

Foundations of IT Service Management Based on ITIL V3



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- IT Service Management based on ITIL – A Pocket Guide (V3, English, Dutch)
- IT Service Management from Hell!! (V2, English)
- IT Service Management from Hell. Based on Not-ITIL (V3, English)
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- IT Services Procurement based on ISPL – A Pocket Guide (English)
- IT Service CMM – A Pocket Guide (English)
- Six Sigma for IT Management – A Pocket Guide (English)
- Frameworks for IT Management – A Pocket Guide (English, Dutch)

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Foundations of IT Service Management

Based on ITIL V3

itSMF International
The IT Service Management Forum

A publication of itSMF International

Colophon

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Foreword

It is with great pride that I present this rigorous update of "Foundations of IT Service Management Based on ITIL V3". With the long-awaited update of ITIL®, launched in June 2007, this ITIL Foundations guide had to be completely reconfigured to suit its objective: provide an easy introduction to the broad library of ITIL core books, to support the understanding and the further distribution of ITIL as an industry standard. In addition - as could be expected from the itSMF - we managed to be the first in the market, to provide this service to our members.

The main focus of this guide is on the Service Lifecycle, as defined by ITIL. The information on this lifecycle was taken from the extensive documentation of the core books, and was concentrated in Part 1. Separately, the information on all the processes and functions that were also described in the core books, was concentrated in Part 2 of this book. This approach enables readers to get a firm grasp of the lifecycle's structure, while also having all information on functions and processes at their disposal.

The book was produced the same way other publications of the ITSM Library were produced: a broad team of expert editors, expert authors and expert reviewers contributed to a comprehensive text, and a lot of effort was spent on the development and review of the manuscript. The content was actually developed in a larger publishing project, covering not just ITIL, but also other important sources of information on IT Service Management. This project delivered the ITSM Library title "IT Service Management - An Introduction", a 500+ page itSMF title on ITSM, ITIL, ISO/IEC 20000 and many other standards and management frameworks relevant for IT Service Management. From that title, all relevant material covering ITIL V3 was taken, and used to assemble this comprehensive introduction to ITIL.

For several years, "Foundations of IT Service Management Based on ITIL" has been a core element in the important series of management guides that is titled the ITSM Library, and we expect this new edition will continue to hold that position.

Jan van Bon
Chief Editor ITSM Library for itSMF International

Acknowledgements

This publication is the result of the co-operation of many experts from the field, in many different countries, representing users, providers, government, trainers, examiners, and itSMF chapters. It was based on an itSMF publication in the Netherlands, developed as an introduction to IT Service Management, first published in April 1999. The book was originally initiated by Georges Kemmerling (Quint Wellington Redwood), and built by a Dutch itSMF project team, under the guidance of chief editor Jan van Bon. Since 1999, this project team of reviewers and co-authors has extended and improved the book, in a series of new editions, expressing the developments in the field of IT Service Management.

In May 2002 the first translation was published, in English. This first global edition was soon followed by a second, improved version, audited by selected itSMF members, cooperating in the itSMF International Publications Committee (IPESC), each representing an itSMF chapter. In addition to that, the global edition was reviewed by several experts from vendor and user organizations, and by representatives of the OGC. This resulted in the very first internationally endorsed itSMF publication, supported by the entire itSMF community, and accepted as a high quality introduction to ITIL® and IT Service Management. The book provided excellent services as an aid in understanding the published best practices in the field of IT Service Management, concentrated in and around ITIL publications, in many countries.

Since 2002, several other translations appeared. Each of these translations was developed and audited by a team of experts in the targeted language region, if possible under the guidance of an itSMF chapter. In all cases, a terminology translation table was determined, before translating the text. Translations were delivered in English, German, French, Spanish, Russian, Chinese, Japanese, Italian, Korean, Brazilian-Portuguese, Arabic, and Danish.

In 2004, this title was split into two separate publications: one covering the broad field of IT Service Management (this was the “Introduction” title), the other concentrating on the core of that field as it was scoped for the basic level of understanding of ITIL (this was the “Foundation” title).

In 2007, both books had to be heavily rewritten, due to significant changes in the published sources on IT Service Management. Therefore it was decided to create one comprehensive publication that would contain all the content of both titles, and then split the resulting manuscript into a large all-over publication on IT Service Management and a second publication that contained a part thereof, only covering ITIL.

A team of expert authors and editors who work for itSMF produced the updated text (see the Colophon). As with all publications in the ITSM Library, a broad Review Team was composed, representing experts from various disciplines, covering user organizations, training organizations, consultancy organizations, global leaders in the IT service industry, and individual experts. All of these experts were deeply involved with ITIL in their daily practice. Most of them had already been involved in the review of one or more of the core ITIL books, or were directly involved in the ITIL Refresh project. A third publication, a pocket guide on relevant IT Management

frameworks was also derived from this large manuscript. This way, the reviewers in fact reviewed three publications in one manuscript.

The reviewers that reviewed the entire manuscript, thus covering this Foundations level introduction to ITIL, are the following:

- John van Beem, ISES International, Netherlands
- Aad Brinkman, Apreton, Netherlands
- Peter Brooks, PHMB Consulting, itSMF South Africa
- Rob van der Burg, Microsoft, Netherlands
- Judith Cremers, Getronics PinkRocade Educational Services, Netherlands
- Robert Falkowitz, Concentric Circle Consulting, itSMF Switzerland
- Rosario Fondacaro, Quint Wellington Redwood, Italy
- Peter van Gijn, LogicaCMG, Netherlands
- Jan Heunks, ICT Partners, Netherlands
- Linh Ho, Compuware Corporation, USA
- Ton van der Hoogen, ToTZ Diensten, Netherlands
- Kevin Holland, NHS, UK
- Matiss Horodishtiano, Amdocs, itSMF Israel
- Wim Hoving, BHVB, Netherlands
- Brian Johnson, CA, USA
- Georges Kemmerling, Quint Wellington Redwood, Netherlands
- Kirstie Magowan, itSMF New Zealand
- Reiko Morita, Ability InterBusiness Solutions, Inc., Japan
- Jürgen Müller, Marval Benelux, Netherlands
- Ingrid Ouwerkerk, Getronics PinkRocade Educational Services, Netherlands
- Ton Sleutjes, CapGemini, Netherlands
- Maxime Sottini, Innovative Consulting, itSMF Italy
- Takashi Yagi, Hitachi Ltd., itSMF Japan

Their contributions are highly appreciated and, due to their detailed review, have improved the quality of the book significantly.

Given the desire for a broad consensus in the IT Service Management field, new developments, additional material and contributions from ITSM professionals who have worked with ITIL version 3 are welcome. They will be discussed by the editors and where appropriate incorporated into new editions. Comments can be sent to the Chief Editor of the ITSM Library, Jan van Bon, email: j.van.bon@inform-it.org.

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Chapter 1 Introduction

1.1 Background

Developments in IT have had a tremendous effect on the business market during the last decade. Since the appearance of extremely powerful hardware, highly versatile software and super-fast networks, all connected to each other worldwide, organizations have been able to develop their information-dependent products and services to a greater extent, and to bring them to the market much faster. These developments have marked the transition of the industrial age into the **information age**. In the information age, everything has become faster and more dynamic, and everything is connected.

Traditional hierarchical organizations often have difficulties in responding to this rapidly changing market, and this has led to current trends for organizations to become flatter and more flexible. The focus has shifted from vertical silos to horizontal **processes**, and decision-making powers are increasingly bestowed on the employees. It is against this background that the work processes of IT Service Management have arisen.

An important advantage of process-oriented organizations is that processes can be designed to support a **customer-oriented approach**. This has made the alignment between the IT organization (responsible for supplying information) and the customer (responsible for using these information systems in their business) increasingly significant. Over the last couple of years, this trend has attracted attention under the title of **Business-IT Alignment (BITA)**.

As organizations gained more experience with the **process-oriented approach** of IT Service Management, it became clear that the process must be managed coherently. Furthermore, it was obvious that the introduction of a process-oriented work method meant a big change for the primarily line and project-oriented organizations. Culture and change management proved to be crucial elements for a successful organizational design.

Another important lesson learned was that the IT organization must not lose itself in a process culture. Just like the one-sided project-oriented organization, a one-sided process-oriented organization was not the optimum type of business. Balance was, as always, the magic word. In

addition, it became clear that the customer-oriented approach required that an **end-to-end** and **user-centric** approach must be followed: it was of no help to the user to know that 'the server was still in operation' if the information system was not available at the user's workplace. IT services must be viewed in a larger context. The need for the recognition of the **Service Lifecycle**, and the management of IT services in light of that lifecycle, became a concern.

Due to the fast growing dependency of business upon information, the quality of information services in companies is being increasingly subjected to stricter **internal and external requirements**. The role of **standards** is getting more and more important, and **frameworks** of 'best practices' help with the development of a management system to meet these requirements. Organizations that are not in control of their processes, will not be able to realize great results on the level of the Service Lifecycle and the end-to-end-management of those services. Organizations that do not have their internal organization in order, will also not achieve great results. For these reasons, all these aspects are handled alongside each other in the course of this book.

1.2 Why this book

This book offers detailed information for those who are responsible for strategic information issues, as well as for the (much larger) group who are responsible for setting up and executing the delivery of the information systems. This is supported by both the description of the Service Lifecycle, as documented in ITIL version 3, and by the description of the processes that are associated with it. The ITIL core books are very extensive, and can be used for a thorough study of contemporary best practices. This Foundations book provides the reader with an easy-to-read comprehensive introduction to the broad library of ITIL core books, to support the understanding and the further distribution of ITIL as an industry standard. Once this understanding of the structure of ITIL has been gained, the reader can use the core books for a more detailed understanding and guidance for their daily practice.

1.3 Organizations

Several organizations are involved in the maintenance of ITIL as a description of the 'best practice' in the IT Service Management field.

OGC

Initially ITIL was a product of the CCTA, a UK Government Organization. On 1 April 2001 the CCTA was incorporated into the OGC, which thus became the new owner of ITIL. The aim of the OGC is to help its clients (within the UK Government) with the modernization of their procurement activities and the improvement of their services, by, among other things, making the best possible use of IT: 'OGC aims to modernize procurement in government, and deliver substantial value for money improvements'. The OGC promotes the use of 'best practices' in numerous areas, such as project management, program management, procurement, risk management and IT Service Management. For this reason the OGC itself has published several series of books (Libraries) which have been written by (international) experts from different companies and organizations.

itSMF

The target group for this publication is anyone who is involved or interested in IT Service Management. A professional organization, working on the development of the IT Service Management field, has been created especially for this target group.

In 1991 the Information Technology Service Management Forum (itSMF), originally known as the Information Technology Infrastructure Management Forum (ITIMF), was set up as a UK association. In 1994, a sister-association was established in the Netherlands, following the UK example.

Since then, independent itSMF organizations have been set up in more than forty countries, spread across the globe, and the number of “chapters” continues to grow. All itSMF organizations operate under the umbrella organization, itSMF International (itSMF-I).

itSMF is aimed at the entire professional area of IT Service Management. It promotes the exchange of information and experiences that IT organizations can use to improve their service provision. itSMF is also involved in the use and quality of the various standards and methods that are important in the field. One of these standards is ITIL. and itSMF International has an agreement with OGC and APM Group on the promotion of the use of ITIL.

*The **IT Service Management Forum (itSMF)** is a global, independent, internationally recognized not-for-profit organization dedicated to IT Service Management. itSMF is wholly owned and principally run by its membership. It consists of a growing number of national chapters, each with a large degree of autonomy, but adhering to a common code of conduct. The itSMF is a major influence on, and contributor to, industry best practices and standards worldwide, working in partnership with a wide, international range of governmental and standards bodies.*

itSMF International is the controlling body of the itSMF national chapters and sets policies and provides direction for furthering the overall objectives of itSMF, for the adoption of IT Service Management (ITSM) best practice and for ensuring adherence to itSMF policies and standards.

This Foundations book is a publication of itSMF International, published in the ITSM Library series. The book fits in well with the mission of itSMF International:

***The mission of itSMF International** is to support the development of **IT Service Management (ITSM)** through strategic direction, co-ordination of effort and the sourcing of expertise and financial support with strategic partners.*

This mission can be translated into the following publishing activities:

itSMF Publishing activities:

- publishing supporting material on accepted best practice
- publishing material that represents 'new thought' in the ITSM field
- ensuring that, through all activities, including the publication of relevant material, itSMF assists organizations in the implementation of solutions that will deliver real value to them

By publishing this detailed introduction to the field of IT Service Management, based on ITIL, itSMF International offers a valuable contribution to the development of the subject.

APM Group

In 2006, OGC contracted the management of ITIL rights, the certification of ITIL exams and accreditation of training organizations to the APM Group (APMG), a commercial organization. APMG defines the certification and accreditation for the ITIL exams, and published the new certification system (see Section 2.1: ITIL exams).

Exam bodies

The Dutch foundation Examen Instituut voor Informatica (EXIN) and the English Information Systems Examination Board (ISEB, part of the BCS: the British Computer Society) co-operated in the development and provision of certification for IT Service Management. For many years they were the only bodies that provided ITIL exams. With the contracting of APMG by OGC, the responsibility for ITIL exams is now with APMG. To support the world-wide delivery of these ITIL exams, APMG has accredited a number of exam bodies: EXIN, BCS/ISEB, and Loyalist College, Canada.

1.4 Differences with previous editions

The 'Foundations of IT Service Management - based on ITIL V3' book has played a key role in the distribution of ideas on IT Service Management and ITIL for years. The title has been translated into thirteen languages and is recognized as the most practical introduction to the leading 'best practices' in this field. Earlier editions of the Foundations book focused on the content of three books from the ITIL series (version 2): Service Support, Service Delivery and Security Management, and placed them in a broader context of quality management.

ITIL, although widely used, was never actually in the public domain¹ but there were few restrictions on its use in practice. This has been acknowledged as one of the main reasons for ITIL's wide acceptance. With the transfer of the management, publication, and qualifications of ITIL to the APM Group (for qualifications) and TSO (for publications), a significant shift in the market has occurred. ITIL is now operationally run by commercial organizations that control the use of ITIL by providers in the market, through regulations in the areas of copyright, branding and accreditations. This does not influence the use of ITIL within organizations to a great extent, but it does have a specific effect in the provider market.

As a result of continuous development of best practices, various terms have disappeared between the introduction of ITIL version 2 and 3, and a large number of new terms have been added to version 3. As many of these concepts are part of the scope of an IT Service Management training or exam, they have been included in the relevant descriptions. For a definitive list of concepts, readers should refer to the various training and exam programs.

¹ Based on the definition in Cambridge Advanced Learner's Dictionary: 'If something such as a book, song, computer program, etc. is in the public domain, no one has the right to control its use and anyone may use it without charge.'

1.5 Structure of the book

This book starts with an introduction on the backgrounds and general principles of IT Service Management and the context for ITIL (**Chapter 1**). It describes the parties involved in the development of best practices and standards for IT Service Management, and the basic premises and standards that are used.

The body of the book is set up in two large Parts: **Part 1** deals with the Service Lifecycle, **Part 2** deals with the individual functions and processes that are described in ITIL.

Part 1 starts with **Chapter 2**, introducing the Service Lifecycle, in the context of IT Service Management and IT Governance. It discusses principles of organizational maturity, and the benefits and risks of following a service management framework. This chapter ends with the introduction of the Service Lifecycle.

In **Chapters 3 to 7**, each of the phases in the Service Lifecycle is discussed in detail, in a standardized structure: Service Strategy, Service Design, Service Transition, Service Operation and Continual Service Improvement.. These chapters provide a detailed view on the characteristics of the Service Lifecycle, its construct and its elements. The main points of each phase are presented in a consistent way to aid readability and clarity, so that the text is clear and its readability is promoted. Each section follows a consistent structure:

- Introduction
- Basic concepts
- Processes and other activities
- Organization
- Methods, techniques and tools
- Implementation

Part 2 starts with **Chapter 8**, introducing the functions and processes that are referred to in each of the lifecycle phases. This chapter provides general information on principles of processes, teams, roles, functions, positions, tools, and other elements of interest.

Next, the processes and functions are described in detail in **Chapters 9 to 13**. The 27 functions and processes are clustered according to the ITIL core book that contains their detailed description. Each of these processes and functions is described in terms of :

- Introduction
- Activities, methods and techniques
- Interfaces, inputs and outputs
- Metrics and Key Performance Indicators (KPIs)
- Implementation, with Critical Success Factors (CSFs), challenges, risks and traps

The **Appendices** provide useful sources for the reader. A Reference list of used sources is provided, as well as the official ITIL Glossary. The book ends with an extensive Index of relevant terms, that will support the reader in finding relevant text elements.

1.6 How to use this book

Readers who are primarily interested in the Service Lifecycle can focus on Part 1 of the book, and pick whatever they need on functions and processes from part 2.

Readers who are primarily interested in the functions and processes and are not ready for a lifecycle approach yet, or who prefer a process approach, can read the introductory chapters, and then focus on the functions and processes of their interest.

Readers who want a thorough introduction to ITIL, exploring its scope and main characteristics, can read Part 1 on the Lifecycle, and add as many of the functions and processes from Part 2 as they need or like.

In this way, this new edition of the Foundations book aims to provide support to a variety of approaches to IT Service Management based on ITIL.



Chapter 8

Introduction to Functions and Processes

8.1 Introduction

Processes are *internal* affairs for the IT service provider. An organization that is still trying to gain control of its processes therefore has an **internal focus**. Organizations that focus on gaining control of their systems in order to provide services are still internally focused. The organization is not ready for an **external focus** until it controls its services and is able to vary them on request. This external focus is required to evolve into that desirable customer-focused organization.

Because organizations can be in different stages of maturity, IT managers require a broad orientation in their discipline. Most organizations are now working on the introduction of a process-focused or customer-focused approach, or still have to start working on this. Process control is therefore a vital step on the road towards a **mature customer-focused organization**.

ITIL has made an important contribution to the organization of that process-focused operating method in the past decade. The development started in North-western Europe and has made some progress on most other continents in the last few years also. On a global scale, however, a minimal number of organizations have actually started with this approach - and an even smaller number have made serious progress at this point. The organization change projects that were thought to be necessary to convert to a process-focused organization were not all successful.

These findings lead us to conclude that the majority of organizations in this world require access to good information and best practices concerning the **business processes of IT organizations**. Fortunately, that information is abundant. The ITIL version 2 books provide comprehensive documentation on the most important processes, while ITIL version 3 adds even more information.

The **process model** is at least as important as the processes because processes must be deployed in the right relationships to achieve the desired effect of a process-focused approach. There are many different process models available. The experiences gained with these processes and process models in recent years have been documented comprehensively in books, magazines and white papers, and were presented at countless conventions.

8.2 Management of processes

Every organization aims to realize its vision, mission, strategy, objectives and policies, which means that appropriate activities have to be undertaken.

For example, a restaurant will have to purchase fresh ingredients, the chefs will have to work together to provide consistent results, and there should be no major differences in style among the waiting staff. A restaurant will only be awarded a three-star rating when it manages to provide the same high quality over an extended period of time. This is not always the case: there will be changes among the waiting staff, a successful approach may not last, and chefs often leave to open their own restaurants. Providing a constant high quality also means that the component activities have to be co-ordinated: the better and more efficiently the kitchen operates, the higher the quality of service that can be provided to the guests.

In the example of the restaurant, appropriate activities include buying vegetables, bookkeeping, ordering publicity material, receiving guests, cleaning tables, peeling potatoes and making coffee. With just such an unstructured list, something will be left out and staff will easily become confused. It is therefore a better idea to structure the activities. Preferably these should be arranged in such a way as to allow us to see how each group of activities contributes to the objectives of the business, and how they are related.

Such groups of activities are known as **processes**. If the process structure of an organization is clearly described, it will show:

- what has to be done
- what the expected inputs and results are
- how we measure whether the processes deliver the expected results
- how the results of one process affect those of another process.

Processes can be defined in many ways. Depending upon the objectives of the creator, more or less emphasis will be on specific aspects. For example, a highly detailed process description will allow for a high level of control. Superficial process definitions will illustrate that the creator does not care much about the way in which the steps are executed.

Once the processes are defined, the roles, responsibilities and people can be assigned to specific aspects, bringing the process to the level of a *procedure*.

Processes

When arranging activities into processes, we do not use the existing allocation of tasks, nor the existing departmental divisions. This is a conscious choice. By opting for a process structure, it often becomes evident that certain activities in the organization are unco-ordinated, duplicated, neglected or unnecessary.

*A **process** is a structured set of activities designed to accomplish a defined objective.*

Instead, we look at the **objective** of the process and the **relationships** with other processes. A process is a series of activities carried out to convert input into an output, and ultimately into an outcome. The **input** is concerned with the resources being used in the process. The (reported) **output** describes the immediate results of the process, while the **outcome** indicates

the long-term results of the process (in terms of meaningful effect). Through **control** activities, we can associate the input and output of each of the processes with **policies and standards** to provide information about the results to be obtained by the process. Control regulates the input and the **throughput** in case the throughput or output parameters are not compliant with these standards and policies. This produces chains of processes that show the input that goes into the organization and what the result, and it also monitors points in the chains in order to check the quality of the products and services provided by the organization.

The standards for the output of each process have to be defined, in such a way that the complete chain of processes in the process model meets the corporate objective. If the output of a process meets the defined requirements, then the process is **effective** in transforming its input into its output. To be really effective, the outcome should be taken into consideration rather than merely focusing on the output. If the activities in the process are also carried out with the minimum required effort and cost, then the process is **efficient**. It is the task of process management to use **planning and control** to ensure that processes are executed in an effective and efficient way.

We can study each process separately to optimize its quality. The **process owner** is responsible for the process results. The **process manager** is responsible for the realization and structure of the process, and reports to the process owner. The **process operatives** are responsible for defined activities, and these activities are reported to the process manager.

The logical combination of activities results in clear transfer points where the quality of processes can be monitored. In the restaurant example, we can separate responsibility for purchasing and cooking, so that the chefs do not have to purchase anything and can concentrate on their core activities.

The management of the organization can provide control on the basis of the process quality of the process as demonstrated by data from the results of each process. In most cases, the relevant **performance indicators** and standards will already be agreed upon. In this case the process manager can do the day-to-day control of the process. The process owner will assess the results based on a **report** of performance indicators and checks whether the results meet the agreed standard. Without clear indicators, it would be difficult for a process owner to determine whether the process is under control, and if planned improvements are being implemented.

Processes are often described using **procedures** and **work instructions**.

*A **procedure** is a specified way to carry out an activity or a process.*

A procedure describes the 'how', and can also describe 'who' carries the activities out. A procedure may include stages from different processes. A procedure can vary depending on the organization.

*A set of **work instructions** defines how one or more activities in a procedure should be carried out in detail, using technology or other resources.*

A process is defined as a logically related series of activities executed to meet the goals of a defined objective. Processes are composed of two kinds of activities: the activities to realize the goal (operational activities concerned with the throughput), and the activities to manage these

(control activities). The control activities make sure the operational activities (the workflow) are performed in time, in the right order, etc. (For example, in the processing of changes it is always ensured that a test is performed *before* a release is taken into production and not *afterwards*.)

Processes and departments

Most businesses are hierarchically organized. There are departments that are responsible for the activities of a group of employees. There are various ways of structuring departments, such as by customer, product, region or discipline. IT services generally depend on several departments, customers or disciplines. For example, if there is an IT service to provide users with access to an accounting program on a central computer, this will involve several disciplines. The computer center has to make the program and database accessible, the data and telecommunications department has to make the computer center accessible, and the PC support team has to provide users with an interface to access the application.

Processes that span several departments (teams) can monitor the quality of a service by monitoring particular aspects of quality, such as availability, capacity, cost and stability. A service organization will try to match these quality aspects with the customer's demands. The structure of such processes can ensure that good information is available about the provision of services, so that the planning and control of services can be improved.

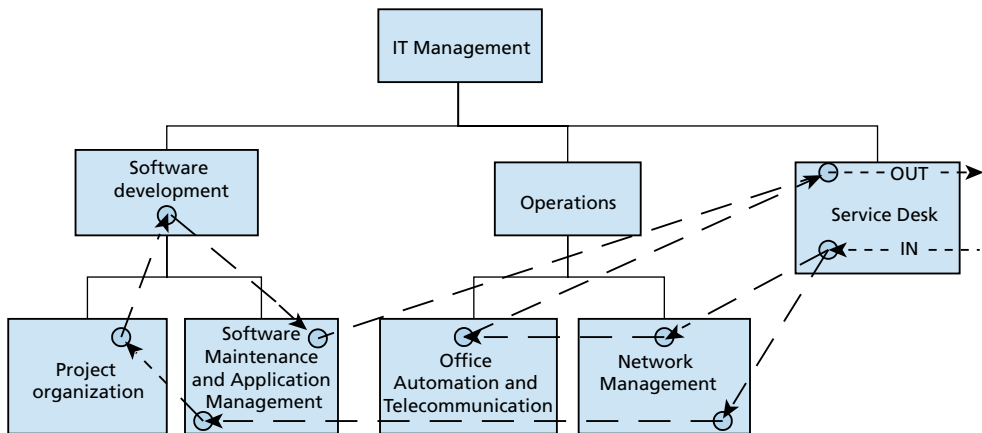


Figure 8.1 Processes and departments (example)

Figure 8.1 shows a basic example of the combinations of activities in a process (indicated by the dashed lines).

IT Service Management and processes

For the last decade, IT Service Management has been known for the last decade as the process and service-focused approach of what was initially known as Information Technology management. The shift of management from infrastructure to processes has paved the way for the term IT Service Management as a process and customer-focused discipline. Processes should always have a defined objective. The objective of IT Service Management processes is to contribute to the

quality of the IT services. Quality management and process control are part of the organization and its policies.

By using a process approach, best practices for IT Service Management describe how services can be delivered, using the most effective and efficient series of activities. The Service Lifecycle in ITIL V3 is based on these process descriptions. The structure and allocation of tasks and responsibilities between functions and departments depends on the type of organization, and these structures vary widely among IT departments, and they often change. The description of the process structure however, provides a common point of reference that changes less rapidly. This can help to maintain the quality of IT services during and after reorganizations, and also among suppliers and partners as they change. This makes service providers far less sensitive to organizational change, and much more flexible: providers can continually adapt their organization to changing conditions, leaving the core of their processes in place. This way the shop can stay open during reconstruction work. However, reality may pose some practical problems, making this more difficult in practice than it seems in theory.

Applying the best process definitions of the industry allows IT service providers to concentrate on their business. As with other fields of industry, the processes in the IT industry are similar for all organizations of the same nature. Many of the process descriptions documented in ITIL have been recognized as the best that the industry could hope to adopt.

8.3 Teams, roles and positions in ITSM

Organizations can divide the various tasks for carrying out processes or activities in many different ways. Tasks can be covered by organizational bodies, such as groups, teams, departments or divisions. These organizational bodies are then managed in **hierarchical organizations** by a line manager, who has a certain 'span of control' and who manages one or more of these bodies. **Flat organizations** have relatively few layers in this hierarchy. Organizations can also divide the tasks more in the spirit of equality, such as, for example, **network organizations**, in which the co-operation between the various bodies is paramount.

Besides hierarchical organizations, which manage through 'the line', there are also **project organizations**, which manage primarily by using temporary forms of project co-operation, while **process organizations** are managed primarily by means of an agreed work method. Obviously, these types of management can be combined in innumerable ways. As a result of this, we are seeing a great number of unique organizational configurations in the field.

Organizations can distinguish themselves from other organizations, particularly in respect to the type of organization they operate. An organization that is directed toward hierarchy will have a staff of primarily of senior line management. A process-oriented organization will have people on staff who are responsible for processes. Depending on the degree to which management is based on processes, the line or projects, the staff will consist of a mix of the relevant responsible managers.

When setting up an organization, positions and roles are also used, in addition to the various groups (teams, departments, divisions). **Roles** are sets of responsibilities, activities and authorities

granted to a person or team. One person or team may have multiple roles; for example, the roles of Configuration Manager and Change Manager may be carried out by a single person. **Positions** (functions) are traditionally recognized as tasks and responsibilities that are assigned to a specific person. A person in a particular position has a clearly defined package of tasks and responsibilities which may include various roles. Positions can also be more broadly defined as a logical concept that refers to the people and automated measures that carry out a clearly defined process, an activity or a combination of processes or activities. Individuals and roles have an N: N relationship.

8.4 Tools used in ITSM

In the performance of tasks in IT Service Management, innumerable automated support aids can be used: these are referred to as tools. With the help of these tools, management tasks can be automated; for example, monitoring tasks or software distribution tasks. Other tools support the performance of the activities themselves; for example, help desk tools or service management tools. The latter category, in fact, supports the management of several processes and are therefore often referred to as workflow tools - although they may not have actual workflow engines.

The fact that the IT field is fundamentally focused on automated facilities (for information processing) has led to a virtual deluge of tools appearing on the market, which have greatly increased the performance capacity of IT organizations.

8.5 Communication in IT service organizations

People, process, partners and technology provide the main 'machinery' of any organization, but they only work well if the machine is oiled: **communication** is an essential element in any organization. If the people do not know about the processes or use the wrong instructions or tools, the output may not be as anticipated.

People are core assets of the organization. This is not only due to the fact that they need to be in place to perform certain activities or to take decisions, but also because people have the attractive habit of communicating. When an organization applies highly detailed instructions for all its activities, it will end up in a bureaucracy. On the other hand, an organization without any rules is most likely in chaos. Whatever balance an organization is trying to find here, it will always benefit enormously from communication between the people in the organization. A regular and formal meeting culture will support this, but organizations should not underestimate the important role of informal communication: many projects have been saved by means of a simple chat in the tea room, or in the car park.

Formal structures on communication include:

- **reporting** - internal and external reporting, aimed at management or customers, project progress reports, alerts
- **meetings** - formal project meetings, regular meetings with specific targets
- **online facilities** - email systems, chatrooms, pagers, groupware, document sharing systems, messenger facilities, teleconferencing and virtual meeting facilities
- **notice boards** - near the coffee maker, at the entrance of the building, in the company restaurant

IT teams and departments, as well as users, internal customers and service production teams, must communicate with each other. The **stakeholders** for communication can thus be found among all managers and employees who are involved in the service delivery, in all the layers of the organization, and with all customers, users and suppliers. Good communication can prevent problems. All communication must have a particular goal or result. Every team, process and every department must have a clear **communications policy**.

IT Service Management includes several types of communication, such as:

- routine operational communication
- communication between teams
- performance reports
- communication during projects
- communication when there are changes
- communication in case of exceptions
- communication in case of emergencies
- training for new or adapted processes and service designs
- communication with service production teams regarding service strategies and design

8.6 Culture

Organizations that want to change, for example to improve the quality of their services, will eventually be confronted with the current organizational culture and will have to deal with any changes to this culture as a consequence of the overall change. The organizational culture, or corporate culture, refers to the way in which people deal with each other in the organization; the way in which decisions are made and implemented; and the attitude of employees to their work, customers, suppliers, superiors and colleagues.

Culture, which depends on the standards and values of the people in the organization, cannot be controlled, but it can be influenced. Influencing the culture of an organization requires leadership in the form of a clear and consistent policy, as well as a supportive personnel policy.

The corporate culture can have a major influence on the provision of IT services. Businesses value innovation in different ways. In a stable organization, where the culture places little value on innovation, it will be difficult to adjust its IT services in line with changes in the organization of the customer. If the IT department is unstable, then a culture which values change can pose a serious threat to the quality of its services. In that case, a 'free for all' culture can develop where many uncontrolled changes lead to a large number of faults.

8.7 Processes, projects, programs and portfolios

Activities can be managed from a process perspective, from an organizational hierarchy (line) perspective, from a project perspective, or from any combination of these three. Organizations that tend to apply just one of these management systems, often miss the benefits of the others. The practical choice often depends upon history, culture, available skills and competences, and personal preferences. The optimum choice may be entirely different, but the requirements for applying this optimum may be hard to realize and vary in time.

There are no 'hard laws' for the way an organization should combine processes, projects and programs. However, it is generally accepted that there are some consequences attached to modern practices in IT service organizations, since the most widely accepted approach to service management is based on process management. The widely accepted best practices for IT Service Management documented in ITIL are using a Service Lifecycle approach, but in fact ITIL is still based on process management. This means that whenever the organization works with projects or programs, it should have established how these approaches work together.

The practical relationship between projects and processes is determined by the relative position of both in terms of 'leading principles for the management of the organization': if projects are considered more important than processes, then decisions on projects will overrule decisions on processes; as a consequence, the organization will not be able to implement a stable set of processes. If it is the other way around, with projects only able to run within the constraints of agreed processes, then project management will be a discipline that will have to adapt to new boundaries and definitions (eg since projects always change something from A to B, they will most likely fall under the regime of Change, Release and Deployment Management).

The most suitable solution is dependent upon the understanding of the role of IT Service Management in the organization. To be able to find a solution for this management challenge, it is recommended that a common understanding of processes, projects, programs, and even portfolio's is created. The following definitions may be used:

- **Process** - A process is a structured set of activities designed to accomplish a defined objective.
- **Project** - A project is a temporary organization, with people and other assets required to achieve an objective.
- **Program** - A program consists of a number of projects and activities that are planned and managed together to achieve an overall set of related objectives.
- **Portfolio** - A portfolio is a set of projects and/or programs, which are not necessarily related, brought together for the sake of control, co-ordination and optimization of the portfolio in its totality. NB: In ITIL, a Service Portfolio is the complete set of services that are managed by a service provider.

Since the project/program/portfolio grouping is a hierarchical set of essential project resources, the issue can be downscaled to that of a relationship between a project and a process.

The most elementary difference between a process and a project is the one-off character of a project, versus the continuous character of the process. If a project has achieved its objectives, it means the end of the project. Processes can be run many times, both in parallel and in sequence. The nature of a process is aimed at its repeatable character: processes are defined only in case of a repeatable string of activities that are important enough to be standardized and optimized.

Projects are aimed at changing a situation A into a situation B. This can involve a simple string of activities, but it can also be a very complex series of activities. Other elements of importance for projects include money, time, quality, organization and information. Project structures are normally used only if at least one of these elements is of considerable value.

Actually, projects are just ways of organizing a specific change in a situation. In that respect they have a resemblance with processes. It is often a matter of focus: processes focus at the specific sequence of activities, the decisions taken at certain milestone stages, and the quality of

the activities involved. Processes are continuously instantiated and repeated, and use the same approach each time. Projects focus more at the time and money constraints, in terms of resources spent on the change and the projects end, and projects vary much more than processes.

A very practical way of combining the benefits of both management systems might be as follows:

- Processes set the scene for how specific series of activities are performed.
- Projects can be used to transform situation A into situation B, and always refer to a change.
- If the resources (time, money, or other) involved in a specific process require the level of attention that is normally applied in a project, then (part of) the process activities can be performed as a project, but always under the control of the process: if changes are performed, using project management techniques, the agreed change management policies still apply.

This would allow organizations to maintain a continuous customer focus and apply a process approach to optimize this customer focus, and at the same time benefit from the high level of resource control that can be achieved when using project management techniques.

8.8 Functions and processes in the lifecycle phases

For the sake of readability and uniformity, the following structure for the descriptions was used as much as possible:

1. **Introduction** - describes the purpose and aims of the process or function, its scope, value to the business, principles, guidelines, starting points and basic concepts
2. **Activities, methods and techniques** - explains the process or function in greater detail based on the workflow of activities (if possible); also describes commonly used methods and techniques
3. **Interfaces** - describes how the process or function is triggered, its inputs and outputs, and its links to other functions and processes
4. **Metrics** - describes the process metrics, in particular the Key Performance Indicators (KPIs)
5. **Implementation** - describes the Critical Success Factors (CSFs), challenges, risks and traps that may apply for the introduction of a process or function

