Achieving IT Operational Reliability and Cost Effectiveness with ITIL and other Best Practices

An ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) White Paper
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EMA™ IT MANAGEMENT RESEARCH, INDUSTRY ANALYSIS AND CONSULTING

Table of Contents

Executive Summary

IT is the cornerstone of nearly every modern day enterprise, including commercial businesses, educational institutions, government organizations, and managed service providers. Regardless of how the technology is ultimately utilized, IT departments must struggle with very similar management challenges – providing reliable IT services that meet organizational expectations while containing operational costs. They often need to ensure reliable legacy IT services while rolling out new services, and they need to enable agility for their customers, to improve their productivity and to help the organization grow.

Fortunately adoption of best practice frameworks for IT management helps lead businesses of all types to success. While there are many best practice frameworks and approaches, the Information Technology Infrastructure Library (ITIL) is the most popular and is the ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) recommended framework for adoption.

ITIL focuses on the perspective of the IT user – that is, to ensure the technology is being utilized to support the business, rather than the other way around. To that end, ITIL suggests that IT departments should interact with the business at the IT service level rather than at the technology level. For example, an IT department may provide a whole e-mail service to users, rather than separate IT components like an e-mail server, software, and a network. Such services should be delivered and operated based on business priority.

Like other widely adopted best practices, ITIL advocates the use of automated tools to achieve process improvements across a number of disciplines, including service desk, incident management, problem management, configuration management, change management and release management. With the right automated solution in place, IT departments are equipped to implement robust policies for more effective IT management while reducing operational costs and increasing overall IT reliability.

Introduction

Critical to the success of any organization – whether it is a commercial enterprise, a government organization, an educational institution, or a managed service provider (MSP) – is to ensure that their operational costs do not increase beyond established revenue. Since revenue is most often derived from income sources that are outside the control of IT departments, such as fixed budgets, funding, and grants, IT managers are challenged to meet organizational IT requirements with limited hardware, software and staffing resources. Although most IT departments are typically not measured directly on their fiscal performance, they need to continually demonstrate their value to the enterprise despite resource limitations. Often these goals need to be achieved while meeting policies of overall cost reductions and increased demands for IT services to meet organizational growth.

Although innovative technologies designed to help IT organization meet service requirements are continuing to be introduced and improved, the core challenges themselves have existed since the earliest introduction of technology into business environments. Fortunately, by learning from decades of trial and error, organizations and industries have been able to establish highly efficient practices and process for ensuring reliable, secure and highly available IT services. Today, IT organizations supporting any demographic can leverage the knowledge and experience of the businesses that have come before by adopting these best practices and utilizing automation tools that are designed to support them simply and effectively.

The Role of Best Practices in Managing IT Services

A wide array of beneficial IT management processes can be established or improved through use of best practices. In the end, IT managers can use those improvements to improve both cost effectiveness and reliability.

Cost Effectiveness

Best practices rely heavily on standardization. When hardware and software configurations gain consistency and IT processes become documented and repeatable, automation can be used to change the economics of IT management. Rather than applying additional IT resources for each new infrastructure component or IT service, tools can be used to dramatically increase the efficiency of IT personnel.

EMA has completed research that strongly demonstrates the efficiency, cost and profit improvement that can be achieved from automation. Automation reduces both time spent managing patches and application deployment time by 50% on average, while operating system deployment time is reduced by 68% on average. An even greater time reduction, an average of 83%, was seen for time spent managing virus and spyware systems.

Clearly, less time deploying, maintaining and correcting system issues translates to lower operational costs. When existing IT staff handles higher volumes of work or fewer staff handles the same workload, costs per activity are decreased. Additionally, documented procedures and processes result in lower direct training costs as well as faster time to productivity for new IT staff.

Depending on the type of business, time savings can also result in greater revenue and/or greater value to the business. Faster service deployment and improved service levels lead to improved customer satisfaction levels. For revenue generating services provided by corporate IT departments, this means repeat business and additional sales. For internally facing IT services provided by educational and government institutions this means enabling greater agility for the organization and greater credibility for IT. For all businesses and IT roles, this frees up more time for developing new products or services, to drive greater IT efficiencies, and increase overall operational cost effectiveness.

Reliability

Reliability, like cost effectiveness, is a key performance indicator. As an example, having an improper configuration or patch level on a critical application can result in performance degradation or downtime for users, leading to loss of revenue and loss of credibility or funding for IT departments. As a result, IT will see an increase in problem reports and escalations. IT staff must then be pulled from current assignments to troubleshoot the problems. Without some level of standardization of configurations it becomes more difficult to isolate and repair the core systemic problem.

Additionally, that lack of standardization can lead to an ad hoc repair, further problems with the application and more time and resources spent "resolving" the problem again. Documented best-practice-based standardization and automation enables repeatability, which translates into fewer errors.

Rather than reacting to problems and escalations, IT should proactively define the appropriate processes to ensure that services are deployed properly from the start and changes are reviewed and approved before applying them during service operation. With best practices in place, the success rate for initial deployments and ongoing changes can increase dramatically. This way customers and end

users experience the service level they expect and IT reduces the time and resources spent "firefighting" and resolving environment failures.

Still, problems can and will continue to arise with IT services. The IT infrastructure is not (and really should not be) completely locked down, so unapproved changes often find their way into the network, applications and servers. While following best practices helps reduce the number of those unplanned and unapproved changes, best practices can also mitigate the risks of those changes by shortening mean time to repair and ensuring fast, approved, high-quality remediation.

Best Practices and Your Business

Best practices are valuable to your business because of how they are developed – or more colorfully, how they "evolve." Survival of the best, or fittest, practices is ensured by IT organizations selectively choosing those processes that provide the greatest known benefit, whether measured by profit, reliability or other measures.

Many organizations around the world, from different industries and based on different business models, are constantly selecting the best practices currently available for IT management, and then attempting to refine, tune or even generalize them. Contributors to this large set of un-coordinated experiments include large enterprises and government bodies as well as the accumulated knowledge from advisors, consultants, professors and professionals. The value of this approach comes through learning from the collective mistakes of others and by keeping only the improvements.

Given the input to best practices by businesses of all types and sizes, they are not just useful for large enterprises or businesses with large IT shops. Best practices make managing IT services easier for IT departments of any size.

Organizations do not need to adopt a very large number of best practices at once to get the benefits. In fact, best practices should ideally be implemented in a phased and/or selective approach. This not only supports prioritization based upon highest business need, it also enables phasing of the IT budget. The flexibility in approaching best practices, and in particular choosing the appropriate ones and tuning them for your business, enables IT to work smarter, not harder to deliver a superior product or service. Best practices allow IT organizations to help their customers and their businesses develop competitive differentiators and productivity enhancements.

Best Practice Recommendations

There are a number of popular approaches to best practices today, including CobiT, Six Sigma, and ITIL. CobiT, or Control Objectives for Information and Related Technologies, is a best practice IT control framework for implementing and demonstrating effective IT governance. Six Sigma is a more generalized quality management framework based on principles such as continuous improvement that can be applied to processes such as manufacturing or IT management. ITIL, or Information Technology Infrastructure Library, is a best practice IT management framework emphasizing management from the perspectives of the business and IT service consumers.

While each of these (and other) best practice approaches has strengths, EMA recommends ITIL in most cases. The success of ITIL is also reflected in actual usage. EMA has found that while around

26% of companies were using COBIT or Six Sigma, around 61% were using ITIL. Popularity aside, ITIL has advantages such as its widely understandable and agreed terminology, its comprehensive coverage of IT service delivery and support, its maturity, and its proven effectiveness.

The ITIL concept began to form in the 1980s within the Central Computer and Telecommunications Agency (CCTA) of the UK government. Adoption initially spread across Europe and grew worldwide in both government and private organizations throughout the 1990s. The CCTA eventually became part of the Office of Government Commerce (OGC) and in 2001 the OGC released ITIL version 2, which has become the most popular best practice approach for IT service management worldwide. More recently, in May 2007, OGC published ITIL version 3, which adopted a more lifecycle-oriented approach to service management and further emphasis on integration between business and IT.

ITIL version 2 includes a commonly used set of books covering IT Service Management. This *set* in ITIL terminology consists of two publications: Service Support and Service Delivery. Service Support addresses how to manage and maintain the IT services that support the business. The following management processes are addressed:

- Help Desk/Service Desk
- Incident Management
- Problem Management
- Configuration Management
- Change Management
- Release Management

Service Delivery addresses how to ensure the IT services meet the needs of the customer. It emphasizes the business as the customer and therefore the business needs for these management processes:

- Service Level Management
- Capacity Management
- IT Service Continuity Management
- Availability Management
- Financial Management for IT Services

One of ITIL's foundational principles is that best practices can and should be used for business benefit. ITIL V3 further emphasizes and supports this idea. Rather than *aligning* business and IT, V3 views service management and business strategy as an *integrated* entity. V3 does not conflict with V2 so existing and ongoing investments based on V2 principles will not lose value as V3 gains widespread use. ITIL V3 also now organizes by lifecycle rather than IT management domain. The V3 library has five books: Service Strategy, Service Design, Service Transition, Service Operation and Continual Service Improvement.

ITIL process implementation is best approached from the perspective of a continuous set of intermediate goals rather than a final objective. The initial goals *may* be chosen based on the expectation of delivering rapid success and demonstrating value. In any case, and in keeping with ITIL philosophy, they should be chosen to support the needs of the business. Those needs may be derived from acute

or chronic pain points or, more optimistically, from opportunities the business may otherwise not be able to pursue.

For any ITIL project, it should be kept in mind that ITIL is descriptive and not prescriptive. The ITIL processes need to be adopted and tuned to individual business needs, and that requires investment across people, processes, and technology. An IT department cannot simply "buy ITIL." ITIL success requires organizational, political and cultural change, as well as commitment, to shape processes and people. It also requires tools and enabling technologies that support and accelerate ITIL driven business success.

Tools for Success: Kaseya IT Automation Framework

As an example of how automated tools can align directly with ITIL and other best practices, the Kaseya IT Automation Framework is a solution purpose-built and specifically designed to enable and support the processes in ITIL V2's Service Support publication and V3's Service Transition and Service Operation publications. The solution can be purchased as a single product in either Enterprise or MSP Editions and offers an integrated set of features including patch management, software deployment, remote desktop management, server monitoring and alerting, computer inventory, service desk, audit, backup, and reporting.

A requirement for building repeatable best practice processes is to understand what IT assets are available, along with their configurations. The ITIL Configuration Management process, part of the ITIL V3 Service Transition lifecycle, addresses this need. Kaseya's discovery and inventory capabilities provide visibility into physical devices such as servers, desktops, laptops and printers. Kaseya also discovers device-specific configuration information including CPU, memory and disk volumes, as well as software configuration information such as operating system version, patch level and installed software. By capturing a baseline configuration and additional snapshots over time it becomes possible to determine what changes are happening within the IT infrastructure. Baseline configuration as well as change history is also essential for compliance auditing and reporting.

With an understanding of available assets and their configurations in hand, additions or changes to the infrastructure can be considered. The ITIL Release Management process, also part of the V3 Service Transition lifecycle, addresses these needs. The Kaseya software deployment capability supports this process by packaging and deploying applications as well as by releasing system configuration changes via its script automation. Kaseya also provides ITIL Release Management capability through its software deployment and patch management capabilities. While automated patch scans can be scheduled periodically to keep configuration information up to date, the release management aspect, patch *deployment*, will keep patch levels up to date. Maintaining the right patch level and reducing the time between patch availability and patch deployment will improve system reliability and security.

Events within the IT infrastructure may occur that interfere with the normal operation, availability or quality of an IT service. The Incident Management process from ITIL provides guidance here. One aspect of incident management is incident identification. According to EMA research, end users are first to report 44% of application problems. If IT staff can detect (and preferably resolve) more incidents prior to users reporting them, and prior to a business impact, users will be affected less, and the business will be better served. To quickly identify incidents Kaseya provides monitoring and alerting for down systems, configuration changes and security threats.

ITIL has identified the need for a Service Desk function that serves as a single point of contact for IT users into the IT department. Since Service Desk has been described by ITIL as a function, however, it owns and drives processes such as the service request process. While IT users may submit incident reports to the Service Desk, it is possible for management tools to submit them as well. As described above, incidents may be identified by monitoring tools prior to users detecting an issue, so an integrated approach between management tools can enable a *closed loop* management process which automates change steps and reduces staffing needs. Kaseya supports this approach through automated incident generation, combining proactive monitoring with automated ticket generation, to enable faster response to and resolution of incidents. In fact, Kaseya's Service Desk module provides advanced workflow capabilities with integrated ITIL-based automated processes and flow of incidents, problems, and changes.

Kaseya's IT Automation Framework includes a number of other capabilities that support best practice IT management. The remote support capability lets administrators access PCs and servers across the network, enabling faster problem resolution and improved administrator to system ratios. The Policy Enforcement capability is used to restrict access for files, applications and network access. Kaseya also offers add-on modules for backup and disaster recovery as well as virus and spyware detection.

Optional services are available from Kaseya and may be used to enhance investments made in the Kaseya IT Automation Framework. The Kaseya *em*Power Program for MSPs provides product and business education, quick start implementation, Webinars addressing business best practices, customizable collateral, example service level agreements (SLAs), and industry knowledge resources. The Kaseya *em*Power program also offers a menu of out-tasked services that Kaseya can provide through its own resources including datacenter, IT infrastructure and staffing. These out-tasked services may include IT monitoring, desktop/server management, service desk capabilities and advisory or project oriented consulting.

Case Study: Process Improvement with ITIL

To illustrate the value that can be achieved from best practices in conjunction with an ITIL-focused management solution, EMA interviewed Steve Creager, Technology Manager for the University of Kentucky's Research Information Service Group. Creager's department of 10 IT management and support personnel maintain 15 in-house database application servers and more than 300 clients utilized by a staff of research administrators responsible for governing millions of dollars in academic research grants. Initially, the organization relied on 5 different independent point products for help desk ticket generation, remote access, systems monitoring and patching. Utilizing multiple interfaces required very inefficient "swivel chair" IT management practices, and even with the disparate tools in place, they were not able to perform basic ITIL-based service management. "6 years ago, the only resources we had to actually track service calls was a pencil and a piece of paper," Creager recalls. For instance, when support staff responded to help desk calls, users would request additional "while-you're-at-it" tasks that could not be effectively recorded and traced resulting in a good deal of uncredited extra effort and an inability to perform true root cause analysis on systemic problems.

Recognizing the need for a comprehensive and consolidated service management platform, Creager's team selected and deployed the Kaseya IT Automation Framework. In comparison to the earlier point products, Creager recognized, "Kaseya could do all the things those programs could do … and more."

Although best practices were not specifically considered at the time of the purchase, the organization was able to take advantage of ITIL-specific practices around service and problem management that were designed into the Kaseya solution. Significant process improvements were particularly achieved with the introduction of advanced capabilities in scripting, patch management and remote access: scripted agent procedures allow them to simply perform common tasks such as automating software updates and adding users to administrator and power users groups; Kaseya's patch management process was found to be simpler to manage and more comprehensive than the Microsoft product they were using previously; and whereas previously roughly 65% of all support issues required physical access to the supported end point, the Kaseya Remote Control capabilities have allowed them to perform roughly 90% of administration activities without leaving their workstation. In fact, in regards to the latter, part of the organization's support responsibilities involves managing IT resources for the campus hospital – a location with a firewall (necessary for HIPPA compliance) that was impervious to their earlier remote access point solution and required frequent 15-minute "sneaker net" walks to gain physical access to the environment for maintenance and servicing. Kaseya, however, has provided them with seamless remote access to the hospital so they now only need to travel to the location in the event of a hardware failure.

The results of moving to an ITIL-based support platform have been dramatic. Users are clearly more satisfied with the quality of support, the reliability of the IT infrastructure has improved, and operational costs have decreased. In fact, the more effective management techniques have allowed the organization to be more productive, shifting the workload to effectively reduce the support staff by one half of a headcount, and by replacing the 5 ineffective point products with a single, centralized solution, annual license costs have dropped 41%.

Recently, the university has instituted policies for transitioning towards more ITIL focused management practices. With the Kaseya solution already in place, however, Creager's team has had a leg up on the ITIL implementation, principally with the assistance of the Service Desk Module that has helped them to meet SLAs and achieve standardization of administration procedures. With the right automation solution in place, any organization can achieve best practice goals simply while avoiding disruption in their production environments.

EMA Perspective

Kaseya's IT Automation Framework can help many types of IT management organizations that are focused on Windows-based platforms improve their management of services and, by extension, their overall operational productivity. Organizations will get the most out of the Kaseya solution if they also commit to a best practices approach to IT management, especially ITIL.

Kaseya's approach as a "one stop shop" for IT management tools is compelling. From a best practices perspective, Kaseya offers value across a very wide set of ITIL processes. The core capabilities of discovery, inventory, service desk, monitoring, application deployment and patch management are all included. This means rapid time to operations, and value, for Kaseya deployments. A new IT support center could become operational with the most common IT management capabilities very quickly.

Kaseya's combined approach also means integrations across these capabilities are available out of the box. Rather than getting multiple vendors to work together on integrations or an enhancement, only Kaseya would need to be involved. Small to medium organizations could simplify their purchasing and vendor management by consolidating on Kaseya solution.

The foundation elements for systems management are also part of the offering. While users won't find a complete systems management capability with out-of-the-box capabilities for all server systems administration tasks (which was never Kaseya's intention), they will find instead the framework to support this. The Kaseya Agent Procedure framework allows users to leverage existing systems management scripts and tools, and the remote support capability will let service desk or other administrators work live with end users to troubleshoot problems – a more effective systems management approach for desktops then "sneaker net" administration.

Kaseya has a clear understanding and focus on making its own customers successful with their businesses. The Kaseya IT Automation Framework is tuned to meet the needs of enterprises of all types and sizes. Kaseya also has identified valuable services to assist new or growing organizations to speed their time to revenue generation. Quick start implementation, product training, customizable collateral and other components of the Kaseya *em*Power program are designed specifically with the quick success of Kaseya's customers in mind. Similarly, outsourced services from the Kaseya *em*Power Program, such as service desk, allow IT organizations to offer 24x7x365 coverage across all geographies without the need to invest additional capital and staffing. Without outsourced services many IT organizations are simply too small to provide the capabilities their customers demand.

Kaseya IT Automation Framework is valuable for enterprises that wish to streamline their IT operations while containing operational costs and enables them to respond to growing demands from the business and increasing infrastructure complexity within fixed or decreasing budgets.

About Kaseya

Kaseya is a leading global provider of IT Systems Management software. Kaseya's solutions empower virtually everyone — from individual consumers to large corporations and IT service providers — to proactively monitor, manage and control IT assets remotely, easily and efficiently from one integrated Web-based platform. Kaseya's technology has been deployed on over 4 million machines in over 25 countries around the world.

For more information please visit www.kaseya.com

About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that specializes in going "beyond the surface" to provide deep insight across the full spectrum of IT 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 its clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise IT professionals and IT vendors at www.enterprisemanagement.com or follow EMA on Twitter.

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