



COVID-19

Shaping the Future Through Digital Business



A typical crisis plays out over **three time frames**: **Respond**, in which a company deals with the present situation and manages continuity; **Recover**, during which a company learns and emerges stronger; and **Thrive**, where the company prepares for and shapes the “next normal.”

1. Respond

As an organization responds to crisis, resilient leaders are defined first by five qualities which distinguish between surviving and thriving amidst crisis. Next, resilient leaders must take specific actions spanning three dimensions and evaluate them within the context of geographic location and sector. Finally, learnings from those experiencing the same crisis conditions should be leveraged to manage the response.

For more information on Respond, please explore [The Heart of Resilient Leadership: Responding to COVID-19](#).

2. Recover

Resilient leaders view recovery as a journey for their organization, teams and stakeholders. There are five imperatives within the Recover phase to guide the business from Respond to Thrive:

1. Understand the required mindset shift;
2. Identify and navigate the uncertainties and implications;
3. Embed trust as the catalyst to recovery;
4. Define the destination and launch the recovery playbook; and
5. Learn from other’s successes.

For more information on Recover, please explore [The Essence of Resilient Leadership: Business Recovery from COVID-19](#).

We have developed supporting material across these priority areas to support leaders as they develop the recovery playbook:

Valuing Trust

Command Centre

Strategy

Workforce

Business Continuity & Financing

Supply Chain

Customer

Technology & Digital

Cyber

M&A

Environmental, Social, and Governance (ESG)

3. Thrive

Preparing for the next normal. Supporting materials to come.

Leveraging technology to support the recovery and produce lasting change

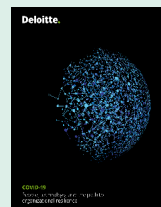
The impact of the COVID-19 pandemic has been both immediate and far-reaching, spreading across geographic, demographic, and economic domains simultaneously. The unprecedented nature of the threat has pushed organizations and those that lead them into uncharted waters.

Technology leaders are no exception — if anything, the challenges they have been forced to face are among the most multi-dimensional in which organizations have had to grapple. Consider the pressures placed on them virtually overnight— changing customer demands to digital channels, reconfigured supply chains, additional necessary workforce collaboration capacity and bandwidth, licenses and equipment to support remote work, and a litany of other issues requiring immediate scale and resiliency.

Never has there been a time in which the role of the CIO and other digital technology leaders has been so pivotal to shaping the future of their organization. As the pandemic shuts down the physical world — businesses, schools, sports arenas, shopping and entertainment, etc.— everyone is assuming that the digital world will step in and fill the chasm. But is that realistic? Resilient leaders will need to rise to the challenge and see the opportunity for what it is — a chance to not only help their organizations stand back up, but to ensure that the technology capabilities equip the organizations to grow and thrive.



Although there is no proven roadmap available for dealing with a global humanitarian crisis with the scale of COVID-19, we believe that leaders at all levels will need to act across three phases: **Respond, Recover, Thrive**. Globally, technology decision makers in every organization have already made significant choices to **Respond** to the COVID-19 pandemic crisis with speed to maximize the safety of employees and ensuring continuity of business. Gradually, as the pandemic begins to evolve, they will have to transition into the next two phases: **Recover** and **Thrive**.



Additional insights for technology leaders responding to the COVID-19 crisis can be found in our first article: [COVID-19: People, Technology and the Path to Organizational Resilience](#).



1. Jumpstart the recovery to ensure scalability

Given the complexity of the pandemic, there is reason to believe that the recovery phase for COVID-19 will require unprecedented levels of orchestration, communication, and changing of existing configurations during what promises to be a challenging and potentially protracted period across the globe. For many technology leaders, the first steps they take during this phase will be informed by the necessary series of adjustments they enacted as the crisis erupted and came to a head. For others, it will mean recognizing the missteps taken during the response phase for what they were – and committing anew to continuous improvement.

1. Jumpstart the recovery to ensure scalability



Support and enhance the workforce experience for collaboration and co-creation.

Engaging, enabling and supporting the workforce, especially those not used to working remotely, is a challenging task but one where a huge opportunity exists for the acceleration of a digitized workplace. For some, the train has already left the station, ready or not. In many respects, the future of work is here. This has brought fresh urgency to the need for technology leaders to ensure that their workforce is equipped and trained to handle the new virtual environments, that collaboration tools are effective, and that virtual connections are being created across the organization in the absence of physical workspaces. Additionally, they now face the need to deploy emerging tools and resources for managing and addressing stress and mental health, amid the lack of physical and social interaction.

Secure technology supporting the new work environment.

The large-scale deployment of workers across a sprawling network of remote locations has put the security and availability of systems under significant stress. The unprecedented spike in remote traffic overwhelmed VPNs and choked access control. Remote work also exposed many unpatched systems that left privileged access out in the open, unprotected by corporate firewalls. In the span of a few short weeks, phishing emails spiked 667 percentⁱⁱ. There were other issues as well, with collaboration apps getting hacked. Disruptive intrusions included videos featuring racist remarks, aggressive language and pornographic content. Schools were among organizations that banned these virtual tools as a direct result. Technology leaders will need to test current and proposed solutions for stability and security in a variety of operating environments and offer reliable, scalable tools that provide consistent service levels. This may mean switching vendors, offering different alternatives, and creating policies that are potentially more restrictive for remote work. Ultimately this challenge is about managing risk and ensuring resilience.

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Construct monitoring “command centers” for strategic response.

Moving from rapid response to thoughtful recovery will require tech leaders to monitor the effectiveness of response actions and anticipate future needs. Simply put, executive teams are asking “how do I know when we’re ready to recover?” While there is no standard answer, we believe it will be a mix of signals and conditions that provide leaders with a level of confidence to take some well calculated risks to move their businesses forward. As part of this effort, technology leaders should consider co-creating “command centers” for key business areas to provide real time visibility, proactive alerts, prescriptive insights, and self-driving execution. The command center teams would be comprised of members of the technology function and others across the business. They would leverage technologies such as automation, artificial intelligence, machine learning, and advanced analytics, pulling data from internal CRM and ERP systems, and working with ecosystem partners to understand external data that can provide much needed market signals around consumer demand. The customer service command center can provide real-time visibility into order fulfillment, product availability, and delivery timelines. The operations command center can provide data on inventory levels, logistics backlogs, and other capacity constraints. While business leaders can use the key insights discovered by these command centers to help craft future organizational strategy and planning, it will help with near-term decisions as they power up their businesses to meet customer needs and once again compete in the market.



Produce a playbook for future disruptions.

This is not the first health crisis that the world has faced and will not be the last. More immediately, tech leaders need to prepare for a potential second or third wave tied to the COVID-19 pandemic. As their technology organizations assess risk and develop risk mitigation plans and actions during the response phase of this crisis, leading practices and techniques are emerging, along with a good number of lessons learned. A key part of the recovery effort should be to document the wins and areas in need of improvement, and to take corrective action from a planning perspective to avoid future pitfalls. Part of that process should entail continuous scenario planning of potential risks not yet considered and the implications put on technology to run the business differently. When alarms are triggered, indicating possible upsets to the plan, there should be a process in place to identify alternative actions. This process should compare, analyze, and select the best alternative scenario and present recommendations to the designated stakeholders. This will take strengthen business continuity planning and identify critical dependencies. One example from the crisis in the US has been many states’ reliance on a scarce talent base skilled in the decades-old coding languages needed to reprogram mission-critical systems for requirements pertaining to the [Cares Act](#).



2. Stabilize business operations for future readiness and resilience

The world will ultimately reopen for business. When that happens, the quick fixes and patchwork solutions adopted during the response phase may not stand up to rigorous testing. While agility necessarily trumped elegance in the heat of the moment, the recovery phase will see long-term resilience take higher priority. For many technology leaders in recovery mode, that will mean stabilizing and strengthening many of the solutions and processes rushed into place, by being more thoughtful and strategic about their deployment, developing the support infrastructure around them, and fully understanding the impact they will have across their organizations and partner networks.

2. Stabilize business operations for future readiness and resilience

Enhance digital innovations and presence.

For many organizations, customer buying patterns shifted dramatically as lockdown and isolation mandates were put in place. The most nimble among them have innovated and scaled alternative digital channels to stay engaged with their customer base. This is often predicated on a deep understanding of the consumer journey and the things that matter most to them, and, in the case of COVID-19, how those needs can rapidly evolve. Those companies that were able to draw on that understanding and combine it with an ability to adjust their business digitally to meet those needs were able to create “moments that mattered” for their customers. One example is telehealth, the use of which has surged and become mainstream across many geographies with the emergence of telemedicine platforms, reconfigured chatbots to support remote patients, and enabling collaboration tools for patients, their families, and clinicians. Other sectors such as professional services, education, and even the sports industry, are being redefined through new forms of digital engagement. The challenge for technology leaders is finding which of these enhancing features or enabling temporary features are worthy of being made permanent. On a much more complex level, they will need to find ways to be more thoughtful about anticipating future customer needs and supporting them through associated technology capabilities and coordinated integration throughout their organizations. It is likely in the post COVID-19 world that companies will be faced with a different value chain, addressable market, customer preferences, and competitors than they experienced pre-pandemic.

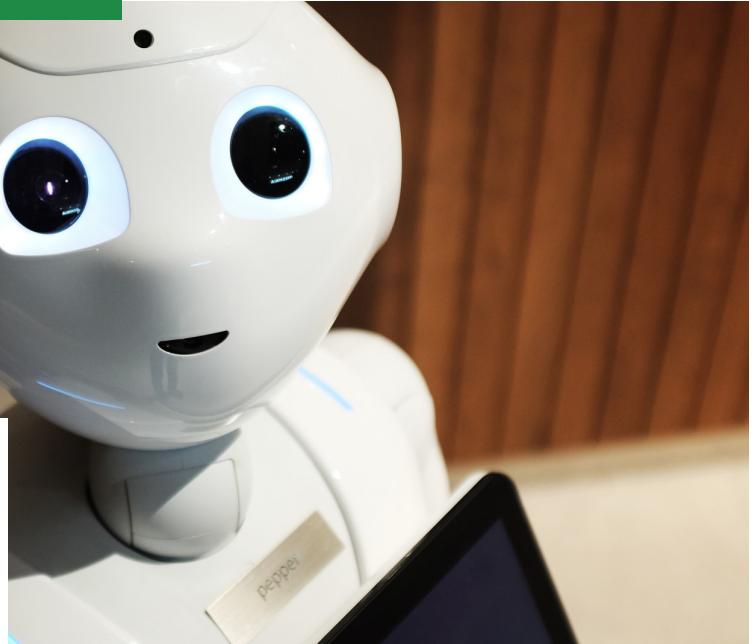
Post-modernize customer support operations.

Increased call center volumes during the crisis extended wait times up to more than 10 hours for some. Digital solutions can help address and overcome some of these bottlenecks. While the traditional communications channels such as phone or email support are clogged, organizations are taking innovative approaches to rethink customer support and finding new ways to reach the customers. Companies are deploying intuitive AI bots, using more AI-enabled moderation of online channels, and creating ways for call center employees to work remotely. Other customer interaction channels such as live chat, or more informal channels like WhatsApp or SMS, need to be aligned, connected, and integrated to ensure customer agents are able to offer exceptional customer experience irrespective of channel. Technology platform providers are also creating new capabilities and providing free services and tools to support their customers and the marketplace. Amazon Web Services (AWS), for instance, expanded its provision of tools, technical support, and promotional credit to support remote working, learning, and teaching. ServiceNow launched four emergency response apps to help its customers, which includes government agencies, to combat the global coronavirus outbreak. Technology leaders need to evaluate the additional steps they can take to support, enable, and empower their customers to better respond and recover.

2. Stabilize business operations for future readiness and resilience

Build a trusted technology ecosystem.

Demand the same level of care and reflection from your partners as you recover. Technology ecosystems for many organizations are broad and complex and increasingly so. During the pandemic, organizations saw some of their ecosystem partners rise to the challenge, adjust their services, provide timely innovations, and invest in the long-term relationship. Others faltered, and their lack of responsiveness compounded the severity of challenges their partner organizations had to deal with. Once the dust settles, put together a comprehensive report card across your ecosystem, identifying your most trusted performers and investing more time and resources into nurturing those relationships, because these partners will likely be critical over the next few months as you recover. More importantly, think about engaging them as you plan for future growth. Conversely, if any of your partners tried to unfairly exploit the situation to their advantage, think about moving on. Finally, consider which technology capabilities or functions or roles might be more secure if you owned them internally, rather than outsourced, increasing your dependence on others. Having a mix of fixed and variable capacity, both technology and human, will continue to be a source of agility during uncertain times.



Scale automation pilots.

Automation and robotics are often blamed for job losses, but these enabling technologies have emerged as saviors in dealing with certain aspects of the coronavirus crisis. Artificial intelligence, robotics, and automation innovations have enabled organizations to function as their human resources were compromised due to absenteeism and remote working. In some instances, these substitutions could pave the way for their human counterparts to take on more value-added activities. As jobs become more digitized, multidisciplinary, and data-driven, automation can free up capacity for humans to tap into their inherent advantages, namely creativity and emotional intelligence. The resulting “superjobs” that are likely to be created out of this transition could lead to significant productivity and efficiency gains. The task at hand is to scale rapid-response innovations and previous automation pilots to move to a more engaging and robust augmented way of working. Proactively look for opportunities to automate manual and cumbersome business processes, especially the ones that require complex computations.

2. Stabilize business operations for future readiness and resilience

Create a resilient IT architecture.

Leading organizations have evolved their approaches to technology architecture during the crisis in order to stay nimble and responsive and compete with more innovative, often younger organizations. Digital businesses, often unburdened by legacy systems and technical debt, have moved quickly and adjusted to changes in buying and working patterns. But the response of some larger businesses has been equally impressive, and the key is to further leverage the investments made. Ensuring the scalability and speed of cloud-based services is one obvious area. If there's one lesson to draw from the crisis on this count, it's that companies that have invested in cloud-based platform approaches and modern architectures to support them (e.g. microservices, API strategies, low-code approaches) have had a much easier time scaling their application to cater to the challenges posed by COVID-19, particularly those that operate in multiple geographies. The crisis for many has necessitated the movement to a product-based model for end-to-end technology delivery, where technology and business process ownership are more intertwined and embedded. Going forward, technology architecture needs to flex without compromising security and reliability, and without becoming an obstacle to business innovation and positive change. This means repositioning your architecture teams to support growth—a daunting task, considering that 54 percent of organizations report gaps in skills and headcount for architecture.ⁱⁱⁱ



Establish a sensing function.

Enterprise agility will require organizations to both predict events and react swiftly. As one example, applying geo-risk modelling to determine the impacts of storms, political unrest, and health concerns on supply chains can help fortify them and empower executives to make better decisions on workforce and financial forecasts. Command centers can optimize key material flows, identify purchase orders at risk, re-route supply lines, and even dynamically adjust pricing. Sensing and more predictive modelling, applied with AI technologies, will increase the value technology brings to the business and drive real-time results.

2. Stabilize business operations for future readiness and resilience

Reallocate tech funding for agility.

Technology investments have been adjusted in many organizations quite dramatically during the crisis. Some programs have been halted as part of a wider cost-cutting necessity, while others have been re-planned, slimmed down, or otherwise adjusted. Conversely, new initiatives have been launched with immediate sanction from the CEO and CFO. In the longer run, organizations need to develop flexible approaches for innovating and operating at speed, and this will require tighter collaboration between technology and finance when it comes to budgeting and appropriations, whether under the name of supporting innovation, defending against disruption, or enabling digital transformation. Underinvestment in innovation should be front and center in these discussions. Technology leaders spend a little less than 20 percent of their technology budgets on innovation. This will likely need to climb during the recovery phase as organizations experiment with new ways of working. The work of transitioning to more agile finance, planning and budgeting processes that support innovation and wider business agility will need to happen quickly.

Keep an eye on your assets.

The increasing digitization of assets is rapidly shifting the security perimeter and contributing to an ever-expanding threat landscape. Given this, it's critical to

create and maintain constant cyber vigilance across your organization to ensure you don't become another victim to an aggressive cyberattack. In order to create the best defensible position possible, you will need to prioritize two tasks in particular: 1) collecting the latest threat intelligence on an ongoing basis, and 2) leveraging emerging technologies such as artificial intelligence and machine learning to identify threat patterns and necessary protective responses.

Get to knowing your people, inside and out.

With a digitized workplace and changing customer demands to digital channels, it's more important than ever that your employees, customers, and those in your extended enterprise can "prove they are who they say they are." A simple act of social engineering—whether the result is identity theft, fraud, or a data breach—can blemish your reputation and erode customer trust. Across your entire extended enterprise, you will need to strike the right balance between a secure transaction and a positive user experience. It's a tough balance to manage but the rewards for getting it right are significant: you can confidently expand the online services you offer across your enterprise, and even expand the definition of who you take on as customers.



3. Position to thrive longer term by shaping the “next normal”

As organizations recover, it is essential to cast an eye on the future competitive landscape, considering which changes wrought by the crisis will constitute a “next normal.” To be sure, there are likely many twists and turns ahead in dealing with the pandemic and its aftermath, but we’re already seeing some possibly seismic shifts in behavior among consumers and in wider society. Those technology leaders able to get ahead of these shifts will help their organizations thrive beyond the near and intermediate terms.

3. Position to thrive longer term by shaping the “next normal”

Reimagine customer experience by focusing on human-centered design.

A growing class of AI-powered solutions—referred to as “affective computing” or “emotion AI”—are redefining the way we experience technology. In the coming months, more companies will ramp up their responses to a growing yet largely unmet demand for technology that better intuits human behaviors and responds more appropriately. Historically, computers have been unable to correlate events with human emotions or emotional factors, but that’s changing as innovators add an emotional quotient (EQ) to technology’s IQ, at scale. Combining AI, human-centered design techniques, and technologies currently being used in neurological research to better understand human needs, human experience platforms will be able to recognize a user’s emotional state and the context behind it, and then respond suitably. Indeed, the ability to leverage emotionally intelligent platforms to recognize and use emotional data at scale is one of the biggest, [most important opportunities](#) for companies going forward.

Bridging the physical and digital worlds to deliver new value.

Rapidly evolving simulation and modeling capabilities, better interoperability and IoT sensors, and greater availability of tools and computing infrastructure are closing the chasm between the physical and digital worlds. We’re already seeing “digital twins” being used to simulate the real world — and to great effect. They’re being used to optimize entire manufacturing value chains, capture and analyze massive amounts of oil rig data for more productive drilling, and even to create digital copies of the human heart to improve the accuracy of clinical diagnoses. The [market for digital twins capabilities](#) — valued at US\$3.8 billion in 2019 — is projected to swell to US\$35.8 billion by 2025. Technology leaders need to consider how they’ll incorporate the factors supporting these technologies — advanced simulation, new sources of data, interoperability, visualization, instrumentation, and new platforms — to design new services, drive growth in existing markets, and ensure their organizations stay ahead of their competition.

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Establish trust as a key business value.

Trust is an invaluable asset that can be quickly compromised or in short supply during moments that matter most. Leading companies are realizing that every aspect of their organization that is disrupted or reshaped by technology represents an opportunity to gain or lose trust. Deloitte research has found that high-growth companies are [twice as likely](#) to consider ethical ramifications of technology use compared to their low-growth counterparts. They are approaching trust not as a privacy, compliance, or public relations issue, but as a business-critical goal to be pursued. Organizations are setting themselves apart from the competition by establishing stakeholder trust as a core business value

and a differentiator. Business leaders are reevaluating how their products, services, and the decisions they make —around managing data, building a partner ecosystem, and training employees, among others — build trust. Leaders who embed organizational values and tech ethics across their organization are demonstrating a commitment to “doing good” that can build a long-term foundation of trust with all stakeholders. Reflect on the trust gained and or lost during the crisis and adjust your practices, such as client experience, transparency, and data usage and retention.

Conclusion

COVID-19: An unprecedented opportunity to lead

In many ways, the COVID-19 pandemic has poked holes in the preparedness of organizations and has shown how underutilized the technologies are that could have ameliorated some of the worst impacts. Video conferencing and remote monitoring are two technologies that have both been available for at least a decade, but only now are many companies scrambling to figure them out. The same reluctance has been exhibited with remote working and online learning tools.

That we fail to adopt until the need is urgent is an observation as old as humanity. But now that need is upon us, and it is providing the strongest incentive possible to change attitudes about our behaviors, our risk perceptions, and our fundamental ways of working. COVID-19 has provided an unprecedented learning opportunity, and it might be a fleeting one. Don't wait for the business to tell you what they need. Take up the mantle, get ahead of this rapidly shifting landscape, and tell them what they will need to be better equipped for the next crisis.



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Supporting Materials

ⁱ <https://www2.deloitte.com/global/en/pages/about-deloitte/articles/people--technology--and-the-path-to-organizational-resilience.html>

ⁱⁱ <https://www.infosecurity-magazine.com/news/covid19-drive-phishing-emails-667/>

ⁱⁱⁱ <https://www2.deloitte.com/us/en/insights/focus/tech-trends/2020/systems-architecture-design-awakens.html>

^{iv} <https://www2.deloitte.com/us/en/insights/topics/leadership/global-cio-survey-2018/IT-operating-models.html>

^v <https://www2.deloitte.com/us/en/insights/focus/tech-trends/2020/executive-summary.html>

^{vi} <https://www2.deloitte.com/us/en/insights/focus/tech-trends/2020/digital-twin-applications-bridging-the-physical-and-digital.html>

^{vii} <https://www2.deloitte.com/us/en/insights/focus/tech-trends/2020/ethical-technology-and-brand-trust.html>



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