

The Path to Value in the Cloud



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Introduction

In his groundbreaking book about the cloud, *The Big Switch*, author Nicholas Carr foresaw an epic change in “the nature and economics of computing,” with repercussions that reach far beyond the data center. That prediction from 2008 is holding up quite well as the cloud grows increasingly popular, and public, private, and hybrid options become mainstream business tools.

Cloud computing today is fundamentally altering business processes and changing the way organizations interact with customers, partners, and employees. This transformation brings incredible opportunities, including the ability to build a real-time enterprise where interaction and innovation flourish, and more agile, flexible, and cost-effective practices thrive. Yet cloud computing also presents significant challenges. The path to value is not clearly marked, and there are potential stumbling points along the way.

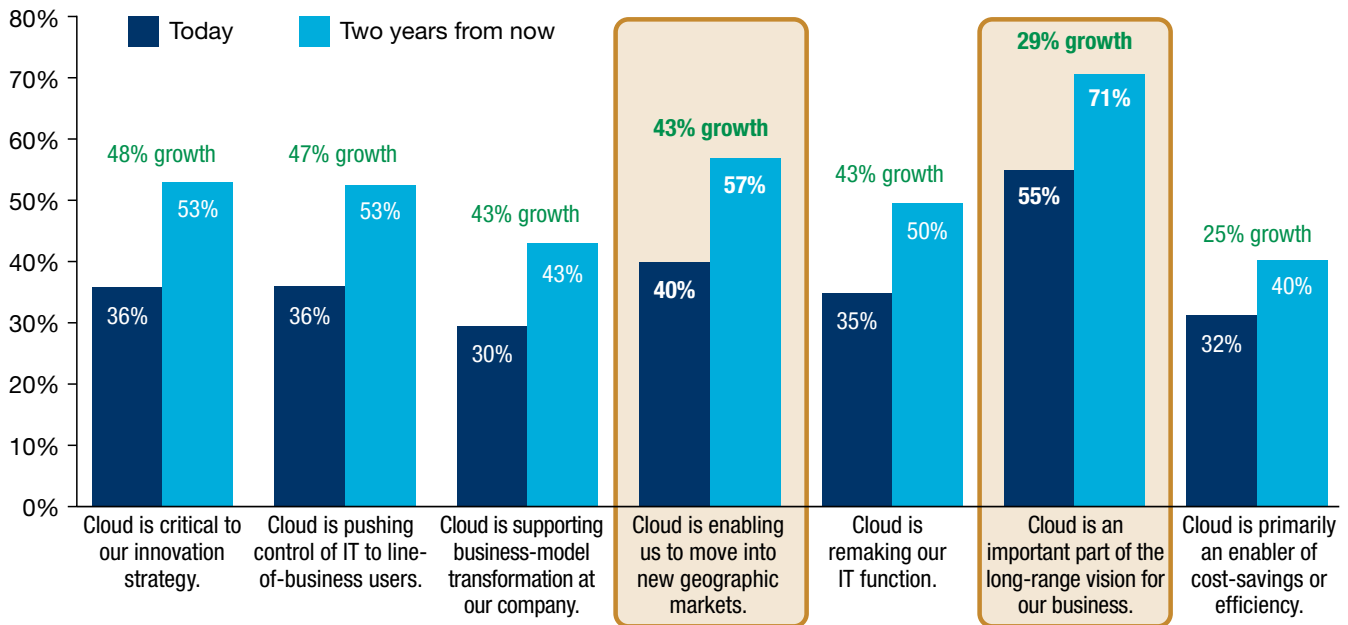
Research by Oxford Economics shows that the cloud already is central to strategic vision and operations—and that its influence is growing rapidly. As more and more business functions move into the cloud, organizations realize increasing benefits. Among the key findings of our national survey of 350 executives:

- Over half (53%) of respondents say cloud is a key to their innovation strategy, and nearly three-quarters (71%) expect the cloud to be part of the long-range vision for their business in two years.
- Geographic expansion and new lines of business are seen as key goals enabled by the cloud. Within two years, use of clouds to drive entry into new markets will increase by nearly 50%.
- Collaboration among business units (63%) and partners (59%), innovation (55%), and improved customer service (44%) are valued over increased efficiency (33%) and operational savings (36%). Time to market (52%) and business agility (50%) are also key drivers.

Cloud computing today is fundamentally altering business processes and changing the way organizations interact with customers, partners, and employees.

Fig. 1: Cloud becomes critical to business strategy

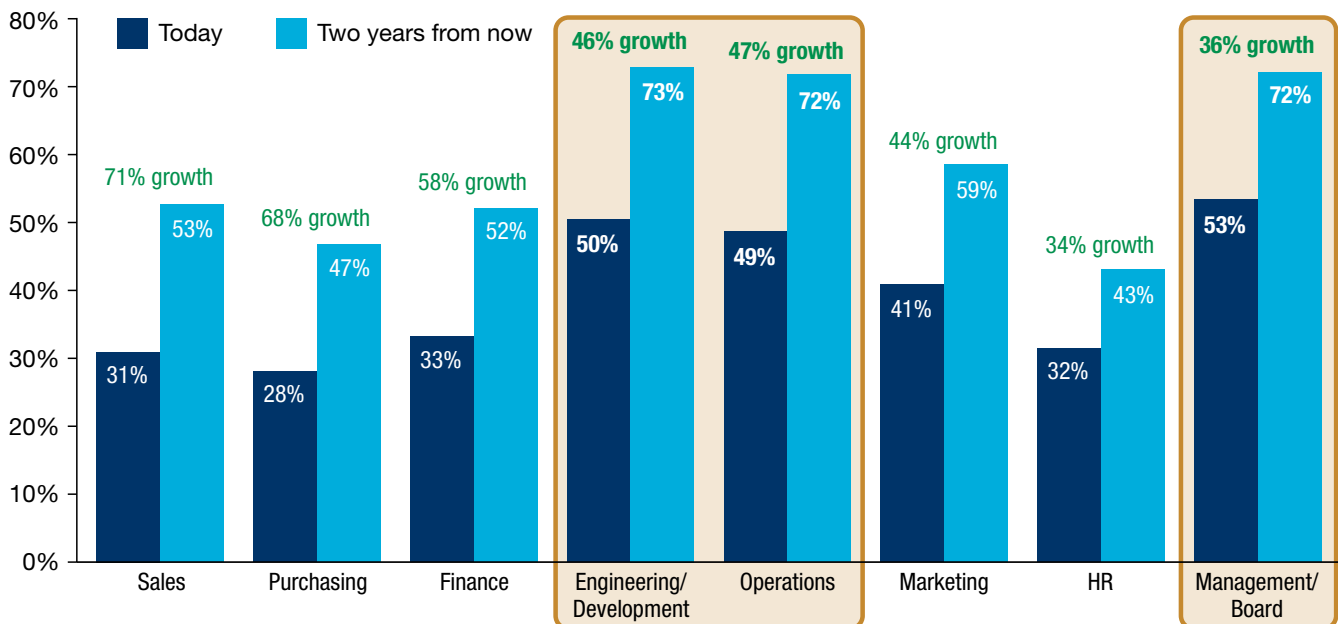
To what extent do you agree with the following statements about your company's cloud strategy today? Two years from now? Rate on a scale of 1–5, where 1 = Strongly disagree and 5 = Strongly agree. ("Agree" and "Strongly agree" responses)



As companies move to fulfill their strategic visions, they are pushing an increasing number of business functions into the cloud. The leading functional areas for cloud adoption are engineering/development, management/board functions, and operations. Growth in these areas will continue, along with sharp increases in sales (71% growth in two years), purchasing (68%), and finance (58%).

Fig. 2: Business functions in the cloud, now and in two years

To what extent do the following business functions operate using cloud-based services now? Two years from now? Rate on a scale of 1–5, where 1 = Not planned, 2 = Planned but not started, 3 = In development, 4 = Partially functional, and 5 = Fully functional. ("Partially functional" and "Fully functional" responses)



Yet for all this enthusiasm, many companies lack a clear strategy for migration to the cloud and cannot measure their progress.

- Only 31% say they have a clear migration plan in place.
- Less than half of firms have defined metrics for Key Performance Indicators (43%) and Return on Investment (40%).
- Security remains a prime concern, with 76% citing it as the top challenge influencing their cloud migration strategies.

Yet a select group of companies demonstrates that a more mature cloud strategy pays off handsomely when it comes to successful migration and business results. These leaders on the path to value—we refer to them as Trailblazers—demonstrate the path forward for other companies eager to tap into the power and performance of the cloud.

McKinsey Global Institute estimates that by 2025 most IT and web applications will be cloud-delivered or -enabled. And the incremental gains derived from individual cloud services pale in comparison to the returns possible within a highly integrated cloud framework. New products, services, and approaches to business are on the way. Those companies that are quick to develop migration strategies, learn to measure value, and pursue their business vision through the cloud are likely to see quantifiable improvements in financial performance and operational efficiency.

By 2025, most IT and web applications will be cloud-delivered or -enabled.

McKinsey Global Institute

Who took the survey?

Oxford Economics surveyed 350 business and technology executives in April 2014 to determine how companies are moving to the cloud. Respondents are evenly distributed across a range of industries. Nearly 80% of survey respondents are from the C-suite, and the rest are their direct reports. Respondents come from all 50 US states, with a fairly even distribution across regions. Respondent companies showed a broad range of annual revenue, and most expect modest to strong revenue growth over the next two years.

Fig. 3: Respondents by industry

What is your firm's industry segment?

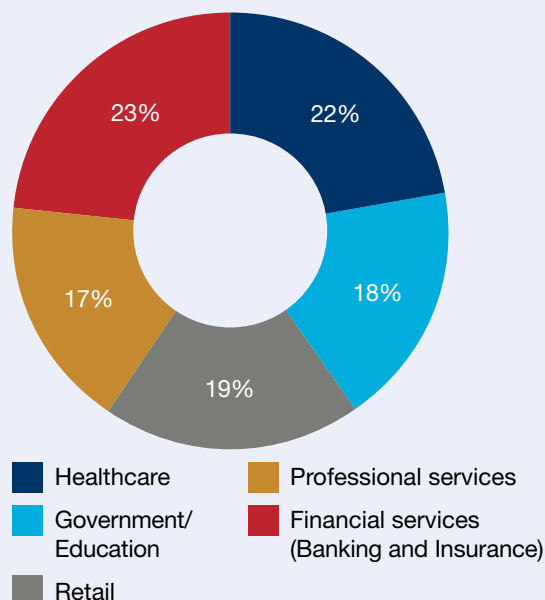
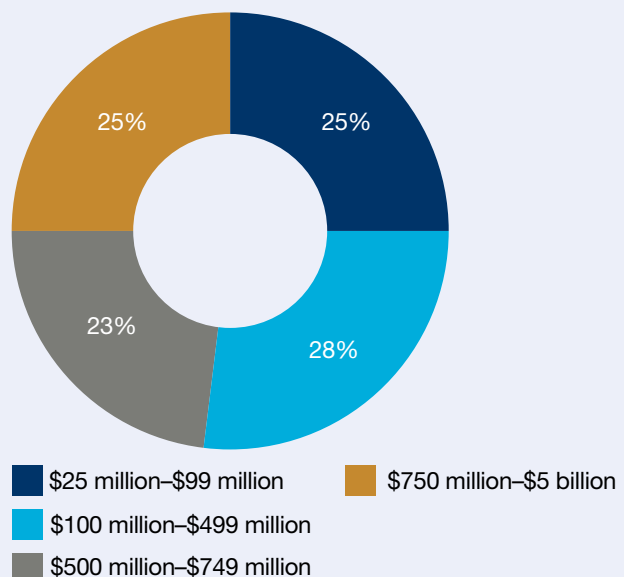


Fig. 4: Respondents by company size

What is your firm's annual revenue in US\$ for the most recently completed fiscal year?

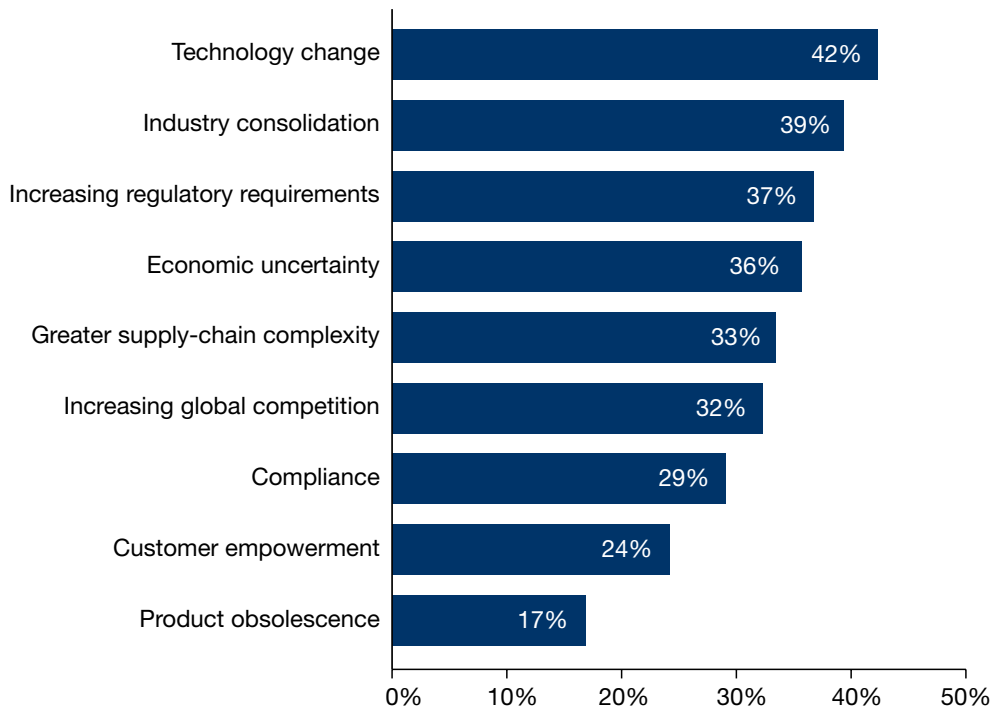


The Cloud Opportunity

The nature of business and IT has changed considerably over the last decade. As digital technologies and unified communications have supplanted legacy systems and processes, the need for a faster and better business framework has emerged. Clouds are fast becoming the structural foundation that supports mobility, collaboration, social media, and a spate of other key business functions such as ERP and e-commerce. What's more, as enterprises find themselves pressured by multiple factors—including changing technology, industry consolidation, growing regulation, and rapid globalization—there is a need to speed decision-making and act in a more agile and dynamic manner.

Fig. 5: Factors most affecting businesses today

Which of the following are most affecting your business today? Select up to three.



Clouds allow organizations to respond and grow in the face of these challenges. They offer an opportunity to move to a flexible and often state-of-the-art IT environment without undergoing a long and arduous purchase process and allow organizations to stay current with technology by virtually eliminating patches, upgrades, and many other tasks associated with traditional IT.

Jim Albert, CIO at Bankers Financial Corporation, a \$350 million insurer based in St. Petersburg, Florida, sums up some of the cloud's benefits for his firm: "I don't want a PBX in my building. I don't want a data center in my building. I do not want my applications sitting on servers in the building, and there is just no doubt in my mind that a cloud solution designed well by an A-grade company is going to be far more secure than my own systems here." What's more, he adds, "I don't want to put in a new system that will soon enough become another legacy system."

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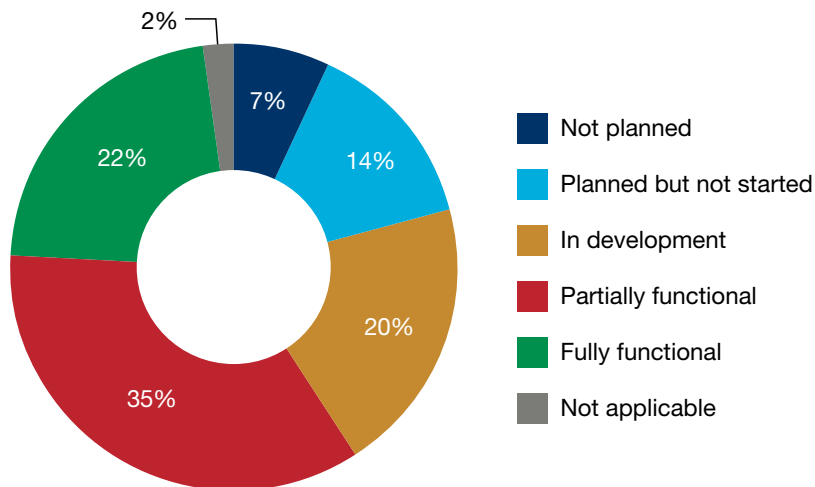
Jim Albert, Bankers Financial Corporation

But motivations for cloud adoption vary. Companies are looking for growth in a number of ways—and they rely on a number of approaches. When asked to choose top growth drivers, respondents mentioned geographic expansion (30%) and new lines of business (28%). Operational efficiency, once seen as a key driver for moving to the cloud, is becoming less important (21%) as the focus shifts from a utility mindset to a more strategic cloud framework. Survey respondents across several industries and markets—including B2B, B2C, and B2G—increasingly view cloud services in a strategic way. They believe that cloud services help them achieve their goals and objectives.

How far along are companies on this journey? Well over half (57%) of respondents say their cloud services are partially or fully functional today. Larger companies are leading this charge, with adoption rates strongly correlated with company size, but almost all organizations have these topics on their radar.

Fig. 6: State of cloud adoption

To what extent does your organization currently employ cloud and managed services?



Among the key differences visible by company size:

- Companies with \$25 million to \$99 million in revenue—the smallest among our survey sample—are less likely to use the cloud for data warehousing and application development two years from now, but more likely to put proprietary applications in the cloud in two years. Platform-as-a-Service may be an appealing option for firms with substantial cloud-based application development plans.
- Small companies are significantly less likely to have disaster recovery in the cloud both now (26%) and two years from now (41%) than the overall sample.
- Larger companies are much more likely to say their supply chain will be functional in the cloud in two years (73%, compared with 55% of the overall sample).

Firms that are slower to adopt the cloud, including many smaller companies, may find themselves at a serious competitive disadvantage. IT and business challenges often revolve around staying current with technology and systems, adapting to a more mobile work environment, adapting and adjusting quickly to changing needs and market trends, and building an infrastructure that is agile and highly flexible—all prime cloud-powered endeavors.

The cloud plays a growing role in connecting systems, people, and objects, enabling the communication and collaboration at the center of the real-time enterprise. Combined with time to market and innovation, these capabilities set the stage for high performance. Add in the burgeoning industrial Internet and the Internet of Things, and the cloud serves as a hub for a wide array of processes and events. As a result, the impact of the cloud will increasingly define the enterprise and IT over the next two years.

- 83% of those surveyed expect the cloud to increase collaboration among business units in two years, up from 63% today.
- 69% expect the cloud to support innovation in two years, compared with 55% today.
- 67% expect improved time to market in two years, compared with 52% today.

Case Study: Bankers Financial Corporation Puts Its Money in the Cloud

Florida-based insurer Bankers Financial Corporation is using the cloud to jump-start a major IT refresh program. The \$350 million firm had relied on an IBM AS400 to manage a variety of computing tasks. “We had a number of applications that weren’t talking to each other,” says CIO Jim Albert. Maintenance was a major issue, and finding developers for the aging software was a growing challenge. “We didn’t want to pin our future on a disappearing development language.”

But the cloud is more than a way to escape the costs of owning legacy assets, says Mr. Albert—it also enhances business performance. “A legacy approach ultimately makes us slower to market.”

As a result, Bankers has moved from having “nothing in the cloud two years ago to a lot of things in the cloud today.” The firm’s first foray was CRM application Salesforce.com. That ratcheted up customer analytics and allowed the company to automate a number of key processes. More recently, Bankers expanded into a cloud-based approach for its call center agents, which has made it easier for employees to share data and information on a real-time basis—greatly enhancing customer service. “We now have a unified view of customers. We are able to react to problems faster and far more effectively,” he says.

Bankers also uses Microsoft Office 365 and is exploring other IaaS and SaaS options, including putting its claims data in the cloud and using the cloud for policy administration. It also is migrating to the cloud for disaster recovery. Cloud computing has allowed the IT department to reduce administrative overhead and become more strategic within a faster and increasingly efficient enterprise. “We have toppled some huge IT and business obstacles,” Mr. Albert concludes. “We are much better equipped to deal with the challenges of today’s business environment.”

Glossary of key terms

- **Managed services** allow companies to leverage a deep pool of engineering talent with 24x7 coverage and industry-leading SLAs that manage thousands of systems, providing faster time to repair than most limited IT organizations. Managed services can be leveraged across all cloud and Infrastructure-as-a-Service (IaaS) solutions, and include proactive systems management and monitoring, reporting, and software and hardware updates.
- **Infrastructure-as-a-Service (IaaS)** uses outside resources managed by a service provider—including servers, storage, and networking components—to provide computing power and other resources on demand.
- **Platform-as-a-Service (PaaS)** allows developers to obtain hardware and software resources on demand on a purpose-built platform.
- **Software-as-a-Service (SaaS)** is a licensing and delivery model that relies on an application service provider to deliver software on a subscription basis.
- **Public clouds** are platforms that are shared among other clients in a scalable and secure multi-tenant environment that includes servers, storage, software, and other resources.
- **Private clouds** are similar in function to public clouds, except that resources are dedicated to one internal group or enterprise.
- **Hybrid clouds** combine aspects of both public and private clouds in order to deliver scalability and cost advantages while managing to higher levels of audit scrutiny and security.

Mapping the Path to Value

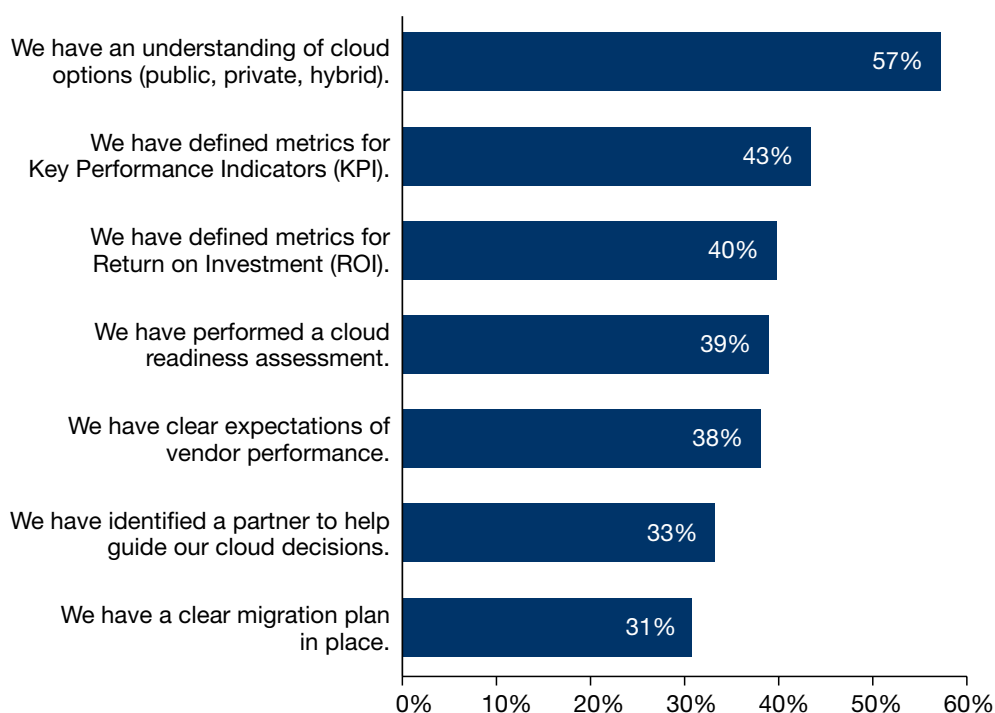
The rapid growth of the cloud has many organizations scrambling to come up with coherent plans for migration. Despite big expectations, they lack a clear strategy for execution. Furthermore, many don't know where to begin the transition, how to conduct internal assessments, and how to begin identifying and selecting vendors.

Only 57% of organizations have a clear understanding of cloud options. Fewer than four in ten have performed a cloud readiness assessment, and about the same percentage have clear expectations about vendor performance.

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Fig. 7: Cloud and managed services maturity

Please indicate your agreement with the following statements about the maturity of your company's cloud and managed services strategy. Rate on a scale of 1–5, where 1 = Strongly disagree and 5 = Strongly agree. ("Agree" and "Strongly agree" responses)



- Companies with higher profit margins are ahead of their peers; 55% of high-profit firms have defined metrics for ROI, compared with only 40% of the total and 33% of the least-profitable companies.
- Even the most-profitable firms have far to go—only 43% have a clear migration plan in place.

Furthermore, many companies lack metrics to measure their success in the cloud, or even understand their options.

The bottom line? Business and IT leaders must formulate a cloud strategy and refine it as their needs evolve with the growth of mobile, social, and collaborative applications.

Meet the Trailblazers

Companies furthest along the path to value—Trailblazers—are more likely than their peers to establish a clearly defined strategy for migrating applications and data to the cloud. And this maturity has measurable rewards: Trailblazers have higher profit margins (over 10%) and are more likely to have been profitable over the last two years than other respondents.

These leaders view the cloud as a way to open new markets and new lines of business that, in turn, spur greater growth. Gains accrue in terms of both internal and external collaboration, as well as improved product and service offerings, and better time to market. Over half (52%) of them say that clouds are critical for innovation, compared with 33% of non-leaders.

Trailblazers also realize increased efficiency, operational savings, reduced head counts, and capital savings. And they see these benefits accelerating over the next two years as they move deeper into the cloud and learn how to use clouds more effectively.

Finally, Trailblazers are far more likely to place key applications in the cloud, including CRM, project management, supply chain, ERP, and proprietary applications. However, even these leaders have far to go: just 58% have defined metrics for KPIs, and even fewer measure ROI (50%).

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Security and Other Challenges

From the earliest days of the cloud, security concerns have loomed large in the minds of prospective customers. Today, despite a growing sense that hosting firms and managed service providers can deliver better security and deeper protections than many IT departments, companies still get nervous about putting critical data into someone else's hands. Add in the challenge of safely interconnecting systems across companies, vendors, and other data sources, and it's clear that security anxiety is not going away.

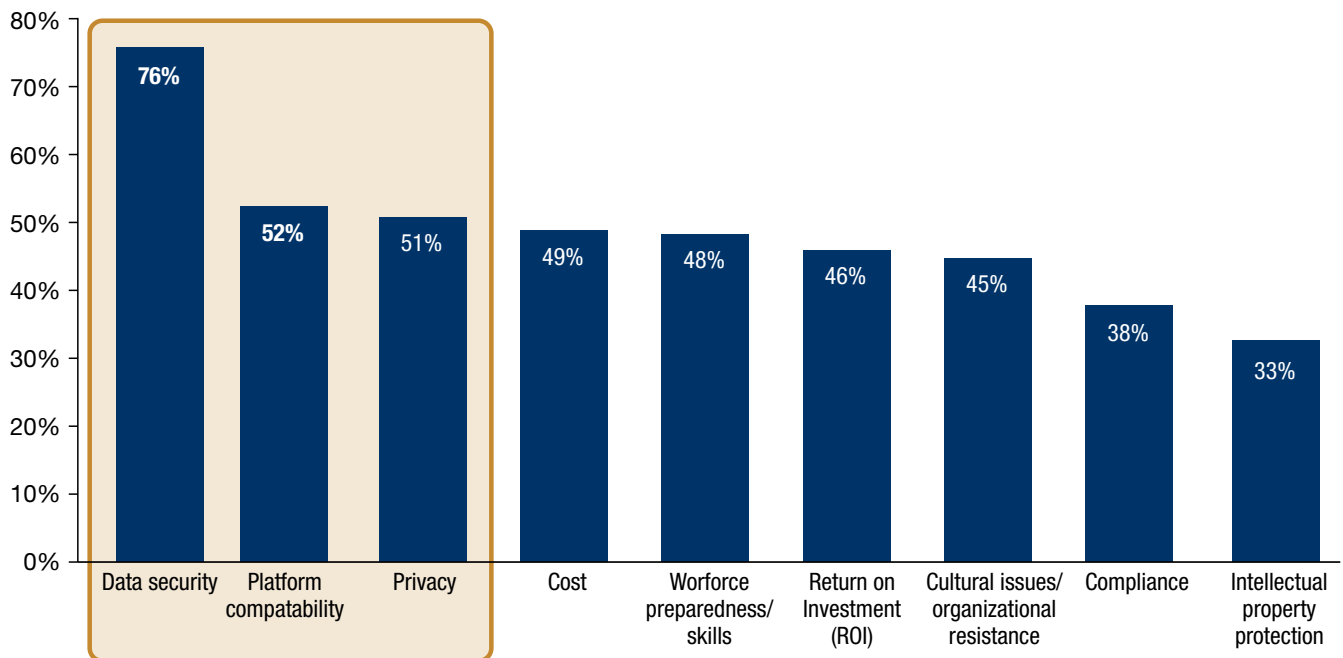
Thus it is no great surprise that 76% of respondents say data security is the top concern influencing their migration strategies. Platform compatibility tallied a distant second, with privacy, cost, and workforce readiness close behind. Yet companies in different industries have somewhat different perceptions about risk. While 87% of healthcare executives indicate that concerns over data security influence their migration strategy, the figure drops to 74% in retail and professional services and to 71% in financial services. Likewise, not all functions view things the same way: more than 84% of CIOs recognize the need for strong security in order to migrate to the cloud, but the figure drops to only 71% for other C-level executives.

Buy-in and cooperation are critical for a cloud migration strategy to succeed. One problem that many organizations face is the emergence of operational silos. Part of the cloud's appeal is that it offers a simple and straightforward way to plug in capabilities on the fly—for business analytics, marketing, human resources, financial functions, and much more. But the same simplicity can generate complexity. Unless line-of-business executives and operational managers engage in a dialogue about technical issues, security, and more, the result can be IT gaps, glitches, and breakdowns.

There is also concern among executives about the threat of service disruption. As Mr. Albert says, "What if the Internet goes down or a cloud provider fails? What if they go out of business?" Meanwhile, Jack Whitley, senior vice president of e-commerce at Replacements, Ltd., a privately held Greensboro, North Carolina, retailer, says it is critical to reevaluate everything from how resource provisioning takes place and how data is stored and accessed, to underlying software code that takes advantage of the elasticity of the cloud and allows an enterprise to scale outward.

Fig. 8: Concerns most affecting cloud migration strategies

To what extent do concerns about the following influence your migration strategies? Rate on a scale of 1–5, where 1 = Not at all and 5 = To a great extent. (“To quite an extent” and “To a great extent” responses)



Respondents recognize a number of potential roadblocks on the path to value:

- Large companies are more likely to cite platform compatability (64%) and privacy (61%) as influencers than the overall group of respondents. For these large firms, cost is less important (43%, compared with 54% for companies with between \$25 million and \$99 million in revenues).
- Only 45% cite cultural issues and organizational resistance as a barrier to migration, and 38% listed compliance. However, these two issues are often critical elements to success in cloud computing. This is especially true for healthcare and financial-services firms.
- Trailblazers are more concerned with intellectual-property protection (47%, compared with 31% of non-leaders). This is significant because, as digital business grows, data is increasingly viewed as a form of capital.

The takeaway for executives: it is essential to connect security concerns with an overall cloud strategy—and to do so from the start. Protections must be woven into applications, devices, endpoints, and overall workflows in a systematic and comprehensive way. At the same time, companies procuring cloud services must take the time and engage in the necessary research to know that a solutions provider offers deep and broad protections that can be identified in a service-level agreement (SLA).

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Case Study: Replacements, Ltd.

At Replacements, Ltd., an \$80 million (annual revenue) North Carolina retailer that specializes in china, crystal, and silver replacements for broken, damaged, or missing pieces, evaluating cloud options has emerged as an integral part of the firm's business strategy. The intersection of antiques and digital bits and bytes has led e-commerce chief Jack Whitley to think very differently about information technology for the company's e-commerce efforts.

The company, which has 12 million pieces in its inventory and caters to about 11 million customers, is looking to cloud computing to ratchet up its efficiency and capabilities. "We have a very computationally intensive set of requirements that would typically match a much larger company," Mr. Whitley explains. Last year, during the "Black Friday" retail peak after Thanksgiving, for example, the firm recorded 5,400 concurrent visitor sessions on its web site—about one-tenth that of Healthcare.gov, which was designed for the entire population of the United States.

"Our load requirement was 10% of Healthcare.gov, but we didn't have 10% of their \$600 million budget," Mr. Whitley says. So, as part of a technology re-platforming project, Replacements is turning to a cloud model that provides a high level of elasticity. "It will allow us to run our web business in a way that provides the scale and speed we require in a manner that is far more cost-effective," he says. "We will have the ability to spin up virtual machines and capacity as we need it."

But it is not as simple as plugging in existing software. Replacements will redevelop key web applications to run in the cloud. It will also remap business processes and workflows. Along the way, Mr. Whitley has focused on finding the right balance between vendor offerings and service and self-service consoles and dashboards that empower the company and unleash greater productivity. "What is significant about the cloud is that it is as much a service partnership as it is a technology partnership," he says. "Speed, uptime, and response time are critical ... In today's business environment, a collection of small differences eventually adds up to significant gains."

"Cloud will allow us to run our web business in a way that provides the scale and speed we require in a manner that is far more cost-effective."

Jack Whitley, Replacements, Ltd.

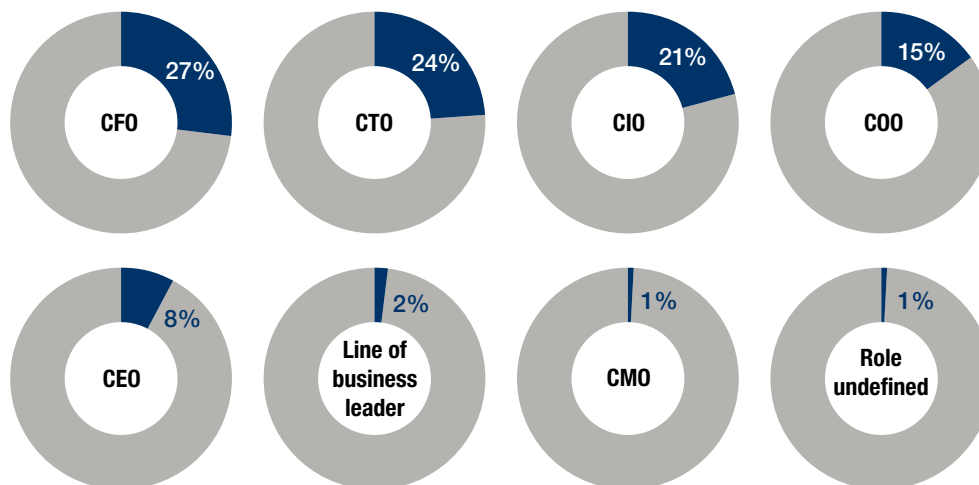
Choices Along the Path to Value

How an enterprise structures and manages cloud computing services says everything about its approach to digital technology. One critical issue is piloting a strategy in a clear direction and balancing the needs and concerns of different executives, business units, and constituencies. Although ultimate decision-making power resides with the C-suite, the push and pull of other groups—including finance, HR directors, and the marketing function—is indisputable. These functions play a growing role in defining the path of cloud services and the overall enterprise direction.

But there is another, often overlooked aspect to cloud deployment: it requires organizations to adopt a streamlined decision-making and approval model. An agile business framework is not possible when IT is too heavy-handed about the process of cloud selection and procurement. IT must serve as an enabler rather than a roadblock. It must provide technical expertise in a domain where non-technical people are increasingly making buying decisions.

Fig. 9: Who is driving cloud decision-making?

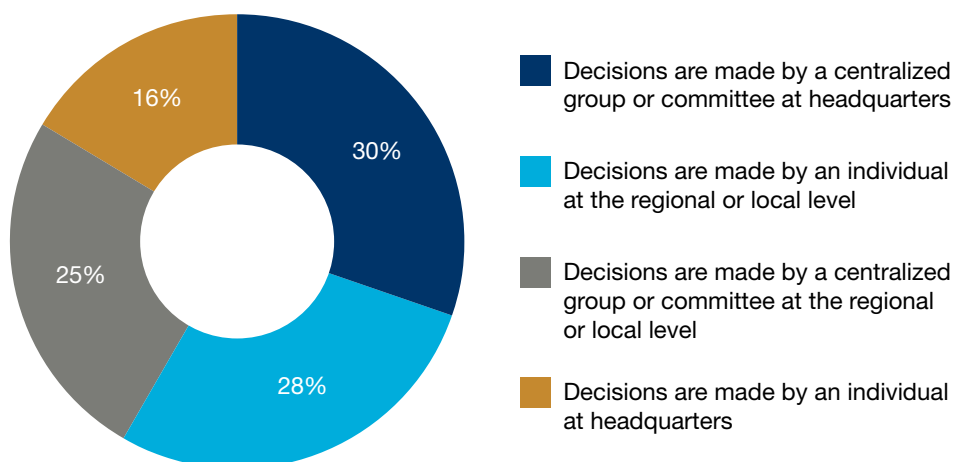
Who is the ultimate decision-maker on cloud and managed-services strategy at your company? Select one.



Yet within many organizations, the decision-making process is not clearly defined. CTOs, CIOs, CFOs, COOs, and CEOs all play a role in directing cloud initiatives within the enterprise. While this fact is not entirely unexpected—various organizations approach business and technology tasks differently—the findings reveal a strong need for clearly defining roles and building in mechanisms that facilitate regular and clear communication.

Fig. 10: Decision-making strategy

How are decisions about cloud and managed-services strategy made at your company?
Select one.



Larger enterprises tend to assign decision-making duties to a centralized group at the regional level—it is rare for these organizations to drop the responsibility into the hands of a small and centralized group at headquarters. In fact, only 39% of large firms opted for a centralized approach, and a mere 9% indicated that a single individual dictated the process. At smaller firms, on the other hand, the corresponding numbers are 20% and 21%. Government and educational institutions are most likely to say that a centralized committee at headquarters makes key decisions about clouds (37%).

Decisions about cloud engagements frequently revolve around a few key issues, including pricing and scalability. Among our key findings:

- Smaller companies are far more likely to name pricing and scalability as top concerns (41%) than the largest companies (5%).
- Portal capabilities are more important to larger firms than the overall body of respondents (79% vs. 65% of the total).
- Although data security is a top concern, only 53% rank a minimum threshold of security as high importance. This clearly represents a disconnect that organizations must grapple with and ultimately address.
- Trailblazers are more likely to value pre-sales engineering that aligns the solution with business needs (71%, compared with 55% of the total) and more likely to value portal capabilities (77%, compared with 63% of the total) and additional services like network application and support.

Large differences also exist in expectations across different size firms. Larger firms expect service providers to add measurable value to business results (84%, compared with 51% at smaller firms, and 46% at medium-sized companies); 65% expect to have a self-service portal in place after the initial implementation (vs. 37% at smaller companies); and 53% expect a pre-sales technical consultation, compared with only 31% of small firms.

While the cloud plays an increasingly critical role at the application layer, the infrastructure layer, and in managing both structured and unstructured data across an enterprise and supply chain, the overarching challenge is identifying how to incorporate all of these pieces into the fabric of the enterprise. The question is not whether businesses and institutions will use cloud computing—it is how much, where, and, ultimately, how successfully they tackle it. Delivering a digital agenda within an agile infrastructure is now the baseline for success in the digital age.

The overarching challenge is identifying how to incorporate all of these pieces into the fabric of the enterprise.

Conclusion

Cloud computing delivers clear advantages for businesses across industries and company shapes and sizes. These include increased innovation, improved agility, greater flexibility with IT and telecom resources, faster and better collaboration, and more efficient use of staff and resources. In the end, clouds allow enterprises to focus on core business issues such as creating better products and services, adjusting rapidly to changing conditions and trends, using information technology in a more strategic way, and reducing capital expenditures.

But clouds also present formidable challenges—and the transition can prove rocky. In the end, a number of factors contribute to a best-practice approach to the cloud. Organizations reaping the biggest rewards from the cloud focus on a few critical areas. These companies:

- Devote attention and time to building a strategy. Mr. Albert refers to this as “mapping out the swim lanes for where we are today vs. where we want to be.”
- Identify decision-makers and thought leaders and empower them to take action.
- Look for cloud providers that offer necessary expertise and assistance. What’s more, they spend time conducting due diligence and identifying the best providers and then negotiate a solid SLA. At Replacements, Ltd., for example, selecting a technology partner for the cloud “can take several months and require extensive analysis and research,” Mr. Whitley says.
- Identify KPIs and metrics to ensure that strategy and business practices are tightly integrated with one another. They validate these KPIs and ensure that a cloud solution is providing the desired results and ROI.

Success in the cloud requires a well-defined strategy and a clear migration path. It demands a vision, and a clear view into business processes and workflows. Finally, it requires an entirely different mindset and IT philosophy that is suited for managing real-time data, instant information, and ongoing knowledge exchange. Companies that execute on a cloud strategy boost the measurable value of their business results. They position themselves to compete in a more agile, flexible, and responsive way to the rapidly unfolding challenges of the digital age.

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