

Hitachi Data Systems

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Inspire the Next

EMBRACE ENTERPRISE CLOUD FOR

Digital Empowerment and Transformation



Organizations must adapt faster than ever to remain competitive. Enterprise leaders, including CIOs and other IT leaders, must transform their organizations with nimble digital solutions and processes to thrive.

Key drivers of digital transformation include:

- ✓ *Better-informed, increasingly demanding customers.*
- ✓ *A mobile workforce requiring new types of connectivity.*
- ✓ *Massive new data streams and increasing storage needs.*
- ✓ *Rising cybersecurity threats and strict compliance regulations.*
- ✓ *Opportunities for increased workload efficiency.*
- ✓ *Flexible IT consumption models.*

To meet these challenges, organizations are recognizing the need to adopt an enterprise cloud strategy. By enabling increased flexibility and mobility in the business model, a cloud investment can serve as a foundational component of digital transformation.

Digital transformation is the
top strategic priority for
50%
of enterprise executives.¹

Digital transformation is the
key focus for all companies,
regardless of size or industry.²



BUY IN

It is no secret that cloud adoption is steadily increasing. The factors driving investments in enterprise cloud are numerous, diverse and unique to each organization. The pressure to adapt can lead enterprises to attempt ad hoc cloud deployments, expecting a broad implementation to serve as a panacea. Instead, unfocused deployments often result in excessively complex IT environments that fail to achieve the desired business outcomes.

In many cases, IT departments that funnel capital into a private cloud end up spending more time building and maintaining their cloud solution than leveraging it for cost savings and data-driven decision-making. To improve investment quality, the question then becomes: How do organizations ensure that their approach to enterprise cloud has the right balance of upfront investment, immediate utilization and ongoing value?

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70%

of companies currently have at least one application in the cloud.³

30%

of CIOs cite cloud computing as the top tech initiative driving IT investment.⁴



95%

of private cloud initiatives encounter serious problems.⁵



EARN REWARDS

Among the most commonly cited benefits of a cloud deployment are reduced hardware costs, improved service delivery and better business continuity. But as enterprise-wide digital transformation becomes a greater priority, cloud capabilities are becoming essential across the entire organization, delivering a host of desirable business outcomes, including:

- ✓ *Empowering employees with access to data and applications from anywhere.*
- ✓ *Creating engaging customer experiences.*
- ✓ *Enhancing internal business processes.*
- ✓ *Developing more effective business intelligence strategies.*
- ✓ *Redirecting resources toward a DevOps model.*

These capabilities live side by side with another important motive for embracing digital technologies: becoming a more agile enterprise. Digital technologies present direct and cost-efficient means of gaining agility, enabling the enterprise to continuously evolve and innovate at scale.

As shifting business climates necessitate greater responsiveness and flexibility, enterprises rely on data to guide them toward the best course of action. But many companies fail to utilize the full breadth of their data or realize its full value. Many on-premises systems are becoming bogged

down by unprecedented data flows, causing storage and processing difficulties. The situation is exacerbated by the rise of the internet of things (IoT) and what IDC calls “third platform technology,” which encompasses social media, the cloud, big data and mobile computing.

Cloud solutions enable organizations to scale quickly and efficiently to satisfy new storage and data processing demands. But to do more than keep up, enterprises must find ways to extract value from these data streams that lead to strategic, actionable business intelligence. Cloud-based analytics will be key to enabling this value chain and determining the success of a cloud transition, as well as the survival of the enterprise during transformative times.

ONLY
21%



of enterprises use cloud-based analytics, but 64% will within three years.⁶



TOP PRIORITIES FOR CLOUD MIGRATION:

Data analysis, management, sharing and storage.⁶

Spending on big data analytics will reach

US \$187 billion
in 2018.⁷



DRIVE NEW OUTCOMES

Because the term digital transformation can mean different things to every enterprise, a successful digital strategy will look different for each organization. Enterprises must develop a distinct path to cloud deployment that is defined and measured by its particular needs.

New cloud deployment models are emerging that help IT teams ensure that their cloud investment delivers immediate, recognizable value that supports enter-

prise-specific goals. As the need for new applications and technologies emerges, the enterprise is equipped with the flexibility, data, and expertise to adapt and thrive.



LEARN MORE ABOUT THE ROLE OF THE CLOUD IN DIGITAL TRANSFORMATION



WATCH HOW TO ADDRESS THE BIGGEST PRIORITIES OF THE ENTERPRISE CLOUD



Recent editorial reports from CIO and Computerworld provide deeper insights into how business leaders are investing in digital transformation and accelerating cloud adoption.



CIOs MOVE MORE DOLLARS TO DIGITAL TRANSFORMATION

CIOs are investing more money in technologies that support shifts to digital services intended to woo and retain customers, according to Gartner's 2017 CIO agenda survey.

By Clint Boulton | Senior Writer, CIO | Oct. 16, 2016

It's become fashionable for CIOs to drop the phrase "digital transformation" to describe their use of cloud, mobile, analytics and other emerging technologies to stimulate business growth. Researcher Gartner, after surveying 2,600 CIOs worldwide, has some numbers that lend empirical support to the digital deluge. CIOs

are already spending 18% of their budget in support of digitalization but that number will set to increase to 28% by 2018, Gartner analyst Andy Rowsell-Jones tells CIO.com.

Top-performing businesses, in which digitalization is already woven into their planning processes and their business models,

are spending 34% of their IT budget on digital, with plans to increase that to 44% by 2018. Driven by consumers accustomed to such niceties as mobile apps, smart appliances and connected cars, the digital business shift is afoot.

Digital Disruptors Threaten Traditional Business

"You're seeing products become services in the digital ecosystem," says Rowsell-Jones, who presented part of Gartner's 2017 CIO agenda survey during its Gartner Symposium/ITxpo, in Lake Buena Vista, Florida. He says that companies are overhauling their business models and allocating more of their IT budgets to catch digital disruptors.

Digital disruptors exist everywhere. Brick-and-mortar retailers are following Amazon.com's myriad digital efforts to get products to consumers as efficiently as possible. Gillette began selling razors online as Dollar Shave Club and marketed its way to three million customers. General Electric's industrial IoT, in which it is creating a "digital twin" for every physical machine it makes, is forcing other manufacturers to rethink their go-to-market strategies.

CEOs and their boards, which have watched these digital disruptors blow up markets, have become the tail wagging IT. Often it is the CEOs leading the digital overhauls as they search for new revenue streams to counter innovations that brash startups brandish like weapons. Top digital performers focused on innovation and new service delivered reported a 4.6% budget increase, more than twice the average increase of 2.2% in the enterprise IT budget.

Rowsell-Jones said this increase caught him off-guard because he had expected the majority of CIOs would be focused on reducing IT cost. "We were pleasantly surprised that IT cost didn't dominate the [survey] agenda."

CIOs said they expect to invest more money in analytics, cloud services, digital market management and security. Business intelligence and analytics continue to top investment priorities across all organization types with an average of 38% of respondents citing them in their top three priorities.

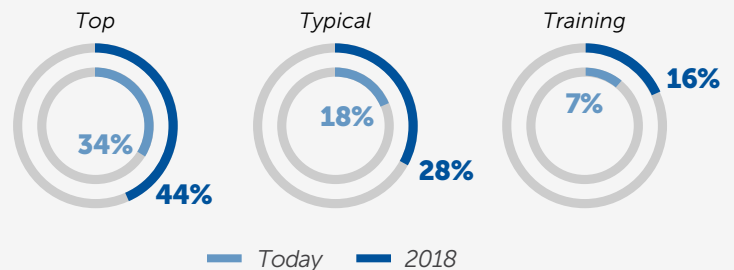
Rise of Digital Ecosystems

The maturation of digitalization has also triggered a halo effect, which Gartner defines as a grouping of enterprises, competitors, customers, regulators and other stakeholders that exchange information and interact electronically.

Such ecosystems, which include Apple's App Store, Amazon's Kindle Store and Facebook, enable connections between partners and customers. Seventy-nine percent of top performers participate in digital ecosystems, distinguishing themselves from the 49% and 24% for average and trailing performers, respectively.

Spending on Digitalization Will Increase, According to Gartner Research.

Average (Mean) Percentage of IT Budget Spend on Digitalization



Top performers can amplify a company's reach, build platforms and invite others to join them by releasing APIs. Several banks are hosting hackathons to lure developers to build applications based on their programming interfaces. "If you're early enough to a market and big enough you can create your own ecosystems," Rowsell-Jones says.

Digital transformations don't lack for obstacles. The chief hurdle continues to be the dearth in IT skills. An average of 34% of respondents reported that information-related skills represent the biggest gap, especially skills required to work with advanced analytics systems.

"The skills that have previously been applied to predigital diagnostic analytics are not sufficient for the new real-time data scenarios presented by the internet of things, personal analytics, operational technology and information ecosystems," Rowsell-Jones says. "As a result, newer skills are in short supply and expensive."

CLOUD ADOPTION KEEPS MOVING AHEAD, SURVEY SAYS

The average company will allocate more than 25% of their IT spending to cloud.

By Computerworld staff | Computerworld | Nov. 4, 2016

Companies continue their migration of both applications and computing infrastructure to the cloud at a steady pace. They have moved 45% of their applications and computing infrastructure to the cloud already, and they expect well over half of their IT environment to be cloud-based by 2018, according to a recent IDG Enterprise survey of 925 IT decision-makers.

On average, IT decision-makers (ITDMs) plan to allocate more than a quarter of their total IT budgets to cloud spending, but organizations with fewer than 1,000 employees are making significantly different choices than larger enterprises in how they spend that money.

The Four Main Drivers Moving IT Decision-Makers to Cloud Computing Are:

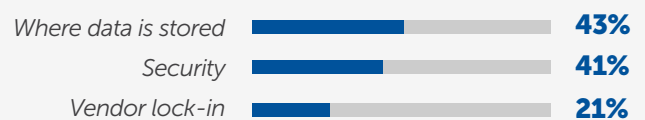
- ✓ Lower total cost of ownership.
- ✓ Replacing on-premises legacy systems.
- ✓ Enabling business continuity.
- ✓ Speed of development.

Seven in ten (70%) have already moved at least one application or a portion of their infrastructure to the cloud. Another 16% plan to do so in the next 12 months, while the remaining 14% plan to move applications or infrastructure to the cloud within the next three years.

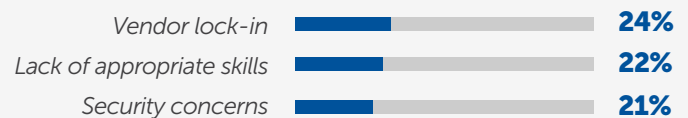
Currently, the average company has 45% of its IT environment in the cloud, with 23% in private cloud, 15% in public cloud, and 7% in hybrid cloud. By the end of 2017, though, the average company expects to have moved 59% of the IT environment to the cloud: 28% in private cloud, 22% in public cloud, and 10% in hybrid cloud.

That's not to say there aren't concerns about the move to cloud; ITDMs name the following as their top three worries in each of the major cloud models:

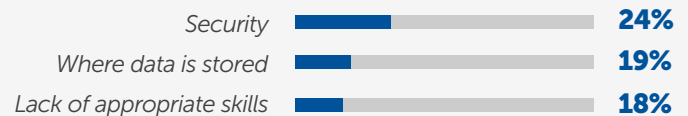
Public Cloud



Private Cloud



Hybrid Cloud



UNDERSTAND THE KEY CHALLENGES OF CLOUD ADOPTION

The demands of digital transformation bring a vast set of challenges that affect each organization differently. Some organizations struggle to provide new hires with immediate access to network resources, others have difficulty granting real-time access to customer support, and others drown in oceans of data. Whatever the goal, cloud-based solutions can often provide the capabilities to overcome these types of challenges.

Key Challenges to Cloud Adoption:

- ✓ *Exorbitant upfront investments.*
- ✓ *Determining accurate return on investment (ROI).*
- ✓ *Lack of accessible talent.*
- ✓ *Integrating legacy systems.*
- ✓ *Developing a clear strategy.*

However, the barriers to cloud adoption can be prohibitive. Traditional migration paths often demand hefty capital investments and require hard-to-find expertise. And then there's the issue of forming an effective cloud strategy. It can be difficult to determine which type of cloud services are best for an organization's specific needs and existing sets of diverse applications and workloads. As noted earlier (see page 4), every cloud strategy and every configuration type, including public, private or hybrid, comes with its own set of challenges.

The move to cloud computing can place a heavy burden on already-taxed IT teams. System administration, operations, life-cycle planning, infrastructure optimization and management are all vital to establishing and operating a successful cloud platform. Other activities, such as adding and rebalancing infrastructure across data centers, ensuring data protection, selecting the right middleware, and integrating disjointed sets of hardware and software, add to the complexity of cloud operations and consume even more resources.

These hidden responsibilities can present a problem, because IT resources are diverted from enabling the very transformation that cloud adoption was intended to promote.

Another significant risk is that enterprises may invest substantial time and resources in building a cloud platform that doesn't meet strategic business objectives. Too often technical specifications and other concerns drive cloud development and implementation, leaving the fundamental advantages of cloud deployment, such as workload efficiency and flexible consumption, as afterthoughts to the process.

Annual spending on IT infrastructure hardware (server, storage and network) to build and maintain private clouds in their own data centers will maintain a

10% CAGR
and reach
US \$20.3 billion
by 2020.⁸



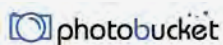
To avoid these scenarios, enterprises require solutions with predictable pricing and clear ROI. Investments in cloud solutions must pay for themselves quickly, while delivering the agility needed to realize business goals today and the flexibility to adapt in the future. The key is to minimize the pain of transition. Identifying cloud service and infrastructure providers that deliver turnkey options for fast deployment, smooth integration and easy expansion is essential for enterprises to remain relevant and competitive in a dynamic business environment.

MEET THE NEEDS OF THE MODERN ENTERPRISE

Lower operating costs with fewer capital expenditures are expected outcomes of cloud adoption. However, as organizations seek innovative ways to support digital transformation, a new self-service cloud procurement model has emerged that offers several additional benefits.

Using a “menu style” approach to cloud deployment, the self-service model delivers turnkey cloud services that are selected based on an enterprise’s distinct priorities. By self-selecting and tailoring its options, the enterprise can prioritize its needs to achieve other benefits, such as improved governance, increased availability, greater simplicity and predictable pricing, while retaining enterprise-grade security.

The self-service model is built around pre-engineered services that spin up quickly, enabling resource provisioning in minutes. As a result, organizations can significantly reduce time to deployment and respond more quickly to fluctuating business needs and customer demands.



READ THE CASE STUDY



READ THE USE CASE



Self-service capabilities also enable consolidation of public and private cloud resources under a single cloud management platform (CMP). Managing all cloud resources through a single pane of glass provides greater control for matching resources to requirements and greater insight into real-time costs of cloud resources. This visibility helps assure that service levels match app protocols and helps avoid provisioning issues, such as assigning a service level in excess of company standards.

The self-service approach does more than increase control and remove guesswork. It also provides the opportunity to meet the need for an agile IT infrastructure while enjoying the business benefits of cloud-based workflows.

45%

of enterprises believe that cloud computing will increase IT's collaboration with other business units while raising the IT professional's profile as a valuable key player.⁹ And,

70%

of enterprises plan to add or already have added cloud-related IT roles to their organization.⁹

When IT resources are shifted from building a cloud platform to using pre-engineered solutions, the enterprise accelerates its path to digital transformation. Cloud-based capabilities enable IT to streamline operational tasks and align cloud utilization and costs with usage. IT can now take a pivotal role in increasing profitability and driving new revenue opportunities, transitioning from being a cost center to being a key player in the evolution of the enterprise.

Discover How a Self-service Catalog Can Satisfy Your Company's Unique Business Needs. Visit:

[HDS.com/en-us/products-solutions/cloud.html](https://hds.com/en-us/products-solutions/cloud.html)

Sources

¹ “How to Win at Digital Transformation: Five Steps Successful Digital Transformation Leaders Are Taking,” from Forbes Insights and Hitachi

² 2016 State of the Network Study

³ IDG Enterprise Cloud Computing Survey

⁴ 2016 State of the CIO Survey

⁵ http://blogs.gartner.com/thomas_bittman/2015/02/05/why-are-95-of-private-clouds-failing/

⁶ IDG Enterprise Cloud Computing Survey

⁷ <http://www.cio.com/article/3074238/analytics/big-data-and-analytics-spending-to-hit-187-billion.html>

⁸ IDC Worldwide Quarterly Cloud IT Infrastructure Tracker, April 2016

⁹ IDG Enterprise Cloud Computing Survey

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