15.3 MICROSOFT CORPORATION

There are training programs that discuss how to develop good methodologies. These programs focus on the use of "proven practices" in methodology development rather than on the use of a single methodology. Microsoft has developed a family of processes that embody the core principles of and proven practices in project management. These processes combined with tools and balancing people are called Microsoft Solutions Framework (MSF).4What appears in the remainder of this section is just a brief summary of MSF. For more information and a deeper explanation of the topic, please refer to Mike Turner's book in the reference at the bottom of the page.
MSF was created 16 years ago when Microsoft recognized that IT was a key enabler to help businesses work in new ways. Historically, IT had a heritage of problems in delivering solutions. Recognizing this, MSF was created based on Microsoft's experience in solution delivery.

MSF is more than just project management. MSF is about solutions delivery of which project management (aka governance) is a key component. Successful delivery is balancing solution construction with governance. According to Mike Turner:

At its foundation, MSF is about increasing awareness of the various elements and influences on successful solutions delivery—no one has a methodological silver bullet; it is next to impossible to provide best practice recipes to follow to ensure success in all projects. . . MSF is about understanding your environment so you can create a methodology that enables a harmonious balance between managing projects and building solutions.

Another key point with regard to MSF is that project management is seen as a discipline that all must practice, not just the project managers. Everyone needs to be accountable and responsible to manage their own work (i.e., project manager of themselves)—that builds trust among the team (something very needed in projects with Agile-oriented project management), not so much with formally run projects (still very top-down project management).

The main point that MSF tries to get across is that customers and sponsors want solutions delivered—they frankly see project management as a necessary overhead. Everyone needs to understand how to govern themselves, their team and the work that the project does—not just the project managers.

Good frameworks focus on the understanding of the need for flexibility. Flexibility is essential because the business environment continuously changes, and this in turn provides new challenges and opportunities. As an example, Microsoft recognizes that today's business environment has the following characteristics:

- Accelerating rates of change in business and technology
  - Shorter product cycles
  - Diverse products and services
  - New business models
- Rapidly changing requirements

- Legislation and corporate governance
- Growing consumer demand
- New competitive pressures
- Globalization

Typical challenges and opportunities include:

- Escalating business expectations
  - Technology is seen as a key enabler in all areas of modern business
- Increasing business impact of technology solutions
  - Risks are higher than ever before
- Maximizing the use of scarce resources
  - Deliver solutions with smaller budgets and less time
- Rapid technology solutions
  - Many new opportunities, but they require new skills and effective teams to take advantage of them

With an understanding of the business environment, challenges and opportunities, Microsoft created MSF.[5]MSF is an adaptable framework comprising:

- Models (see Figure 15–19)
  Figure 15–19. MSF models and disciplines.
  > *Source:* M. S. V. Turner, *Microsoft Solutions Framework Essentials*, Microsoft Press. All rights reserved.
- Disciplines (see Figure 15–19)
- Foundation principles
- Mindsets
- Proven practices MSF is used for successfully delivering solutions faster, requiring fewer people, and involving less risk, while enabling higher quality results. MSF offers guidance in how to organize people and projects to plan, build and deploy successful technology solutions.

MSF foundation principles guide how the team should work together to deliver the solution. This includes:

- Foster open communications
- Work toward a shared vision
- Empower team members
- Establish clear accountability, shared responsibility
- Deliver incremental value
- Stay agile, expect and adapt to change
- Invest in quality

- Learn from all experiences
- Partner with customers

MSF mindsets orient the team members on how they should approach solution delivery. Included are:

- Foster a team of peers
- Focus on business value
- Keep a solution perspective
- Take pride in workmanship
- Learn continuously
- Internalize qualities of service
- Practice good citizenship
- Deliver on your commitments

With regard to proven practices, Microsoft continuously updates MSF to include current proven practices in solution delivery. All of the MSF courses use two important project management best practices. First, the courses are represented as a framework rather than as a rigid methodology. Frameworks are based upon templates, checklists, forms, and guidelines rather than the more rigid policies and procedures. Inflexible processes are one of the root causes of project failure.

The second best practice is that MSF focuses heavily on a balance between people, process, and tools rather than only technology. Effective implementation of project management is a series of good processes with emphasis on people and their working relationships: namely, communication, cooperation, teamwork, and trust. Failure to communicate and work together is another root cause of project failure.

MSF focuses not only on capturing proven practices but also on capturing the right proven practices for the right people. Mike Turner states:

The main thing that I think sets MSF apart is that it seeks to set in place a common-sense, balanced approach to solutions delivery, where effective solutions delivery is an ever changing balance of people, processes and tools. The processes and tools need to be "right sized" for the aptitude and capabilities of the people doing the work. So often "industry best practices" are espoused to people who have little chance to realize the claimed benefits.

MSF espouses the importance of people and teamwork. This includes:

- A team is developed whose members relate to each other as equals.
- Each team member is provided with specific roles and responsibilities.
- The individual members are empowered in their roles.
- All members are held accountable for the success of their roles.
- The project manager strives for consensus-based decision-making.
- The project manager gives all team members a stake in the success of the project.

The MSF team model is shown in Figure 15–20. The model defines the functional job categories or skill set required to complete project work as well as the roles and responsibilities of each team member. The team model focuses on a team of collaborating advocates rather than a strong reliance on the organizational structure.

Figure 15–20. MSF team model.
Source: M. S. V. Turner, Microsoft Solutions Framework Essentials, Microsoft Press. All rights reserved.
On some projects, there may be the necessity for a team of teams. This is illustrated below in Figure 15–21.

Figure 15–21. MSF team of teams.
Source: M. S. V. Turner, *Microsoft Solutions Framework Essentials*, Microsoft Press. All rights reserved.

Realistic milestones are established and serve as review and synchronization points. Milestones allow the team to evaluate progress and make midcourse corrections where the costs of the corrections are small. Milestones are used to plan and monitor progress as well as to schedule major deliverables. Using milestones benefits projects by:

- Helping to synchronize work elements

- Providing external visibility of progress

- Enabling midcourse corrections

- Focusing reviews on goals and deliverables

- Providing approval points for work being moved forward

There are two types of milestones on some programs: major and interim. Major milestones represent team and customer agreement to proceed from one phase to another. Interim milestones indicate progress within a phase and divide large efforts into workable segments.

For each of the major milestones and phases, Microsoft defines a specific goal and team focus. For example, the goal of the envisioning phase of a program might be to create a high-level review of the project's goals, constraints, and solution. The team focus for this phase might be to:

- Identify the business problem or opportunity

- Identify the team skills required

- Gather the initial requirements

- Create the approach to solve the problem

- Define goals, assumptions, and constraints

- Establish a basis for review and change

MSF also establishes quality goals for each advocate. This is a necessity because there are natural "opposing" goals to help with quality checks and balances—that way realistic quality is built in the process and not as an afterthought.

This is shown in Table 15–6.

TABLE 15–6. QUALITY GOALS AND MSF ADVOCATES

MSF Advocate	Key Quality Goals
Product management	Satisfied stakeholders
Program management	Deliver solution within project constraints Coordinate optimization of project constraints
Architecture	Design solution within project constraints
Development	Build solution to specifications
Test	Approve solution for release ensuring all issues are identified and addressed
User experience	Maximize solution usability Enhance user effectiveness and readiness
Release/operations	Smooth deployment and transition to operations

It is often said that many programs can go on forever. MSF encourages baselining documents as early as possible but freezing the documents as late as possible. As stated by Mike Turner:

The term "baselining" is a hard one to use without the background or definition. When a team, even if it is a team of one, is assigned work and they think they have successfully completed that work, the milestone/checkpoint status is called "Complete" (e.g., Test Plan Complete); whereas "Baseline" is used when the team that is assigned to verify the work agrees that the work is complete (e.g., Test Plan Baselined). After the Baseline milestone/checkpoint, there is no more planned work. At the point when the work is either shipped or placed under tight change control is when you declare it

"Frozen"—meaning any changes must be made via the change control process. This is why you want to put off formal change management as late as possible because of the overhead involved.

This also requires a structured change control process combined with the use of versioned releases, as shown in Figure 15–22. What the arrows on the left mean is that as the solution is delivered, the solution completion increases, the knowledge of the solution space increases, and the overall risk to solution delivery goes down. The benefits of versioned releases include:

Figure 15–22. MSF iterative approach.

- Forcing closure on project issues

- Setting clear and motivational goals for all team members

- Effective management of uncertainty and change in project scope

- Encouraging continuous and incremental improvement

- Enabling shorter delivery time

One of the strengths of MSF is the existence of templates to help create project deliverables in a timely manner. The templates provided by MSF can be custom-designed to fit the needs of a particular project or organization. Typical templates might include:

- Project schedule template

- Risk factor chart template

- Risk assessment matrix template

- Postmortem template

The MSF process for risk management is shown in Figure 15–23. Because of the importance of risk management today, it has become an important component of all project management training programs.

Figure 15–23. MSF risk management process.
Source: M. S. V. Turner, *Microsoft Solutions Framework Essentials*, Microsoft Press.

MSF encourages all team members to manage risk, not just the project managers. The process is administered by the project manager.

- *MSF Risk Management Discipline:* A systematic, comprehensive, and flexible approach to handling risk proactively on many levels.
- *MSF Risk Management Process:* This includes six logical steps, namely identify, analyze, plan, track, control, and learn.

Some of the key points in the MSF risk approach include:

- Assess risk continuously.

- Manage risk intentionally—establish a process.

- Address root causes, not just symptoms.

- Risk is inherent in every aspect and at all levels of an endeavor.

There are numerous ways to handle risk and MSF provides the team with various options. As an example, Figure 15–24 shows two approaches for risk prioritization.

Figure 15–24. Risk prioritization example.
Source: M. S. V. Turner, *Microsoft Solutions Framework Essentials*, Microsoft Press.

In Figure 15–19, we showed that MSF is structured around a team model and a governance model. The governance model is shown in Figure 15–25. This model appears on all of the MSF figures, illustrating that governance is continuously in place.

Figure 15–25. MSF governance model: enactment tracks.

There are two components to the MSF governance model: project governance and process enactment:

- Project governance

    - Solution delivery process optimization

    - Efficient and effective use of project resources

    - Ensuring that the project team is and remains aligned with:

        - External (strategic) objectives
        - Project constraints

        - Demand for oversight and regulation

- Process enactment

- Defining, building, and deploying a solution that meets stakeholders' needs and expectations

The MSF governance model, as shown in Figure 15–25, is represented by five enactment tracks. Figures 15–26 through 15–30 provide a description of each of the enactment tracks.

Figure 15–26. MSF envision track.

Figure 15–27. MSF plan track.

Figure 15–28. MSF build track.

Figure 15–29. MSF stabilize track.

. MSF deploy track.

MSF has established success criteria for each of the tracks:

Envision Track

- Agreement by the stakeholders and team has been obtained on:

    - Motivation for the project

    - Vision of the solution

    - Scope of the solution

    - Solution concept

    - Project team and structure

- Constraints

- Initial risk assessment has been done.

- Change control and configuration management processes have been established.

- Formal approval has been given by the sponsors/and or key stakeholders.

Plan Track

- Agreement with stakeholders and team has been obtained on:

    - Solution components to be delivered

    - Key project checkpoint dates

    - How the solution will be built

- Supporting environments have been constructed.

- Change control and configuration management processes are working smoothly.

- Risk assessments have been updated.

- All designs, plans, and schedules can be tracked back to their origins in the functional specifications and the functional specification can be tracked back to envisioning track deliverables.

- Sponsor(s) and/or key stakeholders have signed off.

Build Track

- All solutions are built and complete, meaning:

    - There are no additional development of features or capabilities.

    - Solution operates as specified.

    - All that remains is to stabilize what has been built.

    - All documentation is drafted.

Stabilize Track

- All elements are ready for release.

- Operations approval for release has been obtained.

- Business sign-off has been obtained.

Deploy Track

- Solution is completely deployed and operationally stable.

- All site owners signed off that their deployments were successful.

- Operations and support teams have assumed full responsibility and are fully capable of performing their duties.

- Operational and support processes and procedures as well as supporting systems are operationally stable.

MSF focuses on proactive planning rather than reactive planning. Agreements between the team and the various stakeholder groups early on in the project can make trade-offs easier, reduce schedule delays, and eliminate the need for a reduction in functionality to meet the project's constraints. This is shown in Figure 15–31.

Figure 15–31. Project trade-off matrix.