The Future of IT: From Chaos to Service Automation

Three Ways to Transform IT so CIOs can Lead the Way

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before the turn of the 21st century, IT faced one of its biggest challenges: the Y2K scare. The idea of diving in and unraveling what CIOs called “spaghetti code” was an unprecedented task. Who knew then that the effort would look relatively simple compared to dealing with today’s “spaghetti everything”?

Technology has become the heart and soul of every business. The hardware boundaries of IT have exploded beyond data centers, with mobile devices in the hands of both employees and customers alike. Application options have blossomed, from traditional to open source to software-as-a-service. Business has become global, bringing with it a demand for round-the-clock agility. Employees expect that the applications they use at work should be as easy to use as the Web apps they use at home. Integration remains difficult, because it’s sometimes impossible to know what will happen when someone tries to pluck one strand out of the pile. IT workload and system complexity will only get more challenging, bringing the need for disintermediation through service automation.

Today IT is more than the custodian of technology, and keeping up with business demands has become incredibly difficult. As a result, “no” is all too often the response to new business requests. When most CIOs come to the job, they quickly realize why their predecessors left (or were shown the exit door). They face a landscape of fragmented, complex systems—and if they’re not fragmented, they’re redundant. Their lack of visibility renders them virtually sightless. When CIO Barry Libenson joined food, dairy and agricultural products manufacturer Land O’Lakes, no one could tell him what applications were in the company’s portfolio. When Lt. Gen. Susan Lawrence became CIO of the U.S. Army, no one could tell her how big her IT staff was. As CTO of General Electric, Mark Little came to realize that acquiring companies without integrating their IT departments was creating a managerial nightmare.

No wonder IT has become known for being the “Department of No” and CIOs the “Abominable No-Men” (even when they’re female). It is not because they are purposefully obstructive. It is because moving forward imprudently could mean cross-company chaos far beyond anyone’s Y2K fears. Naturally, maintaining that kind of brink-of-chaos status quo is unsustainable. The future of IT, of any given CIO’s career, of the company itself, relies on transforming IT’s focus from infrastructure-centric to service-oriented. And as business and evolutionary changes take place, CIOs will need to shed their janitorial perspective. They will need to become the
equivalent of highly proficient and insightful general contractors, delivering business solutions by engineering and orchestrating everything from service provider engagements to cloud services to internal development—all in the name of service.

At a recent ServiceNow event, CIOs, analysts and industry experts assessed the future of IT. Together they painted a picture of how companies can move from chaos to a place where IT is not only under control, but operates as the backbone of the enterprise. Here’s how they automated IT services to transform IT and the enterprise.

The Future of IT and How to Get There

The headache of IT has always been the infrastructure, with IT spending so much time focusing on infrastructure that there’s been little time for services or innovation. That ratio is changing. The service model is taking over: software-as-a-service, platform-as-a-service, desktop-as-a-service, infrastructure-as-a-service—you name it. It’s all about service. In the future, IT will spend less of its time handling infrastructure and more of its time managing and enabling service relationships throughout the enterprise, whether those relationships are between IT and their business peers or between the dozens of service domains that exist inside and outside of a company.

But in order to manage and enable those relationships, having insight into its internal workings is critical. IT should have a firm understanding of its own services (if only to be able to compare them financially and operationally with other options). Those who work in IT should become their own service engineers before they can apply their service expertise to other service disciplines.

The problem is that IT spends much of its time helping every other department implement systems to the detriment of its own: project management, service desk and systems management all tend to be fragmented and frustrating for everyone who comes in contact with them. These systems contribute to IT fire drills when they should be contributing to IT fire prevention. In short, IT requires systems that help it manage IT. Only then can it adequately—and even, in time, superlatively—extend the IT service model to automate service processes for other internal service domains within the enterprise, including HR, facilities, legal, finance, operations, etc. This same model can also be applied to service relationships that extend beyond the walls of the enterprise to customers, providers, suppliers and partners.

Three IT transformations can help IT get its own house in order to become the proactive partner of the business. By applying these concepts, IT departments at major enterprises are changing the way they engage with their business peers.
Transformation No. 1: Service Consolidation, Standardization, Globalization. The first transformation starts with getting IT systems under control. That involves consolidating fragmented and redundant service systems to standardize operational processes for global usage. Just as ERP systems brought finance, manufacturing, human resources and other applications into a single system, IT needs its own single system of record. Ideally, this “ERP for IT” uses one data model, one code base, one set of APIs and one user interface to give IT staff complete visibility into the business of IT.

Imagine a single window into everything relating to management: the service portfolio, cost, governance, project portfolios and reporting. Imagine a single window into operations: the service catalog, planned changes, release schedules, incidents, software development phases and service levels—and being able to communicate about them in real time. Imagine a single window into the infrastructure: the configuration management database, automated discovery, asset management, orchestration of automated workflow for cloud and VM lifecycle management, and even a way to create custom applications.

As Peter Argumaniz, VP of tool and automation at financial services firm AIG, noted at the user conference, his company found itself with 2,000 management tools. It’s already consolidated close to 100 service applications, with more being moved onto the ServiceNow Platform this year. “Now we have one system of record,” Argumaniz said, adding that the platform has worked so well that the infrastructure and application development teams are moving onto it, too.

A director of IT for a major chip manufacturer noted that his company has used ServiceNow to consolidate 70 systems within IT down to 40. “Each of our IT employees uses this platform to make us more service-centric,” he said, “because as our CIO says, when IT is mediocre, our enterprise is mediocre.”

Transformation No. 2: Consumerized Service Experience. Once IT transforms the way it manages its internal workings, it can turn to how it interacts with users. Users aren’t generally keen on interacting with IT, because it is more often frustrating than fruitful. Consumerization is the idea of delivering a consumer-like service experience—making access to enterprise systems as easy and intuitive as consumer applications such as online banking, e-commerce or social media. In those scenarios, when consumers have questions, they have a multitude of options. They can get what they need through an intuitive service catalog; they can search for answers using keywords, engage in collaborative social streams and chat in real time with a customer service representative.

NYSE-Euronext North America CIO Paul Cassell remembered when he first came to the exchange, it was using a competing trouble-ticket application. The traders on the floor hated it so much, “they wouldn’t touch it—they would just call IT.” After the exchange deployed ServiceNow, IT worked with the traders to set up a system that was easier to use. “Now the traders enter their requests from the floor, something they would never do before,” says Cassell. The new system completely changed how
traders interact with IT, making IT more accessible and integral to business efficiency.

Transformation No. 3: Service Automation. This may be the most important transformation of all: moving from manual, time-intensive, resource-intensive activities to automated ones. Just as IT spends too much time on infrastructure and too little time on service, it tends to spend too much time on handling processes manually and too little time on analyzing them to see what can be automated. This is not a subterfuge designed to reduce numbers in IT; it is a way to make IT more efficient and to redeploy staff away from repetitive, mindless work toward more strategic capabilities. It is an opportunity to systematize what IT does in such a way that it can be done faster and more efficiently.

This kind of automation will drive a new level of efficiency in the enterprise, enabling IT to scale the delivery of service to support the overwhelming demands of the business. As consumerization and self-service come together with automation, the future of IT begins to unfold. Operational activities happen automatically and correctly. Employees and IT beneficiaries receive faster and more consistent service, while IT can scale service delivery processes dramatically. Consumerization and self-service becomes the backbone of the typical service experience. All of this activity will be trackable and auditable.

Automating a business process also gives enterprises the opportunity to rethink IT, to question why it's done a certain way. When Underwriters Laboratories started automating some of its IT processes, it discovered that some of those processes had been unchanged for decades. A typical change-request form had 90 fields; it took a long time to fill in, and the need for all those fields wasn’t always obvious.

Alison Collop, director of global IT for Coca-
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Cola, uses ServiceNow to automate not only third-party access management, serving thousands of customers, vendors, bottlers and partners, but also its hardware and software provisioning. “The systems used to be very fragmented, but now we have a catalogue where we present applications,” she said. “It links into the ServiceNow workflow for approvals.”

Cassell automated software delivery for his company’s eight stock exchanges, which all used different bug tracking systems. With ServiceNow, development, QA and project management are all tied together, so that software delivery can happen faster than ever before. “We can deliver hundreds of new packages over a weekend, so that IT is no longer the bottleneck for new features,” he said.

Sometimes the automation of processes doesn’t even have to be IT related. In many cases, the ServiceNow application has been adopted beyond IT. GE Energy sells, services and maintains equipment for power generation, water process technology and gas turbines. “We use ServiceNow as more than an IT service platform,” said Reggie Acloque, information management leader. “We’re using it to automate workflow processes of our engineering team, which uses it to enter questions about servicing. We use it to process claims as well. It’s transformed the way we operate.”

The Grander Context
According to the industry experts who spoke at Knowledge13, the transformational aspects of ServiceNow correlate to changes occurring in IT. Bob Melk, senior vice president of IDG Enterprise, reported on the most recent results of CIO magazine’s “State of the CIO” survey, noting that the percentage of CIOs who felt they were perceived as a “service provider” dropped between 2011 and 2012. The percentage of those who thought they were perceived as a “business peer” climbed 5 percent, while those who felt they were perceived as a “cost center” dropped 6 percent.

Melk also noted other shifts in the way in CIOs’ priorities were focused more now than in previous years on service rather than maintenance. “Where CIOs once focused on cost, they’re looking at growth. Where they once looked at efficiency, they’re now looking at speed and customer satisfaction. They’ve moved from worrying

| VIDEO: The Now State of IT – Managing Service Relationships Across the Enterprise |
| There is a shift happening in enterprise IT affecting how business is done. Watch how ServiceNow meets the challenge of the NOW state of IT. |
| www.servicenow.com/cio.do |
about the user interface to worrying about the user experience."

Doug Leone, a partner at venture capital firm Sequoia Capital in Menlo Park, Calif., noted that while technology might not change that fast, the rate of change is accelerating. "It took seven years to get 100 million PC users, five years to get 100 million Internet users, and three years to get 100 million mobile users. That means whatever you do, you have to do it faster."

Aaref Hilaly, another Sequoia partner, points to the consumerization of IT as a bellwether of what CIOs face. "Five years ago, you could issue a laptop and a BlackBerry and everyone was happy. Then consumer technology started moving faster than enterprise technology. Work life and personal life have become completely blurred, and that has brought profound

What happens when CIOs build on a foundation of transformation? The changes can be startling, especially when IT is freed up to spend less time on IT and more time on developing relationships and fostering innovation.

"CIOs have to embrace consumer technology rather than restricting it," said Red Hat CIO Lee Congdon. "You have to find a way to allow business leaders to take advantage of technology." That not only fosters innovation, but it ensures that the problem won’t get worse, "when they do it without you. Give them the ownership and help them figure out how to make it secure."

"IT for IT’s sake doesn’t mean a whole hell of a lot," said NYSE-Euronext’s Cassell in a panel on roles and innovation. "Gee whiz doesn’t bring value to the business. You have to be as knowledgeable on the business side as you are on IT."

Past CIO of Electronic Arts and McAfee Mark Tonnesen concurred. "You’ve got to get out of your chair and spend time with people in other parts of the company. Until I came forward, other executives were reluctant to share their thinking. Once I said that IT was ‘open for business,’ we got buy-in almost immediately."

As an incentive, Tonnesen keeps a budget item reserved for interesting projects. "I can fund something, get it going for a couple of months, and see how well it works." Congdon concurs with this strategy. "If you put up the money for something exciting, people who have the passion will find the time to support it. If you can get your business peers excited, they’ll sell the project in their organization."
change to the enterprise,” he said. In fact, Hilaly sees more enterprises developing applications for mobile technology first.

This only brings bigger challenges to IT. “CIOs believe employees are using anywhere from 25 to 40 applications,” Hilaly said. “The number is closer to the hundreds. That’s why IT has to move from controlling devices to controlling content and applications, with better auditing of mobile and cloud applications. IT has to have that visibility.”

The ServiceNow Take on the Transformation of IT

Who can blame CIOs for being ill-tempered and cantankerous when in the course of their careers, mainframes and VAXes have been replaced by cloud, open-source computing and mobile technology—and they’re expected to figure out all the new developments. “Technology has moved so quickly over the last 30 years, and IT is still stuck servicing outdated systems,” ServiceNow CEO Frank Slootman said, “it’s hard to be proficient on everything.”

Managing the transformation to this new world of IT is important, because its velocity isn’t slowing. “I started out as a programmer 40 years ago, and what’s going to happen in the next three to five years is going to blow those years away,” said Founder and Chief Product Officer Fred Luddy. “We’re moving into the most profound period we’ve ever seen in technology.”

“What aviation does with the black box, monitoring 500 events per second on a plane, we’re going to do with the Internet of things,” Luddy said, citing everything from locomotives to cars to turbines sending data back to IT. “The amount of technology that we’re going to have to consume, enable and connect from 10 to 50 million connected devices will be unfathomable.”

In its efforts to provide a single system of record for IT, Slootman said in his keynote, ServiceNow is dedicated to helping IT move from “no” to “now.” “IT has a reputation pervasive in the enterprise of not being easy to get along with, or the most responsive.” By giving IT the tools to be more responsive and innovative, “we want to change that. We want IT to become the go-to place, the people the enterprise turns to for automation and service expertise.”

Boost IT Visibility and Business Value with Service Catalog

Decision makers at many organizations question the investments made in IT. This is often because they don’t fully understand the value delivered by IT service management (ITSM) or by compliance with recommended best practices such as those defined by the IT Infrastructure Library or ITIL®. This often pressures CIOs to demonstrate the value of IT to the business. Learn how creating a great service catalog can help alleviate these pressures and why many consider it to be fundamental to any IT improvement initiative.

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