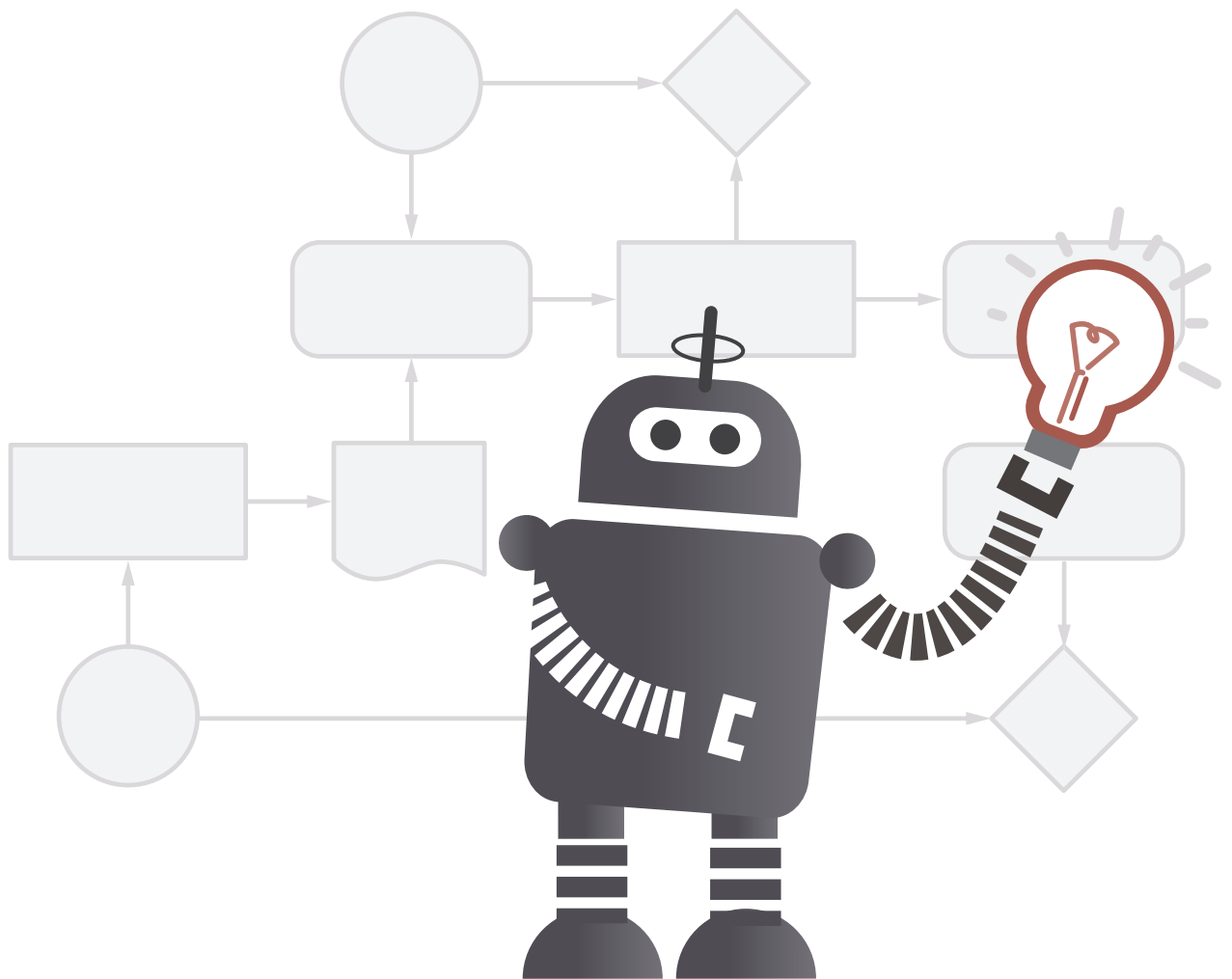


# Effective Change Management: Maximizing IT Reliability Through Service Automation

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IT & DATA MANAGEMENT RESEARCH,  
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# Effective Change Management: Maximizing IT Reliability Through Service Automation

## Executive Summary

Few processes are as impactful to business operations as the introduction of technology changes. This is particularly true of trending technologies supporting IT service optimization, cloud computing, and workforce mobility, which collectively represent a radical departure from traditional methods of enterprise computing. Organizations are challenged to meet these new requirements without radically expanding operational budgets and support resources. Integrating service automation into the change management processes that govern the adoption of trending technologies is the key to ensuring operational efficiency and improved service quality.

## The Challenges of Introducing Change

The Greek philosopher, Heraclitus, famously proclaimed, “Nothing endures but change.” One can only imagine what Heraclitus would have thought had he owned an iPhone that needed to be replaced every 24 months. Change in technology is systemic, and rarely are any requirements more impactful to business performance than the need to rapidly upgrade, reconfigure, redesign, expand, and provision essential business technology components and processes. Change is so pervasive in IT that day-to-day operations include processes for the regular patching, configuring, and upgrading of hardware platforms, operating systems, applications, and services. More dramatic changes must also be regularly supported to meet customer needs, achieve business and regulatory compliance, lower operational costs, and remain competitive in rapidly changing marketplaces.

The introduction of technology changes can also have a profound effect on the more tangible aspects of business production. For instance, the rollout of new services can sometime require scheduled downtime – or worse, result in *unexpected* downtime – of production systems, disrupting business performance. Other unforeseen consequences of a technology introduction may also be impactful, such as unanticipated incompatibilities and increased environment complexities. Additionally, implementation costs may exceed established budgets, and the new solution may diminish an organization’s ability to meet compliance objectives. Even if they accept the value of a new technology, both end users and administrators that lack proper training may also be confused as to how to properly utilize the new service. It is simply no longer possible to consistently achieve rapid and effective changes through manual efforts alone.

To be effective, the adoption of new technologies must perform optimally at the time of their introduction and must achieve productivity enhancements for both users and administrators without disrupting production services. The pragmatic introduction of change requires more than just the installation of a new application or service – a synergistic relationship between people, processes, and technologies must be established to ensure all impacted elements are brought up to speed simultaneously. This can only be accomplished with the successful introduction of service automation.

Automation is the key enabler for ensuring swift, reliable, and cost-effective change implementation. By automating critical change deployment processes, the knowledge of the most experienced IT experts is consistently leveraged every time a change is introduced. This allows deployments to be standardized on known-reliable states,

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virtually eliminating instances of human error during their execution. Further, automated change processes are essentially instantaneous, providing the enterprise with the agility to rapidly meet business requirements. The reliability and speed of automated change processes translates directly into reduced operational costs. Software and hardware infrastructure are employed with greater efficiency, and IT support staff are freed from performing repetitive and mundane tasks so they can focus on other business-focused improvements. Overall, automation empowers IT organizations to accomplish more while minimizing costs and administrative efforts, providing value directly to the business.

## Business Value of Automated Change Management

The adoption of service automation solutions is essential to implementing effective changes to IT services. Automation ensures consistency in deployments and standardizes the execution of administrative processes. Compliance enforcement works in conjunction with automation to continuously identify and report on any performance issues or potential issues that may impact user or business productivity. This reduces administrative efforts and support time by only alerting support staff to issues that require their attention and eliminating any unnecessary distractions. Should a problem be detected an automated management platform will also provide the intelligence necessary to rapidly identify the root cause of the issue, moving administration processes from reactive “firefighting” to proactive problem prevention. Additionally, a consolidated automated management solution enables holistic visibility into the breadth of the support stack, providing real-time reporting of business metrics that help executives and managers gauge the effectiveness of both IT and the workforce to ensure they are able to continuously meet business objectives. Introducing automation into change management increases service performance, ensures compliance achievement, and minimizes costs – all contributing to improved business success and higher customer satisfaction.

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## Best Practices for Automating Change Processes

Introducing changes involve such a radical departure from traditional management processes that business disruptions can seem unavoidable. However, with the application of best practices in conjunction with automation, business impacts can be minimized or negated entirely. Essential guidance is provided by the Information Technology Infrastructure Library® (ITIL®) set of recommended IT management process improvements, which advocates that organizations should not try to introduce all change processes simultaneously, but rather systematically adopt new services one at a time. To begin, an organization should prioritize which new services to introduce according to how well they will meet one or both of the following criteria:

- Changes that will address chronic business and IT pain points.
- Changes that will enable business opportunities that could not otherwise be pursued.

For each new process or resource being introduced, ITIL also recommends the development of a Service Implementation Plan (SIP), which is essentially a project plan consisting of four phases:

- **Initiation** – The introduction of a new technology or a service change begins with setting project goals and identifying the scope of the change process. The “why” and “what” of the project are defined at this stage along with obtaining management commitment for its implementation.

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- **Planning** – At this phase, details are assigned to the activities that will be performed and estimates are made on the time, effort, and financial costs involved. Based on this, a project plan is developed identifying specific roles and support steps for administrative staff, and any new tools essential for project completion are identified and adopted.
- **Execution** – During the period when the plan is being carried out, all change processes must be monitored to ensure that implementation results are proceeding as expected.
- **Closure** – Although an often-overlooked phase of IT projects (but nonetheless critical to success) is the formal acceptance of the change to provide validation and justification for its introduction. Additionally, processes for the on-going performance monitoring of the new service are put in place at this step to ensure it will continue to be reliable and meet business goals



Figure 2: ITIL steps in a SIP

This methodical, step-by-step process allows enterprises to migrate to more business focused IT implementations with minimal impact to business productivity, and users are able to more easily digest changes to their work habits when they are introduced as series of small steps. Applying automation to each step improves their efficiency, reduces implementation efforts, and maximizes the value of the deployment to the business. Identified below are key automation capabilities that should be incorporated into each of the SIP steps:

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- **Automating Initiation** – In order to identify the scope of a change and to establish the requirements for its implementation, end-to-end visibility into the existing hardware and software infrastructure must be enabled. Automation is used to discover and record assets, configurations, and performance data. By consolidating access to this information into a central location, informed decisions can be made on which new services will be necessary to meet expanding business requirements.
- **Automating Planning** – Automated infrastructure monitoring also provides assistance in this step by enabling visibility to available capacities and identifying optimal locations for implementing new services. Automated license management identifies available software resources to support the new service to minimizing costs. At this stage, the project plan workflow should also be integrated with automated service management solutions – such as help desk ticketing systems and change management platforms – to ensure all rolls are appropriately scheduled for all participants and specific tasks are coordinated and scheduled.
- **Automating Execution** – Nearly the entire implementation process for most changes can be automated. This includes provisioning operating systems, virtualization solutions, applications, patches, updates, and any other software resources essential to the deployment of the new service.

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Automation should also be employed for the simple and reliable migration of enterprise services to and from public and private cloud infrastructures. To support a mobile workforce, service automation should be accessible to end users via a self-service portal (such as an enterprise AppStore or Service Catalog) to empower them to provision software and perform other administrative tasks with little or no interaction with IT operations support staff.

- **Automating Closure** – Processes for the on-going monitoring of the IT infrastructure rely heavily on automation. Both the physical and virtual infrastructures should be continuously monitored to promptly alert administrative staff if service levels are not being met. This includes ensuring all software components are on the latest approved versions and patches and that capacity levels are always sufficient to meet service requirements. Additionally, automated solutions should be employed for the proactive enforcement of enterprise security and compliance requirements – particularly to secure any sensitive business data that may be accessed by and/or downloaded to mobile users.

## EMA Perspective

Change does not come easily in IT – particularly so if it is just deployed without due consideration for its impacts to the business. To embrace new technologies, both users and administrators must accept the value of the improvements. There must be an understanding that they will be more productive, that their tasks will be more efficient, and that they will achieve greater opportunities to excel in their job role. After all, a primary goal of technology advancement is to simplify work efforts, eliminating time wasted on mundane tasks and redirecting them toward more exciting, business-focused projects. When users spend less time navigating technology, they spend more time productively meeting business requirements. Similarly, administrators are better able to meet service level agreement (SLA) commitments when they are not performing unnecessarily repetitive tasks and systemic firefighting. IT service improvements allow all members of the workforce to do more in less time and with less effort while enhancing job security and business success.

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Service automation solutions simplify the adoption of new technologies and services for all types of users while improving overall business productivity and success. They are the key facilitator for ensuring services are reliable, secure, easy to use, cost-effective, and always available. Working in conjunction with transformative processes, unified management solutions place the power to achieve positive change directly in the hands of the business – where it belongs.

## About Ivanti

Ivanti is IT *evolved*. By integrating and automating critical IT tasks, Ivanti helps IT organizations secure the digital workplace. For more than three decades, Ivanti has helped IT professionals address security threats, manage devices and optimize their user experience. From traditional PCs, to mobile devices, virtual machines and the data center, Ivanti helps discover and manage your IT assets wherever they are located, improving IT service delivery and reducing risk. Ivanti also ensures that supply chain and warehouse teams are effectively leveraging the most up-to-date technology to improve productivity throughout their operation. Ivanti is headquartered in Salt Lake City, Utah, and has offices all over the world. For more information, visit [www.ivanti.com](http://www.ivanti.com).

## About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals, and IT vendors at [www.enterprisemanagement.com](http://www.enterprisemanagement.com) or [blogs.enterprisemanagement.com](http://blogs.enterprisemanagement.com). You can also follow EMA on [Twitter](#), [Facebook](#), or [LinkedIn](#).

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