

With a Push from Cloud Computing, IT Shifts toward Supply Chain Model



New IT Role Is Focused on Business Strategy, Innovation, Communication.

The growing popularity of cloud computing raises a fundamental issue for IT leaders: How do we stay relevant?

It's a legitimate question. As the IT organization transitions from an owner and operator of IT infrastructure to a role that involves managing a more complex, multi-platform mix of internal and external services, CIOs are tasked with redefining IT's value to the business. The shift is well underway. In a recent Global Market Pulse Survey of IT managers in the U.S. and Europe, the vast majority of respondents (96%) acknowledged that IT's primary role has changed over the past five years—and 40% believe it has changed to a great extent.

What's driving the change? The survey found that process standardization, increased automation and a rise in outsourcing engagements—including moving more services to the cloud—have all contributed to the transition. In the Market Pulse survey sponsored by CA Technologies and conducted by IDG Research Services, more than two-thirds (71%) of IT managers believe cloud computing will continue to change the role of IT over the next two years.

The survey concludes that, driven by these trends, IT increasingly is taking on the appearance of a supply chain. For CIOs, that's a positive development. Consider the traditional supply-chain model, in which loose collections of resources (technology, processes, goods, services and people) are organized in a logical manner to deliver goods and services to a customer base. As applications, infrastructure and even business processes migrate to the cloud, IT organizations that can become effective IT supply-chain managers will be able to create value for their business—and position IT as a driver of growth.

This paper explores the results of the Global Market Pulse study, which set out to explore the concept of a dynamic IT supply chain and how the CIO and the IT

organization are adapting to their changing roles in this new environment.

IT as a Supply Chain

More than half (54%) of the respondents in the Global Market Pulse Survey acknowledged that the current value of IT is largely defined by its role as the owner and operator of the IT infrastructure. Within two years, however, respondents believe the primary value of IT will come from managing the IT supply chain. This explains why nearly three-quarters (72%) of IT managers say their IT organizations are focusing more time on managing outsourced IT or cloud services providers than they were five years ago.

The concept of IT as a supply chain involves IT services (e.g., systems or applications) that are disaggregated and delivered piecemeal to business users, often using third-party providers. Increasingly, IT is tasked with managing this supply chain in order to increase efficiency, effectiveness and performance.¹

"It's a shift from operating the whole internal 'IT factory' to moving some of the parts outside, while continuing to manage those parts," says Vince Re, senior vice president and chief architect at CA. "It's much more about solving problems for business users, but in a very different way—by managing the partners instead of building a new data center."

This heightened sense of problem-solving and relationship management aligned with business objectives is



¹"The IT supply chain," **Computerworld**, July 2009
<http://blogs.computerworlduk.com/computerworld-archive/2009/07/the-it-supply-chain/print.html>

becoming a mandate from business leaders who are increasingly frustrated with IT's historically inflexible approach to technology infrastructure. The evolution of a cloud services model, in which any end user with a credit card can quickly provision new services, combined with an increasingly tech-savvy generation of business managers, is putting more pressure on the CIO to redefine IT's contributions to the business.

"You have to recognize that you can't make decisions the same way you used to," says Jay Fry, vice president of marketing for the CA Technologies cloud computing business. "You have to be much more agile in your decision-making process."

Managing IT as a supply chain not only enhances this agility, it can also enable more innovation and better collaboration across the organization.

"You now have a way to bring things together faster and better, matching your core competency with outside vendors' expertise and delivering a service that is much more aligned at any particular moment," says Fry. "And you can pivot quickly when that changes."

Many IT managers welcome the concept of IT as a supply chain because it can help them deliver IT services far more quickly and more cost-effectively. Transitioning to a supply chain model means that capabilities such as project management, vendor management and increasing interaction with

cloud service providers will become central to IT's role.

The shift will require a significant change in the IT organization's current skill set, because managing an IT supply chain is fundamentally different from managing a centralized IT infrastructure. Nearly two-thirds (66%) of survey respondents cited the ability to manage service providers as the IT skill that is most likely to increase in importance over the next two years.

"IT will still be building things, but the focus will be more on the glue between the blocks rather than the blocks themselves," says Re.

Business Savvy Trumps Tech Expertise?

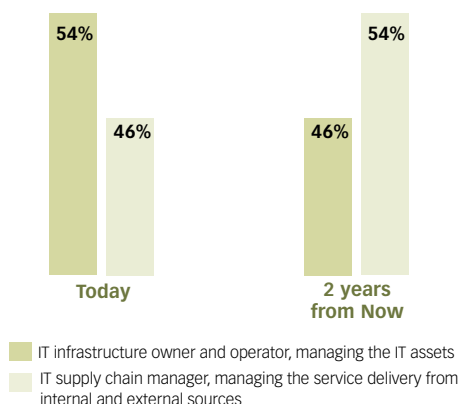
Managing service providers is just one skill that IT staff will need to develop to support the supply-chain model. Already, IT managers are looking to strengthen their business knowledge and communication capabilities—"softer" skills that are a marked departure from the deep technical expertise on which IT has traditionally focused.

The importance of business knowledge, process-standardization expertise, cloud expertise, the ability to manage service providers, and communication skills has increased for the majority of IT respondents over the past five years, particularly in the U.S. Three-quarters of U.S. respondents said the importance of business knowledge skills has increased, and more than two-thirds (69%) of all respondents agree that, in the future, an increasing number of senior IT staff will come from business backgrounds.

These results are in line with changes at the top of the IT food chain. According to CIO magazine's annual State of the CIO research, more CIOs are spending time on activities that drive business strategy as they shift away from functional activities that focus on IT operations.²

"This represents a new, more collaborative way of working with business users who have a very different set of expectations and a higher level of technology sophistication to relate what they want," says Re. "IT is no longer taking business requirements and going off and building something. There will be less emphasis on break-and-fix skills and more emphasis on managing IT at a business service level."

Value of IT to the Organization



Source: IDG Research, October 2010

²"State of the CIO: Three Types of CIO," CIO, December 2009 http://council.cio.com/content.html?content_id=24.9ec.3605bd12&auto=y

Importance of IT Skills

	Today	2 years from now			
	Critically/very important		Will increase in importance	Will decrease in importance	Expect no change in importance
Ability to manage service providers	76%		66%	5%	28%
Expertise with cloud computing, including managing cloud service providers	42%		63%	6%	28%
Knowledge of the business side of the house	84%		60%	6%	34%
Process standardization expertise	67%		53%	6%	39%
Excellent communication skills	82%		51%	6%	43%
Deep functional expertise	63%		30%	23%	44%

Source: IDG Research, October 2010

Recalibrating the expertise of their IT staffs will help CIOs boost the strategic position of IT along with their own standing within the senior management team. They may find cloud computing to be an unexpected ally. CIOs who once viewed cloud computing as a high-risk endeavor that threatened to diminish IT's influence are now eyeing the cloud as a way to improve their standing as a business strategist. Perhaps this is why 63% of IT respondents (72% in the U.S.) acknowledged that expertise in cloud computing will increase in importance over the next two years.

The Cloud as a Driver of Change

The emergence of cloud computing is not simply a technology movement—it's a more fundamental reconfiguring of IT's role in business. "Cloud-based services move the center of gravity for technology decision-making away from IT to business users," says Re. "When you rethink that concept, you find different ways to do things."

There's little doubt that the IT landscape is changing. Survey respondents expect the percentage of their IT environment that is either outsourced or resides in an external or internal cloud environment will grow from 31% currently to 43% over the next two years. On-premise physical infrastructure at respondents' organizations will drop from 41% to 28% over the same period.

The reasons? IT managers view cloud computing as an accelerator of agility, innovation and collaboration. In our survey, 62% said the cloud will increase their abil-

ity to quickly identify and react to market opportunities, 58% said cloud services will improve IT innovation, and 57% said the cloud will better enable collaboration between IT and the business.

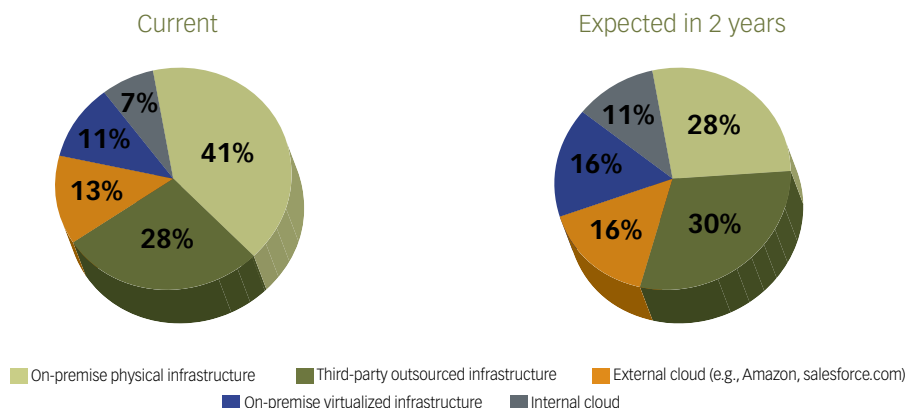
This shift will, of course, have an impact on the IT organization itself. Four out of 10 respondents expect that cloud computing will decrease the level of IT staff time and resources dedicated to IT support, while more than half (55%) said the cloud will increase IT staff productivity.

What shape will this evolving IT staff ultimately take? Asked which IT functional areas would most be affected by the use of cloud technology, respondents cited security management, infrastructure management, service management, compliance and application development as their top five choices. The implications are clear: As their responsibilities evolve to support this new approach, IT staffers' skills—and probably even their job titles (see table)—will evolve as well.

The New IT: Emerging Job Titles

Cloud Architect	Cloud Manager
Cloud Service Architect	Cloud Security Engineer
IT Cloud Architect	IT Cloud Services Manager
Cloud Application Integration Expert	Cloud Security Manager
Cloud Coordinator	Cloud Service Manager
Cloud Computing Architecture	Cloud Solutions Manager
Cloud Computing Manager	Director Cloud Infrastructure
Cloud Infrastructure Manager	EVP Cloud Technologies
Cloud Integration Specialists	

Mix of IT Environment



Source: IDG Research, October 2010

“The way you run IT in this new environment is as important as the technology itself,” says Fry. “It’s a shift in how organizations are thinking about IT, and it will change people’s day-to-day activities. It’s hard, but it will provide many benefits down the road.”

Conclusion

The growing acceptance of cloud computing is driving change not only in the role of CIOs, but in the way IT approaches its mission and how it delivers value to the business. As noted earlier, IT’s value today is largely defined by its role as the owner and operator of the infrastructure (54% of respondents felt this was the primary value for IT today). Within two years, however, respondents believe the primary value of IT will come from managing the IT supply chain.

In this capacity, the IT organization becomes less an owner of the IT infrastructure and more a manager of the end-to-end service quality, performance and cost of IT services. Nearly three-quarters (72%) of IT managers say their IT organizations are focusing more time on managing outsourced IT or cloud service providers than they were five years ago. Conversely, 41% of respondents report the IT organization now spends less time responding to IT issues than it has in the past.

Driven by cloud computing, the changing role of IT will require new skills and a new mindset for CIOs and their technology teams. Vendor management, busi-

ness knowledge and communication capabilities will take precedence over pure technology skills. Increasingly, IT staff will come from business backgrounds.

The potential benefits of managing IT as a supply chain are clear: increased agility for the business, stronger bonds between IT and the business, and more innovation that leads to sustainable business growth. CIOs who understand these benefits—and become a champion for them—can begin to reposition their IT organizations to embrace the change instead of fearing it.

Survey Methodology

This survey was conducted online in October 2010 among IT executives (manager and higher) employed in IT for five or more years, at companies with revenue of \$500 million or more (or IT budgets of \$100 million or more if in the public /nonprofit sector). Respondents were also required to be involved in the purchase or implementation of enterprise software and/or data center technology at their organizations. The U.S. survey was completed among qualified members of the CIO magazine audience. Non-U.S. surveys were completed among an international panel of IT professionals. A total of 200 surveys were completed (100 in the U.S. and 100 in EMEA, split evenly between the U.K., Germany and France.)

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