MIT Executive Study Uncovers Top 10 Trends Shaping IT Resilience

How the pandemic changed and accelerated IT plans
Strategic Insights from Global IT Organizations

As organizations around the world were forced into COVID-19 work-from-home orders and even complete shutdowns, they had sudden, dramatic proof of the value of digital technologies. Now as leaders across the globe attempt to be resilient, new enterprise technology priorities are emerging. It turns out that organizations that are “future ready”—possessing technologies that are highly flexible and capable of fully supporting a distributed workforce—are best positioned to succeed in the uncertain times ahead.

What follows are the top 10 strategic insights from a survey and series of in-depth interviews with 600 global executives about the pandemic’s effect on IT conducted in June 2020 by the MIT Technology Review in partnership with VMware.

In this survey, digital transformation is defined as “the incorporation of modern technologies into an organization’s processes and strategies to achieve business goals, such as improving customer outcomes or operational agility.” Examples include migrating applications to the cloud and automating company operations.
Strategic Insight #1

The Pandemic Has Accelerated Digital Transformation

75% of respondents believe their digital transformation efforts have been accelerated by the pandemic.

Three out of four respondents (75%) to the MIT Technology Review study believe their digital transformation efforts have been accelerated by the pandemic. COVID-19, it appears, is a catalyst for speeding implementation plans for next-generation technologies. Across industries, healthcare respondents (89%) were the most likely to cite accelerating digital transformation due to the pandemic, removing decades-long barriers.

Takeaway: IT organizations naturally become strategic when digital technologies are the only ways to transact business and engage with customers, patients, employees, students, or constituents.

The goal is to become future ready. Organizations that achieve this status possess digital foundations supporting any
cloud, any app, and any device so they can better respond to change—ensuring business continuity as well as resiliency. Of the one-fourth of organizations that have not accelerated digital transformation, there are two possibilities. Either they were already moving so fast to seize digital-first initiatives that no acceleration was necessary, or their technology infrastructures were so antiquated they were hard-pressed to know where to begin. The former organizations are well on their way to resiliency. The latter organizations are unlikely to survive long term.

More than three-fourths of respondents (79%) say they hope to stay the course—maintaining or growing annual IT spending levels—due to the crisis by continuing to invest in the adaptable technologies. In contrast, a large percentage (42%) of respondents who are still considering digital transformation and not yet implementing are expecting IT budget cuts.

Strategic Insight #2

Investment in Transformative Technologies is Trending Up—More in Some Industries

33% of respondents anticipate budget increases due to the pandemic.
Moreover, close to half of respondents (45%) staying the course report that their 2020 IT budgets will be the same, and another third (33%) anticipate increases as a result of the pandemic. This may be because 54% of global respondents that had business continuity plans found them to be less than effective. This theme of digital-forward organizations preserving or increasing IT budgets plays out differently across different industries: healthcare, government, and telecommunications providers are the most likely to maintain or increase their digital investments while manufacturing shows signs of pulling back in response to the crisis.

**Takeaway:** Like their IT peers, today’s executives and boards of directors are increasingly in favor of IT investments that drive resiliency such as improving customer and employee experience, speeding operations, and enabling new revenue sources.

Those ahead of the curve on digital transformation investments are able to more proactively plan—and execute—their technology responses. Those businesses with tight IT budgets can first focus on optimizing infrastructure. This will help them gain sufficient efficiencies to free up the budget for digital innovation.
Strategic Insight #3

App Modernization, Boosting Customer Experience, Rises in Priority

38% of respondents accelerated adoption of a cloud-based platform supporting modern app development.

One of the first signs of changing priorities resulting from the crisis is that nearly four in ten respondents (38%) accelerated adoption of a cloud-based platform that supports modern application development. Moreover, a majority (58%) indicate that they have expanded their Agile practices and continuous delivery (CD) methods in response to demands resulting from COVID-19. More than a third of respondents (39%) are focusing on delivering digital-first customer experiences, and a like amount (39%) have instituted “secure-by-design” application development.
As evidence that the app is the new branch bank, a full 98% of financial services leaders surveyed say they are increasing or maintaining focus on customer needs in digital-first customer experiences within applications that clients need—all because of COVID-19. And more than half (51%) of healthcare organizations surveyed are increasing patient experience investments. The most obvious has been the ballooning of telehealth services worldwide.

**Takeaway:** Improving the application portfolio is key to improving the customer experience, according to a recent Forrester survey.¹ Legacy application development and delivery models are costly and ill-equipped to support cloud-native and other modern apps.

Applying Agile practices and continuous integration/continuous delivery (CI/CD) models help organizations easily support changing business requirements, especially when modernizing apps to enhance the customer experience. And as outside events continue to drive digital transformation, flexible, automated technology environments allow for more fully digital experiences and greater business agility.
Strategic Insight #4

Distributed Work Capability Becomes a Business Continuity Must-Have

Estimated % of remote workforce (industry average)

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<th>Pre-COVID-19</th>
<th>Post-COVID-19</th>
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<td>8%</td>
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Before COVID-19, on average only 8% of workforces regularly worked remotely. This shot up to an average of 27% during the pandemic, albeit much higher in technology-intensive industries such as telecommunications (36%) and financial services (34%). Organizations surveyed cite three employee experience actions as priorities now. The top one is security: securing new endpoint risks and expanding threat management (57%). Next is formalizing or expanding work-from-home policies (56%). And then optimizing employee efficiency by automating manual workflows (45%).
Yet priorities vary across industries. In manufacturing, 73% of IT and business technology decision makers place employee efficiency and workflow automation as the highest priority now. At the same time, retail, telecommunications, and healthcare leaders believe providing employees with the physical equipment necessary to be productive remotely is their top employee experience challenge. Financial and government respondents say their organizations’ top challenge is protecting IP and data in the new remote-access world.

**Takeaway:** The shift to remote working has been a dramatic one, and enterprises that have the most flexible and employee-friendly technology platforms are best positioned for success.

Collaborative tools, virtual infrastructure, and platforms such as the digital workspace unifying device management and identity are essential to distributed workforce success, as they enable the real-time sharing of information across the globe and users’ choices of what platforms to use—all of which are keys to organizational agility.
Strategic Insight #5

As Threats Continue to Rise, Security Teams Play Defense

46% of respondents are allocating a significant share of their IT budget to security and threat management.

As global organizations adjust to new risk realities, close to half of respondents (46%) indicate they are allocating a “significant” share (defined as more than 25%) of their IT budgets to security and threat management. And more than five in 10 respondents (57%) indicate they will put more emphasis on defending against cyberattacks over the next 12 to 18 months. The number one priority is protecting against cyberattacks and securing protected health information (PHI) for healthcare leaders surveyed.
Takeaway: Global organizations saw a 148% spike in ransomware attacks early in the pandemic. Future ready organizations recognize that distributed workforces widen potential attack surfaces and have moved to strengthen their security postures with zero-trust, least-privilege policies and controls across on-premises, cloud, and endpoint devices.

They leverage intrinsic security to automatically embed protection everywhere. This is a fundamentally different approach from “bolting on” security products. By deploying intrinsic security, organizations looking to fortify operations can pivot to a strategy that leverages infrastructure and control points in new ways across any app, any cloud, and any device. When combined with threat intelligence, security teams can shift from simply reacting to proactively protecting their environments from positions of strength.
Strategic Insight #6

Resilient Infrastructure is Key to Digital Success—Automation and Multi-Cloud Are Next

Top infrastructure efficiency initiatives:
40% Automation
37% Adoption of a multi-cloud strategy

Remote workforce numbers tripled during the crisis (see takeaway #4). They are expected to remain elevated even after the pandemic passes. This points to a long-held corporate attitude shift while raising questions about how to sustain hands-on IT operations across a widely distributed organization. When questioned about resilience, more than half of organizations surveyed (57%) prioritized infrastructure efficiency as key to success, adding a significant share of their IT budgets to infrastructure efficiency. And the infrastructure efficiency initiatives they plan to accelerate next are automating (40%) and adopting a multi-cloud strategy (37%).
Takeaway: Automated IT infrastructure and operations can protect employee health and safety not only during work-from-home mandates, but in the aftermath of natural disasters and unrest.

The pandemic highlights the need for an adaptable and resilient technology infrastructure that supports all aspects of the enterprise from front-office transactions and communications to back-end production and supply chains. Organizations that had already diversified their infrastructure to eliminate single points of failure, such as moving to multi-cloud while retaining their on-premises environments, were better positioned to adapt.

Strategic Insight #7

Cloud Growth Unabated—Adoption Remains Balanced

#1 app challenge is maintaining governance and compliance.

The MIT Technology Review study reveals that modernizing applications and cloud adoption go hand in hand. Moving to the cloud—to infrastructure-as-a-service or platform-as-a-service (IaaS and PaaS) environments, as well as user-facing software-as-a-service (SaaS) applications—accelerated during
the crisis, and is expected to continue to rise. Public cloud workloads are growing, albeit slowly, due to COVID-19, the survey shows.

On average, nearly a fifth (17%) of applications, across industries, were hosted in the public cloud prior to COVID-19. This number is expected to increase to 26% over the next 18 months. Yet cloud adoption during the crisis has introduced challenges, especially with regard to compliance. A majority of decision makers across the board (68%) cite “maintaining governance and compliance regulations, for example, patching apps to meet security/compliance requirements” as a top application challenge because of their expanded public cloud activities.

Takeaway: A growing abundance of cloud services are now available to power business apps. This gives organizations the flexibility to rapidly meet new business needs.

For example, organizations seeking to modernize apps can leverage commodity SaaS productivity apps while focusing on refactoring and replatforming the mission-critical business applications core to their competitive advantage. And by adopting a unified digital foundation, organizations can simplify cloud adoption by seamlessly extending to multi-cloud without having to reskill or retool.
Strategic Insight #8

Disaster Recovery Does Not Equal Business Continuity

Only 46% of respondents had effective business continuity plans.

COVID-19 has challenged organizations’ business continuity plans. Nearly two-thirds of respondents (63%) indicate they had business-continuity plans in place prior to the crisis. However, for many, these were oriented toward traditional notions of disaster recovery. Fewer than half (46%) felt their plans were effective when attempting to cope with the shutdowns.

Takeaway: The pandemic is further proof that business continuity and disaster recovery (BC/DR) strategies are critical aspects of an organization’s overall IT strategy.

BC/DR plans and technologies have traditionally been structured to support a quick return to business as usual. Future ready organizations incorporate BC/DR into all of their operations to respond quickly to crises, adapt to new realities, and accelerate innovation. Only when organizations can respond swiftly and effectively to crises will they be ready to make the more radical changes required for digital transformation.
Strategic Insight #9

Digital Leaders Outperform—With IT in Place and Plans to Succeed

48% of Digital Leaders intend to accelerate automation of manual business processes over the next 12 to 18 months.

A full 91% of Digital Leaders—organizations identified by the MIT Technology Review study as those that have fully implemented and deployed multiple digital transformation applications and upgrades—accelerated their digital transformation, compared to 75% of all others. Such organizations have completed at least one digital transformation pilot project. They had an operational business continuity plan in place prior to COVID-19. And their business-continuity plan was “somewhat to very effective” in meeting their needs during the crisis.

Almost half (43%) of Digital Leaders intend to accelerate automating manual business processes over the next 12 to 18 months, and 35% expect to adopt or expand their multi-cloud strategies due to the pandemic. And digital-first customer experience is also a higher priority for Digital Leaders than all other organizations (49% versus 38%).
Takeaway: Other organizations can learn from these Digital Leaders.

The research shows that forward-thinking strategies endow companies with the agility to succeed in any type of business climate. Digital Leaders were better prepared to continue operations and deliver to customers when the COVID-19 crisis struck, and they are better prepared to successfully navigate future disruption.

Strategic Insight #10

Digital Leaders Put People First

62% of respondents cite Agile delivery methodologies, including dev self-service, as higher priority due to the crisis.

Digital Leaders are people-focused. They provide high levels of support for their remote workers today and intend to maintain distributed workforces after the pandemic passes. Globally across all respondents surveyed, approximately just over a quarter (27%) of their employees are working from home now at least three times per week because of COVID-19, and about a fifth (20%) expect this to continue long term.
post-COVID. In addition, Digital Leaders recognize the value of Agile delivery methodologies, including developer self-service, with 62% of respondents citing this as a higher priority due to the crisis. Customer experience as well is a higher priority for Digital Leaders—almost five in ten respondents (49%) are prioritizing addressing customer needs through digital-first customer experiences.

**Takeaway: Digital Leaders are setting the pace when it comes to serving people both inside and outside their organizations.**

They understand the high return on investment—including greater productivity and job satisfaction as well as increased ability to recruit high-quality talent—of providing employees with a positive digital experience as they work from anywhere, on the device of their choice. In short, Digital Leaders recognize that success comes from people.

Looking Forward

Keys to business agility and resilience include adaptable technology architectures, employee productivity, and forward-looking management, according to the MIT Technology Review study. The COVID-19 crisis is the latest—albeit most severe—test of organizations’ abilities to respond and succeed during adverse times, and it has shown that those with future ready strategies are best positioned for success.

Understanding IT and pandemic resilience trends can help your organization be better prepared for what’s next.

To learn more, visit http://www.vmware.com/cio-vantage.