

Quick Reference Guide

TM Forum's eTOM[®] Model

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David and Roderick are passionate about helping organizations understand and document their own business processes, using frameworks such as APQC's Process Classification Framework and standards such as BPMN as well as applying simple approaches to improve and simplify these business processes.

In our recently published White Paper, 'Quick Reference Guide: Business Process Frameworks', we outlined the main Business Process Frameworks commonly in use. In this Quick Reference Guide, we are covering Enhanced Telecom Operations Model, more commonly known as eTOM.

However, eTOM is unlike any other of the Business Process Frameworks we previously covered. This is because eTOM is only one part, the Business Process part, of a set of frameworks, called Frameworkx. Frameworkx was developed by an organization called TM Forum, formerly called the TeleManagement Forum and the Network Management Forum.

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Table of Contents

| | |
|--------------------------------------|----|
| Introducing eTOM | 3 |
| Who are the TM Forum? | 3 |
| What is Frameworkx | 3 |
| How is Frameworkx structured? | 3 |
| What is eTOM? | 4 |
| eTOM Model in Detail | 4 |
| Overview | 4 |
| Level 0 Processes | 5 |
| Level 1 Processes | 5 |
| Level 2 Processes | 5 |
| Background | 5 |
| Operations | 6 |
| Strategy, Infrastructure and Product | 6 |
| Enterprise Management | 7 |
| Processes Beyond Level 2 | 8 |
| How do Organizations use eTOM | 8 |
| Overview | 8 |
| Applying eTOM | 8 |
| Conclusion | 10 |
| References | 10 |

List of Figures

| | |
|--|---|
| Figure 1: Structure of Frameworkx | 3 |
| Figure 2: Architecture Layers of Frameworkx | 4 |
| Figure 3: eTOM Level 0 Processes | 5 |
| Figure 4: eTOM Level 1 Processes | 5 |
| Figure 5: Operations Level 2 Processes | 6 |
| Figure 6: Level 2 Processes for Customer Relationship Management | 6 |
| Figure 7: Level 2 Processes for Service Management and Operations | 6 |
| Figure 8: Level 2 Processes for Resource Management and Operations | 6 |
| Figure 9: Level 2 Processes for Supplier / Partner Relationship Management | 6 |
| Figure 10: Strategy, Infrastructure and Product Level 2 Processes | 6 |
| Figure 11: Level 2 Processes for Marketing and Offer Management | 7 |
| Figure 12: Level 2 Processes for Service Development and Management | 7 |
| Figure 13: Level 2 Processes for Resource Development and Management | 7 |
| Figure 14: Level 2 Processes for Supply Chain Development and Management | 7 |
| Figure 15: Level 2 Processes for Strategic and Enterprise Planning | 7 |
| Figure 16: Level 2 Processes for Enterprise Risk Management | 7 |
| Figure 17: Level 2 Processes for Enterprise Effectiveness Management | 7 |
| Figure 18: Level 2 Processes Knowledge and Research Management | 7 |
| Figure 19: Financial and Asset Management | 7 |
| Figure 20: Level 2 Processes for Stakeholder & External Relations Management | 7 |
| Figure 21: Level 2 Processes for Human Resource Management | 8 |
| Figure 22: Process Interaction Example | 9 |
| Figure 23: Process Flow Example | 9 |

Introducing eTOM

Who are the TM Forum?

Once started, the TM Forum has not only grown in numbers, we've expanded into verticals and businesses that are dependent on the Communications Industry for their success. Starting with only 8 members in 1988, the Forum has grown and evolved to consistently meet the needs of the changing market.

As the TM Forum explains!:

Now, with over 900 member companies, the Forum is the largest communication service providers, digital service providers and knowledge and practical tools for our members, including unique rapidly solve business issues in critical areas, such as business management and security.

The Forum provides member benefits that Inform, Innovate, Accelerate neutral and open platform for collaboration between service providers, an open digital economy..

What is Frameworkx?

TM Forum's Frameworkx, formerly known as NGOSS or "New Generation Operations Systems and Software" is the TM Forum's program to provide ways for their members to better manage their business.

The TM Forum defines Frameworkx as:

... a suite of best practices and standards that provides the blueprint for effective, efficient business operations.

Frameworkx is a suite of best practices and standards that are service-oriented, highly automated and an efficient approach to business operations.

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Frameworkx is developed by industry leaders and practitioners in TM Forum's collaboration community.

How is Frameworkx structured?

The core frameworks included in the Frameworkx include:

- Business Process Framework (eTOM);
- Information Framework (SID);
- Application Framework (TAM); and
- Integration Framework - architecture and standard interfaces.

tmforum Frameworkx

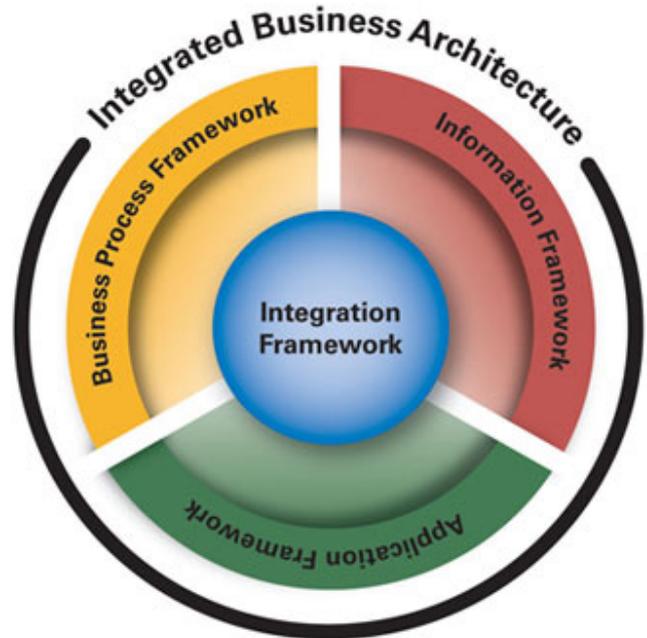


Figure 1: Structure of Frameworkx

Frameworkx also includes:

- Standardized Business Metrics that have been embraced by the industry and allow for benchmarking;
- A suite of interfaces and APIs that enable integration across systems and platforms; and
- Adoption best practices to help implementation.

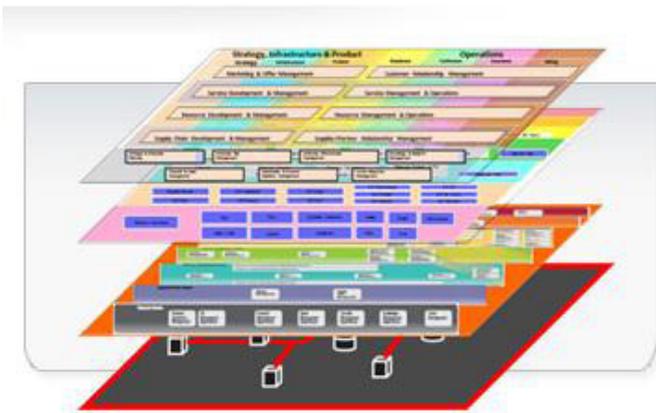


Figure 2: Architecture Layers of Framework

Use of the Framework standards and management best practices can assist their members in ensuring ongoing conformance.

The current version of Framework is Version 13, which was launched in May 2013. The previous version of Framework, version 12.5, was only published in December 2012. Version 10 was released in November in 2010.

Consequently, updates are flowing through Framework more frequently than many other Frameworks. This is likely to be driven by the dynamic nature of the Telecommunication industries.

Obtaining detailed information on Framework can be very difficult, unless you are associated with a member of the TM Forum. Consequently, much of the publicly available publications on Framework and its components are often based on older versions of Framework.

What is eTOM?

The Enhanced Telecom Operations Model or eTOM is the Business Process Framework component of Framework.

TM Forum explains that eTOM is a hierarchical catalogue of the key business processes required to run a service-focused business.

The TM Forum's website lists "6 things you can do with the Business Process Framework"ⁱⁱⁱ:

- Create a common language for use across departments, systems, external partners and suppliers, reducing cost and risk of

system implementation, integration and procurement

- Adopt a standard structure, terminology and classification scheme for business processes to simplify internal operations and maximize opportunities to partner within and across industries
- Apply disciplined and consistent business process development enterprise-wide, allowing for cross-organizational reuse
- Understand, design, develop and manage IT applications in terms of business process requirements so applications will better meet business needs
- Create consistent and high-quality end-to-end process flows, eliminating gaps and duplications
- Identify opportunities for cost and performance improvement through re-use of existing processes and systems

eTOM Model in Detail

Overview

The Business Process Framework (eTOM) describes and analyzes different levels of enterprise processes according to their significance and priority for the business. The framework is defined as generically as possible so that it remains organization-, technology-, and service-independent.

For service providers, eTOM provides the blueprint for process direction. It is also a neutral reference point for:

- Internal process reengineering needs;
- Partnerships;
- Alliances; and
- General working agreements with other companies.

For suppliers, the Business Process Framework outlines potential boundaries of software components that should align with their customers' needs, as well as highlighting the required functions, inputs, and outputs that must be supported by their products.

Level 0 Processes

Level 0 of the eTOM business process framework contains three major process areas that reflecting major focuses within typical enterprises:

- Strategy, Infrastructure, and Product (SIP) - Covering planning and lifecycle management;
- Operations - Covering the core of day-to-day operational management; and
- Enterprise Management - Covering corporate or business support management.

Level 0 of the eTOM business process framework also includes views of functionality as they span horizontally across an enterprise’s internal organizations:

- Market, Product, and Customer:
- High-level view of the market and the enterprise’s offerings.
- Service: Product components developed by the enterprise.
- Resource (Application, Computing, and Network): Consumed in the production of the Service.
- Supplier/Partner: Providing products and services to the enterprise for the production of the Service.

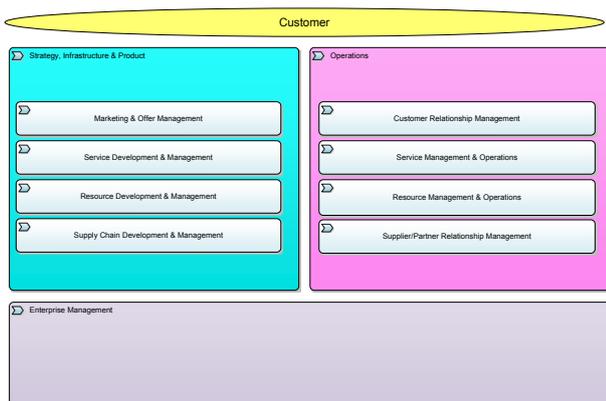


Figure 3: eTOM Level 0 Processes

Level 1 Processes

Level 1 of the eTOM business process framework provides a more detailed view of the Enterprise processes.

The model shows seven end-to-end (vertical) process groupings required to support customers and manage the business.

Among these vertical groupings, the focus of eTOM is on the core customer operational processes of Fulfilment, Assurance, and Billing (FAB).

Operations Support and Readiness (OSR) is the “back-office” environment that enables support and automation for FAB.

The SIP processes do not directly support the customer and they include the Strategy and Commit Processes, plus the lifecycle process groupings for Infrastructure and Products.

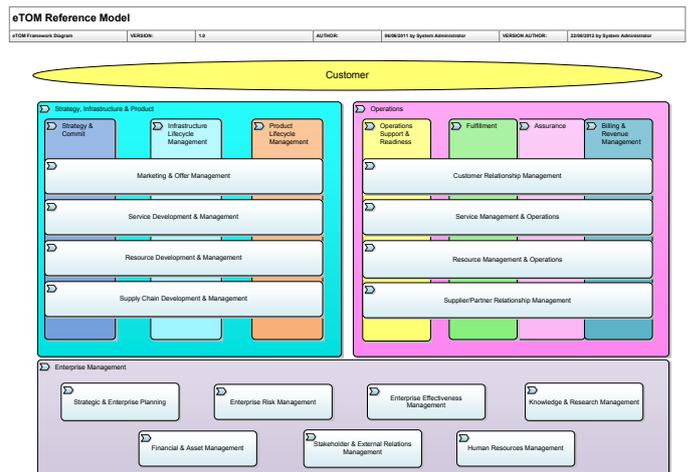


Figure 4: eTOM Level 1 Processes

Level 2 Processes

Background

The next three sections will show Level 2 core processes for each of the processes areas:

- Operations;
- Strategy, Infrastructure and Product; and
- Enterprise Management.

Each core process is generally part of one vertical Level 1 grouping and also one of the horizontal process groupings.

In some cases a Level 2 process is shown as being “stretched” across several Level 1 vertical groupings. This is shown to indicate that the process concerned are needed in two or more of the Level 1 verticals.

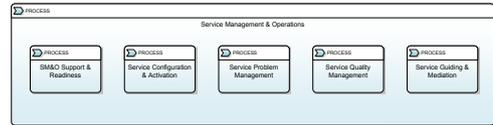


Figure 7: Level 2 Processes for Service Management and Operations

Operations

The Operations process area includes the core (vertical) Level 1 process groupings for:

- Operations Support and Readiness;
- Fulfillment;
- Assurance; and
- Billing and Revenue Management.

The Operations process area also includes the (horizontal) Level 1 processes groupings for:

- Customer Relationship Management;
- Service Management and Operations;
- Resource Management and Operations (Application, Computing and Network); and
- Supplier / Partner Relationship Management.



Figure 8: Level 2 Processes for Resource Management and Operations



Figure 9: Level 2 Processes for Supplier / Partner Relationship Management

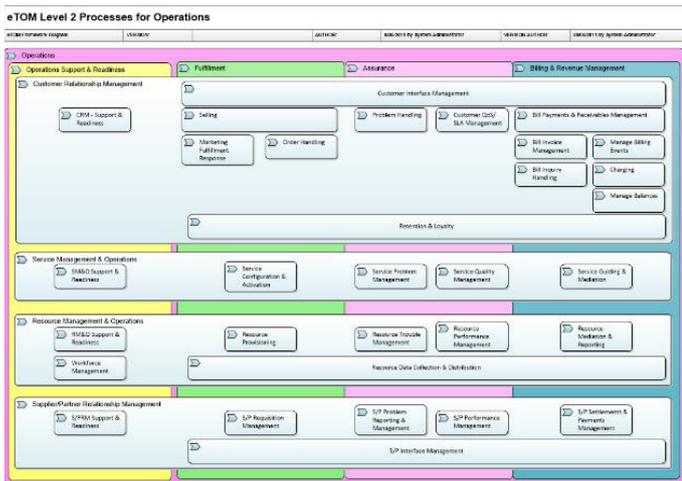


Figure 5: Operations Level 2 Processes

Figure 5 shows the Level 2 Processes in the context of both the vertical and horizontal process groupings. However, some representations may just show the Level 2 Processes as a decomposition of the horizontal process groupings, as shown below:

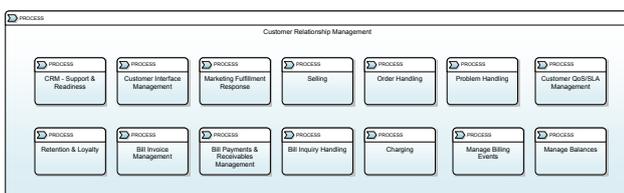


Figure 6: Level 2 Processes for Customer Relationship Management

Strategy, Infrastructure and Product

The Strategy, Infrastructure and Product process area includes the core (vertical) Level 1 process groupings for:

- Strategy and Commit;
- Infrastructure Lifecycle Management; and
- Product Lifecycle Management.

The Strategy, Infrastructure and Product process area also includes the (horizontal) Level 1 processes groupings for:

- Market and Offer Management;
- Service Development and Management;
- Resource Management and Operations (Application, Computing and Network); and
- Supply Chain Development and Management.

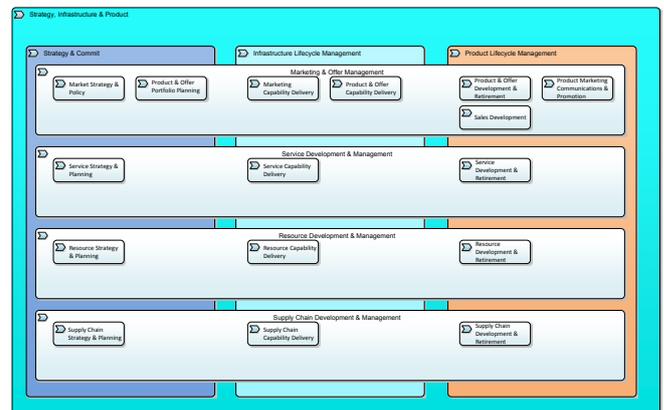


Figure 10: Strategy, Infrastructure and Product Level 2 Processes

The alternate horizontal process groupings view of this are:

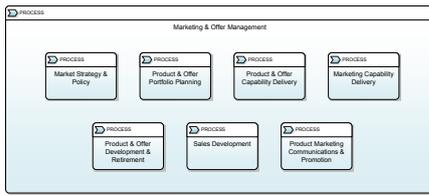


Figure 11: Level 2 Processes for Marketing and Offer Management



Figure 12: Level 2 Processes for Service Development and Management



Figure 13: Level 2 Processes for Resource Development and Management



Figure 14: Level 2 Processes for Supply Chain Development and Management

Enterprise Management

The 7 Level 1 core processes, that decompose from the Enterprise Management Level 0 process area, each decompose further to Level 2 process groupings as follows:

- Strategic and Enterprise Planning;

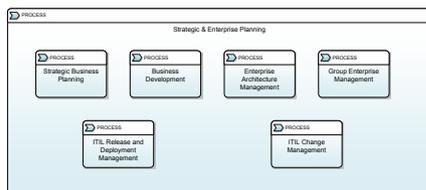


Figure 15: Level 2 Processes for Strategic and Enterprise Planning

- Enterprise Risk Management



Figure 16: Level 2 Processes for Enterprise Risk Management

- Enterprise Effectiveness Management

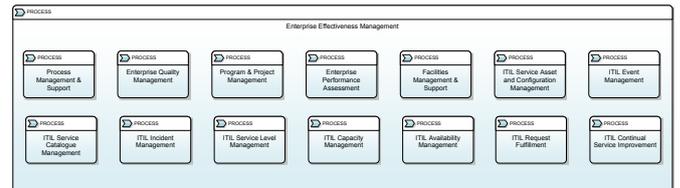


Figure 17: Level 2 Processes for Enterprise Effectiveness Management

- Knowledge and Research Management

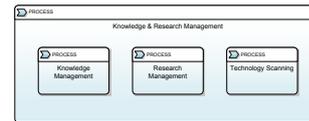


Figure 18: Level 2 Processes for Knowledge and Research Management

- Financial and Asset Management



Figure 19: Financial and Asset Management

- Stakeholder and External Relations Management

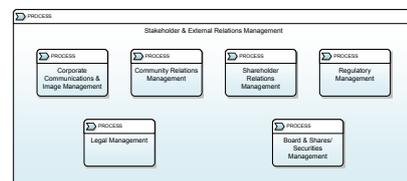


Figure 20: Level 2 Processes for Stakeholder & External Relations Management

- Human Resources Management



Figure 21: Level 2 Processes for Human Resource Management

Processes Beyond Level 2

Each process in the various Level 2 models, shown above, are further detailed through process decomposition.

This is achieved by analyzing each process and subdividing its functionality into lower-level processes. This procedure can be continued at lower levels as required.

The eTOM layers can generally be described as following:

- **Level 0:**
Business Activities that distinguish operational customer-oriented processes from management and strategic processes
- **Level 1:**
Process Groupings including business functions and standard end-to-end processes
- **Level 2:**
Core Processes that combine together to deliver service streams and other end-to-end processes
- **Level 3:**
Tasks and associated detailed “success model” business process flows
- **Level 4:**
Steps and associated detailed operational process flows with error conditions and product and geographical variants (where required)
- **Level 5:**
Further decomposition into operations and associated operational process flows where required .

How do Organizations use eTOM

Overview

eTOM is widely used in the service provider industry because it provides important benefits. In a 2009 White Paperⁱⁱⁱ, CISCO lists some of these benefits as:

- It makes available a standard structure, terminology, and classification scheme for describing business processes and their constituent building blocks;
- It supplies a foundation for applying enterprise-wide discipline to the development of business processes;
- It provides a basis for understanding and managing portfolios of IT applications in terms of business process requirements;
- It enables the creation of consistent and high-quality end-to-end process flows, with opportunities for cost and performance improvement, and for re-use of existing processes and systems; and
- Its use across the industry will increase the likelihood that off-the-shelf applications will be readily integrated into the enterprise, at a lower cost than custom-built applications.

Applying eTOM

As eTOM is a Business Process Framework, it is natural that its focus is on the business processes. Furthermore, one of its core focuses 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.

eTOM represents an industry consensus on these service provider processes, which has been harmonized across the global scene and is based on TM Forum Member contributions. Not unexpectedly, this will mean that eTOM must be tailored and / or extended for use within individual companies.

There are a number of different reasons why a company may want to use eTOM. Some of these reasons include being used to:

- Analyze existing organizational processes in order to:
 - Discover gaps;
 - Eliminate duplication; and / or
 - Optimize processes.
- Develop new organizational processes by using the eTOM framework:
 - As is;
 - By using only parts of it; or
 - By extending the eTOM framework.

Extensions to the eTOM framework can be developed and applied by decomposing Level 3/4 processes and adding organizational specific details at the lower process level as required.

Two of the main techniques used to analyze existing organizational processes are through process interaction and process flows.

The CISCO White Paper^{iv}, referred to in the earlier, provides two examples to illustrate these two techniques.

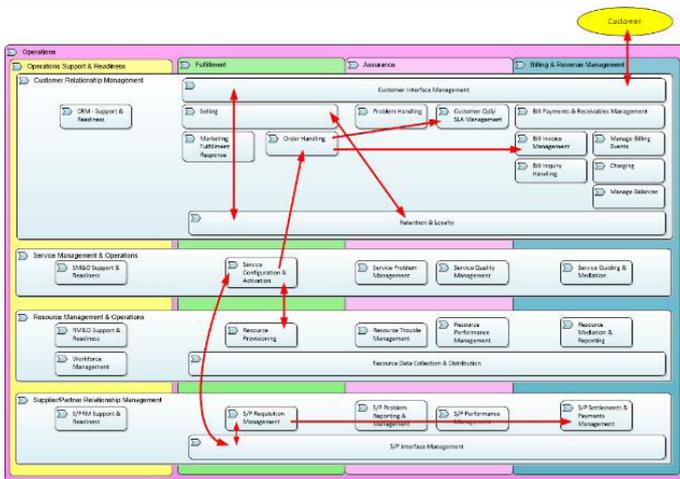


Figure 22: Process Interaction Example

Figure 22 shows an example of the process interactions for a new order. The customer places an order through Customer Interface Management. The Order Handling will trigger:

- Service Configuration and Activation; then
- Resource Provisioning; then
- Supplier/Partner Requisition Management; and finally
- Bill Invoice Management.

A process interaction diagram does not show the sequence or the timeline of these interactions.

By contrast, a process flow diagram presents the sequence of the process interactions as shown in Figure 23.

The Process Flow example, shown in Figure 23, represents the same new order activities as in the previous process interaction example. A process flow can show interactions between processes at different levels.

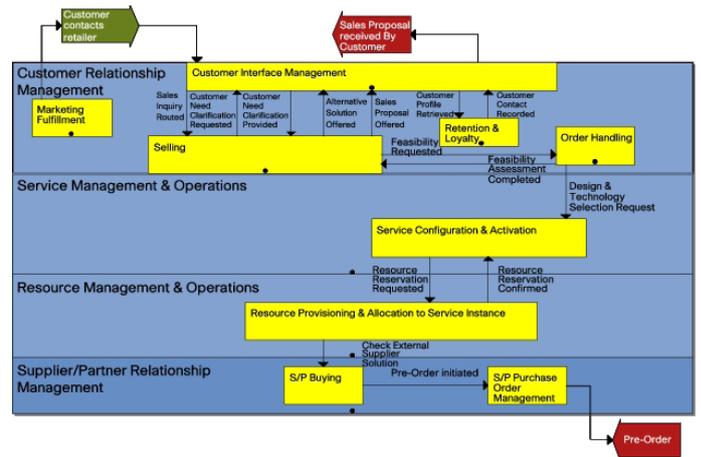


Figure 23: Process Flow Example

The level 1 processes are the four blue “swim lanes” and the level 2 processes are the yellow “process” boxes.

The triggers are conditions marked on the arrows between processes. The large green arrow is an external trigger into this flow and the large red arrows are external triggers from this flow.

References

- ⁱ About the TM Forum - TM Forum's Website
- ⁱⁱ 6 Things You Can Do With the Business Process Framework - TM Forum's Website
- ⁱⁱⁱ Cisco, Introduction to eTOM (White Paper), 2009
- ^{iv} Cisco, Introduction to eTOM (White Paper), 2009