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SERIES M: TELECOMMUNICATION MANAGEMENT,
INCLUDING TMN AND NETWORK MAINTENANCE

Telecommunications management network

Enhanced Telecom Operations Map (eTOM) – The business process framework

ITU-T Recommendation M.3050.1

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International transmission systems	M.300–M.559
International telephone circuits	M.560–M.759
Common channel signalling systems	M.760–M.799
International telegraph systems and phototelegraph transmission	M.800–M.899
International leased group and supergroup links	M.900–M.999
International leased circuits	M.1000–M.1099
Mobile telecommunication systems and services	M.1100–M.1199
International public telephone network	M.1200–M.1299
International data transmission systems	M.1300–M.1399
Designations and information exchange	M.1400–M.1999
International transport network	M.2000–M.2999
Telecommunications management network	M.3000–M.3599
Integrated services digital networks	M.3600–M.3999
Common channel signalling systems	M.4000–M.4999

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ITU-T Recommendation M.3050.1

Enhanced Telecom Operations Map (eTOM) – The business process framework

Summary

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

This Recommendation contains the main body of the eTOM business process framework.

Source

ITU-T Recommendation M.3050.1 was approved on 29 March 2007 by ITU-T Study Group 4 (2005-2008) under the ITU-T Recommendation A.8 procedure.

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).

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FOREWORD

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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.

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CONTENTS

Page

1	Scope	1
2	References.....	1
3	Definitions	2
4	Abbreviations and acronyms	5
5	Introduction	8
5.1	Purpose of the business process framework.....	8
5.2	What is the eTOM?	9
5.3	eTOM is more than one document	13
5.4	Using this Recommendation.....	13
5.5	Intended audience	14
5.6	Benefits of using the eTOM framework.....	15
6	The eTOM business process framework	15
6.1	Core eTOM single enterprise viewpoint	16
6.2	External interactions	30
6.3	Process flow modelling approach.....	32
6.4	Summary.....	32
7	The emergence of e-business within the ICT market	33
7.1	What is e-business?	33
7.2	Implications of e-business for service providers	34
7.3	An e-business reference model.....	35
Annex A	– eTOM concepts	38
A.1	Overview	38
A.2	Business concepts.....	38
A.3	End-to-end process flow concepts.....	41
Appendix I	– TM Forum NGOSS and eTOM	45
Bibliography		47

Introduction

The Enhanced Telecom Operations Map® is an ongoing TM Forum initiative to deliver a business process model or framework for use by service providers and others within the telecommunication industry. The TM Forum Enhanced Telecom Operations Map (or eTOM for short) describes all 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. For such companies, it serves as the blueprint for process direction and provides a neutral reference point for internal process re-engineering needs, partnerships, alliances and general working agreements with other providers. For suppliers, eTOM outlines potential boundaries of software components to align with the customers' needs and highlights the required functions, inputs and outputs that must be supported by products.

A particular strength of eTOM as a business process framework is that it is part of the TM Forum NGOSS (New Generation Operations Systems and Software) program and links with other work under way in NGOSS.

The eTOM work has built on and enhanced the previous TM Forum Telecom Operations Map, and eTOM sets a vision for the industry to enable it to compete successfully through the implementation of business-process driven approaches to managing the enterprise. This includes ensuring integration of all vital enterprise support systems concerned with service delivery and support. The focus of the eTOM framework is on the business processes used by service providers, the linkages between these processes, the identification of interfaces, and the use of customer, service, resource, supplier/partner and other information by multiple processes.

From the highest enterprise-wide level, the eTOM framework defines a business process framework using hierarchical decomposition to structure the business processes. The process descriptions, and their relationship, as well as other key elements are defined. The eTOM framework represents the whole of a service provider's enterprise environment and is defined as generically as possible so that it is organization-, technology- and service-independent.

The eTOM business process framework can be used as a tool for analysing an organization's existing processes and for developing new processes. Different processes delivering the same business functionality can be identified, duplication eliminated, gaps revealed, new process design speeded up, and variance reduced. Using the eTOM framework, the value, cost and performance of individual processes within an organization can be assessed.

Relationships with suppliers and partners can be facilitated by identifying and categorizing the processes used in interactions. In a similar manner, the all-important customer relationship processes can be identified and an evaluation made on whether they are functioning as required to meet customers' expectations.

This version of the eTOM business process framework (GB921 Release 7.0), extends the previous GB921 Release 6.0 with new process detail (in GB921D), and new material on Guidelines for eTOM Users (GB921U), and examples of Real World Case Studies in applying eTOM (GB921R). It also includes some updates on the Addendum for B2B working (GB921B).

ITU-T Recommendation M.3050.1

Enhanced Telecom Operations Map (eTOM) – The business process framework

1 Scope

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

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

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

Additional parts will be published as material becomes available.

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

This Recommendation contains the main body of the eTOM business process framework. The eTOM business process framework is a reference framework for categorizing all the business activities that a service provider will use. This is done through definition of each area of business activity, in the form of process components or process elements that can be decomposed to expose progressive detail. These process elements can then be positioned within a model to show organizational, functional and other relationships, and can be combined within process flows that trace activity paths through the business.

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*.
- [ITU-T M.3400] ITU-T Recommendation M.3400 (2000), *TMN management functions*.

3 Definitions

This Recommendation defines the following terms:

3.1 complementary provider: The complementary provider provides additional products and services to extend the attractiveness of an enterprise's products and services and the scope of its value network. Frequently, these products and services are co-branded.

3.2 customer: The customer buys products and services from the enterprise or receives free offers or services. A customer may be a person or a business.

3.3 customer operations process: A customer operations process is an end-to-end process that focuses totally on directly supporting customer needs, i.e., fulfilment, assurance or billing. It may be initiated by the customer or be initiated by the service provider.

3.4 e-business: e-business includes the Internet presence and buy and sell transactions over digital media of e-commerce. It also includes the integration of front- and back-office processes and applications to provide support and bill for the product or service. For the eTOM framework it is even more expansive. e-business is the integration of traditional business models and approaches with e-business opportunities.

3.5 e-commerce: e-commerce is Internet presence and business buying and selling transactions over digital media.

3.6 end-to-end process flow: End-to-end process flow includes all sub-processes and activities and the sequence required to accomplish the goals of the process. Note that the top-level views of the eTOM framework do NOT show end-to-end process flow since there is no indication of sequence. The eTOM framework shows end-to-end process groupings (see definition below).

The end-to-end customer processes recognized in the eTOM framework are generic sequences of activities that need to occur in the enterprise to achieve desired results (i.e., they are not specific to a particular ICSP business, product, channel or technology).

The eTOM framework does not direct or constrain the way end-to-end processes can be implemented, rather it only guides the definition of standardized process elements to be used within the enterprise. In this way, process elements can be assembled for a specific service provider's end-to-end process requirement. The eTOM framework does not mandate a single way in which the process elements should be organized or sequenced to create end-to-end processes.

3.7 end-to-end process grouping: The top-level view of the eTOM framework shows end-to-end process groupings. At this level of the process framework, flow is not appropriate. However, these groupings represent processes that have end-to-end results that are key measures for the enterprise.

Also termed as vertical process grouping(s).

3.8 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. See also subscriber definition below.

3.9 enterprise: Enterprise is used to refer to the overall business, corporation or firm, which is using the eTOM framework for modelling its business processes. The enterprise is responsible for delivering products and services to the customer. It is assumed that the enterprise is an information and communications service provider (see ICSP definition below).

3.10 enterprise management process grouping: This process grouping involves the knowledge of enterprise-level actions and needs, and encompasses all business management functionalities necessary to support the operational processes, which are critical to run a business in a competitive market. These are sometimes thought of as corporate processes and support. Some functions, such as enterprise risk management (e.g., security and fraud management), have to be more tailored to information and communications service providers, but most (e.g., financial management, public relations) are not significantly different for the ICSP industry.

3.11 entity: Entity is used to mean a person, business, technology, etc., with which a process interacts. The customer is the most important entity. The enterprise management processes interact with government, regulators, competitors, media, shareholders, the public, unions and lobby groups. The supplier and partner management processes interact with dealers, retailers, partners, brokers, third-party providers, complementary providers, financial providers, service suppliers and material suppliers.

3.12 flow-through: Flow-through is automation across an interface or set of interfaces within an end-to-end process flow. For the eTOM fulfilment, assurance and billing processes, process flow-through is between the customer and the resource elements.

3.13 functional process groupings: The functional process groupings (e.g., customer relationship management, service management and operations, etc.) aggregate processes involving similar knowledge. The eTOM functional process groupings are the highest level decomposition of the enterprise. Functional process groupings are shown horizontally in eTOM.

These functional process groupings are not hierarchical with respect to each other and are not built one above the other (i.e., one is not a decomposition of the one above), e.g., "service management and operations" is NOT a decomposition of "customer relationship management".

Also termed as horizontal process grouping(s).

3.14 hierarchical process decomposition: Hierarchical process decomposition is the systematic approach to modelling processes above the level suitable to process flow. The hierarchical process decomposition approach allows processes to be developed more modularly. See levels definition below.

3.15 information and communications service provider (ICSP): A service provider enterprise that sells information and/or communications services to other parties.

3.16 intermediary: Within the value network, the intermediary performs a function on behalf of the enterprise that is a part of the enterprise's operational requirements. Intermediaries provide products and services that the enterprise either cannot provide itself or choose not to due to cost and quality considerations. There are typically three categories of intermediaries: sales, fulfilment and information and communication.

3.17 levels: The best way to structure a large amount of content and detail, while still allowing the higher-level views to present a summary view, is to structure the information in multiple levels, where each level is decomposed into greater detail at the next lower level. This is hierarchical decomposition.

By having the eTOM framework structured into multiple levels, it enables users of the framework to align their enterprise framework or their process implementations with the eTOM framework at different levels, e.g., align at levels 1 and 2 or align at levels 1, 2 and 3.

To summarize how levels are used in the eTOM framework:

- The whole-of-enterprise view (i.e., all of the eTOM framework) is level 0.
- Each vertical (end-to-end) process grouping is level 1.
- Each horizontal (functional) process grouping is also level 1.
- All the process elements, e.g., order handling (which appear in the end-to-end process and the functional process groupings) are level 2.
- Level 2 process elements may be decomposed into level 3 process elements.
- Level 3 process elements may be decomposed into level 4 process elements.

For the eTOM framework, all subsequent levels of process decomposition are level 4, since decomposition level does not necessarily mean the same level of detail from one process decomposition to another. The number of levels of decomposition required has more to do with the complexity of the process and the level at which process flow makes sense.

3.18 offer: An offer is an aggregation or bundling of products or services for sale to a customer.

3.19 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.

3.20 out-tasking: Out-tasking is when an enterprise contracts with an outside enterprise to provide a process, function or capability without transfer of resource. The enterprise begins using the other enterprise's capabilities directly and electronically.

3.21 partner: A partner has a stronger profit and risk-sharing component in their business agreement with the enterprise than a supplier would have. A partner generally is more visible to the enterprise's customer than a supplier would be. A partner might be part of an alliance, a joint service offering, etc.

3.22 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.

3.23 product: Product is what an entity (supplier) offers or provides to another entity (customer). Product may include service, processed material, software or hardware, or any combination thereof. A product may be tangible (e.g., goods) or intangible (e.g., concepts) or a combination thereof. However, a product ALWAYS includes a service component.

3.24 process element: Process elements can also be considered as the building blocks or components that are used to "assemble" end-to-end business processes. Therefore, a process element is the highest level of the constructs within the eTOM framework that can be used directly by the enterprise. Process elements first become visible when either a functional process grouping or an end-to-end process grouping is decomposed into the second level, e.g., order handling.

Process elements are modular for potential re-use and independent update and/or replacement.

3.25 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.

3.26 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.

3.27 service provider (SP): See under information and communications service provider (ICSP). Throughout this Recommendation, the terms "service provider" and "ICSP" are synonymous.

3.28 subscriber: The subscriber is responsible for concluding contracts for the services subscribed to and for paying for these services.

3.29 supplier: Suppliers interact with the enterprise in providing goods and services, which are assembled by the enterprise in order to deliver its products and services to the customer.

3.30 supply chain: Supply chain refers to entities and processes (including those external to the enterprise) that are used to supply goods and services needed to deliver products and services to customers.

3.31 swim lane: A way of depicting process flow in two dimensions by showing sequence horizontally and different actors or process types vertically. Using swim lanes to depict process flow allows for better process design in better end-to-end flow, better flow-through and better visibility of customer interactions in the process.

3.32 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.

3.33 telecommunications management network (TMN): The telecommunications management network model was developed to support the management requirements of PTOs (public telecommunication operators) to plan, provision, install, maintain, operate and administer telecommunication networks and services. As the communications industry has evolved, use of TMN also evolved and it has influenced the way to think logically about how the business of a service provider is managed. The TMN layered model comprises horizontal business, service, and network management layers over network hardware and software resources, and vertical overlapping layers of fault, configuration, accounting, performance and security (FCAPS) management functional areas. The latter should not be considered as strictly divided "silos" of management functions, but interrelated areas of functionality needed to manage networks and services. Indeed, [ITU-T M.3200] and [ITU-T M.3400] define a matrix of management services and management function sets (groups of management functions), which in turn are used to define more detailed Recommendations on specific management functions.

3.34 TOM: The Telecom Operations Map, GB910 Version 2.1, published by the TeleManagement Forum.

3.35 total enterprise process view: The total enterprise process view includes all business processes within the enterprise. In the eTOM framework, the total enterprise process view is also referred to as level 0, since it includes all level 1 process groupings.

3.36 user: See end user above.

3.37 value network: The enterprise as the hub of a value network is a key concept of e-business. The value network is the collaboration of the enterprise, its suppliers, complementary providers and intermediaries with the customer to deliver value to the customer and provide benefit to all the players in the value network. e-business success and, therefore, part of the definition of a value network, is that the value network works almost as a vertically integrated enterprise to serve the customer.

3.38 vendor: Synonymous with supplier above.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

ADSL	Asymmetric Digital Subscriber Line
ASP	Application Service Provider

ATM	Asynchronous Transfer Mode
B2B	Business-to-Business
BM&A	Brand management, Market research and Advertising
BOM	Business Operations Map
BPSS	Business Process Specification Schema
BSS	Business Support System
BTA	Business Transaction Activity
CAM	Content Assembly Mechanism
CBL	Commerce one Business Library
COTS	Commercial Off-The-Shelf
CRM	Customer Relationship Management
DRS&F	Disaster Recovery, Security and Fraud management
DSL	Digital Subscriber Line
DTD	Document Type Definition
DWDM	Dense Wavelength Division Multiplexing
E2E	End-to-End
ebXML	electronic business Extensible Markup Language
EDI	Electronic Data Interchange
EM	Enterprise Management
EQPIA	Enterprise Quality management, Process and IT planning and architecture
eTOM	enhanced Telecom Operations Map
F&AM	Financial and Asset Management
FAB	Fulfilment, Assurance and Billing
GTDD	Global Telecommunications Data Dictionary
HDSL	High bit-rate Digital Subscriber Line
HR	Human Resources
HTML	HyperText Markup Language
ICSP	Information and Communications Service Provider
ICT	Information and Communications Technology
ILM	Infrastructure Lifecycle Management
IP	Internet Protocol
ISP	Internet Service Provider
KPI	Key Performance Indicator
KQI	Key Quality Indicator
M&OM	Marketing and Offer Management
NGOSS	Next Generation Operations Systems and Software
NMF	Network Management Forum (predecessor of TM Forum)

OAGIS	Open Applications Group Integration Specification
OASIS	Organization for the Advancement of Structured Information Standards
OPS	Operations
ORT	Operations Readiness Testing
OSR	Operations Support and Readiness
OSS	Operations Support System
PIP	Partner Interface Process
PLM	Product Lifecycle Management
QoS	Quality of Service
R&DTA	Resource and Development, Technology Acquisition
RD&M	Resource Development and Management
RFP	Request For Proposal
RM&O	Resource Management and Operations
RNIF	RosettaNet Implementation Framework
S&EP	Strategic and Enterprise Planning
S&ER	Stakeholder and External Relations
S/P	Supplier/Partner
S/PRM	Supplier/Partner Relationship Management
SC	Strategy and Commit
SCD&M	Supply Chain Development and Management
SD&M	Service Development and Management
SDH	Synchronous Digital Hierarchy
SID	Shared Information and Data Model
SIP	Strategy, Infrastructure and Product
SLA	Service Level Agreement
SM&O	Service Management and Operations
SOAP	Simple Object Access Protocol
SONET	Synchronous Optical Network
SP	Service Provider (see also ICSP)
tML	telecommunications Markup Language
TMN	Telecommunications Management Network
TOM	Telecom Operations Map
UML	Unified Modelling Language
VC-MC	Value Chain Market Centre
XML	eXtensible Markup Language



5 Introduction

5.1 Purpose of the business process framework

Traditionally in the telecommunication industry, service providers delivered end-to-end services to their customers. As such, the entire value chain was controlled by a single enterprise, if necessary via interconnection arrangements with other service providers. However, in a liberalized marketplace, service providers have to respond both to the customer's increased demands for superior customer service and to stiffer competition. They have therefore been expanding their markets beyond their self-contained boundaries and broadening their business relationships.

Service Providers face very different regulatory environments and their business strategies and approaches to competition are quite distinct, nevertheless they share several common characteristics:

- Heavily dependent upon effective management of information and communications networks to stay competitive.
- Adopting a service management approach to the way they run their business and their networks.
- Moving to more of an end-to-end process management approach developed from the customer's point of view.
- Automating their customer care, service and network management processes.
- Need to integrate new BSSs/OSSs with legacy systems.
- Focusing on data services offerings.
- Focusing on total service performance, including customer satisfaction.
- Integrating with current technology (e.g., SDH/SONET and ATM) and new technologies (e.g., IP, DWDM).
- Emphasizing more of a "buy" rather than "build" approach that integrates systems from multiple suppliers.

Some service providers choose to operate their own network and/or information technology infrastructure, while others choose to outsource this segment of their business. The effective exploitation of this information technology and network infrastructure, whether directly operated or outsourced, is an integral part of the service delivery chain and directly influences the service quality and cost perceived by the end customer. Service providers will need to become skilled at assessing outsourcing opportunities whether in information technology and/or network infrastructure areas or other areas and, then, be skilled at integrating and managing any outsourcing arrangements.

To meet both existing and new demands, service providers still urgently require well-automated operations processes whether they are incumbent providers or new entrants, and whether they are communications service providers, application service providers, Internet service providers, etc. Some service providers are struggling with high growth from a start-up phase, others with the commoditization of key cash-cow services, and yet others with the move from a manual-intensive, inconsistent, inflexible environment to one that provides significant improvement in customer focus, service quality, unit cost and time to market. Service providers have to pervasively do business electronically with trading partners, suppliers and wholesale and retail customers. For the growing mobile/wireless and IP services markets, these service providers are focused on quickly provisioning new customers and supporting service quality issues, while continually reducing development and operating costs. For all service providers, there is an intense drive to introduce both new value-added services and dramatic improvements in customer support. There is also an increasing need for service providers to manage the integration required in mergers and acquisitions activity due to the consolidation trend the industry is now experiencing.

For the full range of service providers and network operators, the leading focus of the TM Forum's mission is to enable end-to-end process automation of the business and operations processes that deliver information and communications services. The eTOM business process framework is the framework for accomplishing this mission.

The purpose of the eTOM framework is to continue to set a vision for the industry to compete successfully through the implementation of business-process driven approaches to managing the enterprise. This includes ensuring integration among all vital enterprise support systems concerned with service delivery and support. The focus of the eTOM framework is on the business processes used by service providers, the linkages between these processes, the identification of interfaces, and the use of customer, service, resource, supplier/partner and other information by multiple processes. Exploitation of information from every corner of the business will be essential to success in the future. In an e-business environment, automation to gain productivity enhancement, increased revenue and better customer relationships is vital. Perhaps at no other time has process automation been so critical to success in the marketplace. The over-arching objective of the eTOM framework is to continue to build on TM Forum's success in establishing:

- An "industry standard" business process framework.
- Common definitions to describe process elements of a service provider.
- Agreement on the basic information required to perform each process element within a business activity, and use of this within the overall NGOSS program for business requirements and information model development that can guide industry agreement on contract interfaces, shared data model elements, and supporting system infrastructure and products.
- A process framework for identifying which processes and interfaces are in most need of integration and automation, and most dependent on industry agreement.

This Recommendation, the eTOM business process framework, and the associated business process modelling, describes for an enterprise the process elements and their relationships that are involved in information and communications services and technologies management. Additionally, the points of interconnection that make up the end-to-end, customer operations process flows for fulfilment, assurance, billing within operations, and for strategy, infrastructure and product are addressed.

Note that, although eTOM framework has been focused on information and communications services and technologies management, this work is also proving to be of interest in other business areas.

Service providers need this common framework of processes to enable them to do business efficiently and effectively with other entities and to enable the development and use of third-party software without the need for major customization. In an e-business environment, this common understanding of process is critical to managing the more complex business relationships of today's information and communications services marketplace. e-business integration among enterprises seems to be most successful through strong process integration. Recent industry fallout, particularly in relation to dotcoms, does not reduce the pressure for e-business automation – it strengthens the need to capitalize on e-business opportunities to be successful.

However, the eTOM framework is not just an e-commerce or e-business process framework, it supports traditional business processes with the integration of e-business.

5.2 What is the eTOM?

The eTOM is a business process framework, i.e., a reference framework or model for categorizing all the business activities that a service provider will use. It is NOT a service provider business model. In other words, it does not address the strategic issues or questions of who a service provider's target customers should be, what market segments should the service provider serve,

what are a service provider's vision, mission, etc. A business process framework is one part of the strategic business model and plan for a service provider.

The eTOM framework is better regarded as a business process framework, rather than a business process model, since its aim is to categorize the process elements and business activities so that these can then be combined in many different ways, to implement end-to-end business processes (e.g., fulfilment, assurance, billing) which deliver value for the customer and the service provider. Key concepts that form the basis for the eTOM framework are outlined in Annex A and readers that are not familiar with the eTOM framework may wish to gain an initial view of these concepts, to provide context before reading the ITU-T Recommendations M.3050.x series.

Previous eTOM releases have established the eTOM business process framework as TM Forum member-approved, with global agreement from the highest conceptual level downwards and has gone on to take account of real-world experience in applying the eTOM framework, and to incorporate new detail in process decompositions, flows and business-to-business interaction. Beyond this, the eTOM work has potential to develop further in areas such as further lower-level process decompositions and flows, applications in specific areas of business, guidelines and assistance in using the eTOM framework, cost and performance issues associated with the processes, etc. In addition, ongoing feedback from the industry, together with its linkage with the wider NGOSS programme, can be used to guide future priorities for continuing work. It should be noted that the development of a full process framework is a significant undertaking, and the work must be phased over time based on member process priorities and member resource availability. This effect is visible in eTOM's history, from the early work on a business process map that carried through to the eTOM framework itself, broadening along the way to a total enterprise framework and the current release.

A great many service providers, as well as system integrators, ASPs and vendors, are working already with the eTOM framework. They need an industry standard framework for procuring software and equipment, as well as to interface with other service providers in an increasingly complex network of business relationships. Many service providers have contributed their own process models because they recognize the need to have a broader industry framework that does not just address operations or traditional business processes.

The TM Forum initially identified business processes as a consensus tool for discussion and agreement among service providers and network operators. This encouraged convergence and general support for a broad common base in this area, which has been built on and extended with the eTOM framework, to enable:

- Focused work to be carried out in TM Forum teams to define detailed business requirements, information agreements, business application contracts and shared data model specifications (exchanges between applications or systems) and to review these outputs for consistency.
- Relating business needs to available or required standards.
- A common process view for equipment suppliers, applications builders and integrators to build management systems by combining third party and in-house developments.

The anticipated result is that the products purchased by service providers and network operators for business and operational management of their networks, information technologies and services will integrate better into their environment, enabling the cost benefits of end-to-end automation. Furthermore, a common industry view on processes and information facilitates operator-to-operator, operator-to-customer and operator-to-supplier/partner process interconnection, which is essential for rapid service provisioning and problem handling in a competitive global environment. This process interconnection is the key to e-business supply chain management in particular.

The eTOM work also provides the definition of common terms concerning enterprise processes, sub-processes and the activities performed within each. Common terminology makes it easier for service providers to negotiate with customers, third-party suppliers and other service providers. Clauses 3 and 4 contain definitions of eTOM acronyms and terminology.

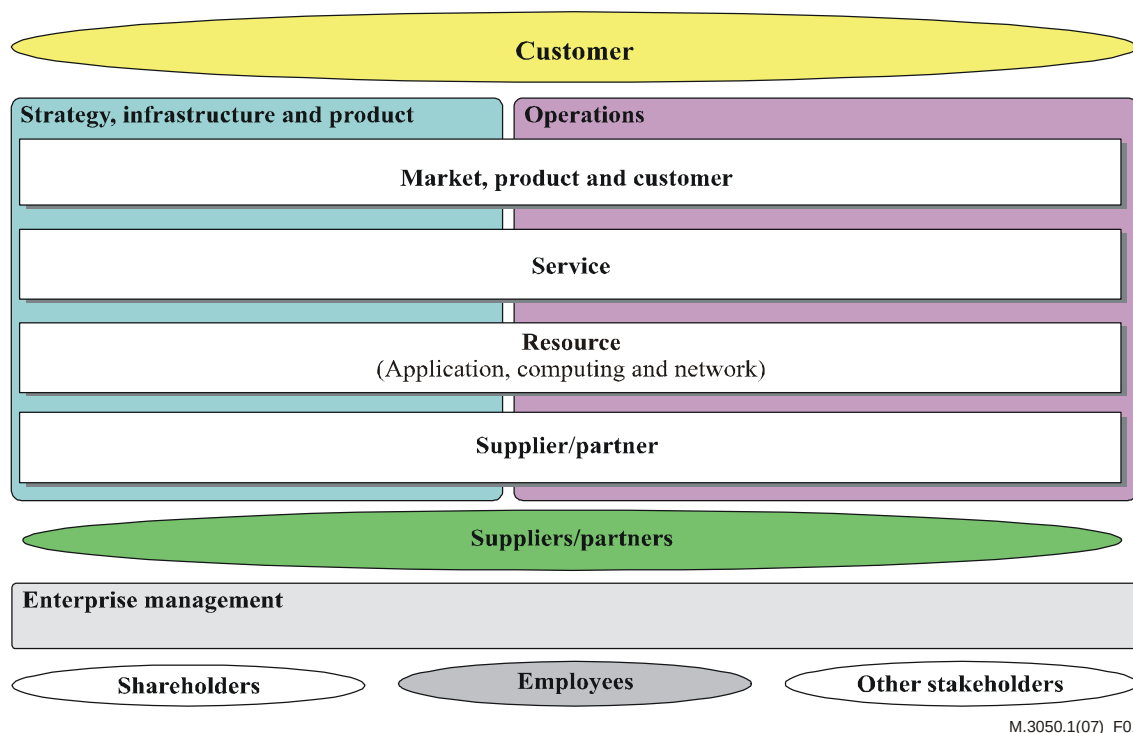


Figure 1 – eTOM business process framework – Level 0 processes

Figure 1 shows the highest conceptual view of the eTOM framework. This view provides an overall context that differentiates strategy and lifecycle processes from the operations processes in two large process areas, seen as the two major boxes in the upper part of the diagram. It also differentiates the key functional areas as horizontal layers across these process areas. The third major process area, concerned with management of the enterprise itself, is shown as a separate box in the lower part of the diagram. In addition, Figure 1 also shows the internal and external entities that interact with the enterprise (as ovals).

Figure 2 shows how the three major process areas, designated as level 0 processes of the eTOM business process framework, are decomposed into their constituent level 1 process groupings. This view thus provides the level 1 decomposition of the level 0 processes and gives an overall view of the eTOM framework. However, in practice it is the next level, the level 2 decomposition of the level 1 processes, at which users tend to work, as this degree of detail is needed in analysing their businesses. This view is presented later in this Recommendation in a series of diagrams examining each area of the eTOM framework.

Figure 2 also shows seven end-to-end vertical process groupings, which are the end-to-end processes that are required to support customers and to manage the business. Amongst these end-to-end vertical process groupings, the focal point of the eTOM framework is on the core customer operations processes of fulfilment, assurance and billing (FAB). Operations support and readiness (OSR) is differentiated from FAB real-time processes to highlight the focus on enabling support and automation in FAB, i.e., online and immediate support of customers, with OSR ensuring that the operational environment is in place to let the FAB processes do their job. Outside of the operations process area, in the strategy, infrastructure and product (SIP) process area, the strategy and commit vertical, as well as the two lifecycle management verticals, are differentiated. These are distinct