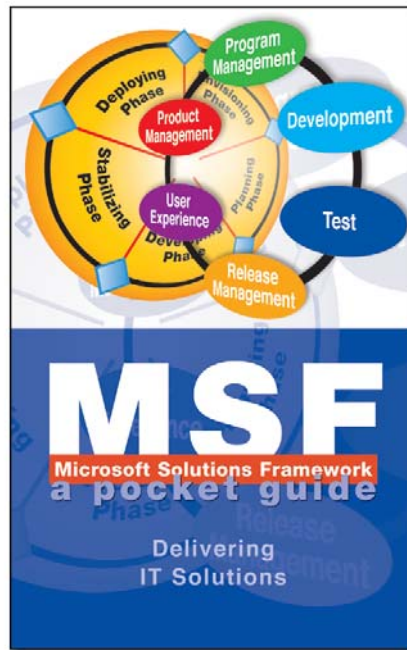


MSF, a pocket guide

Delivering IT Solutions



Title: MSF, a pocket guide

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This pocket guide is intended as a practical reference for information technology (IT) professionals studying or implementing Microsoft Solutions Framework (MSF). This guide is derived from and complements the core MSF documents, as described in chapter 14 of this guide.

The guide introduces the core components of MSF:

- MSF Team Model.
- MSF Process Model.
- MSF Disciplines.

Furthermore, the guide provides guidance on implementing MSF. Finally, the guide shows how MSF integrates with Microsoft Operations Framework (MOF). Both frameworks are complementary in Microsoft's approach to help organizations in delivering innovative solutions and achieving operational excellence.

During these past 10 years, Information Technology (IT) has seen a dramatic increase in both its usage and the rate of change. Companies no longer view IT as a necessary overhead, but instead now recognize it as the key to future success. Businesses' demand on information is the driving force behind the need for IT solutions. Successful implementation of these solutions requires not only the technology but people and processes as well.

In today's climate, organizations are looking to processes and proven practices as ways to maximize their investment in IT. Microsoft recognizes this and created Microsoft Solutions Framework (MSF) to deliver on its 25 years of proven practices in software development and infrastructure deployment. Established in 1993, MSF was developed to enable customer and partner success in the implementation of IT solutions.

MSF focuses on the people and process sides of the IT equation. Through a series of models, disciplines and practices, MSF addresses roles, responsibilities, and processes within the project lifecycle. The flexibility of the framework allows each organization to easily adapt it to their own needs.

Microsoft would like to thank the customers and partners who have contributed to the on-going evolution of MSF.

Allison J. Robin
Director
Microsoft Solutions Framework
Microsoft Corporation

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Introduction

Microsoft® Solutions Framework (MSF) is a structured yet adaptable approach to managing technology projects, based on a defined set of principles, models, disciplines, key concepts, guidelines, and proven practices from Microsoft. It provides guidance on how to organize people and projects to plan, build, and deploy successful information technology (IT) solutions. MSF consistently focuses on the business value of the IT project by placing emphasis on delivery of the complete technology solution - all of the elements required to successfully respond to a customer's business problem or opportunity. MSF draws from a collection of internal and external best practices that have been proven effective in the management of all types of technology projects. Its easy-to-learn, easy-to-use, technology-independent approach makes it accessible to a wide range of organizations. Since its introduction in 1993, MSF has been used both nationally, and internationally, to successfully deliver technology solutions faster, with fewer people and less risk, while enabling higher quality results.

MSF's View of Solution Delivery

MSF concentrates on the three aspects of people, process, and technology involved in delivering solutions. Solutions include the coordinated delivery of technologies, documentation, training, and relevant components of service support and delivery, among others. MSF recognizes that no single structure or methodology is appropriate to all projects and environments given the wide variations in size, complexity, business requirements, and organizational and process maturity. It affirms that an adaptive approach is an absolute necessity for success.

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MSF's philosophy for managing solution delivery is not to introduce a prescriptive methodology, but to provide a framework that is flexible, scalable, and technology-independent. In contrast to other more traditional project management approaches, its guidance is based on principles rather than rigid steps - this makes MSF broadly applicable. Whether the solution to be delivered is software development, infrastructure deployment, application integration, web applications, or a combination thereof, MSF components can be used individually or collectively to improve success rates.

In addition to its core principles, MSF uses two models, the Team Model and the Process Model, as the primary means for providing its guidance. The underpinning disciplines of MSF - Risk Management, Readiness Management (team knowledge, skills and abilities), and Project Management - are used extensively throughout the project life cycle to add depth and continuity. This multi-dimensional approach creates a solution delivery mechanism that extends end-to-end across development and deployment activities - from the initial project concept through implementation - to ensure business initiatives are well-understood and effectively integrated in the operational environment.

Why Microsoft Created MSF

Current environments have become increasingly more demanding of IT organizations: rapid change, increased consumer demands, new global markets and interdependencies, financial constraints, and an ever-widening and accelerating set of stakeholder expectations are the norm. Additional pressures come from within IT, where technological advances and constantly-changing work force must be factored into each project undertaking.

IT resources are increasingly under pressure to build within reduced schedules business-driven solutions that can be deployed and operated securely and cost-effectively. In the past, an IT failure

could damage a company's operational ability; now it can threaten the bare existence of companies.

While new technologies have enabled many new business opportunities, technology projects continue to challenge IT. Many projects are unsuccessful because they are implemented with poor quality, excessive costs, or missed dates. Other projects squander precious resources through false starts, cancellations, or failure to implement. MSF was developed to help teams overcome the most common obstacles, thus improving business value, success rates, and solution quality.

Common Obstacle	What MSF provides to overcome
Poorly defined business problems or opportunities (and goals)	Establish clear, measurable project goals
Breakdowns in communication	Align business and technology goals using a shared vision and principles Focus on improving communication, within the team and externally
Unclear roles and responsibilities	Define and establish a set of easy to understand team roles and responsibilities Match resources (people and budget) to project needs, and resource needs to projects
Breakdowns in processes	Implement an iterative, milestone-driven process with clearly defined deliverables
Mistaken assumptions and unanticipated risks	Manage risk proactively using a well-defined approach Respond to change effectively and recognize its inevitability up-front

Table 1.1 Common obstacles in projects

IT organizations need to understand the businesses they support. Only by recognizing where that business is going, its goals and plans, can IT help the business be successful. MSF helps to forge a partnership between IT and the business. It lays the groundwork for greater understanding, accountability, collaboration, and communications.

Evolution of MSF

MSF has evolved over the last ten years and is now a robust and mature framework managed and developed by a dedicated product team within Microsoft. MSF originated from within Microsoft's own product development groups and from Microsoft Worldwide Services engagements, where it became integrated with well-known, industry-proven best practices. As MSF was developed and continues to evolve, these practices are consolidated and simplified for easier understanding and adoption, then verified through application in real-world projects. To stay abreast of the continually-changing and expanding needs of technology teams, Microsoft has looked to Worldwide Services, Microsoft product groups, Microsoft's internal operations and technology groups, Microsoft partners, and customers. Their successful experiences and practical innovations are incorporated into the development of MSF. An international advisory council of subject matter experts (SMEs) participates in MSF's development by providing guidance, reviews, and other input. Microsoft has found that involving outside expertise and experience helps to keep MSF up-to-date and relevant to what is happening in the industry and prevents it from becoming too parochial.

Thousands of people, internationally, have been trained in MSF and use it regularly. Teams use MSF within Microsoft to manage projects. Many Microsoft customers get their first introduction to MSF during engagements with Microsoft. These customers often adopt it and re-use it on subsequent projects as their preferred approach.

The most recent release of MSF, version 3.0, includes:

- *Updated Team and Process Models:*
 - The revised models provide a unified, adaptable framework with guidance for development, infrastructure, enterprise software integration projects, or other technology-based changes.
 - New Process Model phases. The Process Model now consists of five phases, combining the previously separate application development and infrastructure deployment models into one unified process for use in all types of projects.
- *Greater integration with industry standards* - Adding Project Management and Readiness Management Disciplines provides increased focus on building stronger, more effective teams. Refinements to the Risk Management Discipline extend MSF and add depth for broader application and improved scalability.
- *Linkages between MSF and MOF* - Connecting MSF and MOF ensures the close relationship of these approaches and helps project teams to deploy solutions into a production environment.
- *A new MSF Practitioner Program* - The new program has been created to ensure individuals have the knowledge and skills necessary to effectively lead an MSF project and/or participate as a project team member.

MSF Overview and Key Terminology

The basic MSF structure consists of eight core **MSF principles**, two **MSF models**, and three **MSF disciplines**. Although these components were designed to work together as an integrated whole, each component may be used individually as well. An organization might use their own project methodology, but adopt the core principles, or, it might use its own set of project roles, but use the five process phases. Augmenting the basic structure, **key concepts, proven practices, and recommendations** that apply to specific topic areas are used to extend MSF's applicability and adaptability on projects of varying size and complexity.

They are integrated into the models and disciplines.

To recap, the overall framework consists of:

- *Principles* - Microsoft uses the term 'Foundational Principles' for the core principles upon which the framework is based.
- *Models* - Schematic descriptions of principles, concepts, and proven practices that describe an entity or process. MSF includes two models, the Team Model and Process Model.
- *Disciplines* - Areas of practice using a specific set of methods, terms, and approaches (Risk Management, Readiness Management, and Project Management).
- *Key concepts* - Ideas that support MSF principles and disciplines and are displayed through specific proven practices.
- *Proven practices* - Practices that have been proven effective in technology projects under a variety of real-world conditions.
- *Recommendations* - Optional but suggested practices and guidelines in the application of the models and disciplines.

Figure 1.1 shows how the MSF components are interrelated. The example begins with the MSF principle, *Learn from All Experiences*, which is employed in the MSF Process Model at key milestones. The successful application of the principle is dependent upon the key concept of *Willingness to Learn*, which is employed in the project through the proven practice of *Post-Milestone Reviews*. The MSF recommendation for large and complex projects is to *Use External Facilitators* to maintain objectivity, ensure an environment that does not assign blame, and to maximize opportunities for learning.

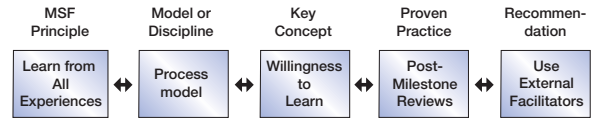


Figure 1.1 MSF Component Relationships

As indicated in the example, the framework is built around core principles that support decision-making and activities necessary for effective process and team collaboration. Principles unify the models and disciplines through a common set of values creating a flexible, adaptable structure. Within the models and disciplines, the principles are reflected in key concepts that are demonstrated through proven practices and the resulting recommendations.

The result is a solution delivery approach specifically designed to deal with changes, identify and manage risks, allocate resources, and establish easy to understand team and process structures.

The definition of several other key terms (table 1.2) is essential to comprehending MSF. Please consult the Abbreviations and Glossary chapter at the end of this guide for additional terms and definitions.

<i>Customer</i>	An individual or organization that expects to gain business value from the solution and is the recipient of a service or product.
<i>Framework</i>	A structure or frame designed to support something - it is assembled of component parts that integrate and fit together.
<i>Milestone</i>	A point on the project schedule at which the project team assesses progress and quality, and reviews deviations in scope and specifications. A project may use numerous milestones, external (or major) and internal (or interim).
<i>Process</i>	A coherent sequence of activities that yields a result, product, or service; usually a continuous operation. A series of actions or operations designed to achieve an end.
<i>Project life cycle</i>	A collection of generally sequential project phases whose name and number are controlled by the needs of the organization or organizations involved in the project.
<i>Solution</i>	Within MSF, the solution is the 'technical solution', the coordinated delivery of the elements needed to successfully respond to a customer's business problem or opportunity. A solution includes technologies, documentation, and training, as well as aspects of service support and delivery related to MOF (among others).
<i>Sponsor</i>	Individuals who initiate and approve a project and its results.
<i>Stakeholder</i>	A person with a significant interest in the outcome of a project.
<i>User</i>	The person who uses the solution or services on a day-to-day basis. Individuals or systems that directly interact with the solution.

Table 1.2 Key Terminology

MSF Principles

There are eight core principles upon which MSF is based.

The principles are tightly interwoven but also stand on their own merits in their applicability to projects of varying types, sizes, and complexity. Subsequent chapters will elaborate further on these principles and discuss how they are employed in their respective area.

1. *Focus on delivering business value* - Understanding why a project exists from a business perspective and how its business value will be measured is an essential element in delivering successful solutions. MSF teams understand how the project will satisfy the customer's specific business needs. The team understands the worth of the project to the business, which enables the team to maintain focus throughout the project.
2. *Foster open communications* - MSF endorses open communication that embraces team member, customer, and other key stakeholder input at all times. Individuals and teams need information to be effective. Team members, customers, and other key stakeholders must have confidence that information will be readily available and actively shared.
3. *Work toward a shared project vision* - The key enabler for MSF teams and processes is establishing a shared vision at the beginning of the project. In creating this vision, the team communicates to identify and resolve conflicts, and to clarify mistaken assumptions. This allows them to define the project's direction and goals in achievable, measurable terms.
4. *Establish clear accountability and shared responsibility* - All team members share overall responsibility for delivering a successful solution. In the Team Model, MSF defines clear accountabilities and responsibilities for each team role and their relationship to respective stakeholders. This is elaborated on in the Process Model.
5. *Empower team members* - Based on 'a team of peers' concept, MSF empowers team members by holding them accountable to

themselves and each other for the project's goals and deliverables. By accepting and sharing accountability and responsibility as equals, the team is empowered to make decisions, set direction, and take actions they deem necessary.

6. *Stay agile, expect change* - MSF takes the position that continuous change is expected and that technology solution delivery projects cannot be insulated from it. The iterative life cycle of the Process Model enables course adjustments to project activities and deliverables at progressive states of completion. It is supported by the Team Model where members participate in key decisions and respond to new challenges.
7. *Invest in quality* - MSF holds the entire team responsible for balancing the trade-offs of delivery, cost, and functionality to preserve solution quality and insulate it from compromise. Team members must build quality into each of their deliverables for the completed solution to be successful and IT organizations must invest in their team members (through education, training, and experience).
8. *Learn from all experiences* - The last twenty years have witnessed only marginal increases in technology project success rates. Given that the major causes of failure are primarily the same, IT organizations do not appear to be learning from their unsuccessful projects. MSF embraces the concept that continuous improvement based on individual and team learning will lead to greater successes.

MSF Models: Team and Process

MSF contains two models: the Team Model and the Process Model. The purpose of the **Team Model** is to enable project scalability and to ensure teams meet various stakeholder needs through its definition and assignment of goal-driven roles and responsibilities. The Team Model identifies who does the work during the project and links each team role with a major project responsibility.

The purpose of the **Process Model** is to drive fast, high-quality results through a proven project life cycle using a key set of project activities and deliverables. The Process Model works in conjunction with the Team Model by organizing the process into distinct phases and milestones for creating, testing, and deploying a solution.

MSF Disciplines: Risk Management, Readiness Management, and Project Management

Disciplines are necessary throughout the life cycle of the project and are constant guides for each of the models. MSF relies on three disciplines: the Risk Management Discipline, Readiness Management Discipline, and Project Management Discipline.

The **Risk Management Discipline** is a comprehensive, proactive approach to increase the likelihood of project success by minimizing the negative factors that could impact project success. Risk Management reduces surprises and expensive 'fire-fighting' activities by providing guidance for proactively managing project risks.

The **Readiness Management Discipline** helps project teams identify skill gaps and opportunities for learning. Readiness Management proactively identifies the skills required by the team matching resources to project needs and schedule requirements. Use of Readiness Management enhances individual skill sets as projects provide opportunities for learning and growth.

The **Project Management Discipline** applies industry-standard project management best practices to MSF principles. By streamlining project management activities, the Project Management Discipline helps the team be successful rather than hindering its performance with additional overhead that may not provide sufficient value for the resource investment.

MSF and MOF/ITIL

Any discussion of MSF would not be complete without examining its relationship to Microsoft Operations Framework (MOF). MOF is Microsoft's structured approach for helping customers achieve excellence in managing operations. As with MSF, MOF provides a collection of principles, models, and guidance. MOF is Microsoft's adaptation of the international standard for IT service management, the Information Technology Infrastructure Library (ITIL).

MOF focuses on service support and delivery with the goal of achieving high reliability, availability, security, and manageability on mission-critical production systems. Microsoft Solutions Framework focuses on solution delivery, namely the envisioning, development and deployment of technology and related elements in response to a business need. These two slogans summarize the goals of MSF and MOF:

MSF = Build IT right.

MOF = Run IT right.

MSF and MOF are complementary frameworks. IT organizations use MSF to develop and deploy solutions and use MOF to operate and manage those solutions on an on-going basis. While MSF guides the planning, building, and initial deployment of solutions, MOF facilitates the implementation, management, support, and evaluation of the solution in the production environment.

MSF and MOF have been designed to work well together, as well as independently. MSF is all about technology solutions and takes the solutions perspective. MOF is based on MSF and takes the operations perspective. MOF is about service support and delivery capabilities - service solutions - that operations provides to the business. Both MSF and MOF provide a view of the IT life cycle and incorporate an enterprise and a systems perspective for their planning and deployment activities, as reflected in figure 1.2.

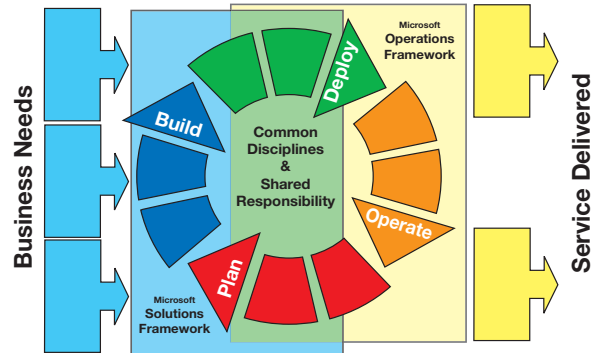


Figure 1.2 How MSF and MOF work together to meet business needs

Within the overall IT life cycle, MSF and MOF follow four basic steps to create a new solution (or change to an existing one) and to operate that solution in a production environment. These are:

1. *Plan a solution using MSF* - Understand the business and operational requirements in order to create the solution architecture, design, project plans, schedules and so on.
2. *Build a solution using MSF* - Complete the features, components, and other elements described in the specifications and plans.
3. *Deploy a solution using MSF & MOF* - Effect a smooth transition into the production environment.
4. *Operate the solution using MOF* - Use the MOF models and processes to achieve and maintain operational efficiency.

In addition to these shared perspectives, the three disciplines (Risk, Readiness, and Project Management) can be applied to both solutions delivery and operations. IT organizations that employ both MSF and MOF guidelines (Principles, Models, and Processes) will develop a broader perspective for effective solution delivery as well as for excellence in support and operations. This will also serve to create greater awareness of the best way to meet project and service man-

2. The MSF Team Model



agement expectations without decrementing or disrupting services. Throughout the IT project life cycle, the MSF team can make decisions that result in greater overall satisfaction and fewer surprises by examining impacts to and requirements from Service Management Functions (SMFs) within MOF's Optimizing Quadrant, see table 1.3.

Service Level Management	Service Continuity Management
Capacity Management	Financial Management
Availability Management	Workforce Management
Security Management	Infrastructure Engineering

Table 1.3 Related SMFs in MOF's Optimizing Quadrant

Additionally, MSF intersects with MOF's Changing Quadrant where, during the Envisioning Phase, MSF project plans and schedules are synchronized with Release and Change Management activities to provide more effective planning for the IT environment. MOF Configuration Management can be used to help identify impacts and interdependencies as MSF requirements and functional specifications are developed. Conversely, MSF can be useful to operations groups as they undertake project-based work (for example, changes, maintenance projects, and so on). The combination of these two frameworks makes a powerful contribution to improving how solutions are delivered and how the systems for those solutions are run.

Overview

The MSF Team Model defines the roles and responsibilities of a team of peers working in interdependent, multidisciplinary roles. All project work is performed by individuals who must work together toward a common goal while representing their individual identities and unique perspectives. The MSF Team Model is based on the concept of cross-functional teams representing the different points of view, with all team members behaving as peers and collectively managing the outcomes. Figure 2.1 is a logical depiction of the MSF Team Model.

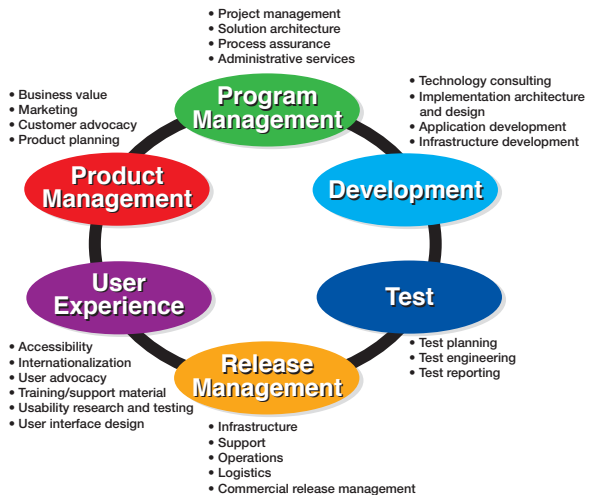


Figure 2.1 Role Clusters and Functional Areas in the MSF Team Model

The MSF Team Model is based on the premise that any technology project must achieve certain key performance goals in order to be considered successful. These goals drive the team and define the Team Model. The MSF Team Model emphasizes the importance of