

# HP IT Service Management (ITSM)

## Transforming IT organizations into service providers



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## Executive summary

Because most enterprises today are completely dependent upon information technology, IT service readiness can have significant business consequences. However, despite massive technology investments during the 1990s, many IT departments are ill equipped to deal with business realities. Evolved as IT-centric cost centers, they continue to rely on outdated organizational structures, management systems, processes, and tools that make it difficult to provide what businesses need most: high-quality solutions and support delivered in real time. Just as enterprises increasingly need to be adaptive in order to survive, their IT organizations and underlying infrastructure must be agile, flexible, and responsive.

Because of the disparity between business needs and the limited capabilities of most IT organizations, Gartner believes that IT departments are gradually “losing their franchise to deliver IT solutions” to a variety of specialized consulting and outsourcing firms<sup>1</sup>.

Agility and operational excellence may be difficult for most IT departments to achieve, but they are necessary for long-term business growth, and achieving them does not necessarily require a larger IT budget. The opposite approach—reducing IT budgets and headcount and consolidating infrastructure—may not achieve agility and operational excellence. These responses can help a business survive during an economic downturn, but taken alone cannot prepare companies to leap ahead of the competition when the economy improves. Instead, IT organizations must become strategic solution providers, committed to enabling key business initiatives with reliable, cost-efficient services.

IT executives who have cultivated a broader business-IT perspective realize that achieving IT agility and operational excellence requires not only cutting costs but also transforming IT so its focus is on service management rather than technology management, on customers instead of users, and on the integration of people, process, and technology. IT departments must also reassess their core competencies and capabilities, changing them to enable the delivery of new services to the entire extended enterprise. This process may require rethinking and restructuring services and underlying support models.

Simply put, transforming an IT organization into a service provider requires a return to the basics.

The purpose of this document is to introduce IT organizations to IT Service Management (ITSM) solutions. ITSM is based on the Information Technology Infrastructure Library (ITIL)—the most comprehensive and respected source of information about IT processes ever written. An invaluable resource for organizations seeking to implement IT Service Management, ITIL has enjoyed widespread adoption by successful companies and governments worldwide.

The paper discusses how companies can use ITSM best practices to transform their organizations into trusted, respected service providers that are strategically aligned with business realities—and that support the Adaptive Enterprise. It also includes detailed discussions of the three key elements in any IT transformation effort—people, process, and technology—and how ITSM best practices and methodologies affect them. The paper closes by summarizing the stages of IT transformation and introducing the HP ITSM Reference Model, a fully-integrated IT process relationship map that is invaluable to enterprises as they seek to understand people, process, and technology problems and consider solutions.

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1. Gartner Research Note, *Adopting an ESP Business Model*, C. Young, April 27, 2001.

## Technology provider or strategic business enabler?

Today, the effectiveness, reliability, and flexibility of IT services are the critical success factors behind business initiatives. Yet according to Gartner<sup>2</sup>, many IT organizations are not equipped to meet sophisticated and time-sensitive IT service demands. Evolved as cost structures and structured around functional or architectural component lines, nearly 70 percent of IT departments still function as tactical, reactive technology providers rather than as strategic service providers and business enablers. Moreover, despite massive technology investments during the 1990s, many IT departments continue to use outdated organizational structures, management systems, processes, and tools that make it difficult to provide what businesses need most: high-quality solutions and support delivered in real time.

Given the almost total dependence of business operations on information technology today, this lack of IT service readiness can have significant business consequences. During the early mainframe computing years, business innovation was not necessarily dependent on information technology, but rather was driven by the long cycle times required to build a new infrastructure and produce traditional goods and services. As customers and industries evolved—in part due to new information technology advancements that allowed large-scale business process integration—traditional goods and services were replaced with information-enabled services. Organizations learned that new business models—and the supporting IT infrastructure—must be flexible enough to allow growth. Without a flexible, reliable IT infrastructure, innovation was stifled, resulting in decreased revenue and lost market share.

As the pace of business continues to accelerate, enterprises must become adaptive in order to survive. As they grow ever more dependent on IT, IT organizations and the underlying infrastructures must be agile, flexible, and responsive.

### Meeting critical business needs

IT agility and operational excellence may be difficult goals for IT departments to reach, but they are key to supporting long-term business growth. The disparity between today's business needs and internal IT abilities constitutes a significant business risk. An IT organization that cannot handle growing demands can contribute to dysfunctional operations. This soon becomes problematic, because when IT is unable to deliver business value, innovation is hindered, and IT is threatened with a loss of trust and decreases in budget. Given this situation, it is not surprising that for the past five years, "business to IT alignment" has rated high among the top five CIO concerns.

Gartner believes that IT departments are gradually "losing their franchise to deliver IT solutions" to a variety of specialized consulting and outsourcing firms—a situation in which no one wins except the vendor<sup>3</sup>. Businesses are forced to seek assistance from outside vendors and to pay more for services that their own IT departments could potentially deliver more cheaply. Costly inefficiencies grow as organizational silos act alone, without central IT leadership to identify tools, disciplines, and best practices that can be applied across services. Profitability drops as IT costs increase, opportunities are lost, and dissatisfied customers take their business elsewhere. In such an environment, IT departments are no longer able to implement the new processes, organizational structures, and other changes that, together, can transform them into strategic business enablers.

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2. Gartner Research Note, *Adopting an ESP Business Model*, C. Young, April 27, 2001.

3. Gartner Research Note, *Key Competencies for Service-Based IS Organizations*, M. Gerrard and B. Gomolski, Sept. 10, 2001.

## More than a budget issue

Solving the problem does not necessarily require a larger IT budget. Quite recently, companies, governments, and even educational institutions focused on growth, spending millions of dollars on expanding IT infrastructure and staff. While these costly, often poorly coordinated investments provided greater flexibility and enabled dramatic business innovation, they did little to prepare IT organizations to meet today's service needs. If anything, businesses learned that a tough economic climate and growing demand could quickly outpace an IT organization's ability to deliver high-quality services.

Cutting costs, reducing headcount, and consolidating infrastructure are also unlikely to be effective, though they can help a business survive an economic downturn. Increasingly, however, IT executives understand that the immediate financial benefits of these activities are short-lived and cannot prepare their enterprises to compete effectively when the economy improves. Instead, IT organizations must strive to become strategic solution providers, committed to enabling key business initiatives with reliable, cost-efficient services.

## Transforming IT into a service provider

IT executives who have cultivated a broader business-IT perspective realize that achieving IT agility and operational excellence requires not only cutting costs but also transforming IT so it focuses on service rather than technology management, on customers instead of users, and on integrating people, process, and technology. At the same time, IT departments must reassess their core competencies, changing them to enable the delivery of new services. The process may require rethinking and restructuring services and underlying support to position their organization for the future.

Simply put, transforming an IT organization into a service provider requires a return to the basics.

From an internal customer's perspective, transforming IT into a strategic service provider means aligning the IT organization with business goals, focusing on the value-added services that businesses want, and delivering them. It means that IT becomes a trusted, respected advisor who develops innovative solutions to business problems. And it means that IT is run as a business function.

Only recently has it been possible to combine the components essential to a successful IT transformation—people, process, and technology—and use them to implement the organizational changes required to make this vision a reality. High-quality IT service solutions require a strong bond between these components because services are the outcome of IT processes and infrastructure. They are executed and controlled by people working in an organizational structure, and they are supported by management technology.

A successful IT transformation can contribute to sustained business success, an experience shared by companies that have balanced the ability to expand market share and revenues with the ability to deliver profits and increase customer satisfaction.

## Making IT transformation real

IT transformation is achievable, but it requires significant and potentially risky changes. Globally and across industries, IT organizations are seeking answers to critical questions such as the following:

- How do we refocus our IT organization on the basics?
- How can we move toward managing services?
- How can we evolve to enable the Adaptive Enterprise?
- Where do we start?

Many IT organizations are turning to IT Service Management (ITSM) and the HP ITSM Reference Model for answers.

## A brief history

ITSM began as a project undertaken by the government of the United Kingdom (U.K.) in the early 1980s. In the midst of a serious economic downturn, the government was forced to lower costs and better manage IT service delivery. The government knew it needed to develop innovative ways to improve IT service efficiency.

The government put the British Central Computer and Telecommunications Agency (CCTA)<sup>4</sup> in charge of the project. The CCTA knew it could increase efficiency quickly by focusing on improving IT processes. The team recruited consultants, vendors, and users to design a set of best practice-based IT processes, which were then documented using a common glossary of terms and published in an integrated series of 40 books. This series, recently updated and repackaged as seven books, is now referred to as the IT Infrastructure Library (ITIL).

ITIL is the most comprehensive and respected source of information about IT processes ever written for organizations seeking to implement IT service management. Successful companies and governments worldwide have adopted ITIL. Organizations such as the IT Service Management Forum (ITSMF), an independent, international ITIL users group, help to share ITIL best practices. And many consulting and educational firms around the world now offer ITIL training and certification programs for IT professionals.

## Defining ITSM

According to ITIL, “IT Service Management is concerned with delivering and supporting IT services that are appropriate to the business requirements of the organization. ITIL provides a comprehensive, consistent, and coherent set of best practices for IT Service Management processes, promoting a quality approach to achieving business effectiveness and efficiency in the use of information systems.”<sup>5</sup>

Having designed and implemented ITIL-based solutions for the past nine years, HP takes the definition of ITIL a step further by defining ITSM as a business-driven approach that IT organizations can use to design, build, manage, and evolve quality IT services that:

- Are customer-focused and process-driven
- Meet quality, agility, and cost targets
- Enable the achievement of service-level targets as defined in service-level agreements (SLAs)

Both definitions imply that implementing ITSM provides an IT organization with service delivery capabilities that are stable and cost-effective, yet agile. In addition, IT service quality is measured and improved, providing greater value to the business. These types of impacts make ITSM a crucial factor in achieving sustained business success.

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4. The CCTA is an executive agency of the Cabinet Office created to improve the delivery of public services through the best use of IT. The CCTA is currently known as Office of Government Communications (OGC).

5. ITIL Service Support, version 1.2 published for OGC by the Stationery Office.

## Focusing on the basics

One of the first questions an IT organization must ask when beginning its transformation into a service provider is, “What do we need to have in place in order to support our business objectives?” This question refers to the idea that IT organizations must adapt in order to succeed—an idea that is aligned with the business goals of the Adaptive Enterprise. Attempting to answer the question generates next-level people, process, and technology questions, such as the following:

- What type of IT structure enables efficient delivery of IT services?
- What IT processes are required to deliver high-quality IT services? What inter-process relationships and business linkages are required?
- What are the appropriate, available technologies for enabling processes and providing tight process integration?

### **Tactical considerations**

Answering these conceptual, strategic questions naturally leads to tactical questions such as:

- How should we design and implement processes that facilitate high-quality IT service delivery and support for our customers?
- How do we implement process-enabling technologies quickly and cost-effectively?
- How should we identify which IT functions, if any, to outsource?
- Where should we start?

Knowing when to start planning for IT Service Management is perhaps the easiest question to answer—you should start now. However, answering other tactical questions can be quite challenging, in part because the ITIL is a set of guidelines that only focus on what you should do, and do not explain how to implement a process or adapt it for a particular organization.

For this reason, many organizations turn to consulting firms to help them implement ITIL processes. It is important to note that different firms use different methodologies to implement ITIL processes. HP, for example, combines proven methods, such as process management, with forward-thinking concepts, such as running IT as a business, rather than running IT within a business. Organizations interested in implementing ITIL processes should carefully evaluate the experience, capabilities, and methodologies of different firms to determine which one is right for their needs.

## The importance of process in IT transformation

### The high cost of process problems

While technology management has been the traditional mainstay of IT, most IT organizations are realizing that poor service delivery has little to do with technology and much to do with poorly designed or missing IT processes. For instance, the best technology is not helpful if a service offering fails because of process-related problems, such as the following:

- **Unscheduled changes**  
Unscheduled—and therefore uncontrolled—changes occur to the production environment because of unclear, undocumented IT processes. Change management process problems lead to false starts, multiple reworks, duplicate efforts, periodic work stoppages, lengthy time-to-repair intervals, and increased customer anxiety and frustration.

For a service provider, these problems can be catastrophic. Customers demand predictability for service delivery time, quality, and performance, but IT organizations cannot deliver it if the service delivery environment is unreliable.

- **Vague process triggers**  
Triggers for IT processes—for example, software distribution—are poorly defined. As a result, IT staff inadvertently begins a process at different points, leading to inconsistent, unreliable service delivery. This type of process problem can seriously impact customer satisfaction and prevent repeat business—and it communicates that IT cannot commit to meeting service levels.  
For an IT organization attempting to function as a true service provider, customer satisfaction is critical. A dissatisfied business unit customer can be forced to obtain reliable, efficient IT services from outside the organization.
- **Undefined or nonexistent process links**  
Linkages between IT processes are undefined or nonexistent, making it impossible to capture information and share it among multiple related processes in support of increased business agility, flexibility, and responsiveness. Linkage problems can result in delays to already tight production schedules, low customer satisfaction, missed customer commitments, and, ultimately, loss of revenue.  
Customers today expect a rapid response to their business transactions, whether or not an online delivery mechanism is used. Meeting their needs requires IT to be able to capture information and share it among related, linked processes. These linkages enable the business agility and flexibility customers demand.
- **Unclear roles and responsibilities**  
IT employees responsible for a process—such as incident management or problem management—are unclear about their roles and are not evaluated regularly, contributing to difficulties in assigning accountability when problems occur.  
IT must be prepared to restore services as quickly as possible when problems occur. Well-defined roles and responsibilities are critical during service interruptions. Everyone involved in service delivery and support must perform without confusion or delay. This ability can be the critical difference between success and failure for an IT organization attempting to establish credibility as a service provider.

These situations are all examples of process problems. Sustained business success is very difficult to achieve until they are addressed.

## Characteristics of successful IT processes

Effective IT processes, whether they support service development, delivery, or support teams, must be clearly identified, well-defined, documented, and communicated to all affected personnel. In addition, IT processes must be measurable in order to facilitate improvements. Measuring a well-defined process provides an IT organization with the ability to predict performance over time. This capability is basic to any continuous process improvement effort. With proper metrics, IT can gauge performance and proactively make adjustments, often before service failure occurs.

It is also important to remember that no IT process stands alone. Defining and measuring an individual process must be done in the context of the greater whole—which means understanding and defining interrelationships and dependencies between the target process and other processes in the IT environment. Unclear or undefined process relationships can lead to both false assumptions about reliability and frustration when processes that have presumably been repaired negatively impact other processes.

## Process reengineering and the people factor

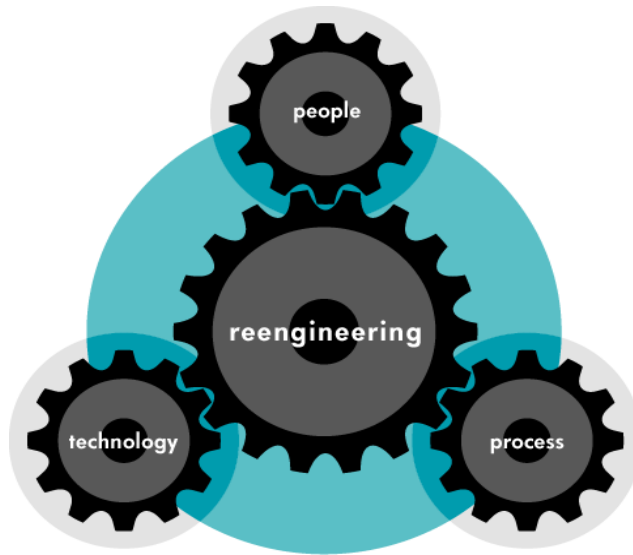
Transforming IT requires that organizations reengineer IT processes—but too often, reengineering results in frustration and failure.

In most cases, IT organizations implement new processes and tools without considering the impact of changes on the organizational structure and the people involved.

Designing and implementing new IT processes is true process reengineering. Process reengineering is the essential bridge that connects people and technology to process (see Figure 1). And to be successful, process reengineering must address all aspects of process management.

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**Figure 1.** Reengineering: aligning people, technology, and process for continuous improvement



### People and process management

Process management effectively integrates people, information, tools, and procedural structures with the goal of meeting performance and quality objectives. When process management is applied to one or more target processes as part of an ITSM-based process reengineering effort, these processes should exhibit the following characteristics:

1. **Process ownership:** assigned accountability
2. **Process measurement:** measurable conformance to user requirements
3. **Process control:** verification that work outputs meet specifications
4. **Continuous process improvement:** increased productivity and efficiency, as well as defect removal
5. **Process definition:** a clear understanding of the value of the process and the steps required to perform it

Note that none of these characteristics is possible to achieve without affecting IT staff. A well-defined process is one that has been documented in flow diagrams and contains clear definitions of each step and its accountabilities.

Assigning accountability through process ownership can also have a dramatic and immediate impact on an IT organization because it directly affects organizational structure. For example, after identifying the processes performed by an organization during a reengineering effort, the next step is to assign process owners to those processes. For most companies, process owner is a new role that must be clearly defined and understood by the entire IT organization and integrated into its overall hierarchy.

Similarly, implementing process measurement, process control, and process improvement can have further implications for IT staff. For example, many of the IT processes currently in place globally are measured poorly or not at all, do not have clearly defined output specifications, and were not designed for continuous process improvement. For such organizations, implementing comprehensive



process management usually results in significant changes in job responsibilities and daily activities for some employees. These employees may also need to develop new skills and use new technologies, which requires skills assessments and strategic education investments.

## The importance of people to IT transformation

Clearly, improved processes are useless without people. But the people component of IT refers to more than a simple understanding of how process reengineering and process management affects IT staff. It also refers to skill sets, attitudes, and the new roles and responsibilities staff must assume to be successful. Each of these people aspects must be transformed in order for IT organizations to evolve from technology to service providers.

### Skill and attitude transformation

IT staff skills must change in support of new or modified jobs that result from process engineering—and changing or improving skills requires education and training.

However, proper performance of new skills alone does not necessarily result in successful IT transformation. Attitudes must also be transformed so that the entire IT department becomes more customer-focused, service-oriented, and aligned with the business goals of the organization (see Figure 2). In practical terms, this means IT organizations must:

- View consumers of their services as customers
- Temper their traditional inward perspective and start looking outward
- Expand their focus on technology to include a focus on service solutions
- Move away from isolated, ad hoc processes and develop business-justified, streamlined IT processes
- Implement measurable, accountable processes
- Balance in-house solution development with outsourcing
- Develop and implement integrated, end-to-end IT processes, avoiding process silos
- Utilize new process improvements to support a proactive approach
- Define and develop service-oriented organizational structures, roles, and responsibilities
- Enhance traditional IT system skills with customer-focused skills

**Figure 2.** New skills and attitudes required for successful IT transformation

From	➔	To
Users	➔	Customer
Inward-looking	➔	Outward-looking
Technology focus	➔	Process focus
Ad hoc processes	➔	Rationalized, streamlined processes
Best efforts	➔	Measured, accountable processes
Entirely in-house	➔	Balanced in-/outsourcing
Fragmented, silos	➔	Integrated, end-to-end
Reactive	➔	Proactive
Operations manager	➔	Service management
System skills	➔	Listening skills

Making these skill and attitude changes throughout an IT organization requires a well-defined educational curriculum that addresses process and technology. In most cases, organizations benefit by hiring a consultant who understands these needs and can develop a tailored plan. Typically, once new processes are implemented and there are measurable, reportable results, people's attitudes shift to a service and customer orientation. However, the tone set by IT leadership also significantly impacts the attitudes of staff.

## Transformation of roles and responsibilities

Reengineered IT processes also require new roles and responsibilities. Attempting to introduce new or significantly improved IT processes without addressing underlying roles, responsibilities, metrics, and job descriptions can lead to poor performance, frustrated staff, and possible failure. For IT transformation to be successful, roles and responsibilities must change to reflect the new processes and service priorities, and these changes should affect the entire IT organization.

### **The role of the process owner**

One of the most important new roles in a transformed IT organization is that of process owner. Essentially, a process owner has end-to-end accountability for a specific process. Because many IT processes are cross-functional—they span the organization—it is imperative that accountability matches the process owner's organizational responsibility. It is next to impossible for a process owner to manage a process without the requisite authority. While many people may actually be responsible for carrying out different aspects of a specific process, it is always the process owner who is ultimately accountable for success or failure.

Change management—production change control—is an excellent example of a cross-functional IT process that requires a process owner or change manager with the authority to manage a process end-to-end. For instance, when rolling out a new application to a business unit or conducting enterprise-wide server consolidations, the change manager must be able to control changes regardless of location or organizational structure.

Since process owners must be empowered by IT management to manage their specific processes regardless of organizational boundaries, the CIO and direct reports must provide both sponsorship and support.

Additional process owner responsibilities include the following:

- Providing leadership for a specific process and its sub-processes
- Understanding the effect the environment has on the process—and the effect the process has on the business
- Understanding the process end-to-end
- Maintaining good relationships with key managers and stakeholders in IT and business domains

Because process owners are also relationship managers who span business and technical arenas, they should be visionaries who are respected by their peers and skilled in navigating corporate politics.

### Barriers to process owner success

While the concept of a process owner is sound, implementing the role can be extremely difficult, and succeeding in it may be unachievable without CIO sponsorship. Functional managers may view process owners as a threat to their authority. These issues are serious but not insurmountable when the process owner role has strong CIO sponsorship and the organization closely monitors and addresses management of change (MOC) issues during the process reengineering effort.

Similarly, when IT organizations are primarily structured around functional or architectural component silos, process owners are set up to fail. Silo-based IT organizations are not designed to deliver end-to-end, cross-functional process management, primarily because functional managers are traditionally not focused on cooperating to deliver IT services. To overcome these potential barriers to success, IT organizations must be restructured around the services they provide to the business. Gartner describes this as “service-based organizational design,” which focuses on quality service creation, delivery and operations<sup>6</sup>.

## Implementing new roles in service provider organizations

Other process roles may be implemented to enable reengineered processes. Each role must be reviewed for its potential impact on the organization, as well as for risks, benefits, and consequences. Again, it is not possible to realize the benefits of reengineered processes without adapting the organizational structure to support them.

How new roles are implemented—and the scope of these roles—varies from company to company because of differences in corporate culture, organizational structure, and size. In larger companies with more complex organizational structures, process owners are typically assigned only one process, and even then, they may delegate management of continuous process improvement to third-party service-quality experts. In smaller companies, process owners may be responsible for more than one process and may also assume the task of leading continuous process improvement efforts.

As organizations identify new roles, responsibilities, job definitions, and lines of reporting during IT transformation, it is natural that those involved may resist change. In such cases, upper management must be actively engaged in the IT process transformation effort.

## The importance of technology to IT transformation

Making new or improved IT processes function smoothly often requires significant changes to existing technologies as well as incorporating new technologies into the existing IT environment. IT also needs process-enabling technologies—special tools to automate processes and simplify the inter-process integration and communications for managing IT services enterprise-wide.

In addition to process-enabling technologies, other tools may be required for an overall ITSM solution, such as tools that:

- Allow companies to view their Internet infrastructure, simulate, and monitor business activity
- Monitor the performance of Web sites and improve the customer experience
- Monitor and analyze telecom service impact and quality
- Provide timely and accurate service reporting, or create portal views that provide customers with visibility into their services

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6. Gartner Research Note, *Service-Based Organizational Design*, S. Dallas and C. Young, April 27, 2001.

## Selecting process automation tools

Proper tool selection is critical to successful IT transformation. However, IT organizations can no longer afford to spend months and thousands of dollars evaluating tools. They must quickly select and implement process-automating tools. The following criteria are helpful in choosing which tools to use:

### **Out-of-the-box integration with other process automation tools**

To simplify implementation, reduce cost, and improve processes, IT organizations must identify tools that require minimal customization. For example, consider the benefits of purchasing a change management system that is already integrated with configuration management, incident management—a help desk process—and service-level management systems. As change orders are processed, past, current, and future IT infrastructure data can be automatically retrieved from configuration management and updated. Past incident data can be gathered immediately, dramatically shortening the review and approval time for a specific change. The same data, when also made available to problem management, allows specialists to analyze trends and avoid future service outages. At the same time, change management and incident management personnel can access problem data to enhance support quality and decision-making. Help desk staff can quickly determine applied service levels and escalation parameters for callers, enhancing customer satisfaction.

At its best, process automation offers these capabilities in a single, integrated platform, using a single database that can be easily distributed across the enterprise. One example is the HP OpenView Service Desk solution, which is ITIL-based, designed specifically for ITSM, and fully integrated out of the box. When evaluating technologies, you will want to carefully compare the out-of-box capabilities of each option.

### **Easy integration into the larger IT environment**

It is also important to consider the ease with which process-enabling technologies can be integrated into the larger enterprise IT environment. Integration can range from inserting an entry on a menu bar to full-scale data exchange between applications. IT organizations must determine their needs and select a product that both enables the desired level of integration and meets cost criteria.

### **Tools that address real business needs**

A common pitfall when selecting a process automation tool is failing to properly evaluate and prioritize business needs before beginning the selection process. For example, IT organizations may need to implement a world-class help desk and also improve IT process integration. Many companies attempt to evaluate technology options with both needs in mind, comparing a mix of help desk point solutions with IT process integration solutions. Unfortunately, few, if any, integrated IT process tools have a help desk component that can compete one-on-one with a world-class help desk vendor point solution. On the other hand, choosing a less feature-rich help desk solution can be easily offset by the various advantages offered by an integrated IT Service Management solution—which will facilitate IT process transformation on many levels.

# The levels of enterprise ITSM

The previous sections have examined the importance of three key variables—people, process, and technology—as IT organizations evolve from technology providers into service providers. However, there are many issues to address before beginning the IT transformation. Should organizations transform everything at once? Are there stages of IT transformation that enable businesses to evolve safely and systematically? How do these stages affect people, process, and technology? Where should an organization start?

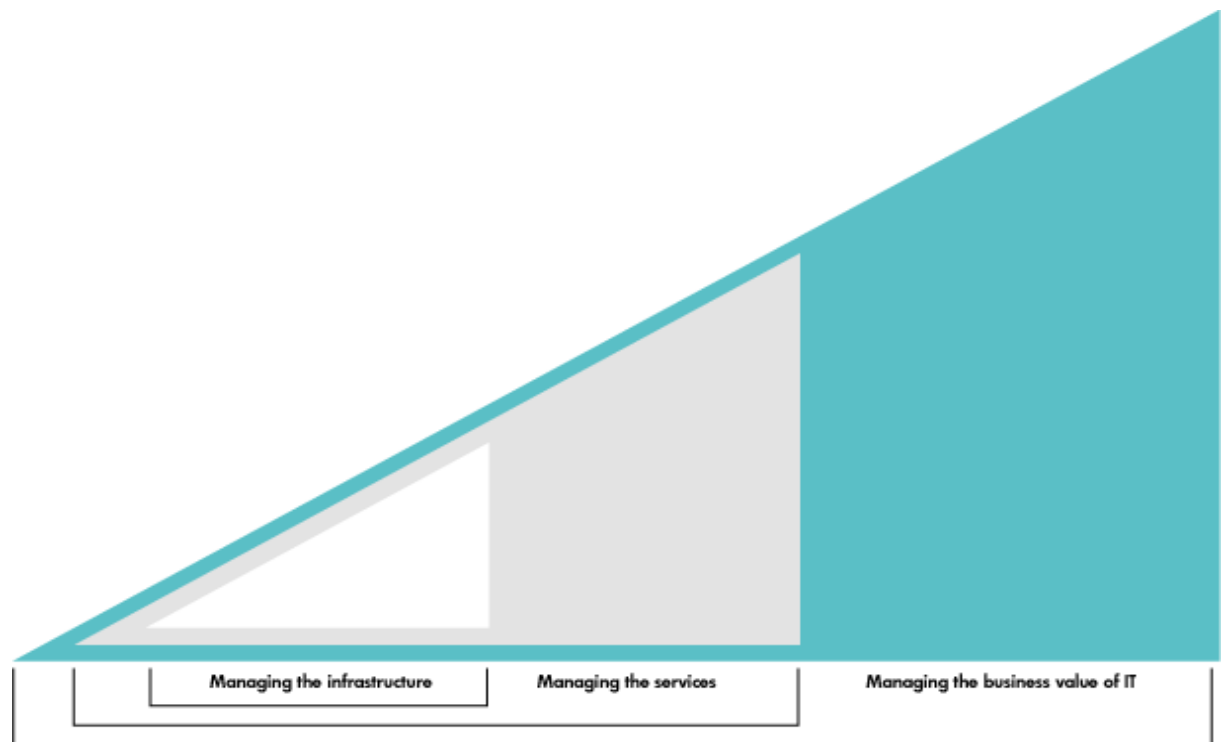
## Stages of IT evolution

Evolutionary models help IT organizations address these issues by providing a framework to assess current and desired states, identify and prioritize gaps, and develop a plan for change.

HP uses an essentials-based, three-stage approach that describes how enterprise IT management evolves and the benefits that ITSM can bring to the business (see Figure 3).

It is important to note that each evolutionary stage builds upon the others, beginning with managing the infrastructure. Following is a detailed description of each stage, as well as a discussion of how IT organizations create increased business value as they evolve.

**Figure 3.** The levels of enterprise IT management



## Stage one: Managing the infrastructure

Initially, IT organizations evolving from technology providers into service providers focus on improving the management of the enterprise infrastructure. Effective infrastructure management means maximizing return on computing assets and taking control of the infrastructure, the devices it contains, and the data it generates. Achieving this goal begins with an understanding of all computing elements. The desired outcome is a highly available enterprise IT infrastructure.

Tactically, the emphasis during this stage is on implementing technology, such as HP OpenView, which plays a critical role in helping an IT organization become a reliable infrastructure provider. This technology discovers, monitors, and manages all computing elements that critical business applications depend upon—regardless of where they are located—and displays linkages and topology. In global businesses, IT management technology usually supports “follow the sun” management, allowing a seamless shift in responsibility from one geographic center to the next.

Comprehensive monitoring and management of computing elements is critical to ITSM success. For example, IT management technology automatically detects status changes, such as a failure or subtle performance degradation that might lead to service failure. When problems arise, automated, corrective actions can repair routine problems—such as deleting temporary files on an overloaded disk drive—without interrupting operators. When staff does need to be involved, IT management technology makes their jobs easier with features such as one-click troubleshooting, predefined fixes, and integrated application toolboxes.

But IT management technology must go beyond monitoring to actively managing performance. Distributed agents, which are sophisticated programs that run on managed devices, constantly scan hundreds of performance indicators. This allows IT to achieve greater performance from existing computing assets—a high priority for most businesses today—and proactively address problems before users are impacted.

Effective infrastructure management also establishes preset policies to help make bandwidth available for business-critical applications, even during peak network traffic periods. Work may be prioritized, for example, so that less-important jobs are postponed and executed during non-peak periods. Infrastructure management also requires intelligent filtering and incoming message correlation to prevent operations staff from becoming overloaded with low-level notifications, thereby allowing them to focus on high-priority matters.

Ideally, during this stage, all infrastructure information can be accessed through a single, intuitive console that dramatically simplifies enterprise-wide infrastructure management. For larger enterprises with many operators, console views are usually specific to an operator’s area of responsibility or specialty.

## Stage two: Managing the services

An IT organization that evolves through stage two—managing the services—is actively identifying the services its customers need and focusing on planning and delivering those services to meet availability, performance, and security requirements. In addition, IT is managing service-level agreements (SLAs), both internally and externally, to meet agreed-upon quality and cost targets. These activities are central to running IT as a business.

When a service is disrupted or performance degrades, the IT organization not only knows the devices involved but, more importantly, understands the business implications of the problem and takes effective action. For example, if a winter storm disrupts data traffic through Chicago, operators immediately know the network links and devices that are affected. IT also knows the business impact and who is responsible for taking action. Though the source of the problem may be a server, network router, or storage device, IT understands that the failed device is one of many essential links in a chain that supports a business-critical service, such as order entry. Given this new, business-focused perspective, IT can base its actions on broader business priorities rather than pressure from end-users.

When implemented properly, an ITSM solution combining people, process, and technology will tightly associate every network device with the services it supports. As a result, IT organizations can proactively manage that device as part of strategic business services. For example, if operators have been alerted to an imminent response-time delay on an order entry application, they will move quickly to ensure that incoming orders are processed. With ITSM-based infrastructure management, operators can be automatically informed of the status of every computing element that affects order entry. Such rapid root cause analysis keeps the business moving—and protects the bottom line.

By measuring the results of these daily activities, an IT organization can manage IT services to meet business expectations for reliability, availability, and performance. It also positions the IT organization to deliver and support service offerings that provide real business value.

## Stage three: Managing the business value of IT

Ultimately, ITSM helps IT organizations evolve as true strategic business partners, enabling new business opportunities. As efforts produce measurable results, ITSM-based technologies track and report resource utilization and monitor user satisfaction. Out-of-the-box, customizable reports allow line-of-business managers to see that they are receiving positive returns on IT investments. And over time, IT develops a reputation for delivering as promised and supporting cost-reduction initiatives and business goals.

One of the most significant characteristics of this evolutionary stage is IT processes that are fully integrated with the complete lifecycle of business processes. Full integration, which is enabled by IT management technology and IT-to-business process design, reduces risk and cost while improving service quality and business agility. Simultaneously, automated service activation promotes high-quality service delivery, full service usage, and accurate billing.

Because IT organizations at this stage have full infrastructure data and can provide services at agreed-upon cost and quality targets, they can also sell and bill for services internally and externally, generating revenue. For example, a well-known truck rental company recently announced interest in extending its logistics expertise to external clients through an e-services model. Similarly, a large amusement park now offers mobile “never lost” units that can help families quickly reunite with lost children. In such instances, IT becomes a revenue-generating, strategic partner to the business.

ITSM solutions at this evolutionary stage also provide sophisticated reporting that allows IT to present an accurate picture of its accomplishments and build its reputation within the larger organization. Data reporting includes more than just device-specific metrics, throughput, and traffic patterns. It also includes measurements of user experiences that are aggregated and related to specific IT services. Achievements can be easily communicated to important IT constituents via clear, understandable Web-based reports. This detailed information also helps increase the effectiveness of IT staff by enabling IT managers, for example, to appropriately reallocate human and infrastructure resources.

By publishing data about service quality, reliability, cost savings, and business impact, IT can make a case for incremental technology investments and be viewed as a trusted advisor.

## The need for a comprehensive ITSM model

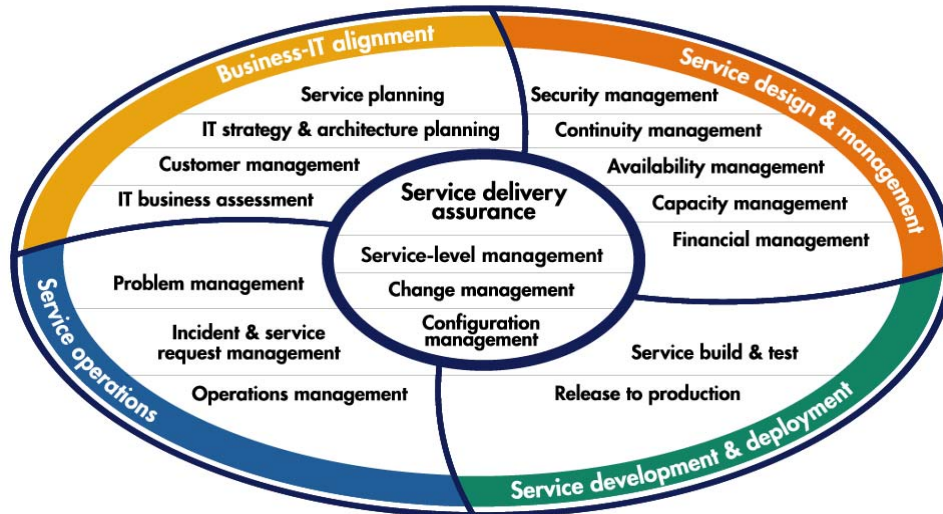
Applying ITIL guidelines can be a daunting task, because it demands far-reaching changes that affect people, process, and technology. CIOs and managers considering IT transformation initiatives have expressed the need for a clear model that helps them identify:

- IT processes that must change
- Service management organizational requirements
- Essential, process-enabling technologies
- Problems with cross-functional process integration and linkages

## Introducing the HP IT Service Management Reference Model

To support its customers, HP has invested considerable time and energy in developing an ITSM model that can be used as an enterprise reference for corporate IT organizations. Based on ITIL best practices and HP experience, the HP ITSM Reference Model is a high-level, fully integrated IT process relationship map (see Figure 4). This model has proven to be invaluable to companies around the world as they seek to understand their people, process, and technology problems and consider possible solutions.

**Figure 4.** The high-level HP ITSM Reference Model (version 3.0)



The HP ITSM Reference Model development team has incorporated relevant ITIL best practices into the model. In addition, the team has leveraged HP's extensive experience in developing and implementing IT service solutions within HP and for HP customers around the world. This includes more than nine years of experience developing and implementing the ITSM-based processes represented in the model. As a result, the model is backed by a broad range of tested methodologies for training and defining roles and responsibilities. Customers who engage HP Services are also provided detailed process guides; process flow diagrams; and responsible, accountable, consulted, informed (RACI) matrixes based on ITIL and the HP ITSM Reference Model. HP consultants typically start an engagement with 80 percent of what a company requires to transform its processes. This unique "directed design" approach to process implementation dramatically accelerates progress and reduces costs.

Additionally, while many ITIL terms and definitions are used throughout the model, HP has added others to reflect HP experience and perspective. The result is a common glossary of terms, definitions, and concepts that are used globally and designed to improve organizational communication.



## For more information

To provide IT organizations with a deeper understanding of ITSM processes and how the HP ITSM Reference Model can help them plan for their own IT transformation, HP has developed a white paper titled *The HP ITSM Reference Model: A model for successfully providing and managing IT services*. To view this paper, as well as to get more information, please visit our Web site at [www.hp.com/hps/itsm](http://www.hp.com/hps/itsm).

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