

# Taking Control of Change: Optimizing Your Environment for More Effective IT Service Delivery

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An ENTERPRISE MANAGEMENT ASSOCIATES® (EMATM) White Paper  
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## Executive Introduction

The importance of IT services to businesses is on the rise, as many companies and organizations are discovering competitive advantage through automating manual processes and extending the reach of business services through IT applications. The differences between IT services and business services are in fact becoming increasingly blurred, while the more traditional role of IT in supporting business productivity has also grown in importance.

Perhaps the single most pervasive challenge in capitalizing on this opportunity is managing change. Change can arise from technology advances, cost-cutting and consolidation, mergers and acquisitions, and a wide variety of shifting business concerns as more creative executives seek out new services, new audiences, new partners, and even new, more efficient business models by leveraging IT services more expansively. The stress of supporting these advances for IT organizations facing constrained resources is obvious, and the cliché of “doing more with less” has never been more resonant than in the current economic climate.

This white paper presents some perspectives on the most critical factors driving IT organizations to find more effective ways of managing change. It will present some recommendations for planning successful change management initiatives, including key technologies such as discovery and configuration management. Finally, this report will introduce SunView’s ChangeGear solution, which provides a versatile and functionally rich offering for addressing change management concerns with comparatively minimal administrative overhead. Such a pragmatic approach is, Enterprise Management Associates (EMA) believes, a refreshing alternative compared to many solutions that require extensive coded customization and lengthy, costly deployments.

## Environmental Conditions Requiring a More Efficient Approach to Managing Change

As IT becomes a more integrated part of businesses and organizations across virtually all verticals, it is also more vulnerable to shifting market and service demands. To some IT managers and executives, this may seem like a lose-lose scenario. After all, why stick your neck out in supporting business or organizational outreach when your budget is frozen or being cut, and when you will only get blamed for failures if your services don’t meet expectations?

But in fact, such thinking is bound to be counterproductive sooner or later given the realities of a globally competitive marketplace, and the need to *show* value versus simply retreat into IT’s traditional role as a cost-center shielded by its own, opaque complexity. This is true for IT organizations as a whole, just as it’s also true for the groups within IT who may seek to hold on to a siloed approach to managing specific domains based more on tradition and habit than the growing requirements for delivering cohesive services.

The need for accountability, transparency and visibility in IT operations is especially stringent in the requirements for managing change. A quick survey of some of the more significant challenges includes:

- *Mergers and acquisitions* – Consolidating data centers, for instance, involves far more than effective optimization of HW and SW infrastructure and operational floor space. It will also demand assimilation of new individuals and organizations into often newly defined processes, best practices and procedures for working together.

- *Increasing demand for new services* – While the qualitative shift of IT services towards more business-contributive value has already been discussed, the quantitative push to provide more services faster, more fluidly, and more resiliently is also forcing IT organizations to consider new, more effective ways of managing and facilitating change. This is one of the drivers for the move to virtualization, but it is also a driver for more effective processes supported and enforced through automation.
- *Accelerating frequency of infrastructure changes* – In parallel with applications, and in many respects in response to them, infrastructure changes across systems and networks are orders of magnitude more frequent than they were just five years ago. And of course, the move towards virtualization is taking this to a new level altogether.
- *Virtualization* – While most may think of virtualization in terms of systems environments, it is in actuality a multi-domain phenomenon – including networks, storage, applications, and desktops. EMA data shows that virtualization can provide strong capex and opex benefits, as well as facilitate more effective application provisioning. But virtualization requires more, not less, awareness of infrastructure and application interdependencies, and superior tools for automating change management and change control.
- *Cloud Computing* – Similarly Cloud computing is taking off primarily in the “private Cloud,” or virtualized data center, with public and community Cloud services trailing significantly and many companies targeting hybrid “private” plus some public Cloud services. EMA data shows that those vendors with strong capabilities for managing change are categorically more successful in assimilating Cloud services than those who are less mature in change management.
- *Compliance, security, risk management* – changing infrastructures and application environments can often leave IT organizations and the businesses they support open to increased security risks. Having an effective and accountable set of processes – ideally enforced at least in part through automation – can deliver striking advantages. For instance 94% of high performers in security and risk management were committed to a well-defined approach to change management and control. (*IT Governance, Risk and Compliance Management in the Real World*, EMA, May 2008). At the same time, audits can drive extensive operational overhead if effective levels of automation are not in place – or else result in millions of dollars in consultant fees just to save on penalties and minimize embarrassment. With the array of industry-driven regulations, such as Gramm-Leach-Bliley (GLBA) for banking and the North American Electric Reliability Corporation (NERC) for utilities, as well as government-driven regulations (U.S. Patriot Act) and regulations that affect multiple industries such as PCI-DSS, the challenges of keeping up with IT audits has become a minor industry in itself.

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## Managing Services and Assets Together – The Move to Optimize Performance and Minimize Costs

As IT organizations try to get their arms around cost-cutting, change management also takes center stage. The IT Infrastructure Library (ITIL) v3 places a renewed focus on asset lifecycle management in conjunction with service lifecycle management. These insights conform to the EMA vision of “next generation asset management” in which assets are understood as dynamic contributors to services rather than simply static investments to be amortized or supported by routine maintenance and license control. The values of such an approach include increased visibility, relevance and accountability of how assets impact IT’s bottom line. But such an approach also requires a system of change control to optimize assets as performing entities, including the need for ongoing configuration and service impact insights.

EMA research (see Figure 1) shows that IT organizations are already beginning to move in this direction – as their approach to managing services and assets are increasingly interlinked.

The EMA vision of “next generation asset management” in which assets are understood as dynamic contributors to services rather than simply static investments—requires an effective system for change control.

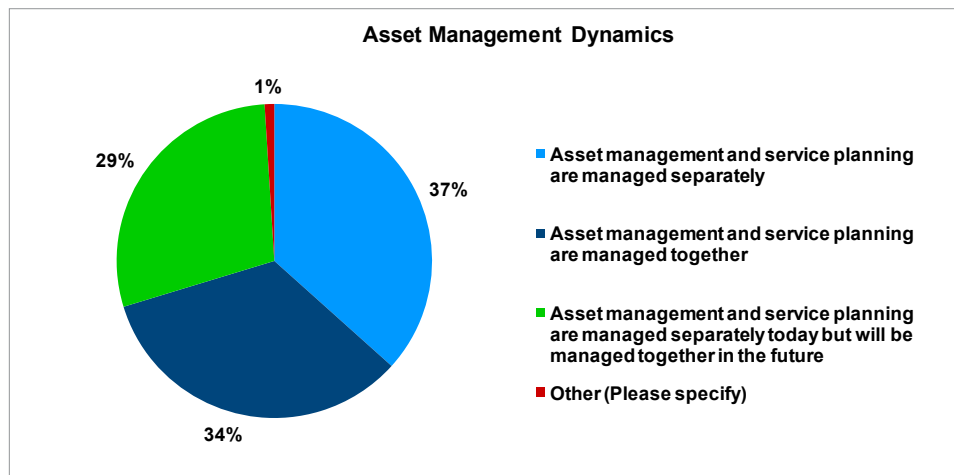


Figure 1: Sixty-three percent of respondents are either integrating their service and asset management strategies, or plan to in the near term – and EMA believes the number is even higher in 2010 (“The Changing Face of Asset Management,” EMA, June, 2008)

EMA has documented advantages to this next-generation approach in a number of areas, as highlighted below:

- Insight/ visibility
- Where are my assets and who’s using them?
- Are my assets deployed to meet the highest priority need?
- How can I understand value versus cost?
- Control

- Align budget and spending with business need
- Respond more dynamically to changing service-related conditions - e.g. virtualization, security vulnerabilities, diagnostics, incident/ problem management
- More automated and efficient audits for compliance
- Automation that hardens processes to minimize risk and create new efficiencies
- Business Impact and Optimization
- IT users become accountable for IT service usage
- Asset investments are based on business need so utilization is improved

## How to Get Started with a Successful IT Initiative for Managing Change

As so many IT managers and professionals know, many strategic initiatives fail to meet expectations – either by taking far longer than expected, or by not delivering anticipated value, or both. A lot of the issues, however, are not pure play technology problems so much as issues involving organizational readiness, communication, and getting buy-in across stakeholders. While these issues are especially worrisome in very large organizations, they can also be sticklers in mid-tier shops. The good news, though, is that with a little focus and leadership, a lot of these challenges can be rectified more quickly and easily in mid-tier organizations than in large enterprises. And moreover, the dialog involved typically pays huge dividends in itself.

Figure 2 shows some of the critical questions to ask when trying to establish a baseline for a change management initiative that touches multiple groups within your IT organization.

- Interviews with IT staff
  - Processes in place
    - What are your informal and formal (ITIL, etc.) processes?
    - How well do the current processes work in real-life?
- Interviews with Customers and Users
  - What do your customers expect from IT?
  - What has their experience been?
  - How disruptive have changes been in the past?
- Document current organizational structure
  - How well do the different technology groups really work together?
  - Who “owns” the initiative on a day-to-day basis?
  - Who is the executive sponsor?
  - Who are the stakeholders?

Figure 2: Some questions to ask for establishing a baseline plan for going forward with an integrated change management strategy

## The Role of Best Practices

ITIL, COBIT and Six Sigma and the Microsoft Operations Framework (MOF) can all play a role in supporting best practices for change. A lot of IT attention in the last few years has been focused on the ITIL in particular, and its best practices in providing a context for establishing more effective processes for IT to work in a more unified and efficient fashion.

Figure 3 highlights ITIL v3's five libraries for service lifecycle management – which in large part hinges on effective change management and control systems. *Service Strategy* combines business and IT insights into which new services are needed, which should be retired, and which can be improved. *Service Design* brings operations and development together in the creation of new services, or modification of existing services. *Service Transition* targets the provisioning of new services or service enhancements across the infrastructure. *Service Operation* provides guidance on optimizing the day-to-day performance of IT services in terms of performance and cost. And *Continual Service Improvement* addresses the need for governance in improving service quality and cost efficiency.



Figure 3: ITIL v3's five libraries enable a more approach to service lifecycle management that depends on effective change management and control systems

While ITIL is a terrific departure point, it won't supplant the type of self assessment characterized in Figure 2. Moreover, ITIL, as with many best practices, is best leveraged as a resource rather than enforced as dogma. For instance, no IT organization should view ITIL as an end in itself, but rather as a *means* to an end that should be both relevant and pragmatically achievable. ITIL is also best addressed in context with organization, culture and technology adoptions that can help to open up more efficient and consistent ways of evolving towards more mature processes. Those technologies that directly or indirectly enable more advanced levels of automation can be especially valuable in minimizing operational overhead while also enforcing desired policies.

## Some Key Automation Technologies

Automation can bring a lot of benefits to change management, as well as to incident and problem management, asset management audits, security, governance, application provisioning, and assimilating virtualized infrastructures – just to name a few examples. In fact, strategic initiatives can easily stall if automation is not sought early on and too much dependence is placed on manual processes. A short list of values is highlighted in Figure 4.

- Harden processes for efficiency and governance
- Allow more collaborative and consistent ways of working
- Enforce policies to ensure that changes are made consistently
- Minimize risk from unauthorized actions
- Create new levels of operational efficiency which can be as dramatic as 1000% improvements and more
- Be far more responsive to problems when they occur, reducing MTTR 90% or better in some environments
- Support superior levels of governance across IT
- Enable far more effective compliance to regulatory requirements

Figure 4: A short list of benefits achievable through various forms of automation

At a high level, EMA views automation as connecting three prime areas: *people-to-people* (e.g., workflow), *people-to-machine* (e.g., configuration and release management software), and *machine-to-machine* (e.g., workload automation). While in the past, and to a large degree in the present, these three areas have remained quite separate with separate tools, they are gradually coming together. Pragmatic capabilities for establishing policies across these three technology groups are just beginning to emerge and are helping to reshape the automation marketplace.

Two key areas for automation in managing change are *Discovery* and *Configuration Management*. Associated with both are CMDB or CMS deployments, which, combined with workflow, can help provide context and consistency to automation so that what can be silos of automation don't collide in counterproductive *train wrecks*. An effective change management system needs to provide the visibility, policy-creation and automation tools to create a versatile and scalable approach to automation. Reconciling discovery from multiple sources into a cohesive view of "truth" is also fundamental.

When this is done some of the benefits can be striking. For instance, EMA has seen environments where change-related automation has reduced Mean-Time-to-Repair by 300%, while reducing security outages caused by changes made to the infrastructure by 900%! In other environments, EMA has seen the time required to assess the impact of changes to infrastructure and service performance reduced from more than four hours to less than five minutes.

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## SunView's ChangeGear 4.5: A Cohesive Approach to Enabling Change Management, Automation and Control

SunView targets mid-tier businesses and enterprises with a functionally rich but pragmatic change management control system in ChangeGear 4.5. There are three flavors – the ChangeGear Plus Edition for businesses needing change management only, ChangeGear Enterprise Edition for larger businesses seeking more process sophistication and configuration management, and ChangeGear Service Desk Suite for businesses that need a multifaceted ITIL-based ITSM suite. With ChangeGear, SunView is focused on coordinating and automating improved levels of operational efficiency and service continuity around change management, configuration and release management. The most recent release also introduced “Dynamic Request Automation” which allows for more intelligent processing of requests originating from employees, IT staff, or other systems. SunView customers are now able to more efficiently enable change across their organizations with advanced workflows, custom forms, and multi-level approvals.



Figure 5: ChangeGear Console

### Key Technology Foundations

One of the more appealing characteristics of ChangeGear's design is its well-thought-out modularity. ChangeGear can easily be broken down into separate modular components that might typically be associated with separate markets or even purchasing decisions, from discovery, to CMDB, to the change management control system itself, to support for trouble ticketing, incident and problem management, and workflow automation. But ChangeGear should be viewed primarily as an integrated platform designed to function as a cohesive solution for managing IT change.

A closer look at SunView's key components is as follows:

- *Resource Discovery Expert (RDE)* – A versatile, agentless discovery technology that can support virtualized and non-virtualized infrastructures. RDE works by discovering systems and network devices, applications, ports, configurations, running processes and other entities through ping sweeps, MIB queries, WMI support, Telnet SSH commands and other points of access. Its support for VMware and Citrix products enables visibility into physical and virtual interdependencies. It is also natively extended through Configuration Collectors to target applications, databases, files, and infrastructure and application configurations. Customers can add their own Configuration Collectors with fairly minimal labor.
- *CMDB/CMS* – Leverage the strengths of RDE to create business service-to-infrastructure mapping and provide a more mature and resilient context for change management. ChangeGear's CMDB is designed for federation, so that it can both import or access data, and export data to or from other systems. It has also been enhanced to support a broader range of logical and physical CI types, including custom CI types. This versatility has allowed several SunView customers to extend the ChangeGear CMDB system to manage parts of the business infrastructure, such as manufacturing floors, or facilities and utilities. The ChangeGear CMDB also enables change impact analysis after changes are made, and if/then examination of proposed changes prior to production.
- *Change Management System* – SunView has worked hard to make change-related automation simple, targeted and effective. Its system is optimized to eliminate requirements for complex coding, and enables customization through easily edited forms, templates, and toolbars. It is designed around an ITIL-based workflow with native support for requests, approvals, notifications and alerts. It also provides a historical record of where, how and by whom changes were made in support of audits, troubleshooting, and other related requirements. The innovative visual workflow progress and action bar at the top of each request makes it easy to understand what state the request is in and what actions are available for processing.
- *Service Desk* – SunView offers a service desk option that is optimized to support the handling of incident and problem management in the context of change control. ChangeGear's service desk provides an array of other functional values such as a self-service portal, a personalized dashboard with real-time graphs and metrics, and its own knowledge base to support best practices and best-case.
- *Workflow Engine* – ChangeGear includes an advanced workflow engine to automate processes across all modules including incident, problem, change, and release management. For each executed workflow action customers have the ability to add orderable automation steps (e.g., send e-mail notifications, run a script/program, trigger a workflow action, assign/reassign a ticket, write to a system log, edit values, make an announcement, send a survey) with conditions for execution based on request contents.
- *Dynamic Request Automation* – Automation is at the very heart of ChangeGear and Dynamic Request Automation (DRA) and is a testimony to SunView's attention to pragmatic design. It allows for requests from portals, e-mail, desktops, or other applications and sorts processing requests based on content-sensitive templates. Dynamic Request Automation supports branched workflows for parallel levels of automation, as well as multi-tiered review cycles. Policies can be defined in flexible forms editors for authoring forms and templates, while a Business Rules Engine can promote consistency and efficiency in automating the change management process. As such, DRA can help to enforce best practices and automate compliance requirements in addition to enabling support for request fulfillment.

## Conclusion

An effective plan for optimizing change across your environment typically requires awareness of process and organizational factors. But technology can open the door to process improvements by making collaboration and communication more effective, more automated and consistent. Some key areas for attention are good discovery, insight into configuration interdependencies, and effective workflow and flexible policy creation.

SunView offers a pragmatic but richly functional approach to managing and automating the change process, with minimal administrative headaches. It is optimized for mid-tier businesses and enterprises that have limited resources but often high-end requirements for managing change across critical IT services and the infrastructures supporting them. EMA especially likes ChangeGear's modular but unified design point, its insight into infrastructure and software interdependencies, its CMDB/CMS-readiness, and its ability to work well with other management investments. SunView has wisely focused on change control and is well designed to be a leading investment in enterprises for managing that arena through its function, deployability and integration strengths.

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## About SunView

SunView Software is revolutionizing the way IT organizations manage change for critical virtual and physical infrastructure across the enterprise. ChangeGear is an integrated platform for automating your organization's IT best practices including solutions for change management, configuration management, incident management, and problem resolution.

Based on the ITIL best practices framework, SunView's ChangeGear products automate and streamline IT processes. ChangeGear's service-oriented architecture allows companies to easily integrate the change management process into other applications or systems, making it easier for IT staff to manage change. Our customers are seeing the results of having a great solution for enforcing IT controls - greater visibility into their IT infrastructure, improved system uptime, reduced operational costs, and improved security.

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## 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](http://www.enterprisemanagement.com) or follow [EMA on Twitter](#).

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