

How Microsoft Moves ITIL V3 from Concept to Practice

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Executive Summary

The IT Infrastructure Library (ITIL) has evolved from focusing on functions in its first version, to processes in its second version, and now—with ITIL version 3 (v3)—to addressing the entire service management life cycle, from service conceptualization to continuous service improvement.

The benefit of a full life-cycle approach is that you design services that hold strategic value for the business and you continue to operate and improve those services to continually meet business needs as they evolve.

This paper articulates how Microsoft supports and extends this service life-cycle approach. Microsoft's core service management strategy is to deliver solutions for the effective and efficient integration of the people, process, and technologies required for organizations to reap the benefits of quality IT services. As shown in the following figure, Microsoft provides people and process guidance with Microsoft Solutions Framework (MSF) and Microsoft Operations Framework (MOF), management tools with the System Center Family of products, and integrated technology and guidance packages to handle complex problems with Solution Accelerators. When combined, MSF, MOF, Solution Accelerators, and System Center products support optimized service delivery and management of the Windows® operating system platform—which in turn delivers the core IT infrastructure required to support business services and workloads.

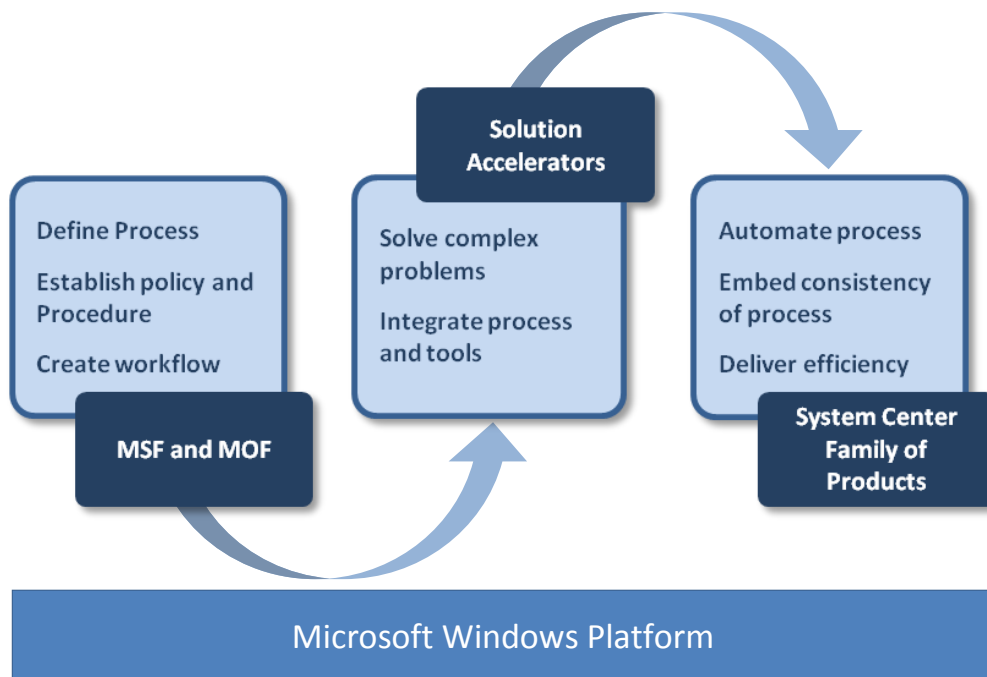


Figure 1

Audience

This white paper is intended for business and IT professionals who are tasked with ensuring the performance, efficiency, and effectiveness of IT infrastructure services.

Feedback

Please direct questions and comments about this paper to satfdbk@microsoft.com.

Why Service Management Matters

IT service management is vital to the success of an organization because it aligns people, processes, and infrastructure to deliver and support IT-based services that enable business functions and activities. The need for service management will continue to grow as businesses increase their dependence on IT services while at the same time demanding the efficient and cost-effective introduction of new and changed services. Simply put, this cannot happen without the aligning force of service management practices.

A December 2006 forecast by the Gartner Group cites the growing importance of business and IT alignment:

- “Businesses that connect the design of information and business process with technology will exceed average sector performance by at least 15 percent until at least 2011.
- By 2012, business processes, information and relationships will be more than half the value focus of most former IT organizations in large enterprises.”

In short, business and IT pros who do not see IT service management as important now will see it as important soon. Those who do will prosper, and those who don't, won't, according to Gartner.

Aidan Lawes, former CEO of itSMF International, agrees.

“Establishing the necessary Service Management solution can be challenging,” Lawes warns. “It takes time, effort, money, and commitment to implement service improvement programs. Adopting ‘good practice,’ as described in ITIL Service Management Practices, can help enterprises on this journey—but it is not the entire solution and it is certainly not an end in itself. Enterprises seeking to be truly world-class in service management need to harness other frameworks and approaches—such as MOF, COBIT, Balanced Scorecards, Six Sigma, ISO 20000, etc.—to develop, measure, and manage their solutions.”

“There is absolutely no doubt that enterprises that do achieve world-class service management practices reap the benefits—nimbleness, leaner, more focused and responsive to business needs, faster to market, and delivering real return on investment,” Lawes concludes.

How Microsoft Solutions Help Put the ITIL Framework into Practice

The Microsoft strategy for IT service management is to provide guidance and software solutions that enable organizations to achieve mission-critical system reliability, availability, supportability, and manageability of the Microsoft platform. The strategy includes a model for organizations and IT pros to assess their current IT infrastructure

maturity, prioritize processes of greatest concern, and apply proven principles and best practices to optimize performance on the Microsoft platform.

Microsoft has been actively involved with the ITIL community since 1999, both by adapting it and by contributing to ITIL content and publications. ITIL provides a broad spectrum of guidance documents that cover IT service delivery, management, and support, as well as elements of IT infrastructure, security, and application management. It promotes the practice of applying descriptive guidance to achieve focused improvement in various areas of service management on a continuing basis.

ITIL v3 defines the top-level processes and functions that constitute best practices in IT management and the service life cycle. This top-level approach provides an excellent way to organize IT activities and deliverables for effective service management throughout the IT service life cycle.

ITIL v3 defines the five phases of the service life cycle as follows:

- **Service Strategy.** How to design, develop, and implement service management not only as an organizational capability but also as a strategic asset.
- **Service Design.** How to design and develop services and service management processes that convert strategic objectives into portfolios of services and service assets.
- **Service Transition.** How to take designed services into the live environment.
- **Service Operation.** How to successfully manage services on an ongoing basis.
- **Continual Service Improvement.** How to create and maintain value for customers through better design, introduction, and operation of services.

Through the integration of Microsoft Solutions Framework, Microsoft Operations Framework, and the recent addition of the Continuous Improvement Roadmap (CIR), Microsoft delivers guidance for managing IT services throughout the life cycle. MSF, MOF, and the CIR have been developed using the data and wisdom of the Microsoft ecosystem of users, customers, partners, and internal IT and research groups. Figure 2 demonstrates the alignment of the Microsoft frameworks to ITIL v3.

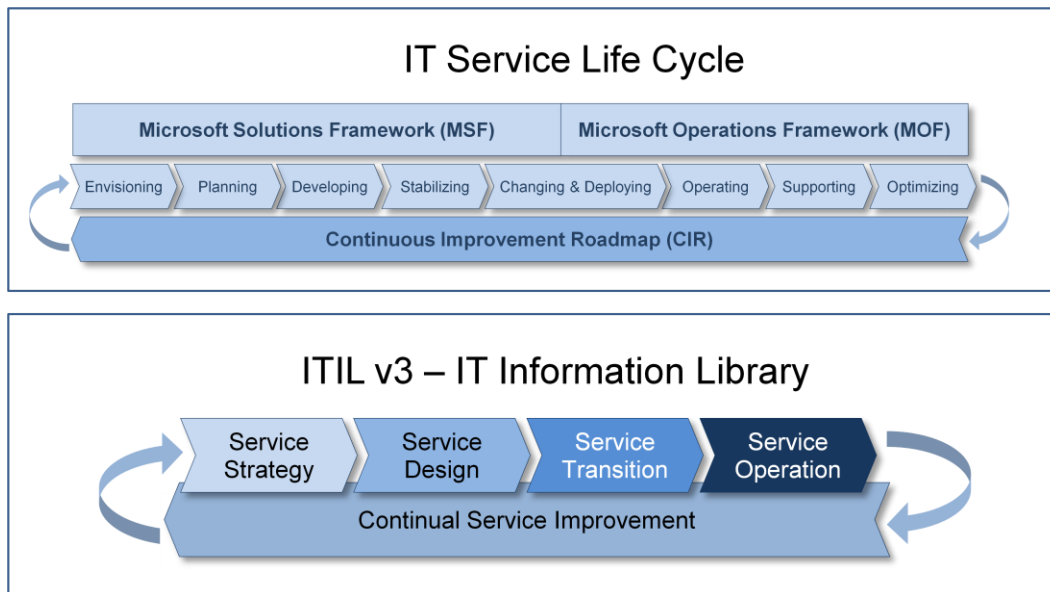


Figure 2. How the Microsoft strategy for IT life-cycle management aligns with ITIL v3

In addition, MOF, MSF, and the CIR provide a way to demonstrate how Microsoft products, technologies, guidance, and solutions link to ITIL concepts and support putting them into practice.

How Microsoft Helps Overcome Obstacles to Service Management Success

Business and IT pros face many challenges in turning service management initiatives into business benefits. The most common barrier is the “knowing-doing” gap between the abstract theories of service management frameworks and the day-to-day activities IT pros perform. While such frameworks have obvious value, they also tend to emphasize process steps, performance indicators, and controls, whereas IT pros must focus their attention on the immediate operational tasks at hand relevant to their respective roles. This gap between knowing what to do—change management, for example—and actually doing it, creates the following issues in a typical organization:

- IT service management processes that are documented but not part of the real-world activities of the IT pro.
- Procedures that work for IT pros at the operational level but are not in sync with or supportive of the organization-wide service management goals to support the business.
- “Localized” IT tasks and activities that are not effective in achieving over-arching customer-focused outcomes.

For these reasons, IT pros need *task-level guidance aimed at their roles* and implementation platforms that can take the abstract concepts and best practices of ITIL and integrate them into their daily work. This is precisely what Microsoft’s strategy is: the combination of products and guidance for solving timely, relevant issues for business and IT pros.

Microsoft supports IT service management best practices, including ITIL v3 and its approach to the IT service life cycle, by extending ITIL v3 through processes, tools, and guidance across the life cycle for the Microsoft Core Windows Platform. By doing so, Microsoft makes service management tangible to the IT pro and directly applicable in the Microsoft environment.

Aidan Lawes sees that support by Microsoft as highly valuable:

“ITIL is and always has been generic good practice guidance which enterprises need to adopt and adapt for their individual circumstances,” Lawes explains. “While it was implicitly acknowledged that complementary material would add value, v3 explicitly recognizes the need for complementary guidance that will assist enterprises to develop solutions in specific market sectors or for managing specific technologies. Such complementary material can, and in many cases should, come from those who best understand the specific environment. Hence, the Microsoft suite of offerings is seen as adding immense value to the marketplace.

“The comprehensive nature of the suite demonstrates how important Microsoft considers Service Management to be,” Lawes continues. “The emphasis on business needs and value as the driving force for decision making fits perfectly with the core ITIL thrust and the various components in the suite can enable enterprises to accelerate the development of their own quality solutions. Addressing the key areas of people, process, and tools, the suite provides a comprehensive toolkit for those wrestling with the complex challenges inherent in Service Management.”

How Microsoft Core Infrastructure Supports Business Services and Workloads

All businesses require a solid infrastructure to support their operations. For example, an airport provides services, such as catering, security checks, baggage handling, restaurant services, and fuel services, as well as critical services, such as radar and runway scheduling. An airport is dependent on the computing and communications infrastructure services on which these business services and workloads reside. These IT services must be consistently available, secure, reliable, continuously at the right capacity, of the right quality, and at the right cost. Without this, an airport grinds to a halt.

To help organizations assess how well-matched their infrastructure is for supporting their business workloads, Microsoft provides an Infrastructure Optimization (IO) Model. The IO Model helps customers realize dramatic cost savings for their IT infrastructure by moving from an unmanaged environment towards a dynamic environment. Security improves from highly vulnerable in a Basic infrastructure to dynamically proactive in a more mature infrastructure. IT infrastructure management changes from highly manual and reactive to highly automated and proactive. Processes move from fragmented or nonexistent to optimized and repeatable. A customer's ability to use technology to improve their business agility and deliver business value increases as they move from the Basic state up the continuum toward a Dynamic state, empowering information workers, managers, and supporting new business opportunities.

IO allows organizations to obtain immediate benefits and grow over time by helping them understand and subsequently improve the current state of their IT infrastructures and what that means in terms of cost, security, risk, and operational agility.

The IO Model defines four levels of maturity and how they relate to this business capability:

- **Basic.** Infrastructure that requires constant manual monitoring and repairs.
- **Standardized.** Infrastructure with automated systems management and automated identity and access management.
- **Rationalized.** Infrastructure with increased virtualization, proactive security, and configuration policies that enable self-provisioning.
- **Dynamic.** Infrastructure that becomes a strategic asset and enables people throughout the enterprise to do more to advance the business.

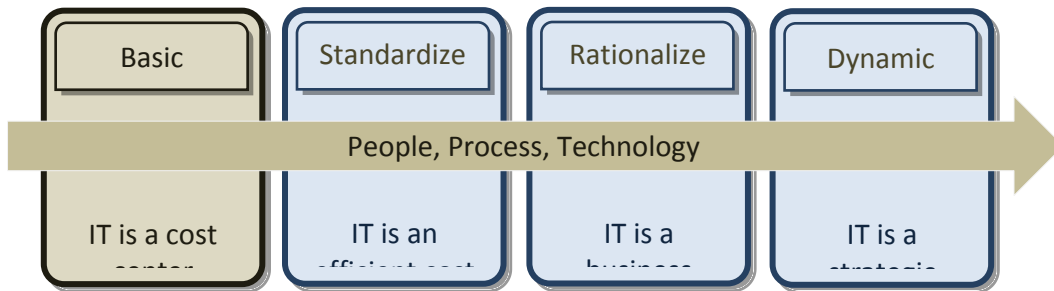


Figure 3. The IO Model

By utilizing the IO maturity model, organizations can benchmark their technical and process capability to measure their ability to deliver business value. Organizations can improve their maturity through their adoption and use of MSF, MOF, Solution Accelerators, and System Center products. As shown in figure 3, these core service management components provide the foundational practices, processes, guidance, and technologies required for the optimization of the Windows infrastructure.

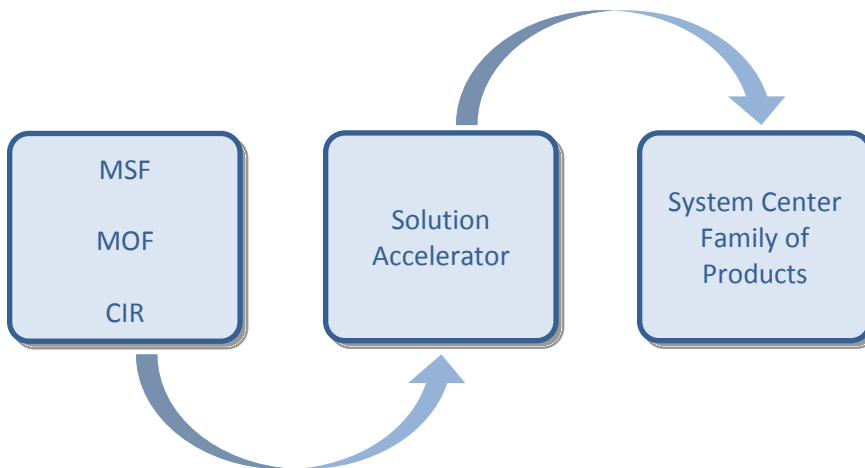


Figure 4. How Microsoft process guidance, tools, solutions, and technologies support the optimization of the Windows platform

The remainder of this paper describes these core service management components and their purpose, and provides case studies demonstrating customer successes through their adoption of Microsoft service management components.

Service Management Frameworks

Microsoft Solutions Framework (MSF)

MSF is a flexible, interrelated series of concepts, models, and best practices that lay the foundation for planning, building, and managing technology projects. It draws from a

collection of internal and external best practices that have been proven effective in managing development, infrastructure, and integration projects.

As MSF was developed and continues to evolve, these practices have been consolidated and simplified for easier understanding and adoption, then verified through application in real-world projects. The result is a solution delivery approach specifically designed to deal with change, identify and manage risks, assign resources, and establish easy-to-understand team and process structures.

The MSF Process Model focuses on the solutions development phase of the life cycle, which is composed of five stages:

- **Envisioning.** Define project goals and expectations.
- **Planning.** Define what needs to be built, timeline, and procedures.
- **Building.** Develop, test, and refine all aspects of the solution.
- **Stabilizing.** Test solution and prepare for final release to production.
- **Deploying.** Deploy solution into production environment.

MSF works closely with MOF in understanding the following service management process requirements in order to integrate them into the solution being developed:

- Service Level Management
- IT Program Management
- IT Service Continuity Management
- Capacity Management
- Financial Management for IT Services
- Availability Management
- Workforce Management
- Resource Management
- Requirements Management
- Risk and Issue Management

Microsoft Operations Framework (MOF)

MOF is a framework for managing the operations and support of IT systems, making adjustments due to changing business needs easier as well as optimizing processes for greater efficiency. MOF is based on extensive user research on people and their roles, responsibilities, and skills (IT pro personas).

The goal of MOF is to help IT organizations achieve reliability, availability, supportability, and manageability in their mission-critical systems. Because MOF practices are easy to incorporate, either selectively or comprehensively, operations staff can realize tangible benefits by following the model. Applying the principles of ITIL and other IT service management frameworks to the Microsoft technology platform, MOF provides a foundation to help IT organizations meet the challenges described above and support the goal of continuous improvement.

MOF utilizes a three-pronged strategy to achieve this goal:

1. It establishes processes that are consistent and repeatable.
2. It clearly defines user roles, responsibilities, and skills.
3. It looks to automation via products and tools.

MOF simplifies IT service management processes using a model that is illustrated with clear, easily understood diagrams.

MOF focuses on the changing and deploying, operating, supporting, and optimizing stages of the IT service life cycle—that is, the solutions operation phase of the life cycle.

Continuous Improvement Roadmap (CIR)

If IT service providers want to meet the business needs of the organizations they support, they must get better at what they do and then keep on getting better. In short, they have to learn how to continuously improve. That process of continuous improvement is not a destination, but rather a journey directed toward sustained quality of IT services.

CIR is a vehicle to help make continuous improvement of IT services more actionable and achievable. The primary goal of CIR is to help IT organizations succeed with the Microsoft platform while providing and applying linkages into existing and established service management best practices. It includes both an assessment tool to pinpoint areas of “pain” in IT service management, as well as a methodology for implementing service improvement projects.

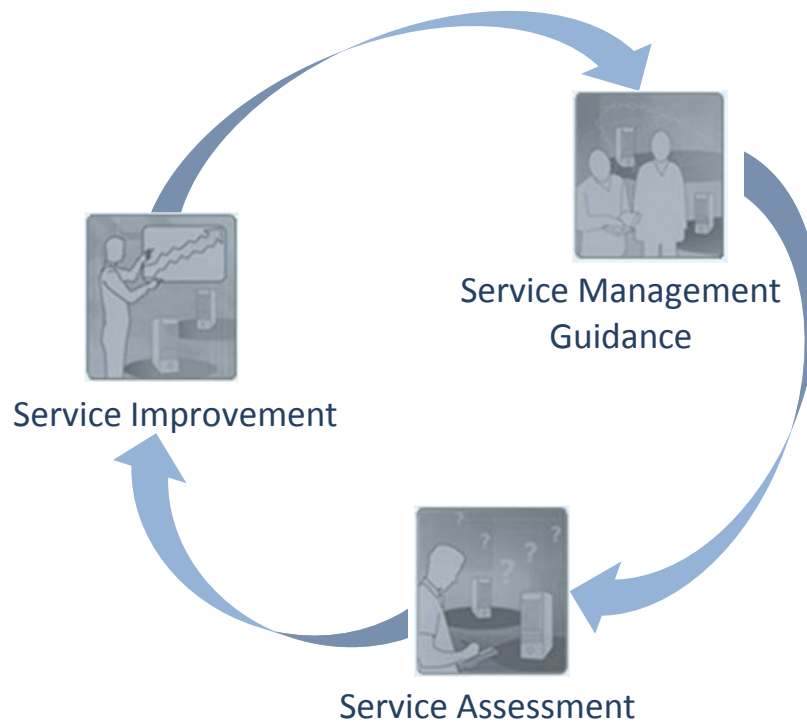


Figure 5. Continuous Improvement Roadmap (CIR)

Case Study: The University of Kansas Hospital

To help streamline operations, the University of Kansas Hospital ITS team paired with Microsoft Services and implemented the Microsoft Services Service Management Assessment (SMA) solution and guided the hospital on its Service Improvement Program (SIP). Microsoft Services helped ITS convert its challenges into problem-opportunity statements and then prioritized these statements based on risk, cost, time, and business value. Using this information, Microsoft Services developed a Service Improvement Program: a series of service management initiatives that focused on aligning business objectives with ITS goals to ensure definition, delivery, and continuous improvement of the hospital's IT services.

The program also helped ITS develop numerous processes around IT operations. According to Ann Rose, assistant director of ITS in charge of the Service Management strategy, "The incident classification matrix and monthly metric scorecard help us better monitor workgroup trends, including breaches of service level objectives, mean time to recovery of incidents, and customer satisfaction scores."

For example, ITS staff automated their desktop deployment process with the use of Microsoft Systems Management Server 2003 R2. To help ensure quality, ITS developed a checklist that end users must sign off on when a desktop is deployed. ITS has seen a steady 8–10 percent decline in incident records each month, and the number of workgroups that breached their service-level objectives for incident resolution declined 50 percent in the same six-month period. In addition, a new change management process that assesses risk when reviewing significant change requests has provided improved stability around configuration changes. The Change Manager tracks and trends these metrics and reported that, in the first quarter of 2007, the average monthly instances of server downtime due to flawed changes reached a low of 47—an 84 percent change from the monthly average of 293 in 2005.

“Now, the ITS department is in a more strategic position where we can effectively catalyze some change within IT. The focus on the need for operations process standardization has allowed us to build repeatable processes,” Rose said.

System Center Family of Products

To increase an organization’s service management capability requires the integration and automation of process and IT pro activities. The Microsoft System Center family of products facilitates this automation and integration, helping to reduce service management complexity and delivering a reliable and consistent operations experience designed especially for the Microsoft environment including Microsoft® SQL Server™, Microsoft Exchange, Microsoft Office System, and the Microsoft .Net Framework. Automation of the service management frameworks is achieved via three key features of the System Center products:

- **Embedded knowledge.** Infrastructure data is captured and used intelligently in order to help automate the service management processes.
- **Integration.** All System Center products work tightly together to present the IT professional with a consistent technology architecture that allows for workflows across the different products.
- **Flexibility.** System Center provides customizable models and process templates as well as the ability to work with different technologies.

The System Center family of products includes the following tools:

- **System Center Operations Manager 2007.** Providing service monitoring of distributed applications, Operations Manager 2007 enables IT staff to have greater control of the IT environment.
- **System Center Configuration Manager 2007.** Enabling greater control over desktop and servers, Configuration Manager provides tools for managing desired system configurations including automating software installations and updates.
- **System Center Service Manager.** A product currently in beta, Service Manager will provide implementations of fundamental IT service management processes, including incident management, problem management, and change management.
- **System Center Data Protection Manager 2006.** Delivering continuous data protection for Windows file servers, Data Protection Manager provides backup and restore capabilities.
- **System Center Essentials 2007.** To enable IT staff in smaller organizations to manage their environments more effectively, Essentials provides a tool that unifies two of the most important management functions: monitoring distributed systems and automating software installation.
- **System Center Virtual Machine Manager.** A new kind of management tool for the new age of virtualization, this product helps management staff with the process of consolidating applications onto virtualized servers.

System Center is consequently well positioned to efficiently and effectively automate many of the service management tasks that IT pros face daily. For example, monitoring and managing the hardware and software in a distributed computing environment is an essential part of the on-going deployment and operations phase of the service management life cycle. But how does that software get onto the managed systems? Once it's installed, how is the correct configuration maintained on each machine, including any necessary updates or patches? And how can an administrator keep track of what's installed on each system or even know what hardware and software assets are in the environment?

The answers to these questions along with the rest of the System Center capabilities uniquely support the practical delivery of the ITIL framework.

Solution Accelerators

Solution Accelerators integrate System Center technologies with integrated MSF and MOF guidance to deliver packaged solutions to the complex problems of IT service delivery. Solution Accelerators cover many areas of the IT infrastructure, including:

- Desktop, Device and Server Management
- Automated Assessments
- Communication and Collaboration
- Security Process and Compliance
- Content Management
- Data Protection and Recovery
- Identity and Access Management
- IT Process and Frameworks

For example, the Solution Accelerator for Business Desktop Deployment (BDD) is best-practice guidance for desktop deployment, aimed at reducing deployment time, effort, and cost by increasing the level of automation. It allows administrators to deploy desktops with Zero Touch and Lite Touch interaction at the target PCs. This solution also helps organizations move to a managed environment with standardized desktop images, thereby reducing system complexity and increasing its overall manageability. BDD uses System Center technologies to automate the software distribution process and works with the underpinning of the core Windows infrastructure to make it possible. The following case study demonstrates how one company used a Microsoft Solution Accelerator.

Case Study: Sony Ericsson Mobile Communications

Sony Ericsson Mobile Communications, a global provider of mobile multimedia devices, wanted to improve IT security and simplify the deployment and management of a standardized computer desktop environment. In keeping with its innovative nature, it also wanted to be proactive in evaluating the latest technologies. Through participation in a Microsoft Technology Adoption Program (TAP), Sony Ericsson upgraded a pilot group of computers to the Windows Vista® Enterprise operating system. Once the new system is deployed throughout the company, Sony Ericsson anticipates that it will be able to reduce time spent rebuilding the desktop configuration on employees' computers by 50 percent. It also expects to better safeguard sensitive company data, drive down IT costs associated with damage recovery, and enable the company to operate with fewer IT people dedicated solely to support tasks.

For further information, see the complete case study at [Sony Ericsson Improves Security, Reduces Support Costs with New Operating System](#).

Delivering IT Service Management: Getting Started with Tangible Assets from Microsoft

Where to begin on the journey to delivering service management depends on where you are and what your current and most relevant challenges are. For example:

- If you want to understand where your organization is with respect to its ability to implement the IT service life cycle and achieve dynamic systems, you can learn more about the [Infrastructure Optimization \(IO\) model](#) and then assess yourself. This will give you a better idea of where your IT infrastructure is and how you can improve on it.
- If you want to automate your service management processes and would like to know more about available tools to make it happen, visit the [System Center Web site](#).
- If you already have an idea of where your problems are with respect to service management, you would greatly benefit from looking at the different [Solution Accelerators](#) and identifying those that you might be able to implement in order to optimize your current IT infrastructure.
- If you need help in identifying or further qualifying the problems that you may have in service management, then doing a Service Management Assessment of your organization would be the best step to take to ensure that resources are allocated to the right problems. Contact your technical account manager or account representative at [Microsoft Services](#) to learn how.
- Finally, if you would like to learn more about the Microsoft strategy for IT service life-cycle management, visit the following sites: [MOF](#), [MSF](#), and [CIR](#).

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- Jennifer Stevens - *Microsoft*

Appendix

Links for More Information

- [Microsoft's People Ready vision](#)
- [MSF](#)
- [MOF](#)
- [CIR](#)
- [System Center](#)
- [Solution Accelerators](#)
- [ITIL V3 Official Site](#)
- [COBIT](#)
- [ISO 20000](#)
- [Prince2](#)

Microsoft System Center Family

- [System Center Service Manager](#)
- [System Center Operations Manager](#)
- [System Center Configuration Manager](#)
- [System Center Data Protection Manager](#)
- [System Center Reporting Manager](#)
- [System Center Virtual Machine Manager](#)
- [Systems Management Server](#)
- [Microsoft Operations Manager](#)