

MOF, a pocket guide

Microsoft Operations Framework

Microsoft is dedicated to helping our customers deliver high-quality, cost-effective IT services on the Microsoft platform. We know this takes quality processes, applied by disciplined professionals who are supported by effective tools. We are committed to providing:

- Published best practices and guidance, within the Microsoft Operations Framework (MOF).
- Services and training to help implement those best practices.
- Service management products and technologies to help automate them.

We are further committed to supporting the growth of industry best practices, as published in the IT Infrastructure Library (ITIL).



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ISBN Barcode
9077212108

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Microsoft Operations Framework
a pocket guide

IT Service
Operations
Management

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Publisher:	Van Haren Publishing (info@vanharen.net)
ISBN:	9077212108
Editions:	First impression, first edition, February 2003
Design & Layout:	DTPresto Design & Layout, Zeewolde-NL

This pocket guide is intended as a practical reference for IT professionals studying or implementing the Microsoft Operations Framework (MOF). This guide is derived from and complements the core MOF publications (described in detail in Section 11 of this guide.)

This guide introduces the core components of MOF:

- MOF Process Model
- MOF Team Model
- MOF Risk Model

Maximum benefit will be derived from this guide, if before studying or implementing MOF an understanding of ITIL is obtained. This should be to at least a Foundation level. Please see Section 11 for more information about ITIL.

Information technology is critical to many aspects of modern life. IT must be reliable and trustworthy. Great strides have been made in technology, but what has not changed is the need for quality processes, applied by disciplined people who are supported by effective tools. These are essential to delivering IT-based services with the reliability, availability and security that we all need. Microsoft believes it is essential to build on the experience and best practices accumulated over many years by the dedicated professionals in IT service management. Microsoft also believes that the leading publicly available body of knowledge of best practices is the IT Infrastructure Library (ITIL). Therefore, Microsoft has chosen ITIL as the foundation for Microsoft Operations Framework (MOF). We have taken the technology-independent ITIL and applied it to the Microsoft platform for IT service delivery in a heterogeneous environment.

"If I see further, it is because I stand on the shoulders of giants," wrote Sir Isaac Newton. I am glad to take this opportunity to thank the giants of ITIL, and say that we look forward to continuing to contribute to the growth and evolution of IT service management around the world.



Bret Clark
Director,
Microsoft Operations Framework

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Introduction

Microsoft Operations Framework (MOF) is Microsoft's structured approach to help customers to achieve operational excellence on the Microsoft platform. MOF delivers a collection of best practices, principles, and models, which provides guidance for achieving high availability, reliability, and security on mission-critical production systems built on Microsoft's products and technologies.

MOF and ITIL

Microsoft believes that the leading publicly available body of knowledge of best practices is the IT Infrastructure Library (ITIL). Therefore, Microsoft has chosen ITIL as the foundation for Microsoft Operations Framework (MOF). One of the lesser developed areas in the two core ITIL publications (Service Support & Service Delivery) however is the approach towards the Operations Management of IT environments. MOF enhances ITIL's collaborative industry standards with guidance in the operation of IT products and technologies, in particular Microsoft's. In addition, MOF introduces some concepts that are relevant to today's business environment which is both increasingly interconnected and increasingly fluid. These concepts include an iterative lifecycle with a focus on constant improvement and structured management reviews to provide focused management attention at key points in that lifecycle. Microsoft is now contributing to ITIL and has helped to write 2 of the new books (Implementing Service Management and Applications Management). Together with the focus on operations management, this makes MOF a valuable and enhanced approach towards IT service management, of which the generic part can be used for other platforms as well.

Design Considerations

Microsoft designed MOF with the following considerations:

- *Leverage industry best practices* - In adopting ITIL, Microsoft leveraged the most widely acknowledged industry best practices as MOF's foundation.
- *Incorporate proven concepts and practices* - In addition to ITIL best practices, Microsoft incorporated proven IT operations concepts and practices from its own IT operations groups, its professional services groups, its partner community, and its customer community.
- *Provide guidance on people and process* - Microsoft designed MOF to complement its technology products with specific guidance on the people and process that surround the technology.
- *Take the perspective of end-to-end services* - Rather than taking the perspective of managing individual technology components (e.g., workstations, servers), Microsoft took the perspective of managing end-to-end IT services (e.g., messaging, print services) as its primary point of view.
- *Integrate with the entire IT life-cycle* - Microsoft designed MOF to integrate well with planning and deployment activities within the overall IT life-cycle.

Why Microsoft Created MOF

Use of Microsoft's enterprise server platforms (including Windows®, Exchange Server® and SQL Server®) in mission-critical production computer systems continues to increase. This situation has created both a need and a demand for established guidance in operating those platforms cost-effectively to achieve high reliability, availability, and security. Microsoft created MOF to provide this guidance.

MOF Models

MOF is composed of three core models, each of which is intended to represent a major component of IT operations. The MOF models are:

- *The Process Model* - A functional model of the processes performed by service organizations to manage and maintain IT services.
- *The Team Model* - A simplified view of team roles that helps management to focus on organizing people effectively.
- *The Risk Model* - The incorporation of key principles, a standard terminology, and a structured and repeatable five-step process for managing risks that service organizations staff face on a daily basis.

Details about each of these models are provided in subsequent sections of this guide.

Key Terminology

The definitions of the following three terms are important to fully understanding the MOF models:

- *Service Solutions* - Service solutions are the capabilities that IT provides to the business, defined in terms of functionality at the end user level. A distinction is made between full services and service components. Examples include line-of-business applications, messaging, data storage, and print services.
- *Service Management Functions (SMFs)* - SMFs are processes and policies applied across service solutions in the management of IT services. Example SMFs include change management, system administration, and Service Desk.
- *Operations Management Reviews (OMRs)* - Key checkpoints focused on the SMFs within a quadrant of the Process Model.

Overview

The best approach to defining the term 'IT service management' (ITSM) is to begin by defining the component parts of the term:

- In the traditional ITIL definition Information Technology (*IT*) stands for the IT infrastructure: hardware, software, network components, documentation, procedures and process roles.
- A *service* is a set of components, physical and logical, IT and non-IT, required to deliver support to a business operation. The customer will judge the effectiveness of this set and view it as a single entity by the support it delivers to their business operation as a whole, not by the performance of any component elements of the set.
- In this context, the term *IT service* refers to a set of related IT and probably non-IT functionality, which is provided to end-users as a service. Examples of IT services include messaging, business applications, file and print services, network services, and help desk services.
- In this context, the term *management* refers to the concepts and practices employed on strategic, tactical and operational level in the support and delivery of these services. Management is concerned with using resources, including equipment, staff, processes and ideas, to achieve an end - in this case delivery of a service.

Central to *IT service management* is the idea that IT organizations, both internal and external, are *IT service providers* whose job is the provision of high quality, cost-effective IT services. The quality and cost-effectiveness of IT services are judged by the respective customers (those who pay for IT services) and users (those who consume IT services).

The true mission of IT service management is to align IT services with the current and future requirements of customers and users. Alignment is achieved when IT provides these groups with the services required, at the level of quality agreed to, and at an acceptable cost. Ultimately IT service management can become a business enabler.

Why IT Service Management?

The increasing business dependence on IT services has highlighted the need for effective management of these services. IT cannot be seen as a collection of devices and applications provided to users, it must be seen as a series of integrated services. There is a strong growth in the awareness that many primary business processes can no longer function without the contributions made by IT services. In many industries, IT is already part of or has already become a primary business process. The developments in e-commerce also show that IT has become a crucial factor for daily operation of businesses. Therefore the business needs to gain control of IT and IT services in order to enable the alignment of business processes and IT services.

The Origins of IT Service Management

IT service management has its roots in a UK-developed collection of best practices called the IT Infrastructure Library (ITIL). ITIL was originally developed in the late 1980s by the UK government's Central Computer and Telecommunications Agency (CCTA, now OGC: Office of Government Commerce) based in part upon an earlier IBM initiative and with input from a significant number of industry experts. The philosophy behind ITIL was to create a set of best practices for the management of IT services, which could be adopted and adapted by IT service providers.

The current edition of ITIL contains 7 books: Service Support, Service Delivery, Application Management, ICT Infrastructure Management, Planning to Implement Service Management, Security

Management and The Business Perspective. ITIL Service Support and ITIL Service Delivery are the two core publications that describe the Service Desk function and the following key IT service management processes:

ITIL Service Support	ITIL Service Delivery
<ul style="list-style-type: none"> • Incident Management • Problem Management • Configuration Management • Change Management • Release Management 	<ul style="list-style-type: none"> • Service Level Management • Availability Management • Capacity Management • Financial Management for IT Services • IT Service Continuity Management

ITIL guidance is vendor and platform neutral and is supported by a worldwide industry of training, globally recognized levels of certification, and consulting services, as well as by software products that facilitate the process.

Since its creation, ITIL has become the world's de facto standard for IT service management.

3. Implementing Service Management

Implementing IT service management is not a task to take on lightly. It requires special skills that have not traditionally been available in IT staff. Where IT staff formerly were predominantly occupied with technical issues, the focus now is on delivering services. The striking differences between products and services can be summarized as:

1. The basic intangibility of services.
2. A substantial part of the service actually consists of acts and interactions; they are typically cooperative events for customers and technical staff.
3. The production and consumption of a service cannot always be kept apart, since they generally occur simultaneously.
4. The customer is often more than just a customer - they are also participating in the production of the service.
5. Modern services are delivered by a chain of partners, consisting of the customer, the internal IT provider and third party suppliers.

This generally means that there is just one single moment in which the service is delivered and the quality perception is established. This moment is often referred to as the 'Moment of Truth' (Normann, 2000). To make it even more complicated: it will take several pluses to make up for one single minus, and the moment of truth is subject to the mood and attitude of all parties involved. To clarify the expectations between customers and service providers, best practice shows that an agreement is required. Such an agreement should be built on metrics that help determine the achieved services.

It is important to realize that implementing successful IT service management will involve a change in organizational culture. The behavior of IT staff has to shift from a focus on delivering output (e.g. desktop, software, network) to a focus on the outcome (what is the effect of IT for the customer). Behavioral issues like relationship management, risk management, and business drive become major

4. MOF Process Model

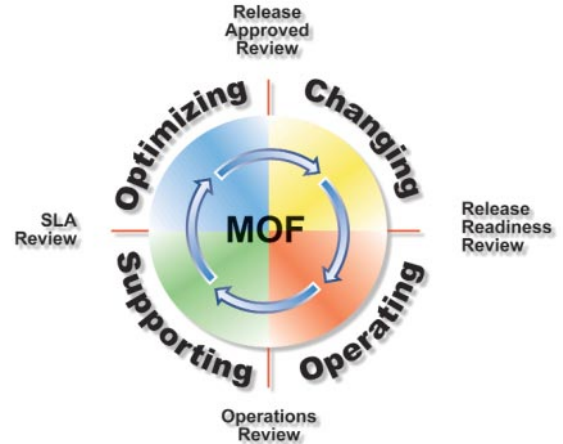
aspects and these cannot be simply switched on. The successful implementation of IT service management requires measurable evidence of benefit to build a business case, and to prove the success of the implementation. Another key requirement is 'Buy In' from customers, a belief that IT service will be improved as a result of IT service management. This will require a significant effort in education and communications with the customer. The longer term challenge is to 'Stay the Course', not deviate from the established processes and fall back into old habits to deal with issues with the services delivered. It is widely accepted that a focus on processes supports the focus on customers in the provider domain and stimulates the quality of the service.

Overview

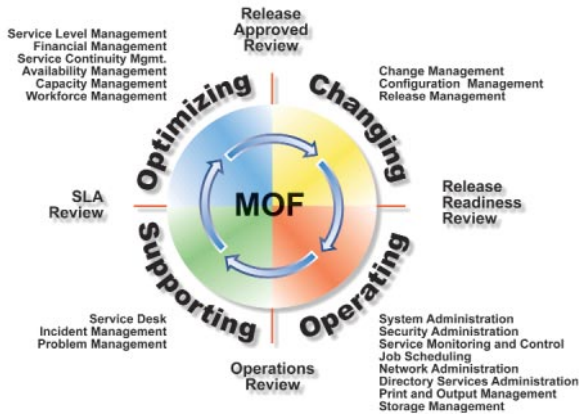
The MOF Process Model has four main concepts that are key to understanding the model:

- IT service management, like software development, has a life cycle.
- The life cycle is made up of distinct, logical phases that run concurrently.
- Each phase has an Operations Management Review process. Operations Management Reviews (OMRs) are either release-based or time-based.
- IT service management touches every aspect of the enterprise.

The MOF Process Model represents the lifecycle of a service solution. The intent of the Process Model is to provide a simple representation of the relationships between the components within the model.



The MOF Process Model



MOF and IT Service Management Functions

The Process Model organizes MOF SMFs into four quadrants of related functions: Changing, Operating, Supporting, and Optimizing. The quadrants represent the highest level of work in the Process Model and are named accordingly:

- **Changing Quadrant** - SMFs are those required to identify, review, approve, record and incorporate change into a managed IT environment:
 - Change management.
 - Configuration management.
 - Release management.
- **Operating Quadrant** - SMFs are those required to monitor, control, manage, and administer service solutions and meet agreed service levels on a daily basis.
 - System administration.
 - Security administration.
 - Service monitoring and control.
 - Job scheduling.
 - Network administration.
 - Directory services administration.
 - Print and output management.
 - Storage management.
- **Supporting Quadrant** - SMFs are those required to identify, assign, diagnose, track, and resolve incidents, problems, and requests based on agreed service levels:
 - Service Desk.
 - Incident management.
 - Problem management.
- **Optimizing Quadrant** - SMFs are those required to manage costs while maintaining or improving agreed service levels:
 - Service level management.
 - Capacity management.
 - Availability management.
 - Financial management.