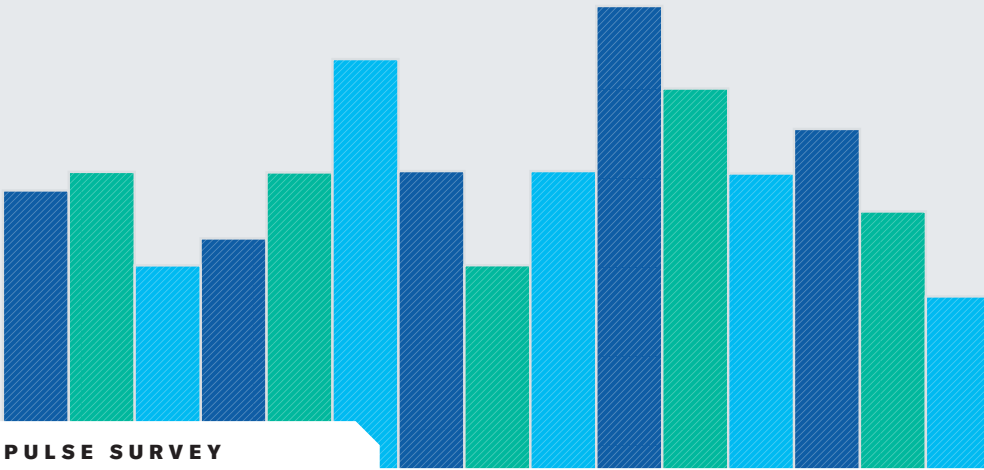




**Harvard
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Review**

ANALYTIC SERVICES



High-Tech Firms Double Down on Cloud to Overcome Covid-19 Disruptions



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Today's uncertainty is clearly accelerating the pace of digital transformation. And behind every digital transformation is a workforce transformation—which requires transforming the cultural core of your organization and empowering your people to best serve your customers. As we've partnered with hundreds of C-suites transforming their businesses, we've seen how vital mindset, culture, and employee experience are to driving necessary change.

Prior to Covid-19, we identified three mindsets related to transformation. The most common is the “renovate” mindset. These leaders often realize the need to modernize their technology but try to apply new technology to their old processes and behaviors. This doesn't address the tough cultural and change management work necessary to transform into a truly agile, customer-centric company. On the other end of the spectrum, we see the “transcend” mindset, associated with companies that were born digital. They designed their organization from the ground up to listen deeply and respond to customer needs. The third mindset is the “evolve” mindset. These companies weren't born digital, but they are deliberately refocusing on their customers' needs.

In the post-pandemic world, you need to win the race for relevance. This means being able to sense, anticipate, and respond to changes in your customers' needs. Consumers and business decision makers alike now expect easy, frictionless products and services, tailored to their “job to be done,” on demand, and pay as you go. We see leaders shifting to subscription-based, everything-as-a-service (XaaS) that uses data and ecosystem partners to pivot and offer new solutions faster. Every company is becoming a digital company—with laser focus on delivering personalized experiences at scale, which earns more customer data that fuels ever more personalized experiences.

But those seamless customer experiences don't happen without intense focus on making it even easier for your employees to do their best work from anywhere, innovate to serve customers, and grow. Leaders often wonder why employees don't adopt new technologies and processes. Sometimes adoption of new technology is derailed because it's simply faster to do it “the old way.” However, if you create new solutions together, designing every interaction to be frictionless, deliver value faster, and even make the whole process fun for employees, adoption will take care of itself. The best way to ensure you are building products and solutions that your team and customers will adopt is to create those things with them.

History proves human beings are resilient. We've continually invented ourselves out of crisis. How is your organization empowering people to invent a new future? How can you use technology to do things faster, and at scale, to make the greatest impact?



Katherine von Jan
Chief Strategy Officer,
Digital Transformation
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High-Tech Firms Double Down on Cloud to Overcome Covid-19 Disruptions

Companies in the high-tech industry have long recognized the value of cloud services for improving internal and customer-facing operations. But in the wake of the Covid-19 crisis, are high-tech executives satisfied that their pre-pandemic cloud strategies are helping them address current business disruptions and making their organizations more resilient in the future?

The answer for many companies is no. A survey by Harvard Business Review Analytic Services of 220 high-tech executives shows a clear majority (81%) have accelerated their cloud-adoption timetables as a result of the pandemic. The reasons are clear. “When the pull for a company is to increase business agility and flexibility as well as meet clients wherever they are in the customer journey—all these things scream for ‘cloud,’” says Arun Shastri, principal at ZS, a professional services firm that specializes in high-tech and other industries.

The survey identifies three primary factors spurring the drive for cloud-fueled change: the need to address new business goals, a desire for enhanced organizational agility, and a push to increase productivity in remote offices. The survey also reveals that the stakes are higher than ever: a clear majority (82%) of the high-tech executives say a successful cloud strategy will become a competitive differentiator in their segment of the market.

Some of the survey respondents will be building out another aspect of their overall cloud strategy in the coming months—the rollout of cloud services sold to customers. These cloud-based IT resources have been increasingly important revenue streams for technology companies in recent years, and during the pandemic, the survey shows that a quarter of the respondents at technology companies say they now plan to offer these services in the near future. That’s in addition to the 60% of those at high-tech firms surveyed that say they are already doing so.

HIGHLIGHTS



93% of respondents at high-tech companies say they are **altering their IT operations** because of Covid-19.



82% believe that having a successful cloud computing strategy will become a **competitive differentiator in their segment** of the high-tech market.



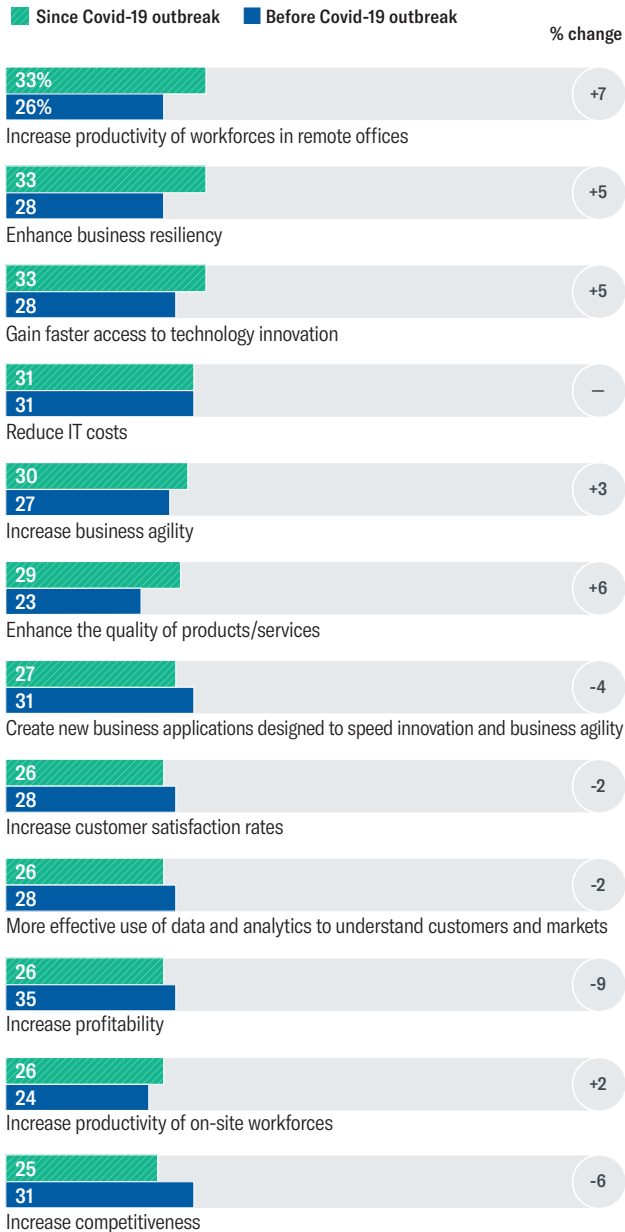
80% of the respondents say that IT staff must work more effectively with the business staff to **plan and implement cloud adoption strategies**.

FIGURE 1

Covid-19 Reprioritizes High Tech’s Business Goals

Resiliency, technology innovation, and agility take on added importance.

What were the primary business goals for your organization’s overall cloud strategy before and since the Covid-19 outbreak?



Source: Harvard Business Review Analytic Services Survey, August 2020

While high-tech firms have clear ideas about what changes are needed in the wake of the pandemic, the executives also realize they are facing stubborn challenges. In addition to security concerns, cultural issues loom large. Thirty percent of survey respondents worry about a reluctance among peers in business units to accept cloud applications more fully. Many of the executives surveyed also acknowledge their organizations lack enough support services to help end users transition to cloud-based services.

The survey data and additional insights from industry observers show why high-tech companies must continue to expand their cloud commitments—for both internal operations and services sold to customers—while also working to overcome the ongoing roadblocks that can derail these plans.

High-Tech Firms Rethink Strategies

It’s understandable why high-tech executives are revising their cloud strategies at this time—the Covid-19 pandemic has had a profound impact on the industry. When offices closed as part of social-distancing measures, high-tech firms needed to beef up online resources to ensure that remote workers could still access core business applications and collaborate with peers and customers—all while adhering to corporate security policies. Workforce changes meant adjustments for most high-tech companies. “The first order of business for many companies was very tactical—make sure that they could keep the lights on with the help of a remote workforce,” says Seth Robinson, senior director of technology analysis at the Computing Technology Industry Association (CompTIA). “The next step was to figure out, how do we enable this workforce to be successful?”

The answer is to embrace change. Virtually all (93%) respondents report that the pandemic is altering some aspects of their organizations’ IT operations, with 59% describing the impact as being so significant it is causing them to fundamentally change most aspects of their IT environment.

The pandemic is also impacting the business goals that high-tech companies have for their cloud strategies. Prior to the outbreak, the U.S. economy was cresting an economic expansion that began in 2009, and the high-tech industry was generating more than \$5 trillion in global revenues.¹ As they rode that economic wave, high-tech executives were looking to cloud computing to reap the financial rewards of their growing industry. The executives surveyed say their most-desired cloud outcomes before Covid-19 hit included a mix of bottom line and strategic goals: increased profitability (35%), reduced IT costs (31%), increased competitiveness (31%), and the ability to create new business applications for agility and innovation (31%). Now, respondents are looking for a new mix of outcomes. **FIGURE 1**



Virtually all (93%) respondents report that the pandemic is altering some aspects of their organizations' IT operations, with 59% describing the impact as being so significant it is causing them to fundamentally change most aspects of their IT environment.

For example, two bedrock business performance goals significantly declined once the pandemic hit: profitability dropped nine percentage points and the ability to increase competitiveness declined six points. What goals rose to the top for high-tech firms? Resiliency, technology innovation, and agility come in as three of today's top-five goals. Not surprisingly, as social distancing imperatives shut corporate facilities, executives consider increasing the productivity of workforces in remote offices another high priority. Gaining faster access to technology innovation also gained in importance as high-tech companies scramble to maintain operations as the virus disrupts workplaces.

As noted earlier, eight in 10 of the respondents also say Covid-19's aftershocks are convincing them that speeding the move to cloud is essential for business success. This finding is significant because a similar number of executives (82%) believe that having a successful cloud computing strategy will become a competitive differentiator in their segment of the high-tech market. "We're seeing that growth is a major ambition statement for organizations coming out of Covid-19," says Paul Gaynor, global technology and alliance lead at the management consulting firm PwC. "The topic of growth centers in and around the cloud because that model offers the agility, the scale, and the speed that companies are looking for today."

High-tech companies aren't waiting to act on their cloud acceleration goals. Eighty-one percent report their organization's adoption of cloud-computing services has already started increasing in light of the pandemic, with 31% of the executives surveyed describing the increase as significant. **FIGURE 2**

It's not surprising that the high-tech industry would naturally look to the cloud at a time of widespread upheaval. In recent years, high-tech firms have been among the leaders in cloud adoption. "They've been the ones that have been pushing the envelope a little bit more than other industries by trying to use the cloud more strategically," says Robinson at CompTIA. "This creates an overall architecture that is cloud based and that lets companies manage their entire IT environment holistically."

Signs of high tech's more-evolved approach include its readiness to use multiple cloud providers. At 38%, software-as-a-service (SaaS) and infrastructure-as-a-service (IaaS) models are tied for the type of cloud-computing services

that are now seeing the most investments since the onset of the pandemic. In addition, the choice of applications that high-tech executives are moving out of on-premises data centers demonstrates the industry's trust in the cloud. Many of the applications are essential enterprise platforms that need to be highly available and secure to keep core business operations running.

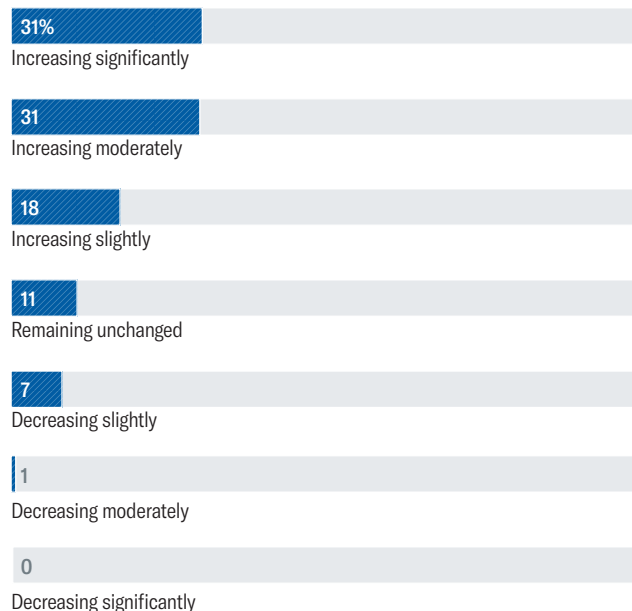
For example, when selecting which specific applications are the top priorities for running in the cloud, the highest ranked are customer-relationship management (CRM) systems and software development programs, each chosen by more than a third (37%) of the executives. Also high on the list are enterprise resource management systems (ERP) and collaboration and videoconferencing systems, at 36% and 35% respectively.

FIGURE 2

Cloud Adoptions Accelerate

Executives feel a new urgency for moving to cloud.

In light of the impacts of the Covid-19 pandemic, how is your organization's adoption of cloud-computing services changing, if at all?



Source: Harvard Business Review Analytic Services Survey, August 2020



“[High-tech] companies are seeing increasing demand to help their clients with the tactical pieces of starting up a remote workforce as well as for the longer-term pieces of creating sustainability and resiliency,” says Seth Robinson at CompTIA.

The need for better collaboration is a direct result of Covid-19’s impact on businesses. “The pandemic requires workforces to adapt to new ways of working and modernize how they work,” PwC’s Gaynor points out. Initially, much of the increased funding for collaboration was to make sure work could continue to happen in the wake of office shutdowns. “But the investments have yielded positive results around productivity, and I think that will cause companies to rethink how people will be working going forward,” Gaynor says.

Even before the Covid-19 crisis, technology companies saw a solid business case for investing in the cloud. Companies with significant investments in cloud technology were seeing higher margins than peers that invested less in SaaS, IaaS, and platform-as-a-service platforms, Gaynor says. Among the paybacks for effective cloud strategies are greater resiliency

and agility, thanks in part to the geographical diversity of cloud-based data centers and the ability for cloud adopters to quickly adjust computing capacities as demand rises or falls, Gaynor adds.

Pivoting to Cloud Services for Customers

Bolstering internal operations isn’t the only reason why high-tech firms are moving to the cloud. The survey respondents also see a chance to create customer-facing solutions that open new revenue streams.

The move to cloud services for customers is part of an ongoing trend that predates the Covid-19 pandemic. Research by the Technology Service Industry Association (TSIA) finds that nearly half (48%) of the 50 largest technology companies have experienced stagnant or falling product revenues, while two-thirds of that group report gains for services revenues.² Performance in the first quarter of 2020 mirrored this trend—50 of the largest technology companies saw services revenues jump 23%, while product sales edged up 2%.³

It’s no wonder, then, that 61% of the respondents say their company has already moved to selling cloud-computing services to customers. An additional 24% of the executives surveyed expect to sell customer-facing cloud services in the near future.

High-tech companies with established business lines for IT services were well positioned when Covid-19 hit. “Those companies are seeing increasing demand to help their clients with the tactical pieces of starting up a remote workforce as well as for the longer-term pieces of creating sustainability and resiliency,” says Robinson. “Many of those pieces are based on cloud computing.”

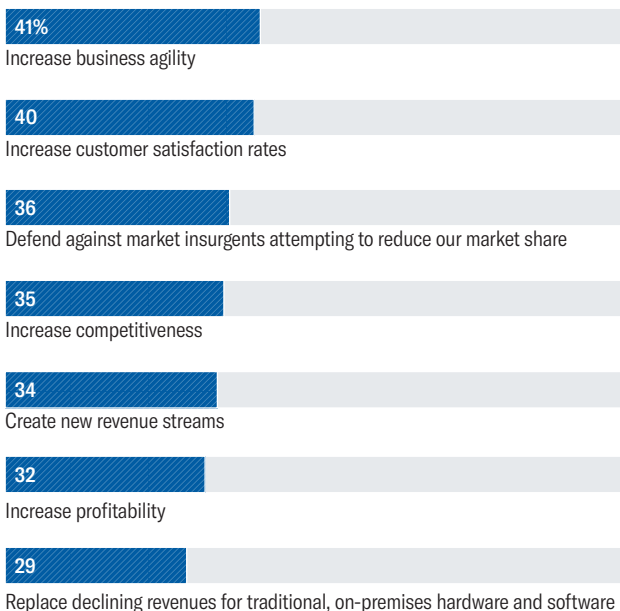
The business drivers spurring the expected rise in the number of companies selling cloud services echo the strategic nature of the top business goals that have come to the forefront since the pandemic’s outbreak. Forty-one percent of the high-tech executives say their most-desired outcome from customer-facing cloud offerings is increased business agility. **FIGURE 3** In addition, four in 10 are looking to boost customer satisfaction rates, apparently another sign of client interest in cloud services rather than traditional IT products. Thirty-six percent of the respondents are responding to competitive threats by market insurgents, while 35% are targeting a related benefit—increased competitiveness.

FIGURE 3

Services Revenues Take On Strategic Importance

Customer-facing cloud services bolster agility goals.

What business outcomes is your organization aiming to achieve most from selling cloud services to customers?



Source: Harvard Business Review Analytic Services Survey, August 2020



61%

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“... organizations tend to take a short-term view of the potential value of cloud. They overemphasize the cost benefits in the business case and miss the longer-term benefits—the ability to gain new functionality and to speed the delivery of new offerings to the market,” says Hendrik Willenbruch, partner at consulting firm Oliver Wyman.

Challenges and Remedies

Unfortunately, a host of stubborn challenges threaten the success of Covid-19-inspired cloud plans. As expected from a group of digitally savvy high-tech executives, technical issues take a backseat to the cultural and policy problems that can keep high-tech firms from accelerating cloud adoptions at the pace that executives have been looking for since Covid-19 hit. One adoption decelerator cited by 30% of the executives is the reluctance of business managers and end users to rely more on applications and IT resources in the cloud. “Many people are resistant to change—they wonder how it will impact them and how they will have to work differently,” Shastri of ZS says. “Companies can’t forget or underestimate the level of change management that will be required to enable the success of these initiatives.”

The survey results shed light on Shastri’s warning. Sixty-four percent say their company would like to increase cloud adoption, but they are unsure of how to do that successfully.

High-tech executives also continue to see a variety of roadblocks that stall the progress of cloud adoptions. Thirty-eight percent of the high-tech executives say their biggest challenge is implementing new support services to help internal staff use cloud-based applications and IT capabilities. The same percentage name security concerns as a top barrier, which is a worry that has been swirling around cloud computing since enterprises began exploring this model.

IT departments at high-tech companies have an important role to play in overcoming adoption hurdles and guiding implementation strategies. The first step is to address disconnects between IT and the business staff. Eighty percent of the survey respondents say the IT staff isn’t working well enough with the business workforce to bring the business departments into the cloud era. Both senior managers and their staff have important roles to play to help businesspeople transition to the cloud. IT executives must clearly communicate the importance of cloud adoption for meeting post-Covid-19 business goals. Junior staff members will need to become more involved by encouraging cross-departmental collaboration between IT and businesspeople to plan and implement cloud adoption strategies for individual departments.

IT can also help senior leaders develop a clear business case that spells out priorities for businesspeople. Attention

should be given to helping top executives look beyond bottom-line benefits. “I see a tendency among companies to underestimate the long-term value of moving to the cloud,” says Hendrik Willenbruch, partner at consulting firm Oliver Wyman. “Especially today, organizations tend to take a short-term view of the potential value of cloud. They overemphasize the cost benefits in the business case and miss the longer-term benefits—the ability to gain new functionality and to speed the delivery of new offerings to the market,” he explains. “The cloud can also become an enabler of important new business models if we look at future client priorities for remote workforces and at the analytics capabilities available from cloud providers.”

To alleviate security fears, IT can highlight the extensive resources that leading cloud providers offer for this area. The business viability of cloud vendors rests on the safety of their IT environments, and accordingly, these companies typically invest more money than their customers do for cybersecurity technology and highly skilled personnel. In addition, IT staff at high-tech companies should showcase the steps they are taking internally to monitor and manage traffic flowing into and out of their on-premises data centers.

High-tech executives have additional plans in the coming year for promoting acceptance among cloud skeptics. Workforce training to increase employee proficiency in using cloud services is one area that is receiving close attention. Fifty-seven percent of the survey respondents say their organization has invested or will invest in cloud training this year. **FIGURE 4**

Training is also important for high-tech firms wanting to expand cloud services sold to customers. “The critical play is to transform their technical staffs from people who are on-premises implementers or customer service providers into becoming cloud advisers for their clients,” Willenbruch says. “That means educating clients about hybrid-cloud operating models for achieving successful business outcomes. To do that, retraining existing workforces and hiring new talent may be needed.”

What extra skills will be most important? Some IT service providers are restructuring their capabilities for data-center and field-services management as their clients move to the public cloud faster, Willenbruch says. “There is also a clear

uptake in expertise for migrating to and operating in hybrid and multi-cloud environments because that’s something that many of their clients don’t have the skills to do themselves yet,” he adds.

Other items on to-do lists include realigning investment priorities. Fifty-six percent of the executives say they recently have identified or will identify existing business and IT initiatives that must be delayed or ended to reflect new priorities for cloud computing. “Anything that a company may have viewed as a ‘nice to have’ when it comes to their IT strategy [is] getting deferred,” Robinson says. “That’s partly because of the uncertainty around budgeting, finances, and revenues since the pandemic arrived.”

Reflecting another high priority, 48% will update security and compliance policies associated with cloud computing this year. “When companies move to cloud, they can’t just rely on the security capabilities of large public-cloud vendors,” says Gaynor. “Cloud customers must also keep up their internal security efforts.”

Important areas for internal security teams to focus on include protecting the integrity of corporate networks and ensuring that data moving to and from end-user devices is secured, which may require new policies and resources with widely dispersed remote workforces.



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Finally, high-tech companies are looking closely at what metrics are needed to judge the success of cloud expansions. Operational efficiency ranks as the top key performance indicator (KPI). Focusing on this area isn’t a surprise considering that streamlining operations has long been a big draw of cloud. But close in the ranking is employee satisfaction, which may indicate a growing understanding that this metric is a sign of a cloud strategy’s overall success. After all, it’s one thing to implement a new cloud service, but getting people to adopt it may not be easy. In the past, some cloud projects were aspirational, Robinson says. “Managers assumed that end users would naturally flock to all the new features they now had at their disposal,” he explains. “But organizations sometimes find that the applications aren’t being used extensively. Companies should look more closely at adoption rates to understand the actual return on that investment.”

In addition, if the metrics show that a cloud service isn’t widely used, organizations will know to investigate underlying causes and make necessary adjustments. Two options are offering additional end-user training and streamlining business operations. “Look at the workflows that employees must use, and determine if adjustments are needed” based on how the cloud service changes the way people work, Robinson says.

Close attention to KPIs will also help high-tech firms assess the ROI of cloud services sold to customers. Executives at companies with cloud revenue streams are looking closely for signs of business penetration and growth—three of the four highest-ranked KPIs in the survey are customer retention, speed to market for new services, and growth in revenues.

A Good Idea for Today and Tomorrow

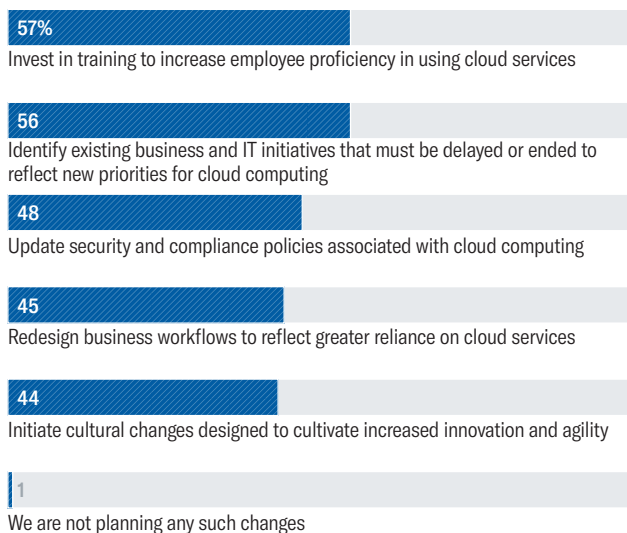
High-tech companies have been among the leading adopters of cloud technology in recent years. Even so, most executives surveyed are accelerating their cloud adoption plans as the

FIGURE 4

New Initiatives Target Cultural Challenges

High-tech executives will beef up end-user training.

What new initiatives, if any, has your organization recently implemented or plans to implement this year to support the adoption of cloud services?



Source: Harvard Business Review Analytic Services Survey, August 2020



“When companies move to cloud, they can’t just rely on the security capabilities of large public-cloud vendors. Cloud customers must also keep up their internal security efforts,” says Gaynor at PwC.

pandemic disrupts normal operations and puts a premium on operational agility and flexibility. High-tech firms are also reprioritizing business goals, and many companies are expanding their cloud service offerings sold to customers. But neither the industry’s cloud track record nor an intensified focus on cloud expansion projects is enough to overcome some nagging problems that have stalled strategies in the past.

The survey points the way to addressing today’s cloud hurdles and putting high-tech firms on a path toward coping with Covid-19 more effectively. These remedies include forging closer collaboration between IT and business units to help nontechnical people transition to cloud services, investing in workforce training to further facilitate cloud adoption, and shoring up security resources. These are all worthwhile investments—in addition to helping high-tech firms weather the ongoing impact of Covid-19, the actions will also position companies to be prepared for other large-scale business disruptions or market opportunities that could once again require fast and decisive action.

“The high-tech industry has always been a leader in aggressive pacing and setting a new bar in this area,” says Gaynor. “I think the industry will continue to develop innovative ideas that other industries will reap benefits from.” Doubling down on cloud-computing adoption during the upheavals sparked by Covid-19 is one such idea.

Endnotes

- 1 CompTIA, “IT Industry Outlook 2020,” November 2019. <https://www.comptia.org/content/research/it-industry-trends-analysis>.
- 2 Dornsife, Nicole, “Tracking Performance Data from the Top Hardware, Software, Services, and Cloud Technology Companies,” The Technology Services Industry Association, June 13, 2019, <https://www.tsia.com/blog/tracking-performance-data-from-the-top-hardware-software-services-and-cloud-technology-companies>.
- 3 Lah, Thomas, “Technology and Services 50, Q1 2020,” The Technology Services Industry Association, April 29, 2020, <https://www.tsia.com/webinars/technology-services-50-q1-2020>.

METHODOLOGY AND PARTICIPANT PROFILE

A total of 220 respondents completed an executive survey by Harvard Business Review Analytic Services.

Size of Organization

9%
10,000 or more employees

37%
1,000 – 9,999 employees

52%
100 – 999 employees

1%
Fewer than 100 employees

Seniority

59%
Executive management/
board members

27%
Senior management

10%
Middle management

4%
Other grades

Key Industry Sectors

100%
Technology

Job Function

67%
IT

All other functions
less than 8% each

Regions

36%
North America

26%
Europe

31%
Asia Pacific

2%
Middle East/Africa

5%
Latin America

All other regions
less than 1%

Figures may not add up to 100% due to rounding.



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