

THE ISM METHOD

Version 3

PAST, PRESENT AND FUTURE OF IT SERVICE MANAGEMENT

Wim Hoving
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Past, present and future of
IT service management

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Colophon

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Preface

'It is not the strongest of species that survives, nor the most intelligent, but the one most adaptable to change.'

(Charles Darwin 1809-1882)

IT service management, or ITSM, is a field that receives a lot of attention. Although improving the efficiency of IT management organizations is a rewarding activity, ITSM is still a rather new discipline, and something of a moving target in terms of new and interesting developments. ITSM is not about processes, but about service. Delivering these services to the business is possible only if the integration of staff, departments, knowledge, processes, procedures, and support (together: people, process, and product) is adequate.

ITSM is also about applying the knowledge and insight that brings IT management organizations under control and helps them to improve continuously. ITSM is about people and organizations that want to – and have to – provide better IT services, and that are getting better at this as time goes by.

Innovations during the past three decades have made it easier to manage the delivery of high-quality services:

- Better-functioning service-desk (help-desk) tools make it easier to manage processes.
- Reporting tools support reports that not only deliver details of performance but can also be used to guide continual performance improvement.
- The decreasing fear of matrix organizations makes it possible for line and process organizations to cooperate more efficiently.
- The rise of information management (in the demand domain) improves the alignment of the IT service delivery (in the supply domain) with the information demand of the business.

However, issues of some concern continue to exist. The focus of our concern lies in the fact that many innovations are not connected to each other. Different fields of expertise connect and cooperate insufficiently, hindering operational management:

- The focus on processes leads to neglect of the necessary connections between people, process, and product.
- The lack of connection between functional, application, and technical management is consolidated by reference models such as ITIL, ASL, and BiSL. The different management areas are largely growing in separate directions.

- Widely accepted theoretical concepts and paradigms are not linked to simple solutions that can be applied instantly. The complexity is only growing: ITIL v3 and its ITIL 2011 update have become more academic instead of becoming more applicable.
- Generally speaking, projects are being judged by the extent to which they deliver within time and budget. The goal (providing a stable and IT service-oriented organization) seems to be of less importance.

It is striking that these problems are deliberately maintained. Experts and consultants still advise IT management organizations to introduce partial solutions and spend a lot of time and money on complex custom-made solutions and writing new processes. This still happens all over the industry, despite the fact that the average consultant knows the standard processes that can be deployed in any organization. For the sake of support, a lot of time and money is spent on developing processes that are already available from many other organizations.

Experience shows that it does not have to be this way:

- Functional, application, and technical management can cooperate from one underlying structure.
- Projects can be managed effectively in a process-based culture.
- If people, process, and product are coordinated well, they will influence each other positively.
- All IT management organizations can use one standard management solution, since they all have the same goal.
- Organizations can change their culture relatively easily by improving quality in a structured and methodical manner.
- Complexity can be drastically reduced by a simple process structure.
- A proper out-of-the-box set of practices can be used in all organizations.

The ISM (Integrated Service Management[®]) Method is the result of years of practical and theoretical development. Constant analysis of business needs has resulted in a method that will quickly and efficiently lead to structural improvement in IT service delivery. This experience and these concepts have been combined to form a robust architecture for service delivery. All useful practical and theoretical innovations are based on this architecture. This has resulted in one coherent structure that is successfully used in practice in large and small IT management organizations.

The field of ITSM is only 30 years old and will not stop developing any time soon. The same goes for the ISM Method: new ideas, and the experience of dozens of organizations already using ISM, will lead to continual improvement. However, all these improvements must fit in with a simple and practical structure that will improve IT service delivery.

With this book, we hope to stimulate ideas about ITSM. In addition, we hope that we can provide tips and ideas that can help organizations to improve their service delivery. And last but not least, we hope to receive a lot of responses to this book, which will help us to develop and improve the ISM Method.

Wim Hoving, Jan van Bon

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About the authors

Wim Hoving has been involved in IT since 1986, initially as a system manager, but from 1990 onwards in various management positions. This work was often combined with leading large commercial and technical projects. In 1990 he introduced ITIL at PTT Telecom, and he worked on the development of IPW, one of the first compact ITIL-based process models. From 1996 onwards he contributed to the development of the first version of the ISM process model at Unisource Information Services.

In 1998 he started Bureau Hoving & Van Bon (BHVB), with Jan van Bon. Ever since then, he has been exclusively engaged in the development and implementation of IT service management. The experience gained in large and small ITIL deployments has led to the systematic growth of new ideas, resources, and structures. Since 2003 these developments have been consistently applied and tested in a growing ISM framework under his leadership. These efforts expanded into the ISM Method.

The constant quest for simplification and applicability is reflected in his principles: 'If you're in control of complexity, you provide simple solutions' and 'Knowledge without application is worthless'. He substantiates his vision on ITSM in trainings, publications, presentations and projects, stimulating interest in the ISM Method.

Jan van Bon worked as a researcher for the University of Groningen after he graduated as a biomathematician in 1979. In 1989, he switched to a career in IT management, starting with the development and implementation of IT management processes for PTT Post. Later he did the same for PTT Telecom (with IPW) and for Unisource Information Services (with ISM).

Since the early nineties, he has been deeply involved in the development and dissemination of knowledge in the field of IT management. In 1993, he was one of the initiators and board members of the IT Service Management Forum in the Netherlands (itSMF), and he was later tasked with the professionalization of the association. He developed and managed the global publication committee for itSMF-International, and organized dozens of seminars, symposia, and conferences on relevant IT management topics.

In 1996 he started his own company, Inform-IT, where he managed the development of more than 80 books, in 16 languages, with an international team of thousands of authors and reviewers. Since 1996, he has been the chief editor of the ITSM Portal, an international knowledge platform that provides information on current IT management issues for many experts. In 1998, Inform-IT became part of BHVB, which he has subsequently run with his business partner Wim Hoving.

Introduction

Before you lies the first description of ISM (Integrated Service Management®). ISM is a method of IT service management (ITSM) and offers a practical addition to popular reference models such as ITIL, MOF, ASL, and COBIT.

This book describes the basic principles, structure and application of the ISM Method. The specific principles of ISM will be placed in the context of ITSM's past and present.

Why this book?

This book is meant for everyone who wants to be involved in ITSM in a structured manner. We offer a practical ITSM solution, but we also pay attention to the theories on which ISM is based. Compact definitions and principles have been used to create solutions that are readily applicable, have proven their value, are relatively easy to implement, and can be applied successfully.

This book is also aimed at the increasing number of IT staff who work in an environment where the ISM Method has been adopted, and who want to know more about the background and principles of ISM. Finally, it will support the growing number of third parties and organizations that are involved in introducing ISM.

What is ISM?

The ISM Method is a standardized management method that can be used by IT management organizations to gain control of their IT service delivery in an easy and effective manner.

This ISM Method consists of the ISM framework (integrating people, process, and product), an introduction method, and various forms of support. The introduction method not only includes implementing the framework, but also entails coaching the organization in applying the framework and in the culture change required for a successful introduction.

ISM has been developed to support the delivery of IT services to the business in a more efficient manner. In developing ISM, we have not only learned from many years of practice; we have also learned from the mistakes made in those years. ISM's structure is based on solid and proven structures and principles. ISM is a combination of best practices and practical design, supported by many instruments, in a format that is applicable in an unambiguous architecture.

The ISM Method:

- is based on a way of thinking (including service delivery, people, process, product, and management according to the 3x3 matrix model)
- uses a way of modeling (including process structures, organization structures, and relation schemes)
- contains a way of working (including a project approach, and standardized application)
- contains a way of managing (including introduction, coaching, reports, metrics, phasing, and standard products)
- offers means of support (including certificates, publication tools, service-desk tools, version control, standards, and games)

This means that ISM offers a method with fully integrated parts that can easily be maintained. Besides that, ISM is highly compatible with quality reference models such as COBIT and ISO20000.

The purpose of ISM (and this was continually kept in mind when developing the method) is to offer a complete and easily applicable management instrument. The key characteristics of ISM are:

- focus on service delivery
- applicability and simplicity
- structure based on architecture
- integration of people, process, and product
- instantly usable by any organization
- standard introduction: quick installation followed by culture change
- maximum standardization with interfaces to organization-specific characteristics

How to use this book

The first two chapters of this book describe the background and origin of ISM: the past and the present of ITSM. These chapters offer a short history of several models and an overview of the building blocks of modern ITSM.

The next three chapters describe the ISM Method. These chapters clarify the choices made when developing ISM, and the basic principles of the method. We also discuss the three components of the method: the ISM framework, the ISM introduction method, and the ISM support.

The fifth chapter contains a description of the process model, with all process flows.

Throughout the book, definitions, rules, and guidelines are highlighted in colored text boxes, in italics. Important explanations, relevant one-liners, and quotes are shown in text boxes as well.

Chapter 1 is about the *past* and focuses on the general history of ITSM. All important milestones and the most important building blocks are discussed. The frameworks and standards mentioned are discussed in terms of their contribution to the field of ITSM. The chapters make clear that the need for a method for ITSM has been only partially fulfilled in the past.

Chapter 2 is about the *present* and describes the position and the purpose of ITSM (delivering adequate services to the business). After a description of the basics of a service ('What does the customer want'), the frameworks, building blocks, and objects of modern ITSM are described. This chapter offers the justification for standardization, and the inspiration that led to the development of the ISM Method.

Chapter 3 is about the *future*. It provides an insight into the basic principles of ISM. The chapter describes the development and basic structure of ISM, and the choices that have resulted in the ISM Method.

Chapter 4 is about the *practical side* of ISM. The three components of the method are described: the framework, the introduction method, and the support. The chapter will help you, the reader, to get a clear impression of the value and operation of ISM in practice within your own organization.

Chapter 5 contains a *step-by-step description* of the ISM Method. There are descriptions of objectives, definitions, sub-processes and steps, interfaces, management, the organization, and the tooling for all six processes.

The book ends with a list of acronyms, an extensive glossary, a bibliography, and an index.

Terminology

This book features a glossary containing all important terms, including the synonyms used. The glossary also contains a list of acronyms. Terms that are used frequently are expressed through their acronym. For example, IT service management is referred to as 'ITSM'.

You can use the glossary to look up certain terms. However, most of these terms will also be explained throughout the book. To help you fully understand the contents of the book from the very beginning, we have explained the most relevant and important terms below.

Practice, model, method and framework

A *practice* is a way of working that is used to perform a certain task. A *best practice* is the best way of working that exists. Best practices can be used as an example for others.

A *model* is a schematic, and often simplified, depiction of (or a vision of) reality. The way of modeling dictates the way in which reality is schematically depicted. Models are often used to predict and understand future behavior.

A *reference model* functions as an example, to be used as a reference in a practice.

A *review model* is a model that can be used to review a practice in order to establish its relative position versus the model.

A *method* is a systematic technique composed of a way of thinking, a way of modeling, a way of working, a way of managing, and a way of supporting. The terms 'practice' and 'model' clearly have a limited reach compared with the term 'method'.

A *framework* is a term that can be placed between 'model' and 'method'. A framework describes a structure or system that has a specific goal. A framework usually consists of several methods and best practices. Frameworks such as ITIL, ASL, and BiSL are reference models that contain best practices.

IT service management, IT management, IT service

Information delivery is performed within two complementary domains: specifying and managing the information delivery takes place in the *information management domain*, while the delivery of IT services takes place in the *IT management domain*.

The *IT management domain* includes several sub-disciplines. For example, technical management is about managing the technical infrastructure. Technical management includes system management and network management. In an analogous manner, application management is about managing applications, and includes software development and database management. In addition to technical management and application management, the IT management domain includes facility management, human resource management, and document management. The cooperation and cohesion of these disciplines in the IT management domain is managed by IT service management. In ITSM, the focus is on the output that is realized by these disciplines: in other words, the IT service. That explains the term 'IT service management'.

IT and ICT

Information technology (IT) includes the technical infrastructure, the applications, and the technical facilities. A synonym for information technology is information and communication technology (ICT).

Business, organization, customer, supplier

The goal of information delivery is to support the organizational processes with adequate information. The organizational structure around the processes can be expressed in different terms: the business, the company, the organization, the customer. There is no fundamental difference between commercial (often called *business* or *company*) and non-commercial (often called *organization*) environments. In this book, these words are interchangeable.

The customer is served by a supplier of information services. The terms *information provider* and *information supplier* are also used as synonyms.

1 The history of ITSM

This chapter describes the origin and development of the IT service management (ITSM) discipline. This relatively short history has delivered important knowledge, experience, and insights that will help to further develop ITSM. The most important models that have played a role or that are still important are discussed in this chapter. These models contain the most important components of the way an IT management organization works and how it is managed. The chapter ends with an evaluation and conclusions about the requirements for a proper method.

1.1 The beginning

With the emergence of automation came the growing need for organizing its management. IT changed rapidly over the years and became quite complex. It developed from a mainframe with linked terminals and a limited number of updates per year (1964-1985) to networked midrange servers with an internal client/server architecture (1985-2000). And from this network it changed to an internet-linked system of on-premises servers and outsourced servers and network services, through PCs, thin clients, or cloud computing (2000-present).

Furthermore, the functionalities available to the user changed. In the past, users of terminals were restricted to a fixed package of functionality available on the mainframe. Users of PCs, working on a server, had access to more varied office functionalities. This created greater dependency upon the IT department, and a growing need for a better service delivery. At the same time, the complexity of IT services was growing. In its slipstream, IT management became more complex as well. The level of interaction between user and service provider increased, as did the level of interaction between the teams of the IT organization involved in providing the IT services.

The increase in functionality caused tremendous growth in the number of users. While initially IT supported specific functions, it came to support more and more generic functions, used by almost everyone. IT management had to support many different kinds of users, each with their own specific demands for support and communication.

As a consequence, the boundaries between the different roles blurred, and members of different teams were forced to increase their cooperation. There were hardly any mechanisms available to manage this new way of working, causing all sorts of problems. This was not only the result of introducing new systems, but also the result of an increase in the number of user questions about new applications with a shorter lifespan. In a mainframe environment, applications were usually updated no more than twice a year, but many of the newer applications required monthly or even weekly updates. This made systems highly unstable.

Failure of IT should never be allowed to put an organization's operational management at risk. It is unacceptable – if only for the sake of competition – for production to stagnate because IT is unable to print the order forms.

Simultaneously, users became more and more dependent on information systems functioning properly. The contribution of IT to the primary company activities increased exponentially. Nowadays, IT is crucial for the operational management of organizations. Many organizations have become highly dependent on IT, and they would not survive long without it. However, it still seems to be quite difficult to provide adequate IT services that are monitored as well.

1.2 Increasing need for control

There is an ever growing need for higher-quality IT services: a process that still continues today. Internal and external customers require better information delivery to fulfill their organizational needs. More and more organizations have to deal with legislation and regulation, requiring correctly arranged organizational processes.

The stock-exchange scandals surrounding companies such as Enron, WorldCom, and Ahold have resulted in increased attention to *corporate governance*. This led to the Sarbanes-Oxley Act in the USA, overseeing the internal regulation of organizations quoted on the stock exchange. The legislation and regulations continue to grow, including the Code Tabaksblat, anti-spam legislation, SAS 70 statements, IFRS for financial markets, and BASEL II.

More than ever, organizations need to be able to prove that they are *in control*.

1.3 The rise of the process-based approach

It has become obvious to most organizations that they need to manage their processes properly to be in control. Organizations have to be able to adapt to constantly changing conditions – something that has become a habit for many.

Employees have accepted the fact that the ‘job for life’ no longer exists and job hopping has become a common phenomenon. The only truly stable factors in an organization are the processes.

For decades, IT organizations have developed along hierarchical structures. Based on knowledge, technology, or responsibilities, organizational structures have become ‘stove-pipes’, focusing on line management. This structure has to be changed to a more process-based approach. Unfortunately, it appears that managing processes in combination with line management (the matrix organization) is very difficult for many organizations. Organizations tend to start enthusiastically, applying all sorts of processes without having a clear goal in mind. They often use the trial-and- error approach, to see ‘how far this gets us’ – an approach that tends to be quite unsuccessful.

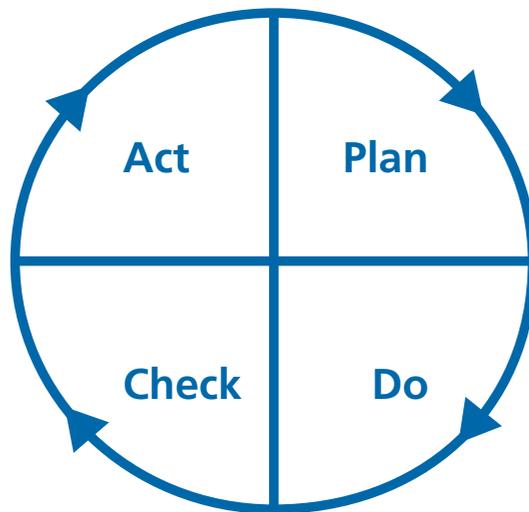


Fig 1.1 The PDCA cycle

In a more structured approach, organizations often use the PDCA cycle¹ as an improvement instrument. PDCA stands for plan-do-check-act, the four sequential stages of an improvement initiative. The PDCA cycle is used in several reference models discussed in this chapter.

1 The PDCA cycle is attributed to Dr. Edwards Deming, who made the method popular. However, the origin of the PDCA cycle lies with Walter A. Shewhart. After a couple of years, Deming changed the PDCA cycle to a PDSA cycle (Plan-Do-Study-Act).

1.4 Process-based reference models

The increased attention to process-based management, for better control, gave rise to many 'models'. Processes have played an important part in these models since the early 1980s. In the following sections, we discuss the most relevant and prominent models in chronological order (Figure 1.2). At the end of this chapter you will find an overview of the trends that are indicative for an integrated solution.

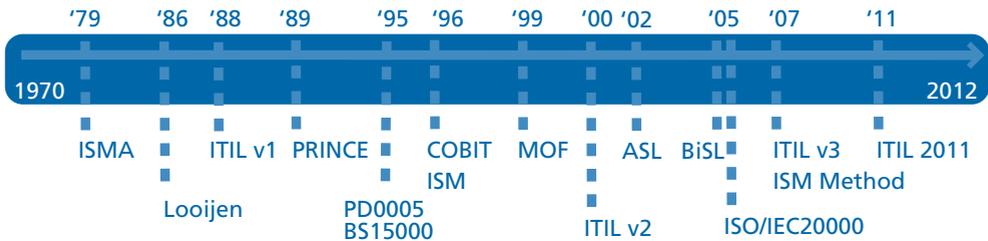


Figure 1.2 Process-based reference models

1.5 ISMA (from 1979)

In the 1970s, IBM conducted research into the quality of IT services. In 1979, Edward A. van Schaik and some of his IBM colleagues developed ISMA (Information Systems Management Architecture) for mainframe computers. The publication 'A Management System for the Information Business' followed in 1985. In ISMA, OGC² recognized the first initiative in developing a process description and it used the method as a reference for the development of ITIL.

In 1994, IBM started a project to replace ISMA. This led to the IT Process Model (ITPM: Ommeren & Kapoor 1997), which was designed as a generic management model for specifying and managing functions in IT management organizations. Since the model was quite complex, IBM also developed ITPM Light (Buijs & Kapoor 1998).

The purpose of ISMA was to provide an efficient management system for IT services.

2 Office of Government Commerce, see Section 1.7.

The *contribution* to the development of ITSM is mainly the distinction between people, process, and product, and the recognition of several identifiable processes.

Description and main graphics

ISMA contained a series of grouped activities in which (steps of) processes and particularly procedures were described (Figure 1.3).

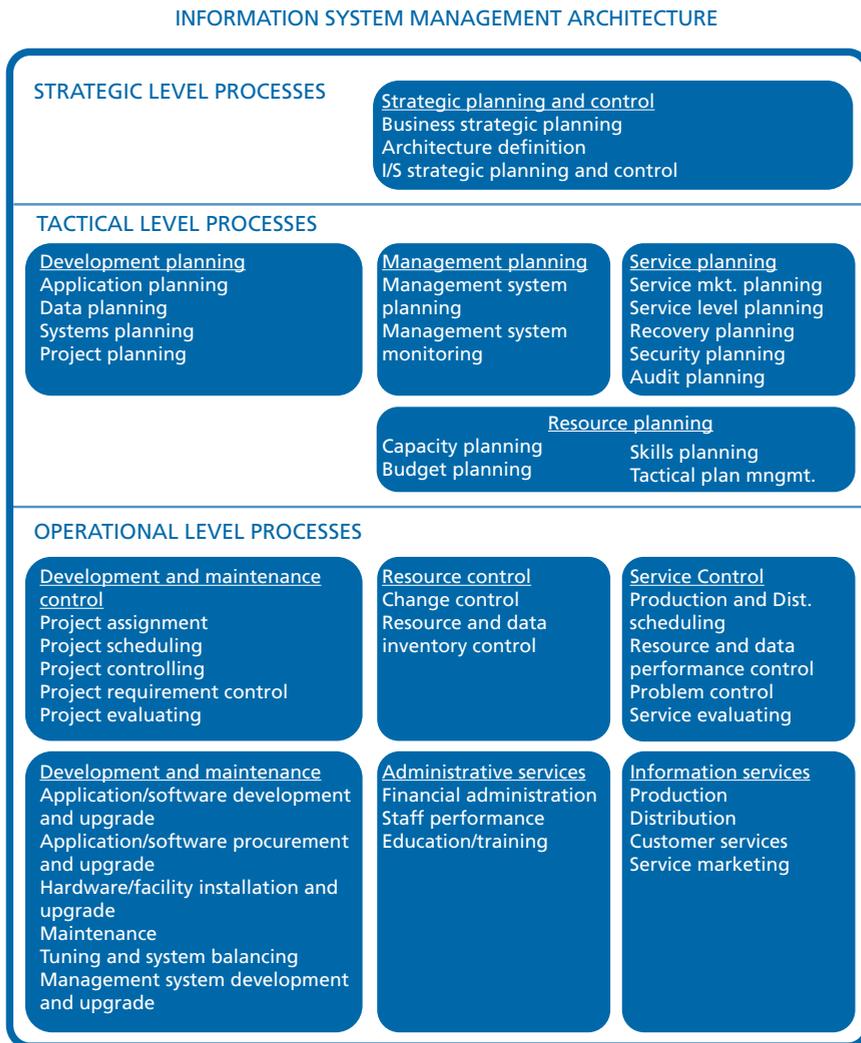


Figure 1.3 The processes of ISMA

ISMA contained 42 'processes', arranged as strategic, tactical, and operational processes. This set already contained several elements that would be given a lot of attention in later models, sometimes under a different name:

- service level planning
- security planning
- capacity planning
- change control
- resource and data inventory
- production and distribution scheduling
- problem control
- service evaluating
- financial administration

ISMA had a maturity model according to the five familiar levels, in this case renamed to Startup, Growth, Control, Planning, and Strategic Planning.

ITPM, a derivative of ISMA, was based on the assumption that every IT organization knows a series of fundamental processes, whatever the organizational structure and the technology that is used. A distinction was made between people, process, and product. The ITPM process model regrouped the 42 ISMA processes and contained 11 process groups. ITPM Light contained only ten (abstract) processes.

Looking at these ten processes, one can easily identify several important ITIL processes and functions, as well as several steps from the ITIL change management process:

- Provide operational support (in ITIL: service desk)
- Make and monitor agreements (in ITIL: service level management)
- Design the solution (in ITIL: change management)
- Select or create the solution (in ITIL: change management)
- Integrate and test the solution (in ITIL: change management)
- Implement the solution (in ITIL: change management)
- Monitor availability (in ITIL: availability management)
- Monitor resources (in ITIL: configuration management)
- Create strategy
- Create and monitor IT plan

Position

ISMA is no longer used in practice and has never received much attention. The success of ITSM came many years after the publication of ISMA. Most of the attention in the 1980s was spent on developments in hardware and software. ISMA became known in later years because it was seen as 'the origin of ITIL'.

ITPM never received much attention either. This is probably because it was a proprietary product and it could not, therefore, compete with ITIL.

Pros and cons

From a historical perspective, ISMA became well known because of the recognition that it was the first initiative to document process management, and that it influenced the creation of ITIL. The names and descriptions of several processes that later became the core of ITIL are derived directly from ISMA. However, just like ITIL, ISMA mainly described procedures as opposed to processes. The lack of an underlying process model, which was also missing in ITPM, led to a fragmented view of the classified activities, especially their technological and organizational aspects.

1.6 Triple management model (Looijen, from 1986)

Separation of duties (or separation of concerns) has been used for many years as an instrument to make a system manageable and controllable. In separation of duties, a domain is divided into two parts that can monitor each other. Separation of duties provides a controllable system, where one domain specifies what the other domain has to do. This method avoids a situation where the provider has to monitor himself. This instrument can be applied without any effort to the information delivery domain of an organization.

In this respect, the work of Prof. Dr. Maarten Looijen (Delft University of Technology, the Netherlands) has been crucial. In his publications and courses, Looijen focused on the role of information management and exploitation. The increased attention to developing and implementing information systems had led to the understanding that better management of information systems was required to realize the desired information delivery. The phases 'design' and 'delivery' became increasingly important and the lifecycle approach became the basis of Looijen's work.

In 1985, Looijen described his ideas on management for the first time in the article 'Exploitation of automation resources and data processing', in the Dutch journal *Informatie* [Looijen 1985]. In 1986, his book 'Exploitation of automation resources' was published. Looijen finished his PhD in 1988 and was appointed at Delft University of Technology. In his thesis, Looijen published the FATO model, which distinguished

between the areas of Functionality, Automation resources, Task areas and fields, and Organization. In his analysis, Looijen distinguished tasks, organization, and resources, which in fact already followed the structure of *people, process, and product*.

In 1991, Looijen published 'EBM – A management method with SDM', in which he emphasized that the IT supply organization should be involved in the early stages of the development of information systems, to prevent systems from being 'thrown over the wall'. In 1992, in collaboration with Guus Delen, he published his views on the professionalization of IT management in the book 'Management of information systems' [Looijen, 1998].

The purpose of the triple management model is to create an efficient and effective system for the management of information systems.

The contribution to the development of ITSM consists mainly of the identification of the three sub-domains 'information management', 'application management' and 'technical management', and the resulting separation of demand and supply.

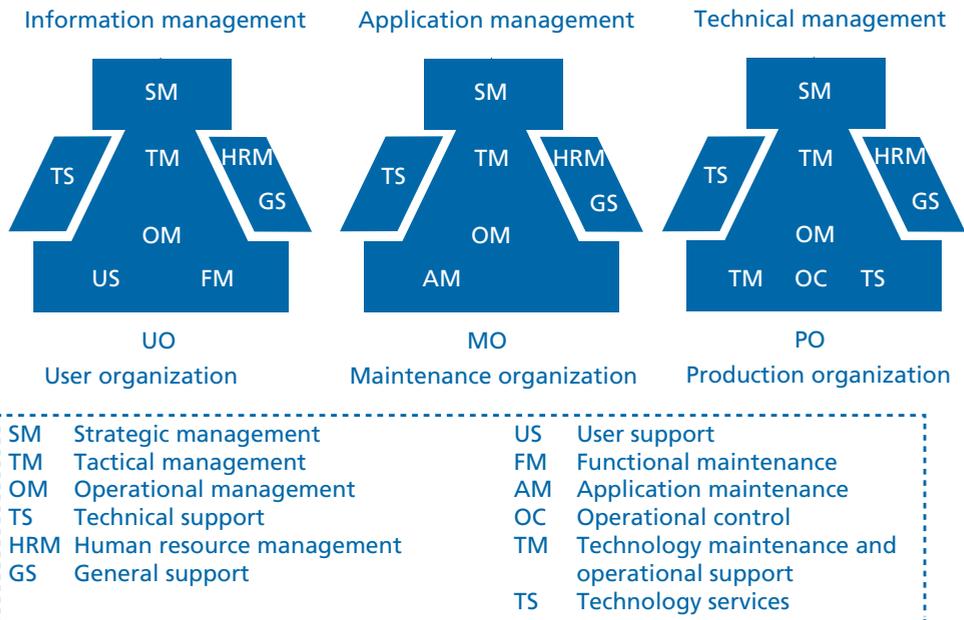


Figure 1.4 The triple management model

Description and main graphics

In the FATO model, Looijen described the activities that can be found in the later ITIL books. Among these are the following processes and functions:

- Change Management (ITIL: change management)
- Problem Handling (ITIL: incident management)
- Service Level Management (ITIL: service level management)
- Capacity and Planning (ITIL: capacity management)
- Information Center (ITIL: service desk)
- Protect (ITIL: security management)
- Availability (ITIL: availability management)
- Disaster Recovery (ITIL: continuity management)

Looijen distinguished three types of management (Figure 1.6):

- **Information management (IM)** – carried out by the User Organization (UO)
- **Application management (AM)** – carried out by the Maintenance Organization (MO)
- **Technical management (TM)** – carried out by the Processing Organization (PO)

Looijen described each of these domains in a Mintzberg Chart.

With the state model (Figure 1.5), Looijen described the lifecycle of the information system. In this model, the phases from development to operation and use were positioned, and a distinction was made between influences from the user organization and influences from the management organization.

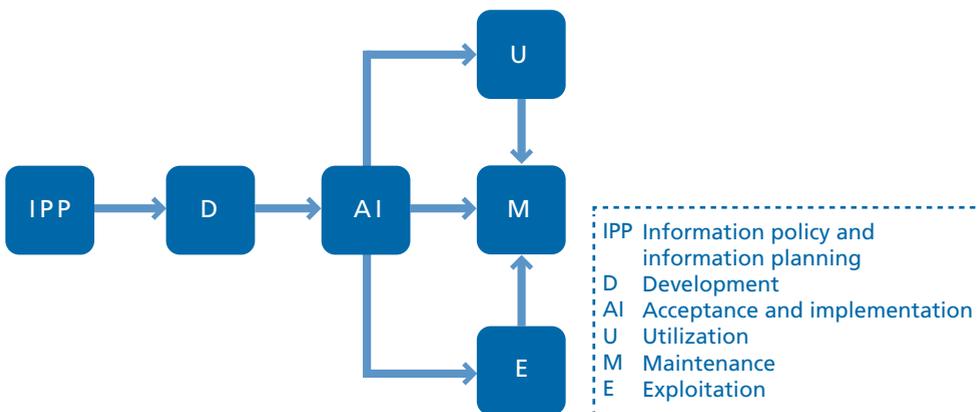


Figure 1.5 The state model (Looijen, 1991)

Position

Looijen provided a very important contribution to the recognition and professionalization of IT management. With his documentation of the three management forms (information, application, and technical management) and the corresponding task areas, he laid a solid basis for structuring the IT management discipline. He used this for many years in his teaching at Delft University, where many IT management specialists were educated in the nineties, until he retired in 2001.

The triple management model had a leading position only in the Netherlands. In other countries this view was hardly known, and instead ideas focused on a separation between demand and supply, which was analogous to the dichotomy between information management and technical/application management (Figure 1.6). This separation of information management and application/technical management (or demand and supply) led to a separation of duties, one of the most basic principles of governance.

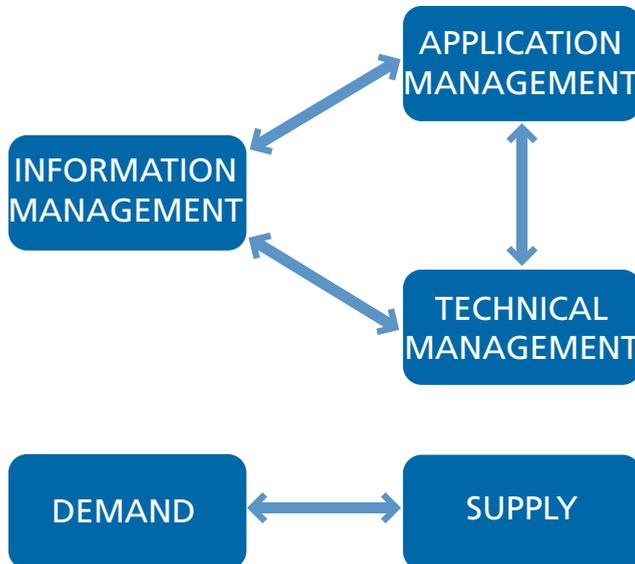


Figure 1.6 The triple management model and the demand-supply model

Opportunities and challenges

The idea that application management and technical management are two sub-domains of the larger IT management domain, and that managing the service delivery (ITSM) is a specific discipline, did not become popular until the end of the nineties. In the IT management domain, the disciplines of application management