

The CIO and the Cloud: Strategic Allies

Recent Research on Challenges and Opportunities
Facing the CIO



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You've probably heard the rumors about some new up-and-coming role that will supplant the chief information officer (CIO). But the death of the CIO has been greatly exaggerated: the role remains the linchpin of technology strategy, digital transformation, and business efficiency.

CIOs continue to show their staying power, outlasting the trend for chief digital officers. And even though line-of-business heads now do more IT procurement than they once did, the CIO still supports and oversees every element of the organization's technology strategy. Indeed, today's challenges mean that, far from a shrinking role, CIOs face growing to-do lists.

Fortunately, CIOs know which issues are most important. According to research by Longitude, sponsored by Oracle, the most commonly cited IT priorities among C-suite respondents include:

- Enhancing security
- Increasing customer reach via new channels, such as web and mobile
- Improving business intelligence, analysis, and data visualization
- Boosting agility and scalability

Based on recent research, this paper explores the impact the cloud is having on these IT priorities.

SECURITY IS EVERYTHING

Security has always been at the top of your agenda as a CIO. Recently, however, it has gone from being an IT department priority to a subject that's discussed at board level. The high-profile data breaches and privacy scares of the past several years have emphasized just how important security is—and just how damaging it can be when it goes wrong.

By 2022, according to Gartner, a company's cybersecurity rating will become as important as its credit rating when customers, suppliers, and partners assess the risk of doing business with that company.¹



The independent Longitude research reveals that a large number of organizations already embrace the cloud. Those surveyed have migrated on average of 29 percent of their applications to the cloud and are in the process of migrating another 25 percent. Just under a quarter of their applications are cloud native. An elite group of "cloud-mature" companies has gone further, with an average of 70 percent or more of their applications either cloud native or already migrated.

¹ <https://www.gartner.com/doc/3829963/predicts--security-risk-management>

The C-suite knows that security challenges are not diminishing: 6 in 10 respondents to the Longitude study say that the frequency and impact of cyberattacks and app and infrastructure outages are increasing. Compounding the issue, CIOs are expected to respond to those threats with fewer resources. A Society for Information Management (SIM) survey found that companies spent a smaller percentage of their IT budgets on cybersecurity last year than they did in 2016.²

As more and more of companies' IT estates move to the cloud, security systems follow suit, helping CIOs to stay one step ahead in the cybersecurity arms race: 57 percent of organizations have already adopted cloud security and 36 percent plan to do so in the next one to three years.

"Why do people think they're more secure running their own platforms internally than going to a cloud vendor?" asks Conny Björling, head of enterprise architecture at global construction firm Skanska. "If the vendor is treating the service in the right way, it's probably more secure than running it internally in your own data center."

Cloud-mature firms have more secure and responsive IT environments. The research suggests a correlation between cloud maturity and the speed at which organizations detect threats: those with more applications in the cloud are more likely to be able to accurately detect new threats within a day. Similarly, cloud-mature businesses have the greatest confidence in their ability to accurately predict and mitigate potential new threats.

CLOUD-MATURE FIRMS RATE THEIR SECURITY THREAT DETECTION AS VERY GOOD/GOOD COMPARED WITH THOSE WITH LESS EXPOSURE TO THE CLOUD.

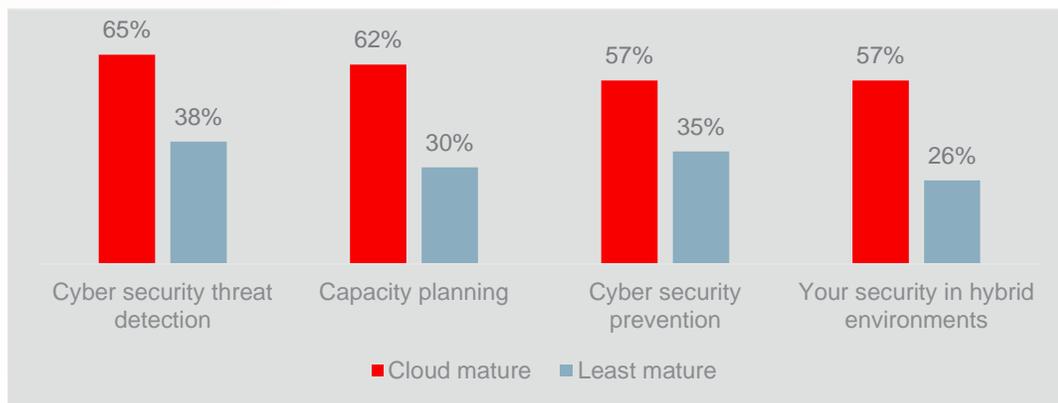


Figure 1. Responses to the question, "For security and management, how would you characterize your organization in terms of. . . Please select where your organization is positioned."

DIGITAL TRANSFORMATION

The rise of digital transformation has been inspired by companies' desire to think bigger—to enter new markets, target different geographies, expand available channels, and roll out additional product lines.

Businesses cannot afford to stand still, but they need to make sure they give new initiatives the best chance of success; as a CIO, that can empower you to create knowledge through better data management.

The amount of data that organizations gather has been growing rapidly, but how do they derive value from all that information after it's collected?



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Head of Enterprise Architecture
Skanska

² https://www.simnet.org/members/group_content_view.asp?group=140286&id=436627

One solution is to use a data warehouse, where advanced analytics and predictive modeling can be set to work to exploit companies' data stores. This is no small undertaking; data warehouses can require huge amounts of time and money to initiate and maintain.

Cloud data management offers an answer. Cloud data management systems and warehouses can be provisioned in minutes. Because they are self-repairing, they minimize costly downtime. This kind of data management is growing in popularity: 59 percent of respondents to the Longitude study are storing and managing data in the cloud, and another 35 percent expect to be doing so in the next one to three years.

With such systems underpinned by artificial intelligence (AI) and machine learning, not only can cloud-first CIOs get the most value out of their data, they can also get it into the right hands at the right time.

Because cloud services take full advantage of emerging technologies, they also enable you to deploy them. Having a robust cloud infrastructure means you can develop, test, and roll out cutting-edge technology solutions for staff, customers, and suppliers. For example, advanced cloud platforms now allow businesses to experiment with and release blockchain-based products that can help improve trust and security.

ACCESS TO INNOVATION

To produce actionable business insight, enterprises need to exploit the data compiled into data warehouses across both cloud and on-premises systems.

With better data and analytics on hand, CIOs can create an environment that enables greater experimentation. You can find new ways to build out the brand, respond to market dynamics, and provide services that are more personalized to customers' needs.

"When done well, moving to the cloud allows you to focus more on where, as an organization, you can add value," explains James Stewart, independent consultant and former deputy chief technology officer for the UK government. "It reduces the amount of time you have to put into managing the complexity of a large on-premises infrastructure. You get that time back to apply to other, value-adding initiatives—particularly innovation. And being in the cloud, with a major cloud provider, gives you access to innovation that's in the market."

For some companies, migrating analytics is the beginning of their cloud journey—the starting point for their IT estate moving to the cloud. Cloud analytics can be used across various lines of business to quickly generate ROI. By starting small, organizations can quickly reinvest the savings they generate into larger-scale projects that create even more value. Over time, CIOs can lead the move to a more advanced model of data analysis: more predictive, more prescriptive, and less passive.

Whether it's continually improving suggestions about which product a customer is likely to buy, or helping to predict production, logistics, inventory, and other problems before they disrupt operations, the gains can be quick and sizable.

As illustrated in Figure 2, the Longitude study found that 78 percent of cloud-mature businesses report improvement in their companies' innovation levels since development moved to the cloud. 74 percent report the same improvement in their ability to compete.



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*Independent Consultant and
Former Deputy CTO for the
United Kingdom*

CLOUD-MATURE FIRMS RATE THE IMPACT APPLICATION DEVELOPMENT IN THE CLOUD MAKES ON THEIR BUSINESS.

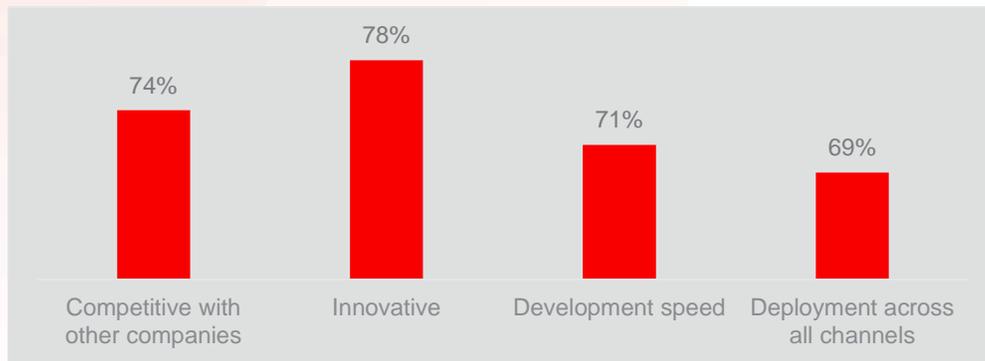


Figure 2. Responses to the question, “Developing in the cloud will make/has made us. . . . Please rate the extent to which you think developing applications in the cloud will impact/has impacted your business.”

The Longitude study also found that data analysis is already moving to the cloud. 51 percent of respondents use such systems, and 42 percent expect to be doing so within the next one to three years. Cloud-mature companies are also more likely to have mastered data analytics. 64 percent highly rate their ability to analyze most types of data, compared with 36 percent of less-mature firms. New AI and machine learning technologies are also being adopted with 65 percent of more-mature firms reporting they use automation and machine learning to streamline data analysis compared with only 28 percent of less-mature firms.

Data analytics is commonly the start of companies’ cloud journeys, but those that are furthest along are seeing the most benefit.

BOOSTING AGILITY AND SCALABILITY

As a CIO, you know that your business needs to be increasingly agile and scalable to respond to market changes. Achieving that degree of responsiveness is driving CIOs to find new ways of improving operations. Automation—from industrial internet applications to accounting software robots—is one tool that can help you build an IT estate that is flexible and responsive.

Automation enables faster processes, cuts manual errors, and frees up staff from repetitive tasks to take on more high-value and complex work.

As well as reducing manual overhead, autonomous cloud-based platforms enable CIOs to cut runtime costs. They scale elastically to match demand, so businesses only pay for the IT resources they use. Such platforms also dramatically cut the time it takes to deploy apps, provision data warehouses, and roll out new business processes, which could generate significant savings in resource costs and allow companies to accelerate release cycles. Because they enable businesses to proactively create new insights and predictively visualize data, autonomous data warehouses speed firms’ reactions to changing economic environments.

Seven in 10 respondents say that the cloud provides greater scalability and agility to be able to change according to business needs. Automation and the cloud are a natural match, and autonomous cloud services, underpinned by cutting-edge AI and machine learning, give CIOs a whole new suite of tools for creating efficiencies and driving innovation.

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Jeff Wittich
Director, Cloud Service Provider Business
Intel

of deployed infrastructure, faster time to market is a huge benefit of the cloud,” says Jeff Wittich, director of Intel Corporation’s Cloud Service Provider Business.

As illustrated in Figure 3, the Longitude study found that 7 in 10 cloud-mature firms report improvements in application performance, governance, and integration as a result of migrating to the cloud.

CLOUD-MATURE FIRMS RATE THE IMPACT MIGRATING WORKLOADS TO THE CLOUD MAKES ON THEIR BUSINESS.

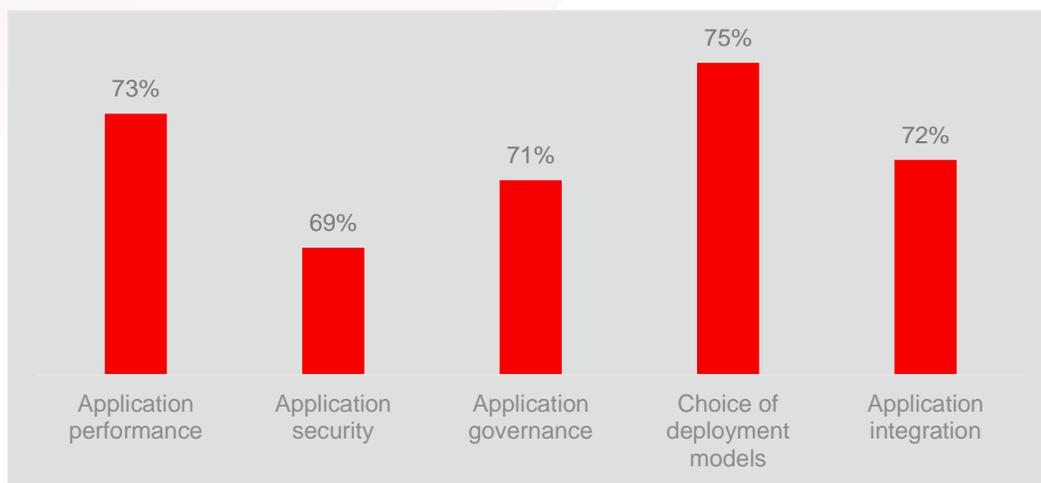


Figure 3. Responses to the question, “Please rate the extent to which you think migrating applications and workloads to the cloud will impact/has impacted your business.”

PRIORITIES UNDERPINNED BY THE CLOUD

Smart use of the cloud is an essential component of the CIO’s current technology agenda. Not only do cloud services enable you to tackle today’s challenges, but they also create a solid foundation for the business’ future.

Moving to the cloud allows you to address both short- and long-term goals. For some CIOs, the move to the cloud has been driven by a desire to update IT infrastructure, offering them a more responsive, up-to-date IT estate without time-consuming and expensive upgrades. For others, cost-saving is a key reason for a cloud migration because hosted services allow IT departments to spend only on the resources used while retaining the ability to scale up and down as business needs dictate.

The C-suite is certain that embracing the cloud helps them to achieve perhaps the most important goal: making customers happier. More than two thirds (71 percent) say moving to the cloud will allow them to better meet clients’ needs.

CIOs are clear about their direction of travel with cloud services: more and more of their IT estate will move to the cloud over time. Those organizations that are ahead of the trend see the greatest benefits of the cloud. The more cloud-mature an organization, the more likely it is to have a robust security environment, gain greater business value from its data, and be more innovative and competitive.

“The conversation about whether one should move to the cloud is no longer relevant. It’s just a question of how to use different cloud assets for specific business and tactical needs.”

The SIM study finds that CIO tenure is on the rise—up to an average 6.67 years, compared with an average of 5.44 years over the preceding four years.³ With a stronger mandate to deliver business value, CIOs know they can turn to the cloud as a trusted ally.

“The conversation about whether one should move to the cloud is no longer relevant,” says one senior IT executive interviewed for the research. “It’s just a question of how to use different cloud assets for specific business and tactical needs.”

ABOUT THE RESEARCH

This article is based on a survey of 730 senior IT leaders in 13 countries and nine sectors conducted by Longitude in 2017. This includes the views of 120 C-suite respondents, among them CIOs.

To learn more, visit oracle.com/goto/yourplatform

Or download the full report [here](#).



³ https://www.simnet.org/members/group_content_view.asp?group=140286&id=436627

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