

INSIDE EDGE

Getting Down to Business: Managing IT as a Service

EXECUTIVE SUMMARY

As healthcare undergoes what promises to be profound change, the IT that undergirds it and that differentiates Scottsdale Institute members is also changing, albeit more quietly. This issue of Inside Edge explores the new and still-emerging service-delivery model that is redefining healthcare IT.

While some of the spear points of this change sound like old IT jargon—IT Service Management (ITSM) and IT Infrastructure Library (ITIL), for example—make no mistake: these signal a transformative shift of the healthcare IT department into a customer-focused, service-delivery organization. And if such acronyms are offsetting, you might say IT is finally taking some of its own medicine.

As veteran CIO Avery Cloud, says, “The IT department is frequently the cobbler whose children have no shoes. We automate every other department in the hospital and IT is the least automated of any.” ITSM aims to change that by providing an integrated suite of methodologies and tools for managing an organization’s IT infrastructure and systems, including networks, servers and applications. ITIL, which originated in the UK, provides a publicly available set of guidelines for best-practices IT service management.

In addition to Avery Cloud, CIO at New Hanover Health Network, we feature George Conklin, senior VP and CIO at CHRISTUS Health, which was an early adopter of ITIL, and Mike Wilson, senior IT director for clinical systems at SI sponsor Compuware, which provides ITSM solutions.

New Hanover Health Network

You’d think with all his years of experience and history of success, Avery Cloud, VP and CIO at New Hanover Health Network, just might feel secure in his job. But that’s never been the nature of the healthcare CIO job and it’s no different at the Wilmington, N.C.-based, 770-bed medical center spread over three campuses that serves seven counties in the state’s coastal southeast corner. About a year ago Cloud was confronted with radiologists who were losing confidence in IT services, and the crisis was sufficient to be career threatening.

“We had 12 PACS workstations and each of them was failing dozens of times a day,” Cloud recalls. Research found that many of the failures were the result of installation of conveniences such as multiple mice. “Once you give users a convenience, it’s hard for them to give it back,” he says.

July 2009
Volume 15, Number 6

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“We were experiencing frustrated clinicians and they weren’t even reporting problems. My staff thought no news was good news, but no news was worse news. IT was in a reactive state and could not get ahead of the problems.”

Today, after removing the extra mice, stripping the workstations of extraneous software and implementing ITSM tools to monitor the end-user experience, New Hanover is experiencing zero hardware failures, improved response time and increased physician satisfaction—and Cloud sleeps better at night.



Avery Cloud, VP/CIO,
New Hanover
Health Network,
Wilmington, NC



The experience has further galvanized his belief in the need to rigorously manage IT as a service and to use ITSM as the tool to achieve that goal.

“Everything we do at the medical center is driven by service excellence and patient satisfaction, and that philosophy has determined how we as an IS shop provide internal service,” says Cloud.

“One of the issues we faced was that we were managing by anecdote. One doc would say your performance stinks; another would say it’s wonderful and yet a third wouldn’t have a clue,” he says. It was clear the medical center IT department needed to move to a more objective program that would provide legitimate data on how systems were working from an end-user perspective.

“We were experiencing frustrated clinicians and they weren’t even reporting problems. My staff thought no news was good news, but no news was worse news. IT was in a reactive state and could not get ahead of the problems,” says Cloud. There was also a lack of IT/business

dialogue that resulted in mismatched expectations. While IT believed 99.9 percent availability meant success, customers were experiencing poor response times.

In a discussion with a clinician it became clear that a system outage might result in patients having to endure pain longer than necessary due to delays in medication administration. IT needed an automated system to monitor service as it was perceived by users and to forecast and fix problems before users experienced them.

It became clear quickly to Cloud that developing—and branding—an IT service management organization was the way to go. “We knew it was really important to have visibility into the clinical experience and so we chose Compuware’s Vantage product, which provides a dashboard view into technology performance from the way the user sees it.”

For example, while the IT department might think availability is fine because the application is still running, users reported that if response time reached 30 seconds, it was as good as down because they wouldn’t use it. ITSM allows an organization to define parameters like availability as excessive response time not only by counting minutes a server is down but the number of minutes when response time reaches excessive levels.

“Robot” computers execute clearly defined transactions over and over to determine response time and special “active agents” in the ITSM software go out and probe various points in the infrastructure and monitor performance.

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“We developed the philosophy that we manage our environment under a single pane of glass,” says Cloud, with a monitor on everybody’s desk in IT displaying the same information about system performance. There are also large-screen monitors in high-traffic areas with the same displays. “We made it an edict that anyone who sees a red-light alert has the responsibility to administer the fix. It’s amazing how much more quickly we were catching problems,” he says.

ITSM has become the backbone of service level agreements (SLAs) with the departments IT supports. For example, IT now provides reports to the radiology department on four major transactions it monitors. Sometimes there are unexpected insights, like inconsistent execution of scheduled rebooting of PACS workstations to clean up memory. Monitoring showed that several workstations were not getting rebooted. “It became a human-performance monitoring tool as well as a technology monitoring tool,” says Cloud.

It doesn’t stop there. New Hanover also has an important leveraging tool with its vendors. When the medical center’s PACS response time plummeted, the PACS vendor swore there wasn’t anything wrong with the application. However, using the tool it was able to determine that paging parameters had not been properly set and the software was paging like crazy. “It’s nice to have that power at your fingertips,” he says.

“Today IT is better aligned with our business, we have no more management by anecdote, we have faster troubleshooting with no increased personnel and have experienced a big reduction in help-desk calls,” says Cloud.

CHRISTUS Health

“We were an early adopter of the ITIL framework,” says George Conklin, senior VP and CIO at CHRISTUS Health, an Irving, Texas-based health system with more than 40 hospitals and other facilities in six states and Mexico. CHRISTUS launched its ITIL effort four years ago, but delays kept it from becoming operational until about two years ago. Today, he says, “It’s working terrifically.”



George Conklin, senior VP and CIO, CHRISTUS Health, Irving, Texas

The original impetus for ITIL arose from a Futures Task Force the organization conducted in 2001 that framed many organizational strategies for the first years of CHRISTUS’ life.

The Task Force reconvened in the fall of 2007 and a final report was completed last January. “It reinforced even more strongly the conviction that we’re moving toward consumerism in healthcare. We had to ask ourselves, how do we more effectively manage resources in this quickly emerging model? I had been talking about ITIL for a year and people finally took it seriously. Now the whole organization is focused on reengineering around a more distinctive CHRISTUS-branded customer-service focus,” says Conklin.

That’s not to say it is easy turning a tanker ship like CHRISTUS 180 degrees—and it’s expensive, he notes—but industry support for ITIL and ITSM

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Cindy Spurr, Corporate Director, Clinical Systems, Partners Healthcare

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is growing among Conklin's CIO peers and that has helped validate the strategy. "ITSM and ITIL are all about a reorientation of IT from a technology focus to a business or service delivery focus. It's a re-crafting of IT to be more responsive to the customer."

There's also much more transparency around processes and costs associated with IT—and that's a key element when it comes to explaining to clinicians why an investment in wireless nodes to increase system speed might be more important than buying a CT scanner. "ITIL and ITSM give you the tools you can use to put it in terms that a person understands," says Conklin.

Transparency is also important because it combats the old stereotype among non-IT people, he says, "that IT does things for its own sake and is really, really, really expensive. The objective is to make a clear statement in business-strategy terms, so a wireless-access point in a hospital is not cast in technical terms. You make it relevant to them."

While ITIL involves careful management of the cost structure of IT, that means translating the cost and benefit into outcomes rather than in transactions per second or in Six Sigma terms like "Five 9s," a reference to .99999 percent reliability of an IT system. In other words, it's all about performance. "The difficulty is how you measure it," says Conklin. "It gets back to the business outlook. The focus needs to be on what the user or customer needs—not technology."

Already highly complex, with PCs, networks, communications, virtual machines, servers, disk drives, IT continues to grow more so. Yet clinicians remain unin-

terested in this componentry, rightly absorbed rather in how it performs at the patient-care end. Still, IT executives must balance both ends of the spectrum.

"Every time you move to another 9 of reliability or add new functionality," he says, "the complexity and cost increases exponentially—maybe even geometrically. Take storage. When I first started at CHRISTUS, we had a few hundred gigabytes. Two years later it was 8 terabytes. Today it's 1.25 petabytes. In even less time it will reach 8 to 9 petabytes. That has huge cost and clinical implications. In the not-too-distant future, we'll run out of storage in our new data center. That is why cloud computing will become increasingly important."

Several factors are driving this growth. "We're capturing increasingly more information about people," says Conklin. "As we live longer the complexity of what ails us increases. And of course, health information is more complex because everybody is different. When you bring in genomics and proteomics, you add billions of bytes. Imaging information adds even more. While important to have in the larger scheme of things, all of the data we store is not relevant at any point in time for service delivery. One of the worst things we could do is to bury clinicians in avalanches of information—just because it is there. Instead, we need to find ways of breaking the data into meaningful components for them."

From the physician performance perspective, the challenge is to distill that information on the fly to reflect the real-time (and ever-growing) complexities of patient diagnosis. "Physicians expect the data will be there when they need it and to not get buried by it," he says.

End-user experience

Mike Wilson, senior IT director, Clinical Systems, Compuware Corp., says that IT organizations are beginning to mature their perspectives on the value of service delivery to clinicians. The service IT supports the clinical process and IT supplies various slices of technology that deliver that service. “It is critical that IT develop an approach that offers visibility into the clinician end-user experience (EUE),” he says. “Understanding the EUE drives the adoption of clinical systems by focusing on the viewpoint that matters most—the clinician’s. The more advanced and mature IT organizations will incorporate clinical operations in the ongoing assessment of IT operations.”



Mike Wilson, senior IT director, Clinical Systems, Compuware, Detroit



Wilson agrees with Conklin’s view of service delivery as the new measurement of success for IT. “It’s about the service, as George

said, not about the technology. As Avery indicated, data gathered by the mature IT organization will be used to identify, and ultimately improve, the IT service delivered to clinicians,” he says.

Where IT organizations used to be focused specifically on availability of technology resources, there is a growing trend in healthcare to focus on the quality of service delivery. Clinical systems need to perform at the point of care. This intersection of technology and process,

notes Wilson, will ultimately offer patient caregivers the opportunity to improve clinical processes, and ultimately improve healthcare. “When IT can stabilize technology to a point that it is always there and always performing, as with a utility, the clinician can then use familiar methods of continuous quality improvement (CQI). Only when healthcare can continuously improve clinical operations are we able to confidently claim success in the IT department.”

ITSM promises to help IT become all about service delivery. Some of the largest IT shops in the world, in all industries, have long recognized the importance of IT service delivery. Healthcare recognizes the value of “asking the customer” what the performance of critical systems should be. This “customer awareness” is further evidence that healthcare IT is maturing and is viewing the clinicians as customers.

Conclusion

The increasing complexity of IT and clinical data is driving the need for a new IT-department paradigm centered on service delivery. While challenging economic times may initially inhibit investment in IT solutions to support this new model, the need for greater efficiencies and accountability from IT demand such investment. The demands of healthcare reform incentives and penalties, the aging population and advent of genomics-based predictive and personalized medicine will only increase the need for the kind of transparency that service-delivery solutions like ITSM provide. In the end it’s likely the only way to extract the value of healthcare IT going forward.

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