service is, however, more than just the functionality offered by the application and, hence, service management is only partially included within application management.

The application management document details the 6 areas of application management shown in Figure 3, the functionality that they will typically embody, the interactions they will have with other service management processes and the way in which an organization should approach implementing these processes.

10 Business view of a combined process approach

It is recognized that companies with involvement in either the eTOM or ITIL approaches may speculate which framework would be suitable in which circumstances and the respective business benefits. Similarly, companies with exposure to both frameworks would wish to know how to integrate the approaches. A combination of the two approaches can deliver equal or improved business value.

In Annex C, the business value of constituting a combined business process environment is discussed. It presents an initial view of the business benefits of using a combined eTOM and ITIL process approach. A streamlined and integrated business process environment can result from the combination of the eTOM and ITIL industry process standards.

The integrated approach, realized by mapping ITIL onto an eTOM-enabled process environment, can deliver a number of business-related advantages. These advantages can be grouped into two main categories:

- the customer-oriented business view;
- the ICSP internal-oriented business view.

These are further described in Annex C.

11 Terminology

In order to understand the relationship between eTOM and ITIL, it is necessary to understand the different terms used by each framework. In many cases, there are terms of the same name but with different meanings; for example 'problem'. There are several ITIL terms that introduce concepts that are not within eTOM; for example the terms relating to the incident and change management processes. Conversely, there are eTOM terms that can be used to extend ITIL; for example, those relating to supply chain management. Annex A consists of a table listing ITIL terms and their eTOM equivalents (still under development).

12 Process element mapping

As a high-level view, it is useful to be able to position the ITIL processes against the eTOM framework. The following figures position the 11 ITIL processes against the eTOM level 1 process groupings of operations; strategy, infrastructure and product; and enterprise management.

In Annex B, further information on the mapping of eTOM level 2 and 3 processes to the ITIL incident management process is shown with degrees of correlation. The team is currently considering the respective benefits and usefulness of these mappings and representations.

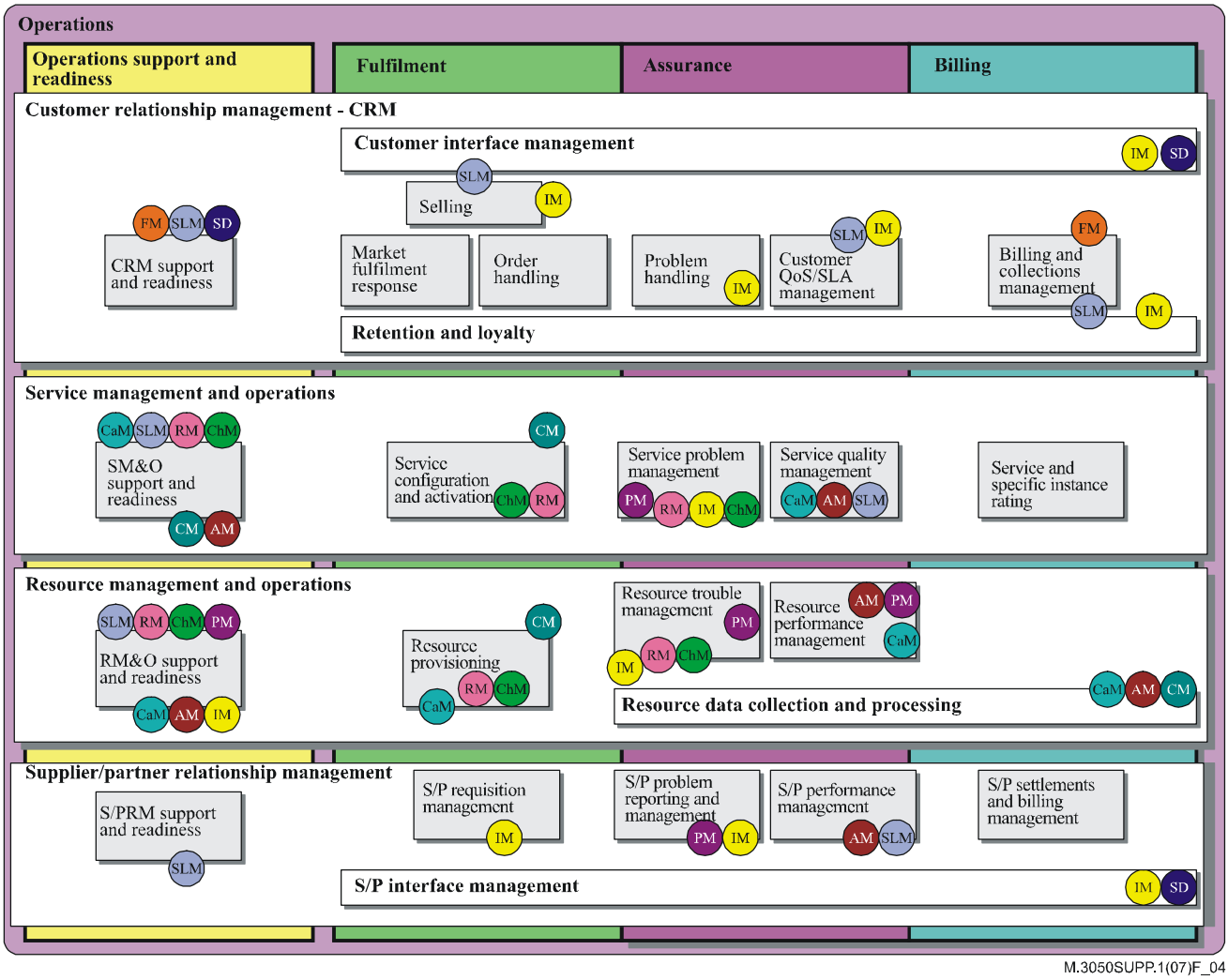


Figure 4 – eTOM L2 operations processes and ITIL processes

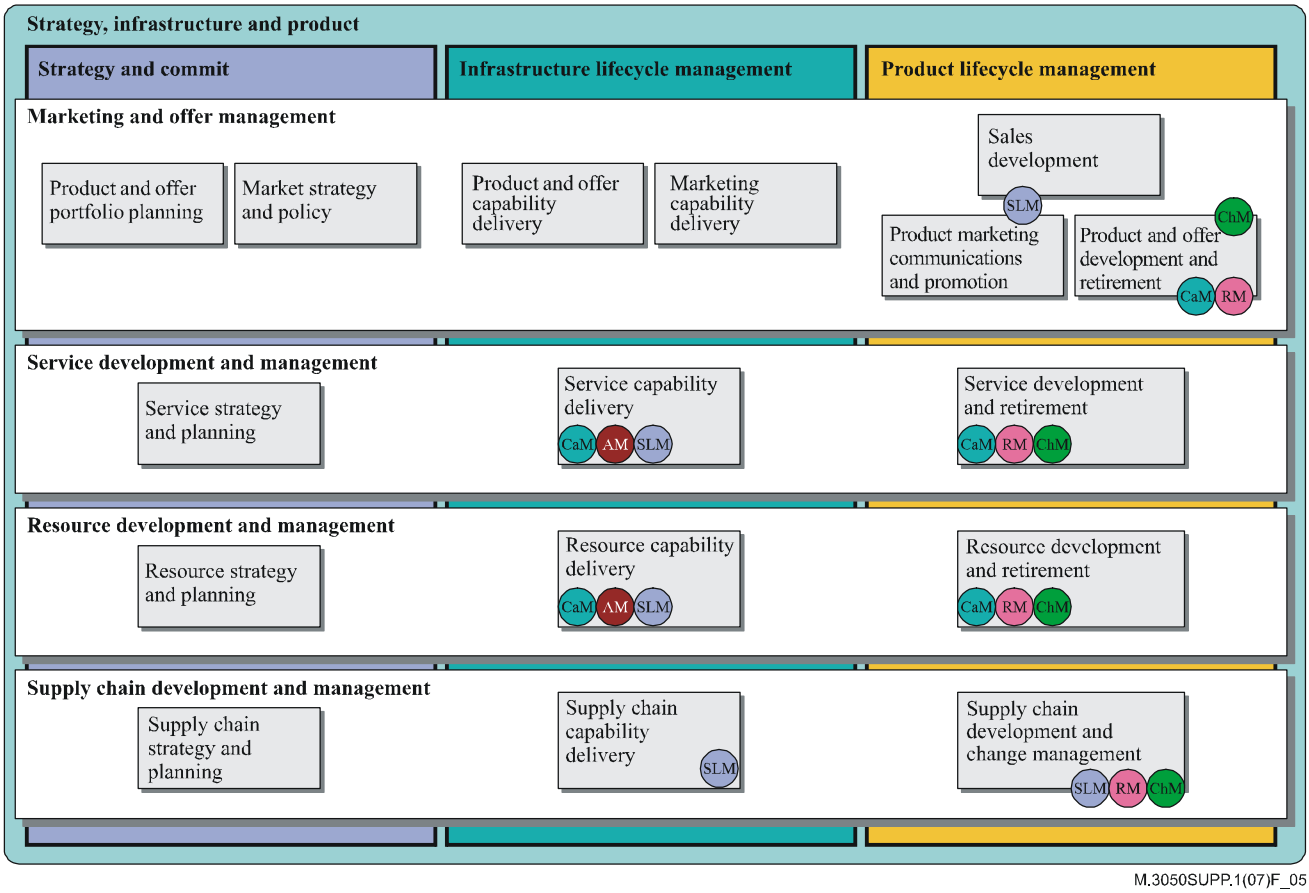


Figure 5 – eTOM L2 strategy, infrastructure and product processes and ITIL processes

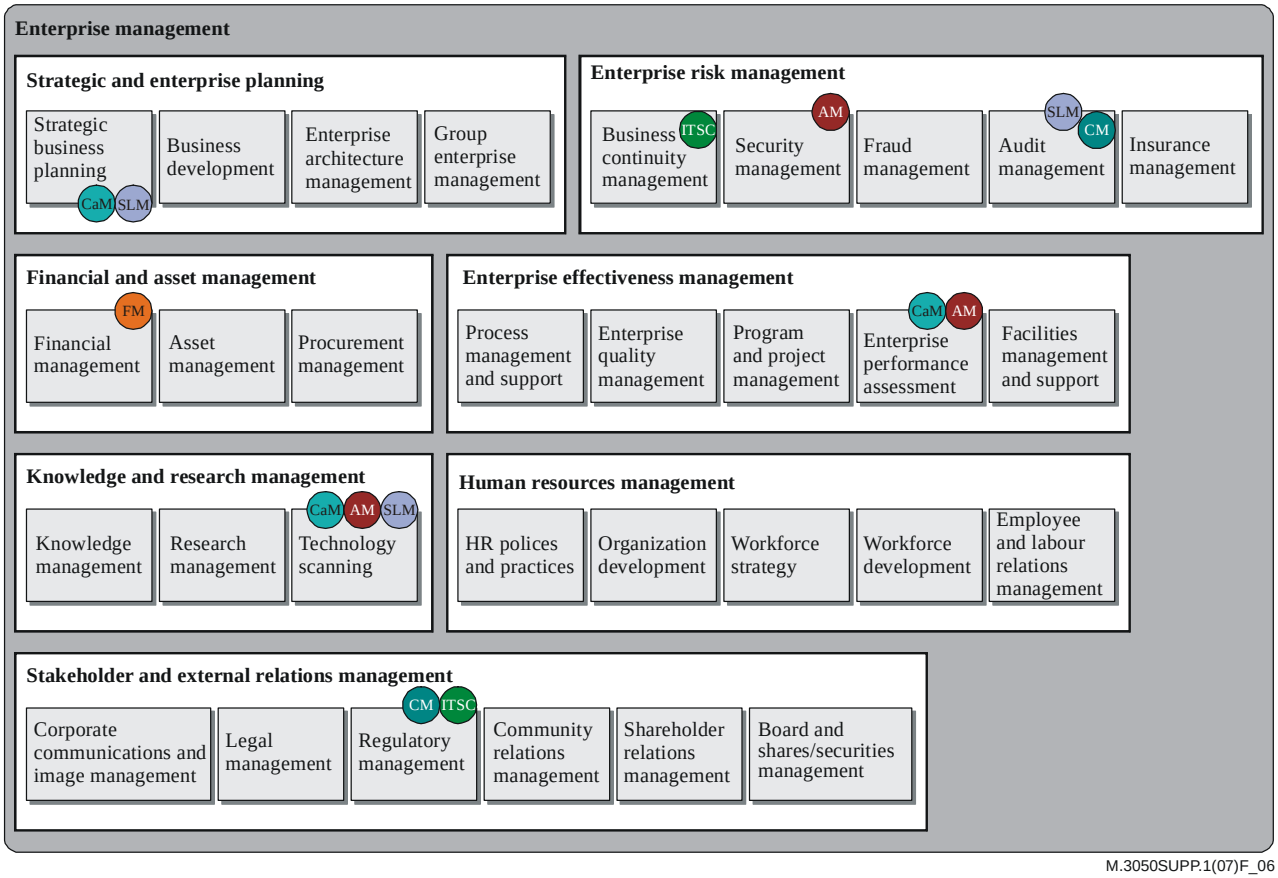


Figure 6 – eTOM L2 Enterprise Management processes and ITIL processes

12.1 Comparison of ITIL processes with eTOM level 2 processes

The following table relates the eTOM level 2 processes and the ITIL processes. It also details how ITIL supports customer and internal IT services.

Table 1 – Comparison of ITIL processes with eTOM level 2 processes

ITIL function/process	eTOM level 2 process	How ITIL supports the management of customer services	How ITIL supports the management of internal IT services
Service desk	CRM support and readiness Customer interface management Selling Order handling Retention and loyalty S/P interface management Supply chain development and change management	• The service desk is the only function within ITIL and acts as the first point of contact for the customers/users as well as their interface to all the other ITIL processes • Process users service requests and requests for change (RFCs) • Update customer accounts • Act as first point of contact for customers and users, gather data on customer/user perception of service quality • Act as the interface to suppliers/partners handing off incident reports, service requests, RFCs, etc.	• Monitor usage of the support services, provide appropriate metrics (call logs, incident records, RFCs raised, service requests, etc.) • Act as the interface to suppliers/partners handing off incident reports, service requests, RFCs, etc.
Incident management	Customer interface management Selling Order handling Problem handling Customer QoS/SLA management Retention and loyalty Service configuration and activation Service problem management Resource provisioning Resource trouble management Resource performance management	• Incident management is the key process used by the service desk function in fulfiling its functional requirements • Incident management supports the capture, processing and monitoring of service requests (requests for change (RFCs), enquires, etc.) as well as incidents • Incident management process steps: – Classification and initial support – Classification of problem (hardware, software, network, etc.) – Investigation and diagnosis – Resolution and recovery	

Table 1 – Comparison of ITIL processes with eTOM level 2 processes

ITIL function/process	eTOM level 2 process	How ITIL supports the management of customer services	How ITIL supports the management of internal IT services
Incident management (*cont.*)	S/P support and readiness S/P requisition management S/P problem reporting and management S/P interface management Supply chain development and change management	• Escalation, either internally or externally and either functional or hierarchical, of incident to problem management or other 2nd, 3rd or nth line support organization • The goal of incident management is to return the user to normal service as quickly as possible	
Problem management	SM&O support and readiness Service problem management RM&O support and readiness Resource trouble management S/P problem reporting and management S/P performance management Supply chain development and change management	• Problem management supports the analysis of resource data to look at performance trends identifying potential incidents/ problems before they affect users • Problem management process steps: – Problem identification and recording – Problem classification – Problem investigation and diagnosis – RFC and problem resolution and closure • Escalation, either internally or externally and either functional or hierarchical, of problem to other 2nd, 3rd or nth line support organization	

Table 1 – Comparison of ITIL processes with eTOM level 2 processes

ITIL function/process	eTOM level 2 process	How ITIL supports the management of customer services	How ITIL supports the management of internal IT services
Configuration management	CRM readiness and support Customer QoS/SLA management SM&O support and readiness Service configuration and activation Service problem management Service quality management RM&O support and readiness Resource provisioning Resource trouble management Resource performance management Resource data collection and processing S/P requisition management Product and offer capability delivery Product and offer development and retirement Service strategy and planning Service capability delivery Service development and retirement Resource strategy and planning Resource capability delivery Resource development and retirement Supply chain strategy and management Supply chain development and change management Group enterprise management Asset management Regulatory management	• Maintain the configuration management database (CMDB) so all assets, and their relationship between each other, are known • Configuration management can be viewed as the key ITIL process responsible for maintaining the CMDB which is used by all the other ITIL processes	• The configuration management database can be used to ensure that legal requirements are adhered to; for example, in the UK the Freedom to Information Act and Data Protection Act

Table 1 – Comparison of ITIL processes with eTOM level 2 processes

ITIL function/process	eTOM level 2 process	How ITIL supports the management of customer services	How ITIL supports the management of internal IT services
Change management	SM&O support and readiness RM&O support and readiness Resource provisioning Resource trouble management Product and offer development and retirement Service development and retirement Resource development and retirement Supply chain development and change management	• Manage the changes that occur and inform the configuration manager of any changes made • Acceptance of the RFC, authorization and planning of the change required for the resolution of services • A RFC may be raised as the result of a user request for a new or change in service/ resource or the resolution of a fault in response to an incident/problem	• Filter, approve and manage changes to the current IT services/ infrastructure • Manage any changes introduced (new or improved services); this can be with either an internal IT department or external IT outsourcer/supplier
Release management	SM&O support and readiness Service configuration and activation Service problem management RM&O support and readiness Product and offer capability delivery Product and offer development and retirement Service capability and delivery Service development and retirement Resource capability delivery Resource development and retirement Supply chain strategy and planning Supply chain development and change management	• Manage the implementation of any change • Implementation of any change required for the resolution of services • Policy, planning and development of changes to IT services/infrastructure	• Policy, planning and development of changes to IT services/ infrastructure • Define policy, purchase, test and accept any COTS or bespoke IT hardware or software

Table 1 – Comparison of ITIL processes with eTOM level 2 processes

ITIL function/process	eTOM level 2 process	How ITIL supports the management of customer services	How ITIL supports the management of internal IT services
Service level management	CRM readiness and support Selling Customer QoS/SLA management Retention and loyalty SM&O support and readiness Service quality management RM&O support and readiness Resource data collection and processing S/PRM support and readiness S/P performance management S/P settlements and billing management Product and offer portfolio planning Product and offer capability delivery Product and offer development and retirement Service strategy and planning Service capability delivery Service development and retirement Resource strategy and planning Resource capability delivery Resource development and retirement Supply chain strategy and planning Supply chain capability delivery Supply chain development and change management Audit management Enterprise performance management Technology scanning	• Monitor and maintain required service levels • Develop and maintain the service catalogue so the customers/users are aware of what IT services are available • Manage relationship between IT service management and the customer • Inform the customer of possible service improvements/cost savings • Monitor and analyse if service performance SLA or OLA requirements are met • Monitor, review and report SLA performance • Ensure that the SLA meets customer and user requirements • (Re)negotiate with the customer developing the service level requirements (SLRs) that will form the basis of the SLA, OLA or underpinning contract (this can be with either an internal IT department or external IT outsourcer) • Negotiate with the customer developing the service level requirements (SLRs) that will form the basis of the SLA, OLA or underpinning contract and ensure that they meet business requirements	• Monitor and maintain required service levels, whether the service is provided internally to an OLA or externally via a SLA. • Manage OLAs or underpinning contracts • Monitor, review and report SLA, OLA and underpinning contract performance • Negotiate with the customer developing the service level requirements (SLRs) that will form the basis of the SLA, OLA or underpinning contract, and ensure that they meet business requirements

Table 1 – Comparison of ITIL processes with eTOM level 2 processes

ITIL function/process	eTOM level 2 process	How ITIL supports the management of customer services	How ITIL supports the management of internal IT services
Capacity management	SM&O support and readiness Service quality management RM&O support and readiness Resource provisioning Resource performance management Resource data collection and processing Product and offer portfolio planning Product and offer capability delivery Product and offer development and retirement Service strategy and planning Service capability delivery Service development and retirement Resource strategy and planning Resource capability delivery Resource development and retirement Supply chain development and change management Strategic business planning Enterprise performance management	• Model, monitor and analyse service/resource performance to ensure that capacity is sufficient to meet business needs and SLA or OLA requirements • Technology watch, introduction of new technology to offer new, different and improved services (service quality, availability, capacity and continuity)	• Model, monitor and analyse service/resource performance to ensure that capacity is sufficient to meet business needs and SLA or OLA requirements • Ensure that the service desk meets the requirements of the customer as defined in the SLA or OLA (resourcing both people and equipment) • Technology watch, introduction of new technology to offer new, different and improved services (service quality, availability, capacity and continuity)

Table 1 – Comparison of ITIL processes with eTOM level 2 processes

ITIL function/process	eTOM level 2 process	How ITIL supports the management of customer services	How ITIL supports the management of internal IT services
Availability management	SM&O support and readiness Service quality management RM&O support and readiness Resource performance management Resource data collection and processing Product and offer portfolio planning Product and offer capability delivery Product and offer development and retirement Service strategy and planning Service capability delivery Service development and retirement Resource strategy and planning Resource capability delivery Resource development and retirement Supply chain development and change management Security management Enterprise performance management Technology scanning	• Model, monitor and analyse service/resource performance to ensure that capacity is sufficient to meet business needs and SLA or OLA requirements	• Model, monitor and analyse service/resource performance to ensure that capacity is sufficient to meet business needs and SLA or OLA requirements • Responsible for the implementation of the security policy

Table 1 – Comparison of ITIL processes with eTOM level 2 processes

ITIL function/process	eTOM level 2 process	How ITIL supports the management of customer services	How ITIL supports the management of internal IT services
IT service continuity management	Product and offer capability delivery Product and offer development and retirement Service strategy and planning Service development and retirement Resource development and retirement Supply chain development and change management Business continuity management Regulatory management		• Compliance with any legal requirement with regard to IT service continuity • The IT service continuity plan forms part of the business continuity plan
Financial management for IT services	Billing and collections management SM&O support and readiness Product and offer capability delivery Service strategy and planning Service capability delivery Service development and retirement Resource strategy and planning Resource capability delivery Resource development and retirement Supply chain strategy and planning Supply chain development and change management Financial management Asset management	• Collect monies for the use of the IT service as per the charging model/SLA or OLA	• Budget, account (develop cost model) and charge

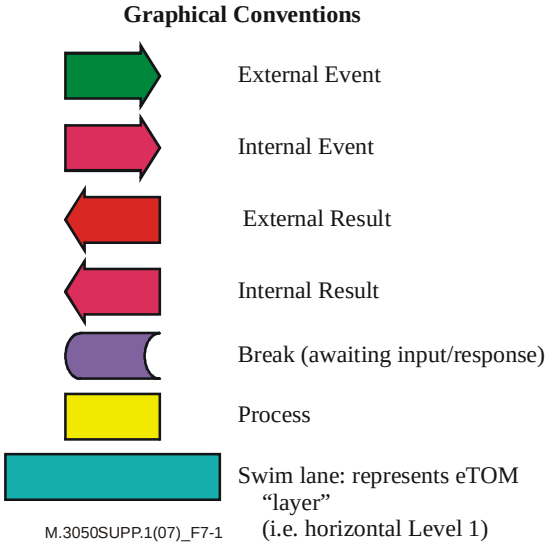
13 Process Flows

This clause contains a detailed representation of how eTOM process elements can support key scenarios for applying ITIL. For each of the ITIL process areas considered (see below), the overall context is described, followed by the descriptions of the scenarios addressed.

Two ITIL areas are addressed in this release of the Supplement:

- Incident management, which is comparable to eTOM assurance. For incident management, two scenarios are considered here.
- Change management, which can arise in a variety of contexts within the enterprise, depending on the choices made by the enterprise on the applicable scope of ITIL for their business. For change management, one scenario is considered here.

13.1 Diagramming conventions



The diagrams show eTOM process elements overlaid on the ITIL incident management process stages, e.g., in incident management, incident detection, and recording, classification and initial support, etc. These ITIL process stages are depicted in "swimlanes" with process flow between eTOM processes indicated by arrows. The process flows may be mandatory, optional or acting continuously. Where an eTOM process is considered to span more than one ITIL process, the eTOM process is stretched in the diagram to cover the swimlanes. For example, in incident management, the eTOM process "survey and analyse resource trouble" is considered to support the ITIL process steps "incident detection and recording", "classification and initial support" and "investigation and diagnosis".

Note that it may be easy to misinterpret what is being portrayed in these diagrams. In the example above, it should not be understood that all the process detail in, say, the eTOM process "survey and analyse resource trouble" is relevant or applicable within the identified ITIL process steps. Rather, the correct interpretation is that some of the defined eTOM process detail can be used to provide the necessary support for the ITIL requirements. To inspect the necessary eTOM process detail, users should consult other parts of the eTOM material outside of this Supplement – in particular, GB921D, which contains process descriptions and other eTOM process detail.

Consideration is currently being given to including some additional outline process detail in a future release of this Supplement, for both the eTOM and ITIL process areas, to assist users in interpreting which aspects of each are relevant when considering their relationship, as documented below.

13.2 Handling ITIL process flows

In defining how ITIL flows can be supported with eTOM process elements, it is necessary to recognize that ITIL provides a view of each of the areas it addresses (such as change management) with the intention of defining how businesses should implement these areas in order to achieve good business results. The details of how this affects individual areas of the business, and the impact on specific process elements within an enterprise-wide process model (such as eTOM represents) is not explicitly defined, but is left for each business to effect in the way it sees as appropriate.

Since eTOM directly addresses this aspect of how individual process areas are defined and used, this means that the requirements, or intentions, of the ITIL flows need to be applied in the eTOM model if we are to realize ITIL using eTOM. In the course of the analysis which has been made on this, it has become clear that this needs to happen at more than one level.

Initially, the ITIL approach for each process flow can be interpreted as setting a corporate approach or policy for the business. In eTOM terms, this would typically be captured within the enterprise management part of the eTOM framework, and can be considered as specializing or customizing the generic eTOM framework to derive an eTOM model that applies or implements ITIL. This policy is then carried through to the rest of the business and would give rise to a set of individual process specializations – which can typically be represented as specific process flows, showing how this policy is used for different circumstances in different parts of the enterprise.

For example, taking ITIL change management, the ITIL guidelines and flow set a policy for handling change within the enterprise that would be absorbed into enterprise effectiveness management within enterprise management. This policy would then feed through to the rest of the business and could be examined by considering individual scenarios for change, each addressing a defined area and type of change, which might involve a wide range of process elements, depending on the actual change concerned. In each case, the principles (i.e., the policy) of ITIL change management would apply but would be implemented using the appropriate process elements for the area of the business that was impacted. As an example, a change affecting product strategy and leading to new or modified products being developed and deployed would involve process elements largely in the upper part of the eTOM framework, across marketing and offer management and customer relationship management (with support, as needed, from underlying process elements elsewhere in SIP and OPS). As another example, a change for a minor bug fix in an IT equipment resource would involve process elements largely in the resource layer of the eTOM framework, across resource development and management, and resource management and operations (again with support from other process elements as appropriate).

It can be seen that further examples could be identified, each based on an individual change scenario and each involving some specific eTOM process elements that would differ from case to case, but all following the approach for change management defined by ITIL.

13.3 Change management

This clause contains a detailed representation of how eTOM process elements support a scenario in ITIL change management. First, the goal of ITIL change management is described, followed by a discussion of change management from the points of view of policy and a specific implementation. Then, a description of the scenario follows with diagrams.

13.3.1 Goal

The goal of change management is to ensure that standardized methods and procedures are used for efficient and prompt handling of all changes, in order to minimize the impact of change-related incidents upon service quality and, consequently, to improve the day-to-day operations of the organization.

13.3.2 Change management as a policy

As noted previously, each of the ITIL disciplines or flows can be considered initially to set a policy for the business which is then applied or implemented throughout the enterprise.

For change management, the ITIL guidelines and flow set a policy for handling change within the enterprise that would be captured within enterprise effectiveness management within enterprise management. The main focus here would be the enterprise quality management (1.E.3.2) level 2, supported by the program and project management (1.E.3.3) level 2.

This policy or approach is then applied in different areas of the eTOM framework depending on the nature of the specific change involved. It is therefore necessary to address this as a series of scenarios or use cases, each of which provides insight into how eTOM can effect ITIL change management for a particular area of change.

For the case of ITIL change management, one scenario is chosen for development although, of course, many other examples could be considered. It is hoped that sufficient insight can be gained from this example that a general message on how eTOM can support ITIL can then be drawn.

13.3.3 Change management applied to specific situations

For the purposes of this analysis, particular eTOM processes have been related to the use of standard change management procedures within the change life-cycle. The swimlanes in the diagrams below are intended to represent these ITIL change management procedures.

13.4 Scenario 1: Change management (software release)

Scenario 1 concerns (low-level) resource change, specifically concerning IT-oriented resources, say for a new software release:

Scenario

A request for change (RFC) is received by the change manager to implement a software release.

Preconditions

RFC is initiated requesting a software release with specific requirements.

Post-conditions

Implemented change or restored infrastructure through back-out plan.

Process steps for change management, based on ITIL

- RFC received.
- Change manager filters the RFC.
- Change manager determines initial priority based on impact and urgency of required change.
- The change is categorized to indicate the type of change (for reporting/tracking).
- The change is categorized to indicate HOW to deal with change (minor, significant, major).
- The change is approved by a change authority.
- The change is scheduled (there is some interaction with release management here).
- The change is 'built'.
- Testing plans are devised.
- A back-out plan is produced to enable the implementation team to revert to known state.
- The change is implemented.

- If there are problems, the change is backed out.
- The change is reviewed to ensure that the desired effect has been achieved.
- The change manager ensures that all documentation has been brought up to date.

Diagrams

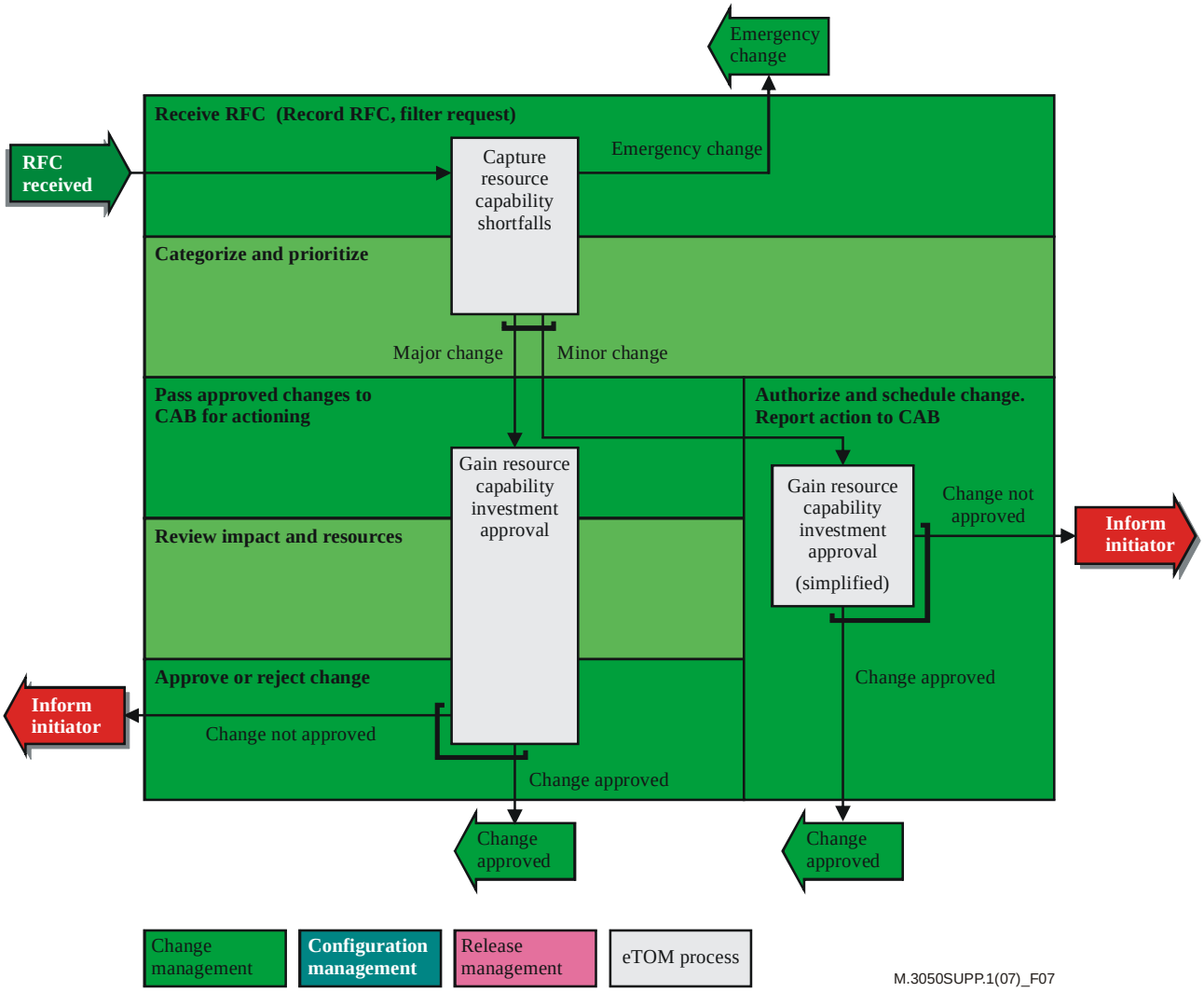


Figure 7 – Change management – Software release (part 1)

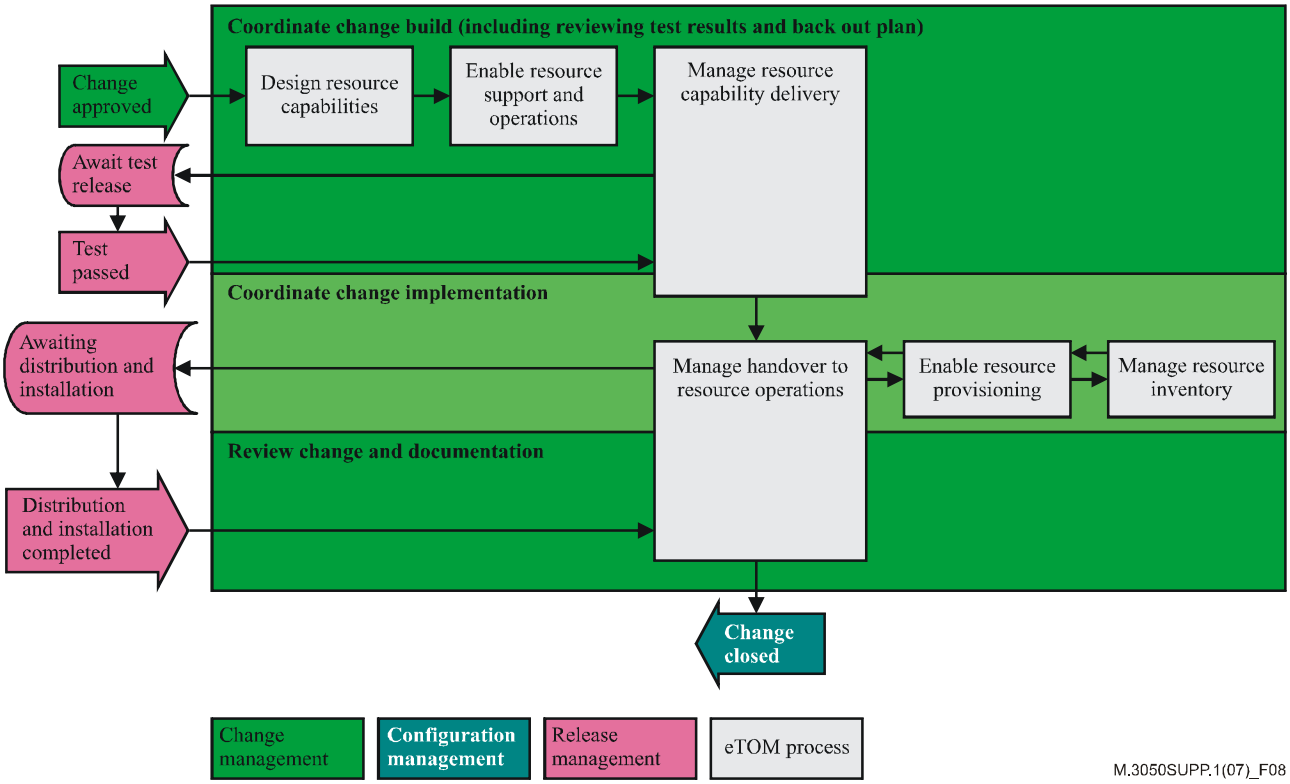


Figure 8 – Change management – Software release (part 2)

13.5 Incident management

13.5.1 Goal

The goal of incident management is to restore normal service operation as quickly as possible with minimum disruption to the business, thus ensuring that the best achievable levels of availability and service are maintained.

13.5.2 Context

An incident is any event which is not part of the standard operation of a service and which causes, or may cause, an interruption to, or a reduction in the quality of, that service. Examples of Incidents are application unavailable, hardware outage and (service) requests for information or assistance.

Incident management is concerned with restoring normal service operation as quickly as possible with minimum disruption to the business, thus ensuring that the best achievable levels of availability and service are maintained.

The service desk is responsible for the monitoring of the resolution process of all registered incidents – in effect, the service desk is the owner of all incidents. To react efficiently and effectively therefore demands a formal method of working that can be supported by software tools.

The scenarios described below address the incident management process in the case of an infrastructure failure and a service request.

For a failure, three sub-cases can be distinguished:

- 1st line support;
- escalation internally; and
- third party.

Often, departments and (specialist) support groups other than the service desk are referred to as second- or third-line support groups, having more specialist skills, time or other resources to solve incidents. The service desk is first-line support. The scenario described here is for the 2nd sub-case, where an incident cannot be resolved by the service desk and is referred to another support group within the organization. This scenario has aspects similar to eTOM assurance.

13.6 Scenario 1: Incident management (infrastructure failure, internal escalation)

An incident is received by the service desk and is transferred to a second-line support group, possibly because more detailed attention is required, or to bring in particular expertise, or because the incident cannot be resolved quickly enough – this is termed 'functional escalation'.

13.6.1 Preconditions

- Details of incident.
- Configuration details.

13.6.2 Post-conditions

- Updated incident record.

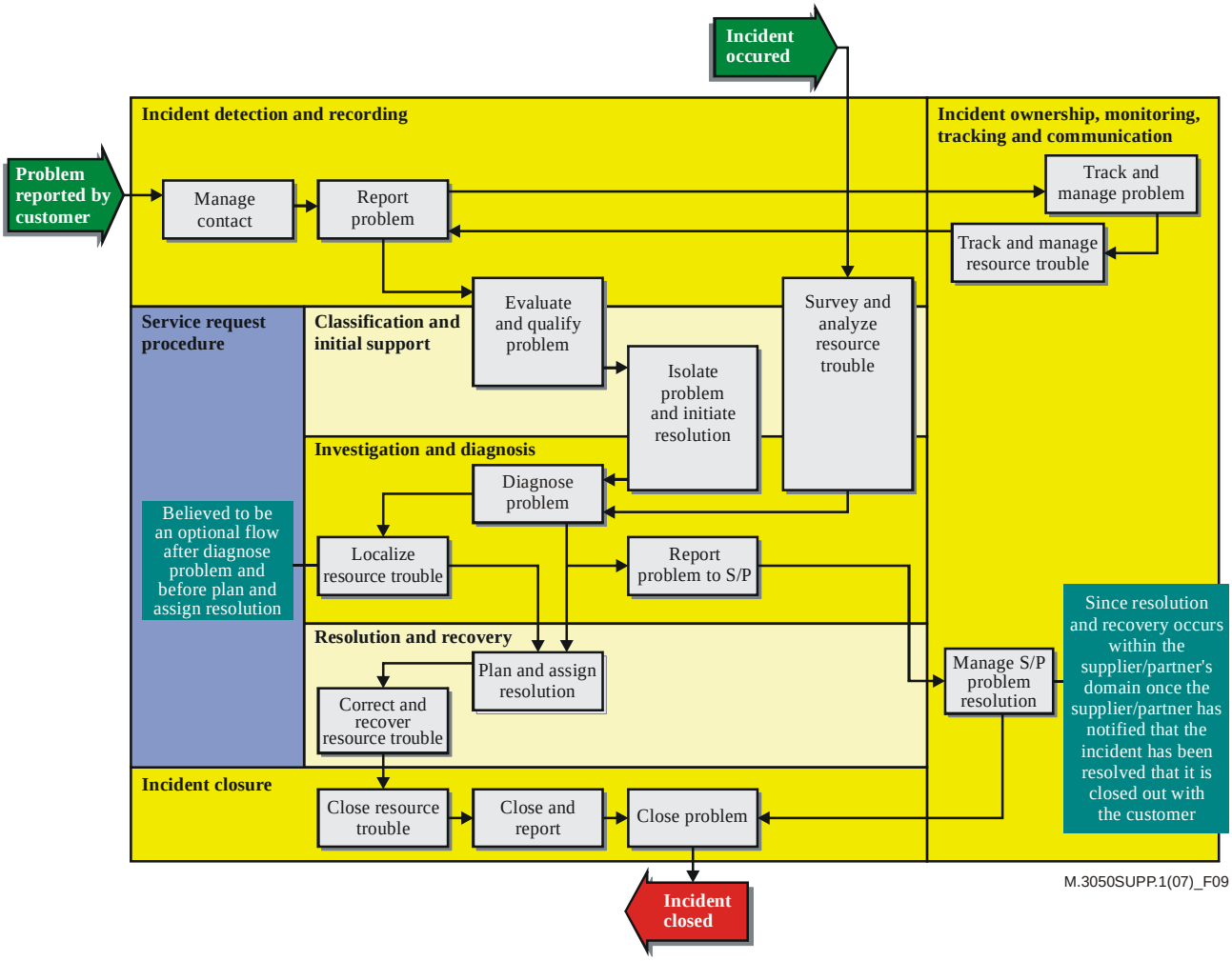


Figure 9 – Incident management – Infrastructure failure (internal escalation)

13.7 Scenario 2: Incident management service request (standard pre-approved changes)

An incident is received by the service desk. It is classified as a service request for a standard pre-approved change. This means that the service request does not require authorization or ITIL change management and is well-understood, requiring the implementation of a specified series of steps and procedures. This scenario has aspects similar to eTOM fulfilment.

13.7.1 Preconditions

- Details of incident.
- Configuration details.

13.7.2 Post-conditions

- Updated incident record.

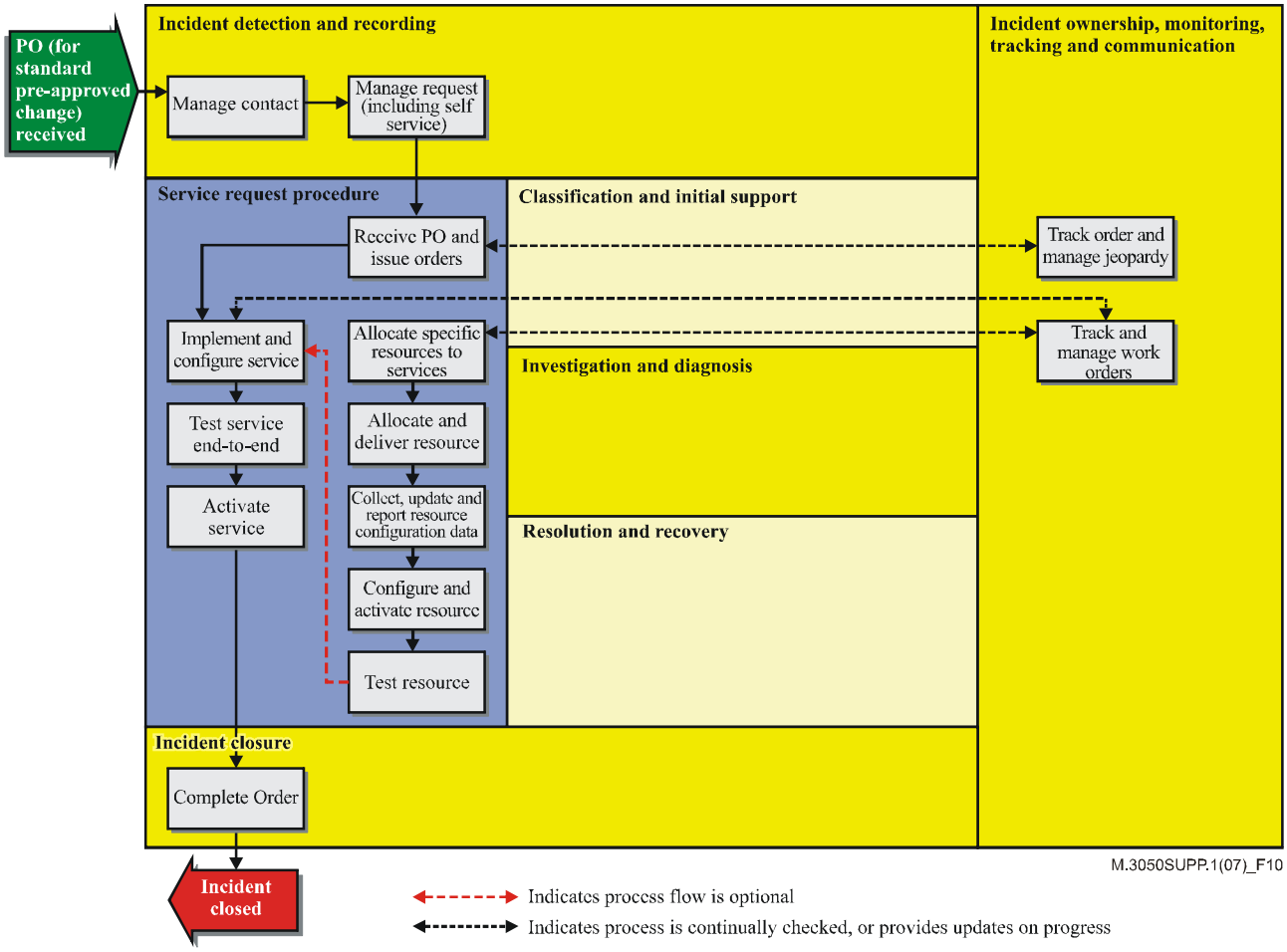


Figure 10 – Incident management service request (standard pre-approved changes)

14 Next steps and other issues

14.1 Further work

The eTOM team has established a method and diagramming technique for the analysis and representation of ITIL processes, with an application of these to incident management and change management. It is proposed to extend this analysis and representation to the other ITIL processes for service support and service delivery.

14.2 Standards for IT service management (BS15000, AS8018, ISO20000 international standard)

The best-practice processes promoted in ITIL both support and are supported by the British Standards Institution's standard for IT Service Management (BS15000). The Australian standard, AS8018, is based upon BS15000 and has a different foreword. Notably it is described as a standard for ICT service management, as distinct from an IT service management standard.

The BSI management overview (PD0005), BS15000-1 (specification for service management), BS15000-2 (code of practice for service management) and the ITIL series form part of the same logical structure. The BSI management overview serves as a management introduction to the detailed guidance in ITIL, and correspondingly, the individual ITIL books offer expanded information and guidance on the subjects addressed within BS15000.

The scope of service management in BS15000 is categorized into service delivery processes, release processes, resolution processes, relationship processes and control processes. Incident management is within resolution processes and, generally, the ITIL processes are a subset of those in BS15000.

ITIL is slated to be adopted by ISO in 2005 as ISO/IEC 20000-1/2:2005.

14.3 itSMF

Contact between the TMF and itSMF has taken place on an earlier document relating eTOM and ITIL [b-TMF GB921L]; further contact is ongoing between the organizations in order to develop the description of the relationship and linkages to the mutual benefit of both communities.

14.3.1 Certification

A formal certification scheme for BS15000 is now in place; the scheme is owned by the itSMF and operated by independent auditors. A similar arrangement is in place in Australia. Six companies worldwide were certified to some extent by September 2004.

14.3.2 ITIL in the international context

Industry analysts such as Gartner speculate that ITIL will be considered or adopted by most companies worldwide by 2006.

Annex A

eTOM and ITIL terminology

(This annex forms an integral part of this Supplement)

When mapping between eTOM and ITIL, it is important to understand the meanings of the different terms that are used in each framework. This annex sets out some of the ITIL terms and their definitions and aims to provide equivalent eTOM terms (taken from TM Forum document TMF044 version 2). Many of the ITIL terms have no eTOM equivalence and are included for completeness.

ITIL term	**Alert**: Warning that an incident has occurred.
eTOM equivalent term	**Alarm**: An alerting indication of a condition that may have immediate or potential negative impact on the state of service resources, e.g., network element, application, system, etc.
ITIL term	**Asset**: Component of a business process. Assets can include people, accommodation, computer systems, networks, paper records, fax machines, etc.
eTOM equivalent term	**Resource**: Resources represent physical and non-physical components used to construct services. They are drawn from the application, computing and network domains, and include, for example, network elements, software, IT systems and technology components.
ITIL term	**Availability**: Ability of a component or service to perform its required function at a stated instant or over a stated period of time. It is usually expressed as the availability ratio, i.e., the proportion of time that the service is actually available for use by the customers within the agreed service hours.
eTOM equivalent term	**Availability performance**: The ability of an item to be in the state to perform a required function at a given instant of time or at any instant of time within a given time interval, assuming that the external resources, if required, are provided. Note that this ability depends on the combined aspects of the reliability performance, the maintainability performance and the maintenance support performance of an item. In the definition of the item, the external resources required must be delineated. The term availability is used as an availability performance. **Service availability**: A measure of the fraction of time during a defined period when the service provided is deemed to be better than a defined QoS threshold. SA is measured in the context of a SLA between the customer and the service provider concerned. It is expressed as a percentage (SA%) to indicate the time during which the contracted service (e.g., SVCs, PVCs, end-to-end circuits including protocols, applications, etc.) at the respective SAPs is operational. Operational means that the customer has the ability to use the service as specified in the SLA (TMF 701 modified).
Comment	Within ITIL the concept of availability covers both eTOM terms.
ITIL term	**Baseline**: A snapshot or a position which is recorded. Although the position may be updated later, the baseline remains unchanged and available as a reference of the original state and as a comparison against the current position (PRINCE2).
eTOM equivalent term	*(awaiting further analysis)*
Comment	Before a service/resource can be configured to deliver a new, or improve a product/service/resource, the current status of the services/resources must be understood.
ITIL term	**Baselining**: Process by which the quality and cost-effectiveness of a service is assessed, usually in advance of a change to the service. Baselining usually includes comparison of the service before and after the change or analysis of trend information. The term benchmarking is usually used if the comparison is made against other enterprises.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Business process**: A group of business activities undertaken by an organization in pursuit of a common goal. Typical business processes include receiving orders, marketing services, selling products, delivering services, distributing products, invoicing for services, accounting for money received. A business process usually depends upon several business functions for support, e.g., IT, personnel and accommodation. A business process rarely operates in isolation, i.e., other business processes will depend on it and it will depend on other processes.

eTOM equivalent term **Business process**: Activities that a business can engage in (and for which it would generally want one or more partners). A business process is formally recorded in XML form conforming to the business process specification schema but may also be modelled in UML.

ITIL term **Category**: Classification of a group of configuration items, change documents or problems.

eTOM equivalent term *(awaiting further analysis)*

Comment The eTOM does not have the concept of the CMDB in ITIL. In order to understand the relationship between configuration items held within the CMDB, the configuration items are assigned to categories (i.e., router, switch, service).

ITIL term **Change**: The addition, modification or removal of approved, supported or baselined hardware, network, software, application, environment, system, desktop build or associated documentation.

eTOM equivalent term *(awaiting further analysis)*

Comment ITIL provides a ridged framework within which change is controlled.

ITIL term **Change authority**: A group that is given the authority to approve change, e.g., by the project board. Sometimes referred to as the configuration board.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Change control**: The procedure to ensure that all changes are controlled, including the submission, analysis, decision-making, approval, implementation and post-implementation of the change.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Change document**: Request for change, change control form, change order, change record.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Change history**: Auditable information that records, for example, what was done, when it was done, by whom and why.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Charging**: The process of establishing charges in respect of business units, and raising the relevant invoices for recovery from customers.

eTOM equivalent term *(awaiting further analysis)*

Comment The billing engine/charging mechanism by which customers are charged for services.

ITIL term **Classification (configuration management)**: Process of formally grouping configuration items by type, e.g., software, hardware, documentation, environment, application.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Classification (change management)**: Process of formally identifying changes by type, e.g., project scope change request, validation change request, infrastructure change request.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Classification (problem management)**: Process of formally identifying incidents, problems and known errors by origin, symptoms and cause.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Closure**: When the customer is satisfied that an incident has been resolved.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Configuration baseline**: Configuration of a product or system established at a specific point in time, which captures both the structure and details of the product or system, and enables that product or system to be rebuilt at a later date.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Configuration control**: Activities comprising the control of changes to configuration items after formally establishing its configuration documents. It includes the evaluation, coordination, approval or rejection of changes. The implementation of changes includes changes, deviations and waivers that impact on the configuration.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Configuration documentation**: Documents that define requirements, system design, build, production and verification for a configuration item.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Configuration identification**: Activities that determine the product structure, the selection of configuration items, and the documentation of the configuration item's physical and functional characteristics including interfaces and subsequent changes. It includes the allocation of identification characters or numbers to the configuration items and their documents. It also includes the unique numbering of configuration control forms associated with changes and problems.

eTOM equivalent term *(awaiting further analysis)*

Comment System/network auditing.

ITIL term **Configuration item (CI)**: Component of an infrastructure – or an item, such as a request for change, associated with an infrastructure – which is (or is to be) under the control of configuration management. CIs may vary widely in complexity, size and type – from an entire system (including all hardware, software and documentation) to a single module or a minor hardware component.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Configuration management database (CMDB)**: A database which contains all relevant details of each CI and details of the important relationships between CIs.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Configuration structure**: A hierarchy of all the CIs that comprise a configuration.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Contingency planning**: Planning to address unwanted occurrences that may happen at a later time. Traditionally, the term has been used to refer to planning for the recovery of IT systems rather than entire business processes.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Continuous service improvement programme**: An ongoing formal programme undertaken within an organization to identify and introduce measurable improvements within a specified work area or work process.

eTOM equivalent term *(awaiting further analysis)*

Comment Would be part of the SIP processes, for example, PLM.

ITIL term **Customer**: Recipient of the service; usually the customer management has responsibility for the cost of the service, either directly through charging or indirectly in terms of demonstrable business need.

eTOM equivalent term **Customer**: The term customer refers to companies or organizations that buy products and services from the enterprise or receive free offers or services. A customer may be a person or a business.

The customer is the ultimate buyer of a network service, but the end user may or may not be the one who pays for the service.

ITIL term	**Differential charging**: Charging business customers different rates for the same work, typically to dampen demand or to generate revenue for spare capacity. This can also be used to encourage off-peak or night-time running.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Downtime**: Total period that a service or component is not operational, within agreed service times.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**End user**: See 'user'.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**First-line support**: Service desk call logging and resolution (on agreed areas, for example, MS Word).
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Function**: The actions of intended purpose of a person, team or thing in a specific role. Service Management functions may be considered as high-level business activities, often with a broad scope and associated with a particular job, consisting of a collection of lower level activities. The characteristics of a function are that it is continuous and represents a defining aspect of the business enterprise. It is usually associated with more than one process and contributes to the execution of those processes. Rarely do (or should) functions mirror the organizational structure
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**ICT**: The convergence of Information Technology, Telecommunications and Data Networking Technologies into a single technology.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Impact**: Measure of the business criticality of an incident. Often equal to the extent to which an incident leads to distortion of agreed or expected Service Levels.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Impact analysis**: The identification of critical business processes, and the potential damage or loss that may be caused to the organization resulting from a disruption to those processes.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Incident**: Any event which is not part of the standard operation of a service and which causes, or may cause, an interruption to, or a reduction in, the quality of that service.
eTOM equivalent term	**Fault**: The inability of an item to perform a required function, excluding that inability due to preventive maintenance, lack of external resources or planned actions. Note that a fault is often the result of a failure of the item itself, but may exist without prior failure.
ITIL term	**Incident control**: The process of identifying, recording, classifying and progressing incidents until affected services return to normal operation.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Information systems (ISs)**: The means of delivering information from one person to another; ICT is the technical apparatus for doing so.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**IT service**: A described set of facilities, IT and non-IT, supported by the IT service provider that fulfils one or more needs of the customer and that is perceived by the customer as a coherent whole.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**IT service provider**: The role of IT service provider is performed by any organizational units, whether internal or external, that deliver and support IT services to a customer.
eTOM equivalent term	*(awaiting further analysis)*

ITIL term	**Key business drivers**: The attributes of a business function that drive the behaviour and implementation of that business function in order to achieve the strategic business goals of the company.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Key performance indicator**: A measurable quantity against which specific performance criteria can be set when drawing up the SLA.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Key success indicator**: A measurement of success or maturity of a project or process.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Knowledge management**: Discipline within an organization that ensures that the intellectual capabilities of an organization are shared, maintained and institutionalized.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Known error**: An incident or problem for which the root cause is known and for which a temporary work-around or a permanent alternative has been identified. If a business case exists, an RFC will be raised, but, in any event, it remains a known error unless it is permanently fixed by a change.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Metric**: Measurable element of a service process or function.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Operational level agreement (OLA)**: An internal agreement covering the delivery of services which support the IT organization in its delivery of services.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Operations**: All activities and measures to enable and/or maintain the intended use of the ICT infrastructure.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Outsourcing**: The process by which functions performed by the organization are contracted out for operation, on the organization's behalf, by third parties.
eTOM equivalent term	**Outsourcing**: Outsourcing is when an enterprise contracts out one or more of its internal processes and/or functions to an outside company. Outsourcing moves enterprise resources to an outside enterprise and keeping a retained capability to manage the relationship with the outsourced processes.
ITIL term	**Performance criteria**: The expected levels of achievement which are set within the SLA against specific key performance indicators.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Priority**: Sequence in which an incident or problem needs to be resolved, based on impact and urgency.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Problem**: Unknown underlying cause of one or more incidents.
eTOM equivalent term	**Fault**: The inability of an item to perform a required function, excluding that inability due to preventive maintenance, lack of external resources or planned actions. Note that a fault is often the result of a failure of the item itself, but may exist without prior failure. **Trouble**: The perception of a fault or degradation that is judged to require maintenance. **Failure**: The termination of the ability of an item to perform a required function. Note that after a failure, the item has a fault.

ITIL term	**Process**: A connected series of actions, activities, changes, etc., performed by agents with the intent of satisfying a purpose or achieving a goal.
eTOM equivalent term	**Process**: A process describes a systematic, sequenced set of functional activities that deliver a specified result. In other words, a process is a sequence of related activities or tasks required to deliver results or outputs.
ITIL term	**Process control**: The process of planning and regulating, with the objective of performing the process in an effective and efficient way.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Quality of service**: An agreed or contracted level of service between a service customer and a Service Provider.
eTOM equivalent term	**Quality of service**: The collective effect of service performances which determine the degree of satisfaction of a user of the service. Note that the quality of service is characterized by the combined aspects of service support performance, service operability performance, service integrity and other factors specific to each service.
ITIL term	**Request for change (RFC)**: Form, or screen, used to record details of a request for a change to any CI within an infrastructure or to procedures and items associated with the infrastructure.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Resolution**: Action which will resolve an incident. This may be a work-around.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Resources**: The IT services section needs to provide the customers with the required services. The resources are typically computer and related equipment, software, facilities or organizational (people).
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Risk reduction measure**: Measures taken to reduce the likelihood or consequences of a business disruption occurring (as opposed to planning to recover after a disruption).
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Second-line support**: Where the fault cannot be resolved by first-line support or requires time to be resolved or local attendance.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Service**: One or more IT systems which enable a business process.
eTOM equivalent term	**Service**: Services are developed by a service provider for sale within products. The same service may be included in multiple products, packaged differently, with different pricing, etc. A telecommunication service is a set of independent functions that are an integral part of one or more business process(es). This functional set consists of the hardware and software components as well as the underlying communications medium. The customer sees all of these components as an amalgamated unit.
ITIL term	**Service achievement**: The actual service levels delivered by the IT organization to a customer within a defined life span.
eTOM equivalent term	*(awaiting further analysis)*
ITIL term	**Service catalogue**: Written statement of IT services, default levels and options.
eTOM equivalent term	*(awaiting further analysis)*
Comment	Product catalogue?

ITIL term **Service desk**: The single point of contact within the IT organization for users of IT services.

eTOM equivalent term **Customer contact point**: A physical or conceptual point at which a service provider can interact with any customer of the offered service for the purpose of maintaining communication services.

ITIL term **Service level**: The expression of an aspect of a service in definitive and quantifiable terms.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Service level agreement (SLA)**: Written agreement between a service provider and the customer(s) that documents agreed service levels for a service.

eTOM equivalent term *Service level agreement (SLA)*: A formal negotiated agreement between two parties, sometimes called a service level guarantee. It is a contract (or part of one) that exists between the service provider and the customer, designed to create a common understanding about services, priorities, responsibilities, etc.

ITIL term **Service management**: Management of services to meet the customer's requirements.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Service provider**: Third-party organization supplying services or products to customers.

eTOM equivalent term **Information and communications service provider (ICSP)**: A company or organization that provides telecommunication services as a business. SPs may operate networks, or they may simply integrate the services of other providers in order to deliver a total service to their customers. Providing a telecommunication service to any one end customer may involve multiple SPs, where one provider may "sub-contract" with other providers to fulfil the customer's needs.

The term service provider is now being used generically and may include telecom service providers (TSPs), Internet service providers (ISPs), application service providers (ASPs) and other organizations that provide services, e.g., internal IT organizations that need or have SLA capabilities or requirements.

ITIL term **Service request**: Every incident not being a failure in the IT Infrastructure.

eTOM equivalent term **Customer order**.

ITIL term **Services**: The deliverables of the IT services organization as perceived by the customers; the services do not consist merely of making computer resources available for customers to use.

eTOM equivalent term *Products*: Services are developed by a service provider for sale within products. The same service may be included in multiple products, packaged differently, with different pricing, etc.

A telecommunication service is a set of independent functions that are an integral part of one or more business processes. This functional set consists of the hardware and software components as well as the underlying communications medium. The customer sees all of these components as an amalgamated unit.

ITIL term **System**: An integrated composite that consists of one or more of the processes, hardware, software, facilities and people, that provides a capability to satisfy a stated need or objective.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Third-line support**: Where specialists' skills (e.g., development/engineer) or contracted third-party support is required.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Third-party supplier**: An enterprise or group, external to the customer's enterprise, which provides services and/or products to that customer's enterprise.

eTOM equivalent term **Third-party service provider**: The third-party service provider provides services to the enterprise for integration or bundling as an offer from the enterprise to the customer. Third-party service providers are part of an enterprise's seamless offer. In contrast, a complementary service provider is visible in the offer to the enterprise's customer, including having customer interaction.

ITIL term **Urgency**: Measure of the business criticality of an incident or problem based on the impact and the business needs of the customer.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **User**: The person who uses the service on a day-to-day basis.

eTOM equivalent term **End user**: The end user is the actual user of the products or services offered by the enterprise. The end user consumes the product or service.

ITIL term **Work-around**: Method of avoiding an incident or problem, either from a temporary fix or from a technique that means the customer is not reliant on a particular aspect of the service that is known to have a problem.

eTOM equivalent term *(awaiting further analysis)*

ITIL term **Workloads**: In the context of capacity management modelling, a set of forecasts which detail the estimated resource usage over an agreed planning horizon. Workloads generally represent discrete business applications and can be further subdivided into types of work (interactive, timesharing, batch).

eTOM equivalent term *(awaiting further analysis)*

Annex B

Correlation table eTOM/ITIL incident management

(This annex forms an integral part of this Supplement)

Legend: Strong correlation | Medium correlation | Low correlation

	Incident management
Supply chain development and management (SCD&M) processes	
Supply chain capability delivery (SCD&M – ILM)	
Manage the tender process (SCD&M – ILM)	
Customer relationship management (CRM) processes	
Customer interface management (CRM – FAB)	
Selling (CRM – F)	
Order handling (CRM – F)	
Receive PO and issue orders	
Track order and manage jeopardy	
Complete order	
Problem handling (CRM – A)	
Isolate problem and initiate resolution	
Report problem	
Track and manage problem	
Close problem	
Customer QoS/SLA management (CRM – A)	
Retention and loyalty (CRM – FAB)	
Service management and operations processes (SM&O)	
Service configuration and activation (SM&O – F)	
Track and manage work orders	
Service problem management (SM&O – A)	
Evaluate and qualify problem	
Diagnose problem	
Plan and assign resolution	
Track and manage resolution	
Close and report	
Resource management and operations (RM&O) processes	
Resource provisioning (RM&O – F)	
Configure and activate resource (RM&O – F)	
Resource trouble management (RM&O – A)	
Survey and analyse resource trouble (RM&O – A)	
Localize resource trouble (RM&O – A)	

Correct and recover resource trouble (RM&O – A)	
Track and manage resource trouble (RM&O – A)	
Close resource trouble (RM&O – A)	
Resource performance management (RM&O – A)	
Supplier/partner relationship management (S/PRM) processes	
S/PRM operations support and readiness (S/PRM – OSR)	
Support S/P performance management	
S/P requisition management (S/PRM – F)	
S/P problem reporting and management (S/PRM – A)	
Report problem to S/P	
Receive and notify problem from S/P	
Manage S/P problem resolution	
S/P interface management (S/PRM – FAB)	
Manage S/P requests (including self-service)	
Analyse and report S/P interactions	

Annex C

A combined eTOM and ITIL process approach

(This annex forms an integral part of this Supplement)

C.1 Customer-oriented business view

A combined eTOM-ITIL approach represents an opportunity to ICSPs and, more specifically, for their service delivery workforce to learn about a process standard being used by their enterprise customers in their strategic business environment. The business value this could deliver can be articulated as follows:

Focused customer communication: Using the same process jargon as being used by enterprises to communicate details around service delivery in an IT environment will facilitate and improve the communication between ICSPs and their respective enterprise customers.

Improved service offering: Being able to communicate on the same wavelength with their respective enterprise customers will allow ICSPs to extend their comprehension on service requirements hereby being able to customize services to particular business requirements.

Customer satisfaction: Speaking the same business process language and being able to deliver services that are addressing the customer requirements will improve customer satisfaction.

The high level layout of an eTOM-ITIL combined process environment and the interaction between the two is shown in Figure C.1 below.

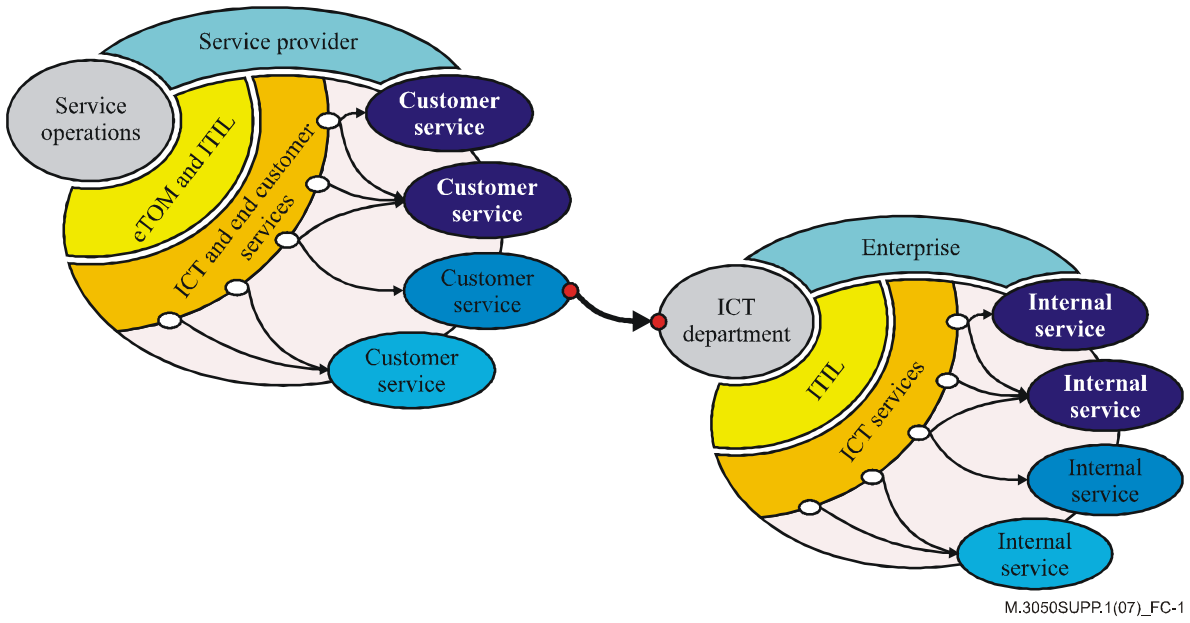


Figure C.1 – Value of an eTOM-ITIL combined process environment

The interaction between the ICSP and enterprise customer will be partially based on ITIL while the actual service delivery process is eTOM framed. The service operations activities will be based upon the eTOM framework where ITIL could deliver components to constitute the actual end-to-end eTOM process.

The enterprise company will be able to continue to use ITIL and also has the business process framework supporting the ICT department in the internal delivery of services. It will be the mapped approach of eTOM-ITIL at the ICSP level that will assure customer communication transparency.

C.2 ICSP internal-oriented business view

A combined eTOM-ITIL business process framework gives an opportunity to service providers to use the best of both worlds to strengthen and/or constitute a strategic business process environment. This by using:

- eTOM's business perspective and wide scope.
- ITIL's details and process best practice definitions.

Both process frameworks are complementary to each other and can deliver incremental value to the process standardization efforts.

A combined eTOM-ITIL approach will streamline and consolidate separate process environments, thereby creating an opportunity to identify redundant areas and opportunities for process improvement. In summary, the benefits could be articulated as follows:

- OPEX optimization: Redundant functions could be consolidated and integrated, thereby reducing the cost of process operations.
- Clarity on process strategy: A clear strategy on business process frameworks will minimize and even avoid disputes between departments and process verticals.
- Process environment complexity reduction: An integration of two process environments into one horizontal process layout will remove vertical process boundaries and eliminate the need for unnecessary interactions with dispersed process building blocks being part of a split process environment. Also the re-usability of standard process building blocks will reduce the necessity to develop ad hoc process building blocks.
- Clearer communication: Simplified and reduced number of measurement points will improve the communication with the ICSP's executive management around service delivery and process performance metrics.

Figure C.2 below shows from a high level viewpoint the advantages of a split versus combined process environment as articulated above.

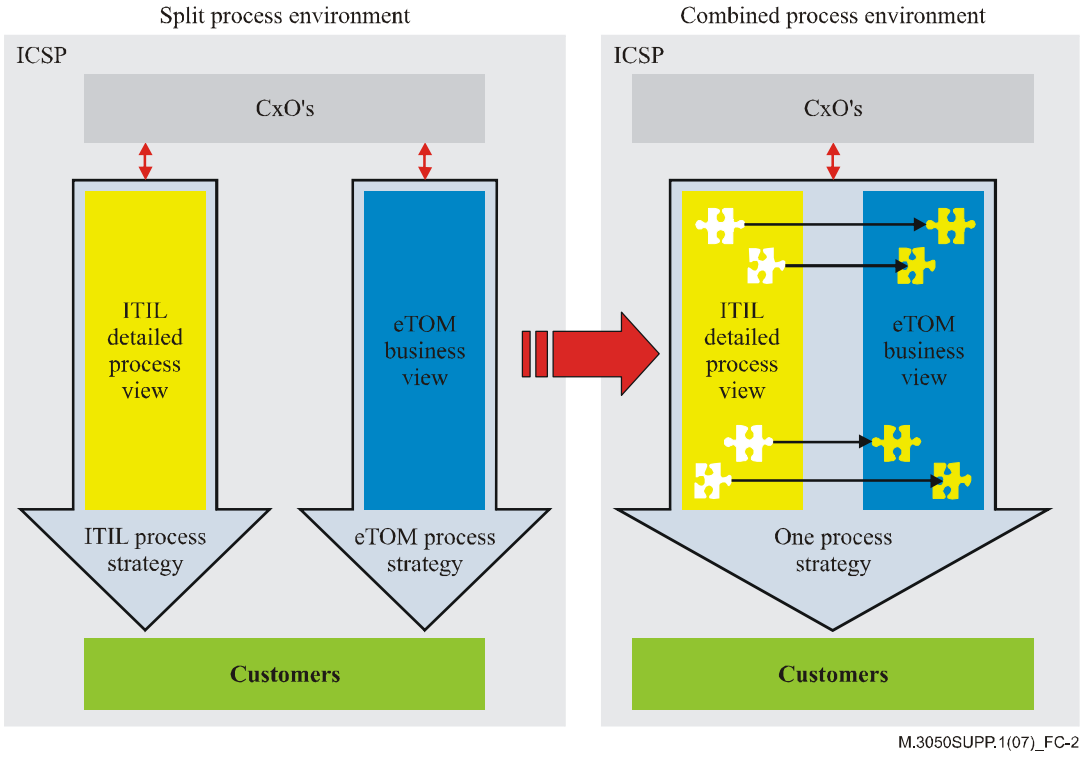


Figure C.2 – Split versus combined process environment

Simpler and clearer communication with the executive management and being able to deliver metrics that really matter for the strategic directions of the ICSP company will increase the importance of a combined and standard-based process environment.

A combined process strategy will improve customer engagements around service delivery and will create a good foundation to address the future process requirements for the next generation networks and services.

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