



Clear enterprise need for Change and Configuration Management despite slow rate of adoption

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Methodology

This study focused on senior IT management in mid-size to enterprise-level organizations with responsibility for overseeing change, configuration, and release management initiatives.

The study was conducted in January-February, 2011.

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Synopsis

This study examines the practices of change management and the related configuration and release management processes in IT organizations in the U.S. and explores to what degree there are automated, cohesive processes in place for these practices.¹

In the majority of companies, study participants acknowledge that there is very little technology-based formalization and integrated automation of change management. Despite IT's embrace of automation in so many other areas of their environment, automating change management and related processes is perceived to be a complex and risky undertaking. IT prefers manual processes and internally developed tools that remain somewhat independent of each other. IT has been comfortable with processes interlaced with several levels of peer-to-peer communication and unified by multiple checkpoints.

The adoption of standards that can help improve change management productivity through disciplined methodologies, such as the ITIL framework, is slow. The vast majority of companies implement individual disciplines for particular processes, if they implement any at all.

Despite this hesitancy, however, there is strong evidence that IT executives see the potential and need for tools that can automate and better integrate the change, configuration, and release processes, as well as the risks of pursuing their current course. A fully integrated change management process would help address key deficiencies while allowing IT to improve service to the business, one of its most critical priorities. Such a process would lead to:

- Improved communication of issues
- Fewer service degradations
- Faster response times to business needs
- Improved service delivery

The study participants expressed a desire to implement change management tools, perhaps not in a broad cohesive manner, but rather in a step-by-step process that introduces integration and automation gradually, minimizing disruption of this critical IT function and providing proof of value at every stage of implementation.

¹ITIL v3 refers to these combined processes as Change, Configuration and Release Management or CCRM.

Increasingly complex environments heighten the need for a change management solution

In today's increasingly complex enterprise IT environments, which have gone beyond traditional IT to include virtualization, cloud deployments, etc, the challenges of quickly and cost-effectively managing change, configuration and release processes continue to grow as more demands are put on IT to deliver better services and support to the business, often with less staff and less budget.

Trends such as virtualization, cloud computing, and the adoption of Agile development processes have only heightened the complexities of change management and increased the pressure on IT to keep its environment operating efficiently.

Virtualization has expanded the enterprise infrastructure rapidly and continues to do so. While the number of physical servers may not be increasing at the same rate, managing the growing number of virtual servers continually presents new challenges. Existing processes and tools often do not provide the visibility necessary to see the impact of change within a virtual environment nor are they typically sophisticated enough to marry the virtual environments with the existing physical ones.

Cloud computing extends the infrastructure as well, moving it beyond the physical boundaries of an organization, further from IT's oversight and control. Processes and tools need to expand to be able to account for this new "branch" of the IT organization.

Faster development cycles, such those using Agile development processes, are becoming more prevalent in organizations that focus on rapidly responding to business needs. This in turn can exponentially increase the number of change, configuration, and release cycles in any given period of time.

"We haven't mapped it out. No one person really knows everything that it takes to keep this application running in its entirety, because things have become so very, very complicated. We have multiple teams, multiple groups supporting different aspects of the service."

– IT Dir, Travel Company

Supporting rapidly evolving business needs is imperative— but difficult

In this changing landscape, IT is tasked with supporting nimble and competitively responsive business initiatives and they clearly understand the importance of this. As seen in Figure 1, more than 80% of IT indicated that the availability of mission critical systems is one of their top priorities, while 65% also cited leveraging technology to support business needs as important.

With 80% of the study participants indicating that controlling IT spending is critical, and nearly 60% citing that improving operational efficiency is key, it's clear that IT is trying to figure out how to do more with less and do it faster.

This is a daunting task for organizations where IT processes haven't kept pace with new technologies and may explain why IT is driven to answer the call for agility and speed with manual, repetitive processes that rely too heavily on people to drive the process.

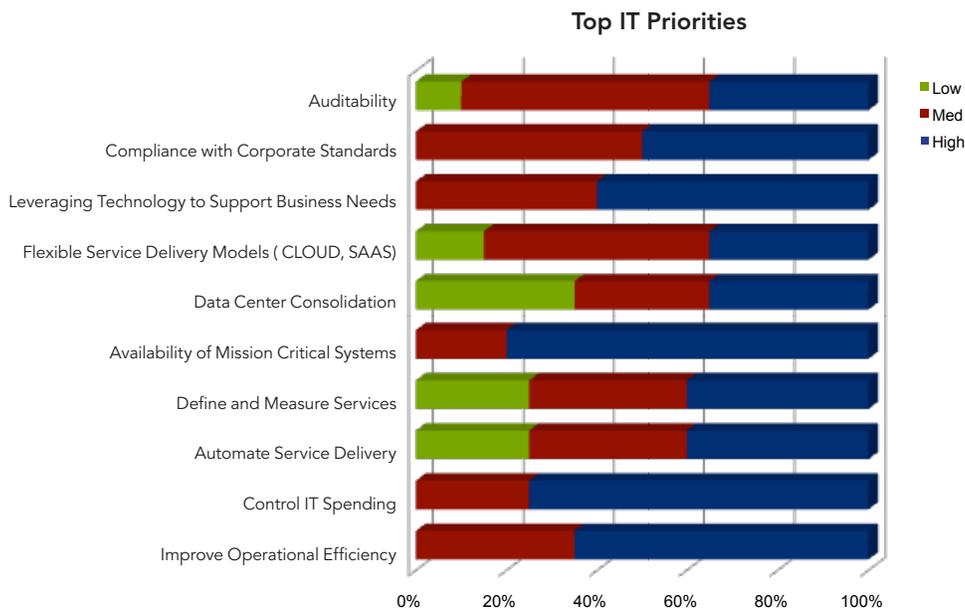


Figure 1

Meeting business needs is a high priority as is providing mission critical applications, improving operational efficiency, and controlling IT spending.

Manual processes with multiple levels of communication provide a sense of security

At a time when many other IT functions are fully automated, the effective management of change, configuration, and release processes still requires IT to rely heavily on time-intensive, lagging operations, such as the ones listed below.

- **Over processing.** Multiple checkpoints are a common safeguard for avoiding change-related issues and failures.
- **Manual processes.** A hands-on approach appears to be perceived as an efficient way to map interdependencies, write scripts, and get approvals.
- **Institutional memory.** There are still silos of individual people who have the primary knowledge for a particular application or system and who therefore have the sole responsibility for each change, configuration update, or release.
- **Verbal communication.** Even today, with a heightened focus on auditable accountability, person-to-person dialogs among disparate teams seems to be the preferred mode of keeping change management processes flowing smoothly.
- **Resistance to and fear of something new.** Quite often, the people in charge of change, configuration, and release processes resist new ways of doing things as they simply may alter status quo – or possibly even eliminate their job.

While today's processes may not be "integrated," they are unified. Each IT organization approaches the management of change differently and while most do not have an integrated approach, many believe that processes they use for change, configuration and release management are somewhat interdependent.

"We look at it as a whole but each is done through separate processes. We have to talk to each other or it doesn't work."

– IT Dir, National Retail

"We are used to operating autonomously."

– IT Dir, Equipment Manufacturing

"Can we work efficiently with less people? Can software do the job so end users are satisfied?"

– IT Dir, Food and Beverage Wholesale

"I always get leery of anything that's automated simply because I prefer to have it set up initially first."

– IT Dir, Insurance

Change management is vital to meeting business needs

As seen in Figure 2 below, IT also cites significant challenges to its current approach, including: the inability to move quickly to meet business needs (70%); the inability to see the impact of change (65%) and poor cross-functional coordination of the processes associated with change management. The inability to move quickly to meet business needs seems the most critical, with IT often being held accountable for inhibiting the growth and profitability of the enterprise it is supposed to support.

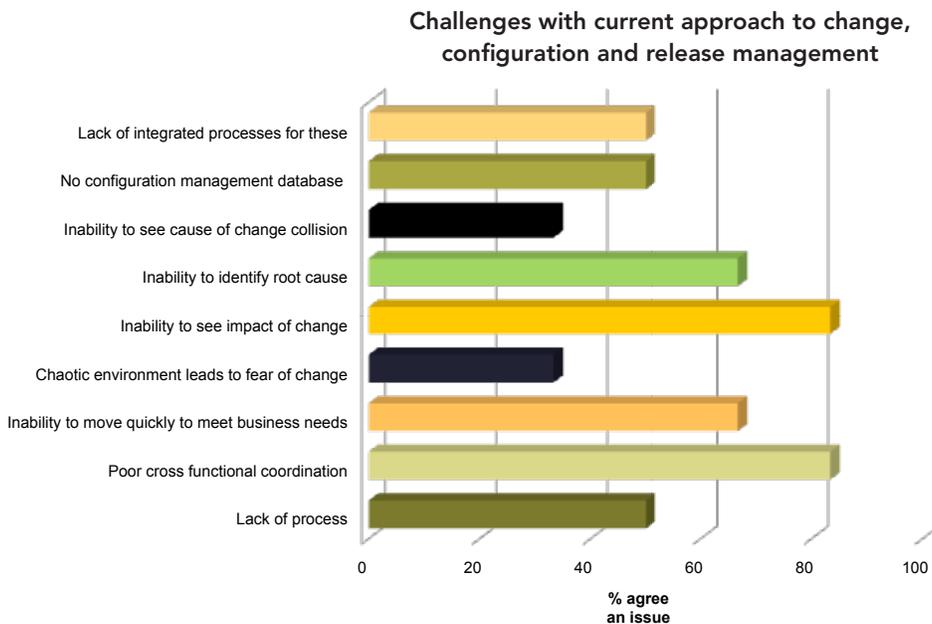


Figure 2

The lack of an integrated change management function presents many challenges for IT.

IT acknowledges that there are risks – often high risks – associated with staying on its current path in regards to change management. With the current state of change management, downtime is a distinct possibility and one with potentially significant financial consequences. This is especially true in organizations that do not have the tools or processes for measuring the impact of change in their environment, such as the 65% in Figure 2 that noted this as a challenge. Service degradations can also be damaging, impacting productivity and the speed of production.

Unexpected or unforeseen consequences as a result of a configuration change or a new release may require a realignment of IT resources, causing staff to be pulled off other initiatives to manage the crisis at hand. This causes unforeseen spending in an environment of already reduced budgets and staff downsizing.

“The biggest challenge is to find out exactly what the changes are and how they impact various departments, just the enormity of it.”

– IT Dir, Financial Services

The risk is not yet intolerable

It appears that the rate of major issues and failures associated with change management (15% and 4.4% respectively) has not yet inspired greater adoption of tools or automation.

However, with the infrastructure’s expansion through virtualization and the cloud, along with more frequent release cycles, it seems as if the point where the risk reaches an intolerable level is approaching, as some respondents reported major issue rates as high as 40% and failure rates as high as 20%. If these rates continue to rise, the frequency of downtime and outages throughout the enterprise will grow, impacting IT’s credibility and the organization’s bottom line.

Some level of change management is already in place—albeit often homegrown

While it isn’t widespread, there is some degree of adoption of change, configuration and release management tools. However, a surprisingly small number of organizations have commercial solutions in place.

Service desk management tools are common in almost all IT departments and are one of the most commercially accepted products. Close to 80% of the companies surveyed have also invested in a change management data base (CMDB), although most (over 60%) have developed these internally.

Software change management tools are also widely accepted, with 30% of the organizations developing them internally, and another 50% purchasing a commercial solution. Virtual server management tools are the second most commonly implemented commercial product.

“15 to 20 percent of our changes have major issues even with all the testing we do. We can’t account for every situation. We have software from the late 80’s.”

– IT Dir, Insurance

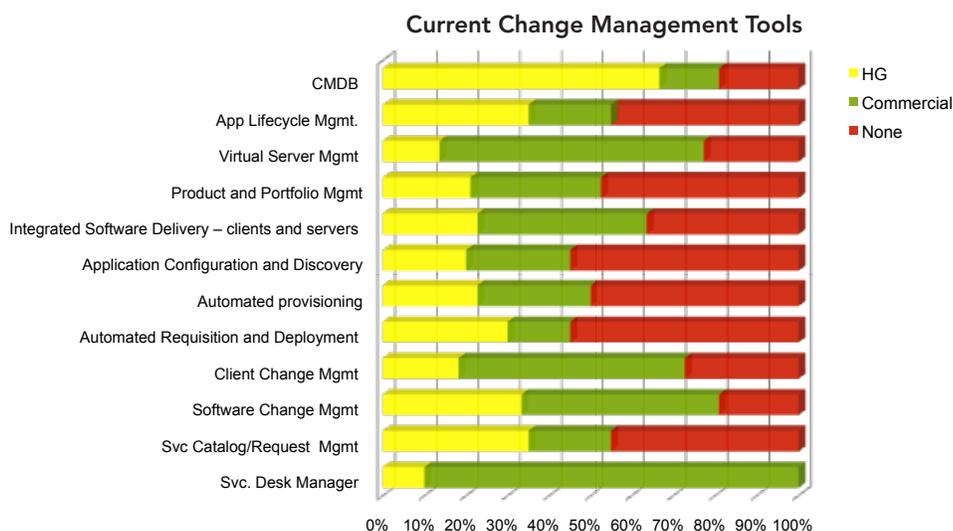


Figure 3
The adoption of change management tools is varied, with homegrown tools still predominant.

ITIL slow to take hold

While adoption of best practices, such as the ITIL framework, provides a support structure for change, configuration, and release management processes, few organizations have adopted ITIL as a whole, with most only using select parts.

Typically, this is either because of resource constraints (training budgets being chief among the cost prohibitors) or because IT only sees value in select modules due to a perception that a prescribed framework isn't workable in their unique environment. The lag in implementation of modules such as automated deployment may be the result of IT's fear of losing control

The most widely adopted process is change management, which was in place in 35% of the organizations. (See Figure 4 below) Other high process adoption includes a 30% deployment of problem management process, with 25% deployment of release management, and only 15% using a configuration management process.

"It's our version of ITIL. We're never going to be so streamlined to do the whole thing."

– VP IT, Financial Services

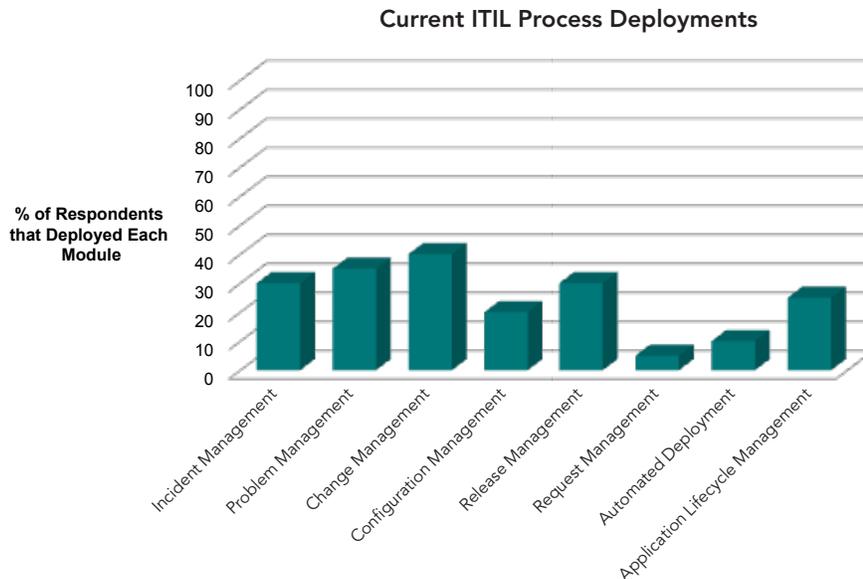


Figure 4

Few organizations are fully adopting ITIL.

The benefits of an integrated approach are admittedly clear

While most organizations haven't yet begun to confront the issues of an overly manual and siloed process, there are significant signs that a shift is underway, with the overriding benefits of managing change, configuration, and release together apparent to all.

In fact, when presented with workflows and a commercial solution description that outline a tightly integrated process with automation at the core, senior IT operations executives were receptive and could envision these immediate benefits:

- Managing with a greater visibility into and understanding of how processes impact each other.
- Tighter links between processes enhances IT's ability to see conflicts or issues and to respond accordingly.
- Automating manual, repetitive tasks to eliminate reliance on people to drive process and to enable an organization to scale up and better manage bulk changes and releases across the network.
- Improved communication between business and IT, leading to a proactive review of multiple requests and a better prioritization of the risks and benefits of each.

Because fear of change and territorialism are often the biggest reasons for not automating and integrating processes associated with change management, there is a recognition that it will take senior level sponsorship and authority to break down the territorial nature of the existing processes.

It will be incumbent on the IT vendors in this sector to demonstrate at an enterprise level that integration across complex environments with multiple platforms, operating systems, and complicated legacy underpinnings can be safely and fully integrated through a change management approach.

Stepped implementation most acceptable

A gradual path to automating and integrating processes associated with change management seems to be most acceptable to IT, with lower-cost points of entry and minimal impact and disruption.

"Uniformity, no service degradations."

– IT Dir, Financial Services

"Quicker communication of what's going on, quicker turnaround, and recognition of [the change that was made.]"

– VP IT, Insurance

"One person is responsible; you're not pulling others off other projects."

– IT Dir, National Retailer

"I wouldn't want to roll this out as a new world...we need to implement with as little disruption as possible. Some systems are already allowing us to do certain things. Let's do some pieces as we need to replace certain tasks."

– IT Dir, Electronics Manufacturer

Summary

While concerns are apparent and risk aversion is a way of life in many enterprise organizations, the processes associated with change, configuration and release management are a weak point in an otherwise highly sophisticated IT environment. As IT complexity continues to grow, the ongoing use of heavily manual interventions and reliance upon institutional knowledge will impact IT's ability to respond to the faster pace of business.

IT executives recognize this gap in their effectiveness and ability to service the tactical and strategic goals of the organization and its users. They are ready, albeit with caution, to move forward and respond more nimbly to change.