

# MSF Readiness Management Discipline v.1.1

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## Credits

Scott Getchell, Program Manager, Microsoft Solutions Framework

Paul Haynes, Program Manager, Microsoft Solutions Framework

Jeff Hickey, Technical Writer, Microsoft Solutions Framework

Nancy Huber, Technical Editor, Microsoft Solutions Framework

Mike Lubrecht, Technical Writer, Microsoft Solutions Framework

Pervez Kazmi, Program Manager, Microsoft Solutions Framework

Rob Oikawa, Principal Consultant, Microsoft Consulting Services, US

Enzo Paschino, Program Manager, Microsoft Solutions Framework

Allison Robin, Director, Microsoft Solutions Framework

Mark Short, Program Manager, Microsoft Solutions Framework

Suzana Vukcevic, Program Manager, Microsoft Belgium

### Reviewers

Eric Halsey, Microsoft Corporation

David Millet, Microsoft Consulting Services, US

John Mulder, Microsoft Netherlands

Bill Reed, Microsoft Consulting Services, US

Paulo Rocha, Microsoft Consulting Services, New Zealand

Dolph Santello, Microsoft Consulting Services, US

Anthony Saxby, Microsoft Consulting Services, UK

Fitz Stewart, Microsoft Consulting Services, US

Ron Stutz, Microsoft Consulting Services, US

Brian Willson, Microsoft Consulting Services, US

Andres Vinet, Microsoft Consulting Services, Chile

### GTD Consulting, LLC

Geof Lory

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Part Number: 602-i402a

## Abstract

Readiness Management is a core discipline for the Microsoft Solutions Framework (MSF). This discipline outlines an approach for managing of the knowledge, skills and abilities needed to plan, build and manage successful solutions. The MSF Readiness Management Discipline describes fundamental principles based on the core MSF and provides guidance for a proactive approach to readiness throughout the IT lifecycle. This discipline also provides a plan for following a readiness management process. Together with proven practices, this discipline provides a foundation for individuals and project teams to manage readiness within their organizations.

## Introduction

To maximize the success of IT projects and operations throughout the entire IT life cycle, the Microsoft Solutions Framework (MSF) and Microsoft Operations Framework (MOF) provide guidance and proven practices for effectively planning, building, deploying, and operating solutions. The information is derived from the experience gained within Microsoft on large-scale software development and service operation projects, the experience of Microsoft's consultants, and common best practices from the worldwide IT industry. It is delivered in the form of white papers, guides, tools, templates, case studies, and courseware. The guidance is organized into two complementary and well-integrated bodies of knowledge.

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### Microsoft Solutions Framework

Creating a business solution on time and within budget requires a proven approach. MSF provides proven practices for planning, building and deploying successful IT solutions. As opposed to a prescriptive methodology, MSF provides a flexible and scalable framework to meet the needs of any size organization or project team. MSF guidance consists of principles, models, and disciplines for managing the people, process, and technology elements that most projects encounter.

For more information on MSF, see: <http://www.microsoft.com/msf>

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### Microsoft Operations Framework

MOF provides guidance that helps enable organizations to achieve mission-critical system reliability, availability, supportability, and manageability of IT solutions built using Microsoft products and technologies. MOF's principle, models and disciplines address the people, process, and technology issues pertaining to operating complex, distributed, heterogeneous IT environments.

For more information on MOF, see: <http://www.microsoft.com/mof>

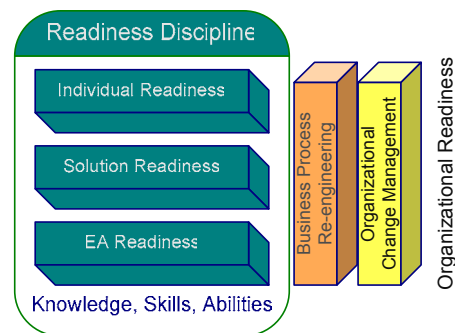
For more information on the IT Infrastructure Library (ITIL), the industry best practices on which MOF is based, see: <http://www.itil.co.uk/index.html>

The MSF Readiness Management Discipline defines readiness as a measurement of the current state versus the desired state of knowledge, skills and abilities (KSAs) of individuals in an organization. This measurement is the real or perceived capabilities at any point during the ongoing process of planning, building and managing solutions.

Each role on a project team includes key functional areas that individuals performing in those roles must be capable of fulfilling. Individual readiness is the measurement of the state of an individual with regard to the knowledge, skills and abilities needed to meet the responsibilities required of their particular role.

At the organizational level, readiness refers to the current state of the collective measurements of readiness used in both strategic planning and in evaluating capability to achieve successful adoption and realization of a technology investment.

MSF and MOF concentrate on successful ways to plan, build and manage solutions. The MSF Readiness Management Discipline focuses on providing guidance and processes for these solutions in the areas of assessing and acquiring KSAs necessary for enterprise architecture (EA) planning and project solution teams. Other far-reaching organizational readiness aspects, such as process improvement and organizational change management, are not covered in the MSF Readiness Management Discipline.



**Figure 1 – The MSF Readiness Management Discipline**

The MSF Readiness Management Discipline focuses on the areas of knowledge, skills and abilities for the individual, solution and enterprise architecture levels. The additional organizational readiness examples shown should be proactively addressed but are outside the focus of the discipline.

## Readiness Fundamentals

The foundation principles, key concepts and proven practices of MSF as applied to the Microsoft Readiness Discipline are outlined below. The primary ideals of effective readiness management are highlighted in this section and referenced throughout this document.

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### Readiness Principles

The MSF foundational principles are cornerstones of the framework's approach. Those principles relating to successful readiness management are highlighted in this section.

#### *Foster Open Communications*

By establishing an open learning environment that encourages individuals to take ownership of their skills development, acknowledge and commit to rectifying skill deficiencies and participate in setting their goals for their learning plans, individuals tend to take greater pride and have a higher drive to succeed and help others. Groups successful in creating this type of open learning environment often have periodic team training sessions where knowledge and learning is both shared and received.

#### *Invest in Quality*

Obtaining the appropriate skills for a project team is an investment. Taking time out of otherwise productive work hours, the funds for classroom training, courseware, mentors or consulting can certainly be a significant monetary investment. However, investing time and resources to obtain or develop the right people with the right skills generally results in higher quality output and greater chances of success. Projects that fail do not supply a positive return on investment. Projects that succeed with low quality result in lowered satisfaction and adoption, which in turn can have significant cost impact in areas such as support. Up-front investment in staffing teams with the right skills generally leads to greater success and higher quality.

### ***Learn from all Experiences***

Capturing and sharing both technical and non-technical best practices is fundamental to ongoing improvement and continuing success by:

1. Allowing team members to benefit from the success and failure experiences of others.
2. Helping team members to repeat successes.
3. Institutionalizing learning through such techniques as reviews and postmortems.

Milestone reviews and postmortems help teams to make midcourse correction and avoid repeating mistakes. Additionally, capturing and sharing this learning creates best practices out of the things that went well.

### ***Stay Agile, Expect Change***

Changes in project direction, operational procedures or individual resources can occur unexpectedly and with significant impact. Being adept at successfully facing change means having individuals and project teams committed to readiness. Readiness agility refers to having a defined readiness management process, doing proactive readiness management, and providing incentives that encourage individuals and project teams to swiftly gain the appropriate level of knowledge, skills and abilities through training, mentoring, or hands-on learning to successfully meet their defined goals. Leaving out any of these aspects of the Readiness Management Discipline increases the likelihood for risks and failure. Without the agility achieved from having a readiness process in place and being able to quickly obtain the appropriate skills necessary for success, organizations can miss opportunities and find themselves behind their competition.

## Key Concepts

These concepts for readiness describe mindsets that are common to groups that successfully manage their approach to readiness.

### ***Understand the Experience You Have***

Individual knowledge and experience is an asset that offers dual value. The individual who possesses the knowledge and experience benefits personally as well as the organization as a whole. The value of this knowledge is diminished for both the individual and the organization without a collective understanding and measurement. For example, an individual may possess knowledge that the organization does not currently recognize, or the organization may lack a method to access that knowledge. Consequently, knowledge assessment and knowledge management are key concepts of a readiness effort. An organization can promote readiness through the capture and utilization of knowledge. A defined knowledge management program will take the idea from concept to reality. The added value of a knowledge management program is its identification of knowledge lacking in both individuals and the organization.

### ***Willingness to Learn***

Willingness to learn includes a commitment to ongoing self improvement. It both encourages and enables knowledge acquisition and sharing.

### ***Readiness Must Be Continuously Managed***

Learning must be made an explicit and planned activity—for example, by dedicating time for it in the schedule—before it will have the desired effect.



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## Proven Practices

The following proven practices are common actions to ensure readiness is a continuous, ongoing focus for success.

### ***Carry Out Readiness Planning***

As with any aspect of a project, planning for readiness is the key to success. Knowing up front the required level of readiness creates a proactive approach to assembling the appropriate resources, defining budgetary needs for training or obtaining the appropriate expertise, and building training time into the schedule. Readiness plans for each role are rolled up to create an overall readiness plan for the solution team. Without planning, readiness management is likely to be overlooked until a significant gap in skills causes the project to be challenged, leading to significant risk of failure.

### ***Measure and Track Skills and Goals***

Successful readiness management includes assessing and tracking skills and the goals of individuals. This includes taking into account current abilities versus the desired knowledge levels so that the appropriate matching of skills can happen at both the individual and the project levels during resource allocation. Tracking and measuring this information helps ensure project teams have the capability of doing readiness planning. Through the process of planning, project teams select members with both the desire to participate and skills required. The most effective way to accomplish this is via a mandatory skills-reporting database and requiring all individuals to keep the data up to date.

### ***Treat Readiness Gaps as Risks***

After completing assessments and determining the proficiency gaps—essentially finding the current versus the desired state—project teams should identify readiness gaps as risks and treat them as such. Gaps in areas of key knowledge, such as the skills and abilities needed to successfully complete a project, can have profound effects on the schedule, budget, and resources needed to fill those gaps. Depending on the type of project, readiness risks may delay project initiation or indicate a need to obtain resources with the appropriate skills. When gaps are treated as risks there is generally a more proactive approach to readiness management and subsequent mitigation of these risks.

## Readiness Process Overview

The MSF Readiness Management Discipline includes a readiness management process to help prepare for the knowledge, skills and abilities needed to build and manage projects and solutions. The readiness management process is composed of four steps: Define, Assess, Change and Evaluate. Each step of the process includes a series of tasks to help reach the next milestone.

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### Define

4. Scenarios
  5. Competencies
  6. Proficiencies
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### Assess

7. Measure knowledge, skills, abilities
  8. Analyze gaps
  9. Create learning plans
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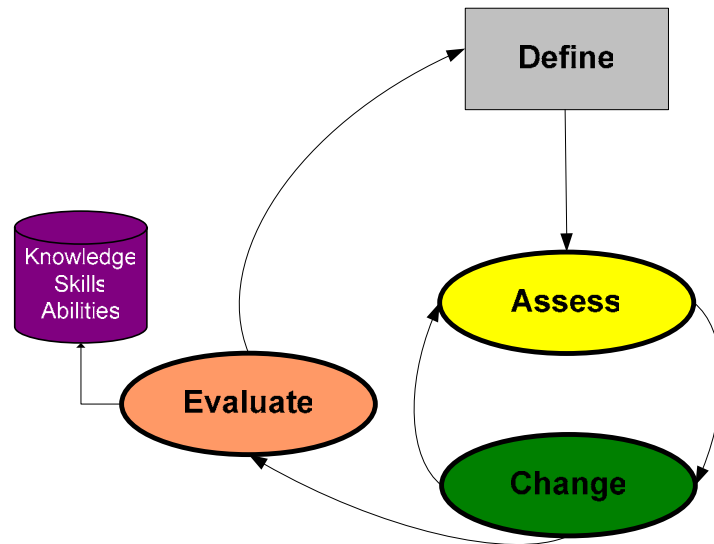
### Change

10. Train
  11. Track progress
- 

### Evaluate

12. Review results
13. Manage knowledge

The process is considered an ongoing, iterative approach to readiness and is adaptable to both large and small projects. For aligning individual, project team, or organizational KSAs, following the steps in the readiness process helps to manage the various tasks.



**Figure 2 – Steps of the Readiness Management Process**

The most basic approach to the readiness process is simply to assess skills and make appropriate changes through training and assessment. On projects that are small or have short timeframes, this streamlined approach is quite affective. However, performing the steps of defining the skills needed, evaluating the results of change and keeping track of KSAs allow for the full realization of readiness management, and is typically where organizations reap the rewards of investments in readiness activities.

## Proactive Readiness Management

Often projects begin without the appropriate level of awareness of the skills individuals must possess to make the project a success. Therefore, teams too frequently find themselves reacting to situations rather than preparing individuals ahead of time to tackle situations that arise. In other words, only when it is determined that a project is losing control is the skills gap addressed, by either turning to companies that can provide solutions to their problems, buying in the skills temporarily or dissolving the project altogether.

The intent of the Readiness Management Discipline is to enable both individuals and groups to be more proactive in their approach to readiness. The discipline provides the foundation for establishing steps to proactively manage readiness issues most likely to be encountered while introducing new technologies, or managing the ongoing operation of solutions. By establishing the competencies and skill levels essential for success, a project team will have the information needed to plan and budget for its training needs to implement the solution.

Equipped with the knowledge of how different scenarios and competencies relate to job roles, teams will be better able to map skills in which people fulfilling the roles must be proficient. This up-front identification allows a more proactive approach to analyzing strengths and weaknesses, to devise appropriate training plans and better enable individual, project team, and strategic planning success.

Another differentiator in a proactive versus reactive approach to readiness management is capturing the knowledge, skills and abilities of individuals and sharing the key learning and best practices with others. Knowledge sharing can be as simple as brown-bag sessions or a more comprehensive approach such as software-based knowledge management and knowledge bases. In either case, this sharing creates a valuable return on investments made in learning.

Readiness Management: A Proactive Approach		
Proactive	vs.	Reactive
Treat readiness planning as positive	vs.	React to shortfalls in knowledge, skills, abilities
Use a known and structured process	vs.	Using and ad hoc process or none at all
Anticipate and schedule readiness needs	vs.	Conduct training or fix gaps as they occur
Develop and use knowledge management system	vs.	Unknown knowledge assets

## Readiness Throughout the IT Lifecycle

As part of the management of the IT lifecycle, the Microsoft Frameworks provide guidance around the overall approach to setting the IT strategy through the enterprise architecture (EA) model. Enterprise architecture is a framework composed of four architecture perspectives: business, application, information, and technology. A number of issues to consider when working with the EA process are outlined below.

For more information on the MSF EA model and strategic planning process, see: <http://www.microsoft.com/business/services/EntArchEssentials.asp>

Any project will introduce change that represents a shift from the existing norm. It is essential that the necessary KSAs to achieve the desired new state are available or can be developed or purchased within the constraints of budget and time. Projects that make it to the planning phase of the enterprise architecture process should have these elements identified and made part of the project criteria.

In EA planning, greater detail around the gap between the current and future knowledge, skills and abilities of the organization is gathered in a manner similar to inventorying other resources of the enterprise. During this time the KSAs within the organization must be considered as the portfolio of projects is prioritized. Skills inherent upon completing one project may be foundational to the delivery of a subsequent project, resulting in a need to appropriately sequence or have the ability to obtain the expertise needed.

In the development phase of the EA process model, the enterprise IT organization must ensure that project initiatives are closely aligned with business needs, the project team is fully prepared in terms of training and skills and is conforming to project requirements to deliver measurable business value.

The key readiness activity during the stabilizing phase in EA is feedback. Individual projects provide feedback about assumptions made during planning, and the effectiveness of the readiness activities performed during development. Capturing this feedback and recycling it into the next iteration of EA planning is the basis of a “continuous improvement” mindset.

It is imperative to allot the necessary time to assimilate the learning and skills development needed to meet the project requirements. Learning is inherently an iterative process. Tailoring the timing and delivery of the training to optimize the learning experience requires an organization’s ongoing commitment to learning.

## Steps of the Readiness Process

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### Define

During EA planning, an organization aligns its business and IT goals to create a shared vision of what the organization will look like. While doing this, the teams and the organization must also define the individual skill sets needed to implement projects necessary to reach that shared vision. This is the first step of the MSF Readiness Management process and is called “define.” During this stage, the scenarios, competencies, and proficiency levels needed to successfully plan, build, and manage the solutions are identified and described. This is also the time to determine which roles in the organization should be proficient in the defined competencies. Depending on the role, the individual may need to be proficient in one or many of the defined competencies.

The three components of readiness concentrated on during the Define step are:

1. Scenarios
2. Competencies
3. Proficiencies

Outputs from the Define step include:

- Competencies identified with desired proficiency levels
- Competencies and proficiencies mapped to the appropriate scenario

## Scenarios

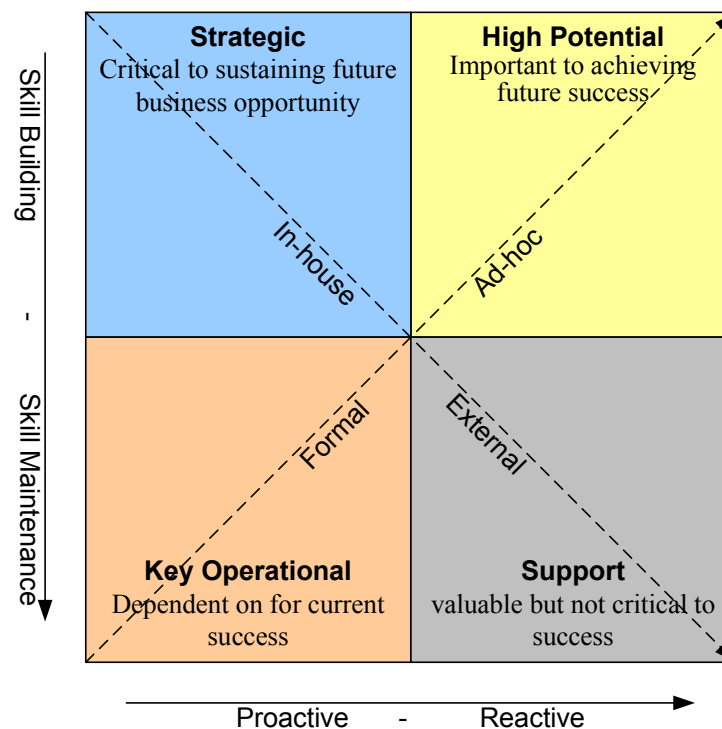
Scenarios are used to describe the typical situation the EA or IT department encounters when introducing technology projects. Scenarios generally fall into one of four categories detailed below. These correlate, to some degree, to the phases, focus areas and unique challenges an organization goes when developing and managing technologies or products.

*High Potential.* Focus on the situations an IT department encounters when planning and designing to deploy, upgrade, and/or implement a new product, technology, or service in its organization. These are typically research type situations in which the technology is brand new or in beta form.

*Strategic.* Scenarios in this category focus on the situations an IT department is likely to encounter when exploiting new technologies, products, or services. These are typically market-leading solutions which could lead to business transformation defining the to-be long-term architecture.

*Key Operational.* Scenarios in this category focus on the situations an IT department is likely to encounter once it has deployed, upgraded, and/or implemented a new product, technology, or service that has to coexist, or continue to seamlessly interact with legacy software and systems. These are typically today's business-critical systems, aligned with the as-is technology architecture.

*Support.* Scenarios in this category focus on situations in which it is necessary to extend the product to fit the needs of a customer's environment. These are typically valuable but not business-critical solutions and often involve legacy technology.



**Figure 3 – IT scenario categories that correlate to typical phases, training types, and skills management encountered when developing and managing technologies or products<sup>1</sup>**

By categorizing IT projects within the EA into the appropriate scenarios, readiness planning can be done according to the unique nature of that project. Different scenarios require distinct approaches to obtaining the appropriate resources and skills for that project type. By first defining the scenario, the appropriate competencies and proficiencies can then be mapped. Differing scenario types may also drive decisions for out-sourcing or using consulting to obtain the skills needed. For example, doing an infrastructure deployment project of software currently in beta development would take a much different approach to achieving the appropriate skill set for the project team than would a key operational project dealing with more conventional and proven systems. Staffing for a “high-potential” project scenario might include specialized vendor trained consultants versus a project scenario where readiness planning typically includes courseware training and certification of in-house staff.



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Here is a summary of the scenario categories and typical approaches for obtaining the appropriate levels of readiness in terms of knowledge, skills and abilities.

*High Potential.* Need to have a high degree of agility, be able to investigate and evaluate new technologies and to be prepared to obtain (for a short period) the best expertise available.

*Strategic.* Need in-house, in-depth expertise at the solution architect level and be able to bridge skills across technology to the business.

*Key Operational.* Quality of technical knowledge and process are critical as is ready availability of the right skills. Typically, out-sourcing occurs to obtain quality skills and knowledge or developing strong in-house capability.

*Support.* The cost of delivery becomes paramount and the organization may decide to rely on external skills (particularly for legacy) on a reactive basis.

With the projects and their associated scenarios defined, it is now time to identify the competencies and subsequent proficiencies associated with these project scenarios.

### ***Competencies***

In the context of readiness, “competent” means being adept or well qualified to perform in a given IT scenario. Competencies are intended to describe the measurable objectives, or tasks, that an individual should complete with proficiency in a given scenario.

“Competency” is used to define a major part of an individual’s job or job responsibility relating to performance. A competency can be considered a “bucket” that consists of knowledge, skills, and performance requirements:

*Knowledge.* The information that an individual must possess to perform competently in the job.

*Skills.* The behaviors that make up the competency. These are the abilities that describe competency in a specific area.

*Performance Requirements.* The expected results of an individual’s executing his or her skills and knowledge at a proficient level of performance in the job role.

### ***Proficiencies***

“Proficiency” is used in relation to readiness as the measure of ability to execute tasks or demonstrate competencies within a given scenario. Proficiencies describe tasks that individuals at a given skill level must be able to perform.

The proficiency or skill level for a given competency is designated by the level at which individuals are assessed or assess themselves. This proficiency level provides a benchmark, or starting point, for analyzing the gap between the individuals’ current skills set and the necessary skills for completion of the tasks associated with the given scenario.

In the MSF Readiness Management process, two determinations must precede the creation of a learning plan. First, the desired level of proficiency must be determined. Second, the current state of readiness must be determined. The proficiency level must be determined for a given scenario and set of competencies, using either self-assessment or assessment testing. Once the beginning and end points are known, the gap is identified. It is at this point that the learning plan is developed to assist in moving to the desired proficiency level.

The following diagram shows a sample proficiency rating scale used in completing proficiency assessments.

<b>Skill Level Rating</b>	<b>Simple Description</b>	<b>Description</b>
0	No Experience	Not applicable.
1	Familiar	Familiarity: Skill in formative stages, has limited knowledge. Not able to function independently in this area.
2	Intermediate	Working knowledge: Good understanding of skill area, is able to apply it with reasonable effectiveness. Functions fairly independently in this area but periodically seeks guidance from others.
3	Experienced	Strong working knowledge: Strong understanding of skill area, is able to apply it very effectively in position. Seldom needs others’ assistance in this area.
4	Expert	Expert: Has highly detailed, thorough understanding of this area and is able to apply it with tremendous effectiveness in this position. Often sought out for advice when others are unable to solve a problem related to this skill area.

A proficiency gap is when performance is at a lower level than the expected proficiency level for a role.

During the Define step of the MSF Readiness Management process, the level at which individuals should be performing for each job role in given scenarios are determined. Proficiency levels are then associated with competencies so when assessments are completed, the output can be measured and analyzed to determine proficiency gaps.

## Assess

The Assess step of the MSF Readiness Management process determines the competencies individuals currently possess. It is during this step that analysis of the competencies as they relate to the various job roles begins, to determine the skills of individuals within each of these roles. Then the desired competencies identified are analyzed against the current competencies – the “as-is versus the to-be.” This work enables the learning plans’ development, so that desired competency levels can be reached. Depending on the number of job roles needed to make the technology a success, a given scenario might have multiple:

- Competencies by scenario
- Defined levels of proficiency by competency
- Objective skills assessments
- Learning plan road maps

Tasks during this step in the process are:

- Measure knowledge, skills, abilities
- Analyze gaps
- Create learning plans

Outputs from the assess step are:

- Assessment output/gap analysis
- Learning plans

### ***Measure Knowledge, Skills, Abilities***

There are two options available for performing individual assessments: self or skills. *Self-assessment* is a procedure whereby individuals assess their own level of ability. This includes responding to a list of questions such as, “Are you able to perform *x*?” Self-assessment requires individuals to measure their own ability scale, ranging from familiarity to expert levels. This technique is effective in learning what an individual thinks of his or her level of ability. While it might not always be an accurate assessment of the individual’s abilities, it is directly linked to the individual’s perceptions of his or her readiness.

*Skills assessments* test the actual expertise of an individual. This type of test requires individuals to respond to specific, often technical, questions to show their knowledge; to perform specific tasks, and to demonstrate analysis abilities.

By measuring the current state of the individuals and aligning those results with the desired state (identified during the Define step), organizations, project teams and individuals are able to identify the gaps between the current state and the desired state of readiness. In many cases when facing a new project, groups do not have the internal capabilities or experience to correctly assess the skills and abilities needed. Providers such as Certified Technical Education Centers (CTEC) or consulting organizations can assist with this essential step.

The following is a simple list of the sub-processes suggested in order to perform successful assessments.

### ***Determine the Assessment Process***

The assessment should be conducted according to a documented process that is capable of meeting the assessment purpose. This is the time to conduct planning for the assessment. Activities should include:

- Define the required inputs.
- Document the activities to be performed in conducting the assessment.
- Document the resources required and the assessment schedule.
- Document a description of the planned assessment output.

### ***Data Collection and Rating***

Next, the strategy and techniques for the selection, collection, and analysis of the data and the justification of the ratings should be identified. Additional considerations include:

- Ensure the objective evidence gathered is sufficient to meet the assessment purpose and scope.
- Validate the data collected.
- Document the justification of ratings.
- Document the decision-making process that is used to derive rating judgments.

### ***Recording the Assessment Output or Gap Analysis***

Finally, the assessment results are documented and compared to the desired competency levels. The difference in scores is the defined skill gap. The following steps and information should be included in the output.

- Results (gaps in performance) are analyzed and documented.
- Results of the assessment are reported.
- The assessment report should contain the following information, at a minimum:
  - Date of the assessment
  - Assessment input
  - Identification of the objectives being assessed
  - Explanation of the assessment approach
  - Identification of any additional information collected and used in the assessment process

### ***Analyze Gaps***

A proficiency gap occurs when an individual actually performs at a lower level than the expected proficiency level for his or her role. During the Define step, the level at which individuals should be performing for a given competency is determined. During the Assess step, the organization determines the level at which individuals are actually performing. With these two components—the current state and the desired state—the gaps are identified and individuals can concentrate on bridging these gaps through the use of learning plans. Training and on-the-job experience will close these gaps. It is at this point that a project team must commit to supporting its members as they execute the learning plans. Identifying a proficiency gap is meaningless if the commitment to support and giving the necessary training is not provided.

### ***Create Learning Plans***

Now that gaps in the individual's current skill set have been analyzed; the information gathered can be used to formulate training plans. An effective learning plan identifies the appropriate resources such as training materials, courseware, white papers, computer based training, mentoring, on the job or self-directed training, that will assist in this evolution.

Learning plans should consist of both formal and informal learning activities, and guide individuals through the process of moving from one proficiency level to the next. The learning plan must be taken beyond a mere list of available and suggested assets; it must be applied into the context of the work environment. The most effective adult training takes into account the different learning styles of individuals and accommodates those differences to efficiently use time and resources. As well as a plan for training, learning plans should account for how to begin to apply the information learned to the job.

## Change

The Change step of the MSF Readiness Management process begins the advancement of skills through learning in order to bridge the gap between current proficiency and desired proficiency levels.

Tasks and outputs of readiness during the change step are:

- Training
- Track Progress

Outputs of the Change step are:

- Knowledge gained from training
- Progress tracking data

### *Train*

Now that the learning plans created during the Assess step are put in place, actual training, hands on learning and mentoring occurs.

### *Track Progress*

Another component associated with the change portion of the readiness management process is implementing a system of tracking the progress of the learning plans. The approach to progress tracking can be as simple as a spreadsheet or as advanced as a tool that allows monitoring and reporting of individuals and their skills by scenario and competency. It is essential to have the ability to track individual progress as employees move from one stage to the next as they bridge the learning gap. This way, at any time in the lifecycle, organizations can analyze individual or overall readiness to make necessary adjustments to readiness plans.

## Evaluate

The Evaluate step of the MSF Readiness Management process determines whether the learning plans were effective and whether the lessons learned are being successfully implemented on the job.

During evaluation, a determination is made if the desired state, as described during the define step and measured during the assess step, was achieved through change. In addition, this is the time to integrate the lessons learned into the organization in order to help make the next project more successful.

This evaluate step could be the end of the readiness management process. But since learning is an ongoing need for continued success, evaluation is viewed as a beginning to an iterative process. Now is the chance to begin defining readiness needs again or to reassess KSAs and determine whether additional change is required.

Components of readiness concentrated on during the evaluate step:

- Review results
- Manage knowledge

Outputs from the evaluate step:

- Feedback
- Certifications
- Knowledge Management system

### ***Review Results***

A real-world test of training's success is the effectiveness of the individual back on the job. One of the activities during the change step is identifying the most effective approach to the transfer of knowledge. A suggested approach is to follow traditional training delivery, such as instructor-led and self-study, with on-the-job mentoring or coaching.

The benefit of this approach is the capability not only to guide individuals through their first exposure to new concepts, but also to allow the expert (mentor or coach) to assess the effectiveness of the training. Using verbal and written feedback, the expert highlights the areas where individuals are performing well and is demonstrating an understanding of the given concepts. Likewise, the mentor or coach is able to provide feedback on the areas where the individuals are struggling or appear weak in their understanding and application of the new learning. This review helps to identify if the knowledge transfer approach taken was the most effective and those areas which may need to be re-addressed and where further training may be necessary.



The individuals' activities in this phase may include some introspection and self-assessment to determine whether the learning was effective before putting those new competencies to work. Individuals may also decide it is a good time to become certified because they have done the learning, performed the key tasks, and assimilated the knowledge.

### ***Manage Knowledge***

A natural side effect of training individuals is that the knowledge they acquire becomes intellectual capital the individual can capture and disseminate throughout the organization. As learning plans are completed and applied on the job, individuals discover key learning that their training provided. Sharing this information with others throughout the organization enhances the collective knowledge and fosters a learning community. One objective of Readiness Management Discipline is to encourage development of a knowledge management system to better enable the sharing and transfer of proven practices and lessons learned, as well as create a skills baseline of the knowledge contained within the organization.

Individuals in an organization carry with them a body of learning, expertise, and knowledge that, however extensive or expansive, encompasses less than the collective knowledge of all the people. A knowledge management system provides an infrastructure by which that knowledge can be harnessed and made available to a community.

As organizations face the need for global knowledge that can be easily and quickly leveraged, compounded by the shorter timeframes for implementing solutions, requirements increase for individuals to share their knowledge and expertise, and reuse what others have learned.

Knowledge management systems provide many benefits including, but not limited to, the following:

- Increasing organizational effectiveness by creating the ability for individuals to find the information and expertise they need, when they need it, fast—regardless of its location.
- Establishing a common structure that facilitates the easy sharing of experiences and proven practices.
- Facilitating individuals working across organizational and geographical barriers through “global” communities. Because many customers have locations worldwide, there's an increased need for collaboration, sharing of proven practices and lessons learned.

## Readiness and the MSF Team and Process Models

As described, the enterprise architecture model is useful when creating a readiness strategy that affects the entire organization and IT lifecycle. At the project team and individual levels, the readiness management process can be used to map activities within the MSF Process and Team models.

When considering readiness there is a need to partition the specific readiness goals into the necessary activities and deliverables produced throughout the project lifecycle intended to achieve those goals. Each role will perform activities and produce deliverables that relate to the project readiness goals for their constituency. When readiness is seen as a component of the project goals, readiness deliverables are completed at various levels within each phase and milestone of the project. Thus, mapping of readiness activities and deliverables to the MSF Process Model phases is useful but teams will need to adjust their activities (and when these activities occur) according to the size and type of project.

The focus is on preparing the team with the knowledge, skills and abilities to effectively deliver the project. In the early stages of the MSF envisioning phase, this includes documenting the project approach to readiness. This approach documentation may contain information such as:

- The individuals that are to perform assessments, priorities, and budgets for training existing staff or obtaining the needed skills
- Determination of the project scenarios and desired proficiency levels
- The ways in which these activities will be accomplished

During the MSF planning phase, the high-level activities and deliverables identified during envisioning are taken to a greater level of detail, with estimates and dependencies applied for the tasks and integrated into the overall project plan and schedule. This helps determine the true cost and feasibility of the project beyond the development effort alone. This is the time when team assessment can be conducted to produce information on skills gaps so analysis and planning for bridging that gap can move forward.

Because the needs of the team precede the operational needs, many of the gaps identified for the team are filled during the planning phase. This improves the design and determines the readiness of the team for development.

Effectively prepared, Development and Testing can focus on the project deliverables during the development phase. Release Management, User Experience and Product Management can begin in the early stages of preparation for final release. Incremental exposure of the product to the external constituencies and gradual involvement in the later stages of testing allow the team to assess the efficacy of the organizational readiness activities on the eventual owners of the product.

In the last stages of the project, most of the readiness activities have been or are being executed as the training and preparation of the users and support and operations staff is done, and the product is released and/or deployed.

At the end of the project, the team effort relative to readiness is evaluated by the team and the organization so that subsequent projects can repeat successes and learn from the areas that require improvement.

The deliberate outputs for readiness are often embedded in the regular milestone deliverables, but may be itemized separately to highlight or manage them with individual attention. Where the gap in KSAs is large, the more deliberate Program Management needs to be in assuring readiness activities and deliverables are not relegated to the background or assumed to occur indirectly. Readiness activities are people-centric, and therefore require constant vigilance.

## Skills Required for MSF Roles

A factor in the success of the MSF team model is its separation of roles and their respective goals. This feature requires each role function team to focus on the aspect of the project it is responsible for delivering to the customer. Because these role functions are distinct, the required skills range from marketing to technical writing to unit test code development. Certain team roles may be combined if one person has a broad skill set that meets the goals. Large, complex projects may require many individuals with skills specific to each aspect of the role function.

The key is taking the project vision and following the MSF Readiness Management Discipline to proactively map the goals to the roles and their respective skills required for success.

Product Management	
Main Role	Proven experience in the area of Product Management. Able to lead and manage a team. Business and technical knowledge. Marketing, Communications, Business case development (cost/benefit analysis) skills required. Advocate for the Customer.
Sub-Role	Proven experience in product management. Able to define version/release plan for product/solution. Able to prioritize requirements and features per version/release.
Sub-Role	Proven experience in product management. Business and Competitive knowledge. Ability to do research and synthesize data. Translate into solution requirements.
Sub-Role	Proven experience in product management with emphasis on marketing. Able to create/drive demand via marketing program. Able to build community and support for solution via communications.

<b>Program Management</b>	
Main Role	<p>Proven experience in managing projects and teams.</p> <p>Business and technical knowledge.</p> <p>Facilitation, negotiation, communications skills.</p> <p>Able to drive trade-off decisions.</p>
Sub-Role	<p>Proven experience in managing projects and teams.</p> <p>Business and technical knowledge.</p> <p>Facilitation, negotiation, communications skills.</p> <p>Able to drive trade-off decisions.</p>
Sub-Role	<p>Proven experience in the area of architecture.</p> <p>Technical expertise in given technology or solution.</p> <p>Understanding of customer environment.</p>
Sub-Role	<p>Proven experience in the project administration.</p>
<b>Development</b>	
Main Role	<p>Prior experience managing a solution development team.</p> <p>Technical expertise in products/technologies which are relevant to solution.</p> <p>Understanding of application and infrastructure components (hardware &amp; software).</p>
Sub-Role	<p>Prior experience developing solutions focus on application dev.</p> <p>Understanding of standards for coding and building apps.</p> <p>Knowledge of relevant products and APIs, industry standards to build to.</p>
Sub-Role	<p>Prior experience developing solutions focus on infrastructure.</p> <p>Technical expertise in products relevant to solution.</p> <p>Hardware knowledge may also be required.</p>

<b>Test</b>	
Main Role	Proven experience in the area of testing. Ability to lead and manage a team. Technical expertise in products/technologies which are relevant to solution. Understanding of application and infrastructure components (hardware & software). Understanding of testing requirements and standards.
Sub-Role	Technical expertise in products/technologies which are relevant to solution. Understanding of application and infrastructure components (hardware & software). Understanding of testing requirements and standards.
Sub-Role	Proven experience in usability design and testing.
<b>Release Management</b>	
Main Role	Prior experience in Release Management. Ability to lead and manage a team. Technical knowledge hardware & software components Ability to release and deploy a solution. Advocate for the operations team
Sub-Role	Prior experience in Release Management. Technical knowledge hardware & software components Ability to release and deploy a solution.
<b>User Experience</b>	
Main Role	Proven experience in developing guidelines and technical documentation to aid in understanding and development of solution. Excellent written and oral communication skills. Knowledge of user requirements. Understanding of Usability. Advocate for End User.
Sub-Role	Proven experience in technical writing.

## Creating Readiness Plans

During the MSF Process Model planning phase, each MSF team role, whether represented by an individual or an entire functional team, must consider the readiness aspects of their respective constituency. This requires planning for the activities required to meet the readiness approach criteria essential for the project to be successfully completed and meet the goals of the solution. To create the deliverables for the Project Plan Approved milestone, each role needs to consider, at a high level, the current knowledge, skills and abilities of their represented constituency and the level of

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effort and feasibility of the change to their constituency during and after the project. The output of this effort is a role-centric readiness plan.

A key component of this effort is the process of planning from the bottom up. For example, rather than having the Test team follow a schedule developed by the team lead, the Test team develops a schedule and passes it up through the team hierarchy. Each role cluster provides its own budget and schedule estimate to the Program Manager, who then rolls this information up into the master project plan. The benefit of this approach is that each role cluster contributes to the readiness plan. Each role cluster has defined a portion of the team's readiness and is therefore committed to overall readiness. The inclusion of the readiness plan as part of the master project plan allows the organization to accurately represent the change and gauge the true cost of the project so as to better project the return on that investment before proceeding to the next phases.

## Summary

The MSF Readiness Management Discipline provides guidance and a foundation for individuals, teams and organizations to establish a process of defining, assessing, changing and evaluating the knowledge, skills and abilities needed for successful planning, building and managing successful solutions. The discipline, as part of the core of MSF, is based on principles, and proven practices of Microsoft, partners, and industry standards.

As the size and complexity of IT solutions tends to become greater, so does the importance of establishing and maintaining proactive readiness activities throughout the IT lifecycle. Using the Microsoft Readiness Management Discipline along with the other MSF models and disciplines can provide greater chance of success for these IT solutions.

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<sup>1</sup> John Ward, Joe Peppard, *Strategic Planning for Information Systems, 3rd Edition* (West Sussex, England: John Wiley & Sons Ltd., 2002), p 41.