Cognizant

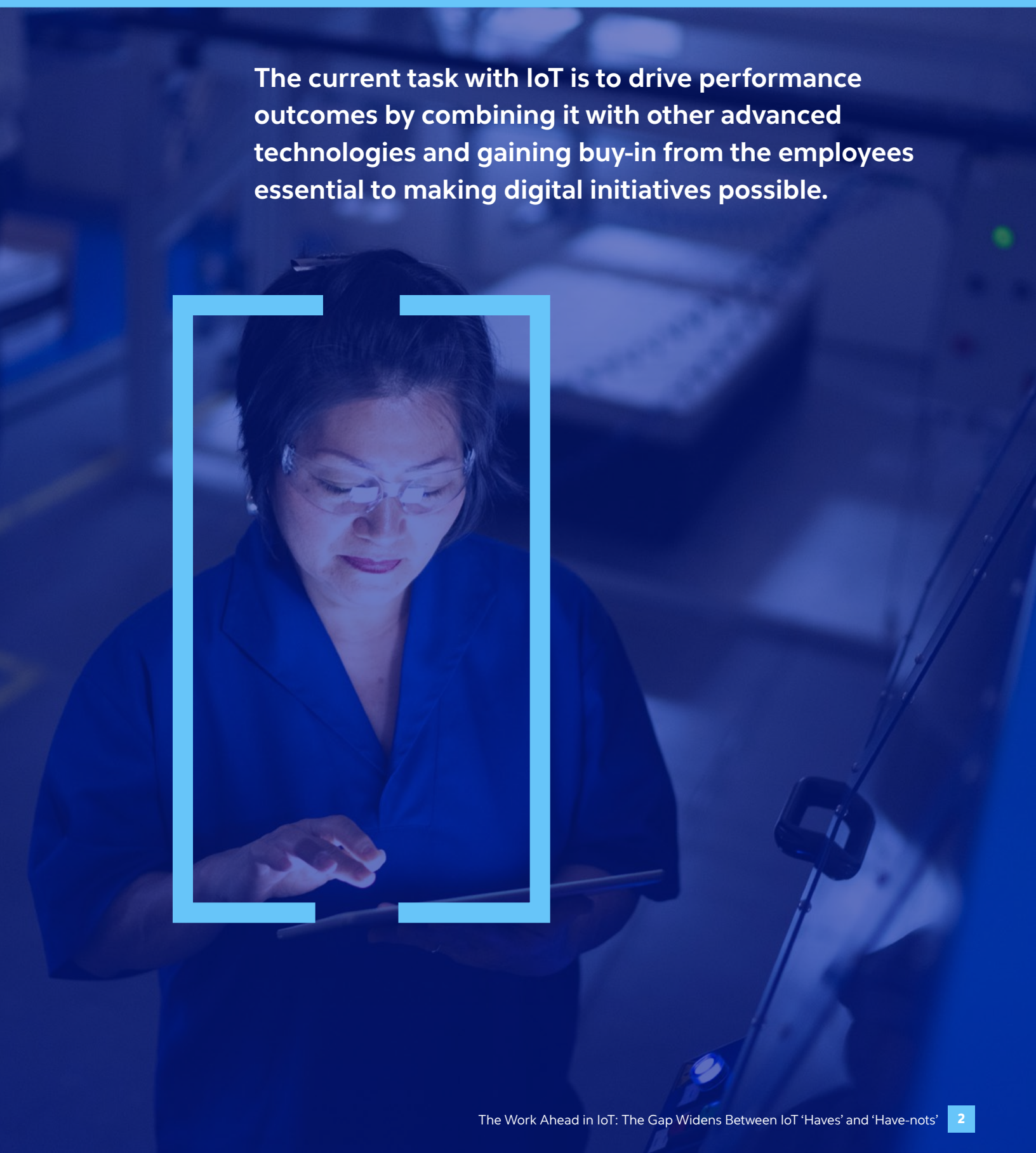
The Work Ahead in IoT: The Gap Widens Between IoT 'Haves' and 'Have-nots'

In our study, businesses with IoT deployments report higher performance and greater adoption of other digital technologies that scale IoT benefits. Even as questions remain on value realization and employee impact, IoT adopters have seized a competitive advantage.

THE WORK AHEAD

Executive Summary

The current task with IoT is to drive performance outcomes by combining it with other advanced technologies and gaining buy-in from the employees essential to making digital initiatives possible.



Ever since a couple of Carnegie Mellon students attempted to track a soda machine's inventory status from their dorm room, the promise of Internet of Things (IoT) was to better perform remote monitoring in real time, from predicting when equipment might not work to knowing when inventory would be depleted.[1]

While the definition of IoT evolves, the mission remains essentially the same: to provide real-time visibility into critical business operations.

But IoT is now at a bit of an adoption crossroads. On the one hand, IoT is the most highly adopted of all digital technologies in our recent study, and those with IoT deployments report they've weathered the pandemic better than those without. Our analysis demonstrates that IoT "leaders" (those companies with live implementations vs. those lacking a clear adoption model) are also more apt to have adopted additional digital technologies such as machine learning (ML), which is enabling them to further widen their competitive advantage and scale benefits. The consequences are real: IoT leaders have already demonstrated better performance than non-adopters across a number of business measures.

Yet, there remains reason for caution: IoT is difficult to implement, generates a massive amount of mostly unusable data and requires other technology to deliver fully on its promise. Overall, the value of IoT has raised some questions as companies have yet to adequately tie its merit to operational and financial outcomes.

To understand the changing nature of work in a world dominated by digital and disrupted by COVID-19, Cognizant's Center for the Future of Work surveyed 4,000 C-level executives at leading companies around the world (see methodology, page 20). We found that the current task with IoT is to drive performance outcomes by combining it with other advanced technologies and gaining buy-in from the employees essential to making digital initiatives possible. It's an arduous and delicate task, but it may make all the difference as organizations push to realize the promise of IoT in the work ahead.

A number of key themes emerged from our research and analysis:

1. **IoT has market momentum.** With 43% of respondents citing some level of IoT implementation, IoT is the most pervasively implemented digital technology, beyond analytics, artificial intelligence (AI) and automation. Other research points to a continued, increasing investment into this foundational technology for driving scaled business processes and product strategies.

2. **IoT adoption is generating a story of haves and have-nots.** Respondents with live IoT implementations appear to have fared better during the pandemic than those with IoT pilots or no plans to implement IoT. The former report being more responsive and more resilient as the pandemic challenged their operations and business models. These respondents were also further along in virtually every measurable performance area, including business process augmentation, outcomes and value chain design.

3. **Manufacturers are top adopters but lag in other ways.** More than half of respondents from manufacturing-intensive industries have a live IoT implementation in place, and are now eyeing a more expansive, global approach to business

operations and network design, post-pandemic. Still, when seen as a group, these companies lag behind IoT leaders and are more closely aligned with IoT laggards (as defined in our study) when it comes to adopting the companion digital technologies necessary to building "smart factories."

4 **Coupling IoT with AI/ML drives better decisioning.** With billions of sensors and devices generating zettabytes of data through IoT systems, perhaps a better measure of IoT prowess is how other digital technologies — namely AI and machine learning — are being used to turn big data into smart, actionable data. For example, IoT leaders have adopted machine learning at a 30% higher level than laggards; leaders also show no signs of letting up, with expected 35%-plus growth in machine-learning adoption by 2023.

5 **Bring employees on the digital journey.** While organizations are generally bullish on IoT and digital migration, executives need to be mindful of the implications of IoT pervasiveness on employees. IoT leaders were more apt to report employees feeling overwhelmed and stressed from always being "on." Process augmentation requires employee participation, and employees have expressed concern about how all of this impacts them.

While the long-term impact of IoT and other digital technology on jobs is unclear, half of the executives surveyed said their own concerns about the impacts of hyperconnectivity are real, which heightens the call for strong leadership as companies proceed with their digital migration.

IoT leaders vs. laggards

To better understand the impact of IoT adoption on business performance, we separated IoT "leaders" from "laggards." IoT leaders (43% of the respondents in our study) are defined as organizations with live IoT implementations, while laggards (57%) are those with either an IoT pilot or no implementation. Leaders have a slightly larger representation from outside of the U.S. and tend to be the larger companies in the study (over $500 million in annual revenue).

The study did not ask respondents for other indicators of IoT leadership, such as creation of a semantic data model and orchestration of business processes from the received signals.

IoT leaders have adopted machine learning at a 30% higher level than laggards, and expect 35%-plus growth in machine-learning adoption by 2023.

Smart action begins with IoT

Our study reveals a correlation between IoT adoption and overall better business performance, including during the pandemic. Among IoT leaders, less than 40% cited the pandemic as having a negative impact on business performance, compared with over half (51%) of IoT laggards saying the same.

Of all the digital technologies included in our study, IoT was the most widely adopted by respondents to augment their business processes.

Over 40% of respondents (who we call IoT leaders) have a live IoT implementation of some sort. This includes 27% reporting "some" IoT implementations and 16% reporting widespread implementation. This is higher than respondents' adoption of AI (8% widespread and 30% "some"), analytics (5% widespread and 30% "some") and automation (8% widespread and 21% "some").

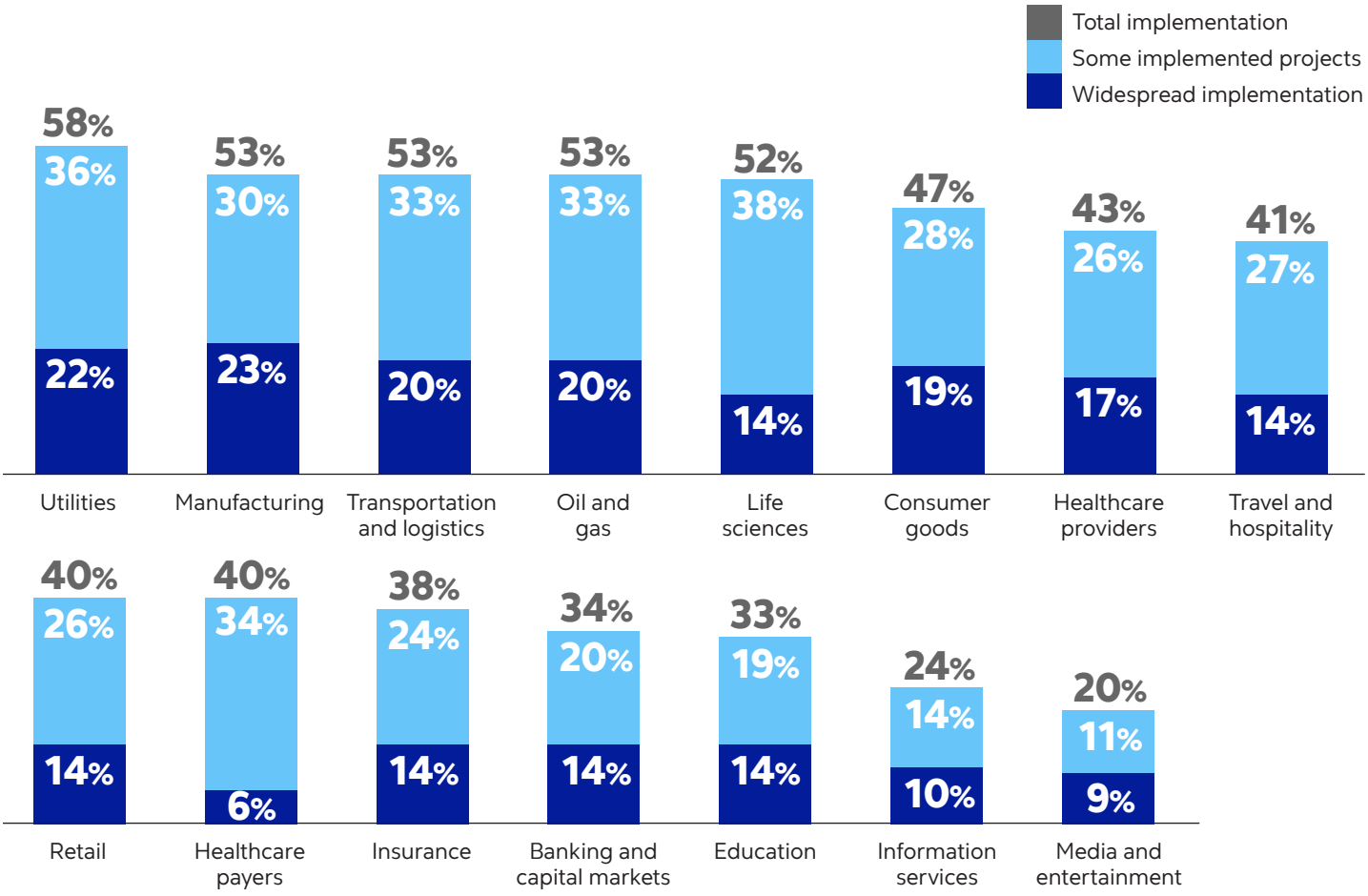
The remaining 57% either have an IoT pilot underway (25%), are exploring the technology (13%) or have no plans to do so (19%).

On a closer look, over half of IoT leaders (53%) come from five manufacturing-intensive industries: consumer goods, life sciences, manufacturing, oil & gas and utilities. Largely because of investments in Industry 4.0, manufacturers themselves and this group of manufacturing-intensive businesses (plus transportation and logistics) have invested early into IoT, deploying sensors, actuators and manufacturing equipment with digitally augmented processes to create "smart" manufacturing environments (see Figure 1).

Even amid IT budget pressure resulting from the pandemic, studies indicate further healthy investments in IoT, with organizations attempting to widen its application into business processes.[2]

Manufacturing-intensive industries lead in IoT deployment

Respondents were asked about their progress in implementing IoT. (Percent of respondents)



Response base: 4,000 senior executives
Source: Cognizant Center for the Future of Work
Figure 1

Yet, deployment has not proved easy. Prior to the pandemic, one study found that one in five businesses had struggled with moving IoT projects beyond proof of concept in a consistent, effective way, while barely one-third (34%) had successfully connected the implementation to their outcomes.[3] Further, many organizations have yet to tie IoT to tangible operational or financial outcomes.

The fact is, while IoT has become the pervasive connector of things — sensors, RFID, machine-to-machine communication, big data, the cloud and advanced robotics — it may be straining the boundaries of its role as a platform. Taken together, all these components generate data — lots and lots of data. So much so that, depending on the time or location, data congestion from sensor density is causing network latency, compromising one of the key purposes of IoT: real-time data assessment and response.

Now, as companies look to next-level technologies such as 5G and edge computing to make IoT work as billed, the definition of IoT is evolving beyond a platform, and into a system that is increasingly dependent on companion technologies that will enable its key functions.

Put another way, the ability to intelligently analyze and act on the data volumes generated by IoT is what makes IoT work. And it is by this standard that IoT adoption will be evaluated in this report.

Post-pandemic, 'leaders' are ready to go on the offensive

Our study also reveals a correlation between IoT adoption and overall better business performance, including during the pandemic. Over one-quarter (26%) of IoT leaders said they had already seen improved organizational agility (e.g., faster and flexible decision making and product/service development) as a result of augmenting their business processes with advanced technology, compared with 22% of IoT laggards. And among IoT leaders, less than 40% cited the pandemic as having a negative impact on business performance, compared with over half (51%) of IoT laggards saying the same. IoT leaders (46%) were also more apt to take significant actions in all or part of their business in response to the pandemic, compared with 43% of IoT laggards.

Looking ahead, there are indications that IoT leaders will further create separation from laggards. Over half of IoT leaders (46%) said they will redesign their global operating model to deal with tighter borders, compared with just 39% of laggards. Similarly, over half (53%) of IoT leaders intend to redesign their supply chains to build in greater resilience to shocks vs. 48% of laggards. Roughly 46% of IoT leaders said they would reshore some previously outsourced activities vs. 38% of laggards.

It plays like an updated version of a time-worn story: Because leaders have already deployed the digital technologies that will enable supply chain visibility, business modeling and rapid response, it will likely lengthen the distance between the haves and the have-nots.

It is already evident that many (if not most) changes in consumer behavior, operational requirements, supply chain design and new technology utilization are unlikely to return to pre-pandemic status. Now, the same operational agility made possible by sensors, connectivity and analytics to identify threats and disruption will be necessary to pounce with new products, services and operational structures as demand signals materialize.

IoT leaders' secret weapon: other digital technologies

IoT leaders have adopted every digital technology in our study at a higher rate than laggards, from analytics, to AI, to software robots. Leaders also adopted chatbots and blockchain at over twice the rate of laggards.

An increasingly pressing byproduct of digital migration is that organizations are now awash in data — whether it is sourced from IoT or elsewhere — and by all indications, the tidal flow of data shows no sign of receding.

IDC predicts connected devices could reach almost 75 billion globally by 2025, resulting in more data being generated over a three-year period than what was generated in the past 30 years.[4] And most of the data now, and going forward, will be generated by devices connected to an IoT platform.

Yet, at the same time, just a fraction of this data is now being analyzed, and only a fraction of it will ultimately be deemed important or mission critical.

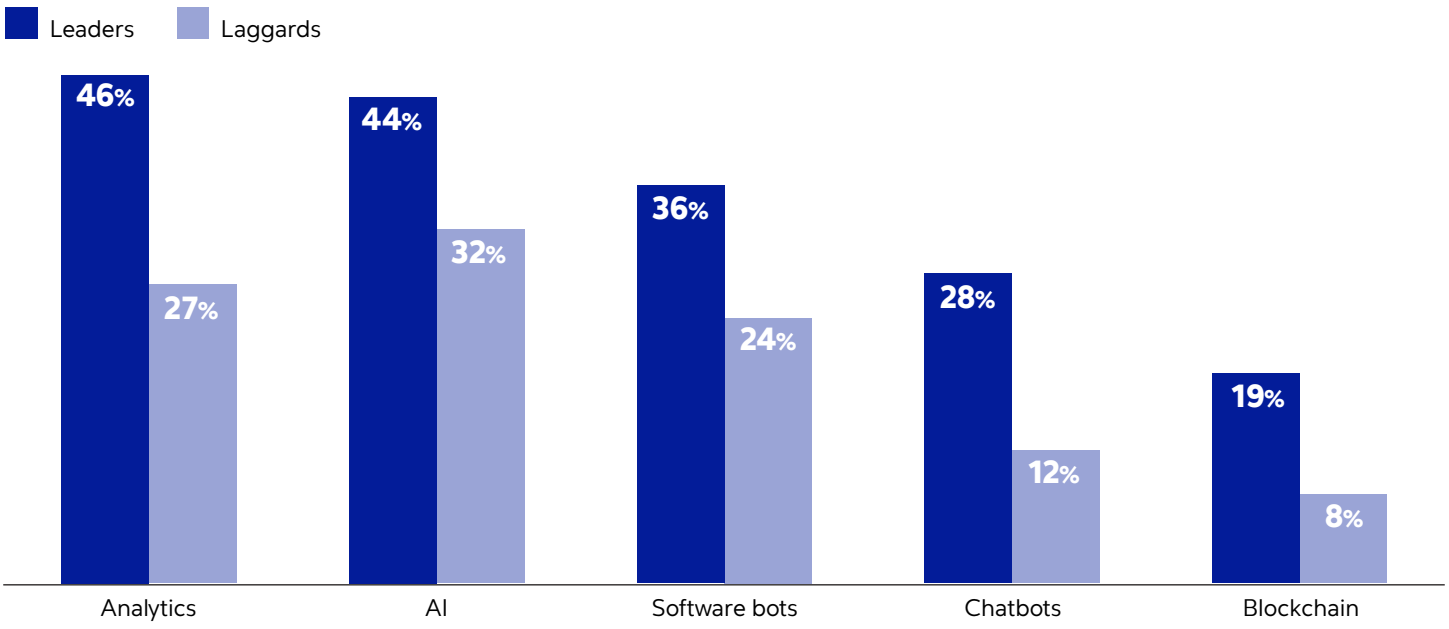
The task, now, is to make the data meaningful and actionable. While the next chapter of IoT will likely involve improved performance through greater bandwidth and strategically-located processing, the crisis of the present can be helped greatly by the tools of the present — namely, AI.

Indeed, our study found that IoT leaders have adopted every digital technology in our study at a higher rate than laggards (see Figure 2), from analytics, to AI, to software robots. Leaders also adopted chatbots and blockchain at over twice the rate of laggards.

A key advantage of AI adoption is that it can enable IoT leaders to more quickly shift from a defensive to an offensive posture based on data-driven insights. Tellingly, over two-thirds (68%) of respondents say they have turned to AI to make meaning of their unstructured data volumes. According to many estimates, unstructured data accounts for at least 80% of businesses' data volumes.

By adopting other digital technologies, leaders make IoT data more useful

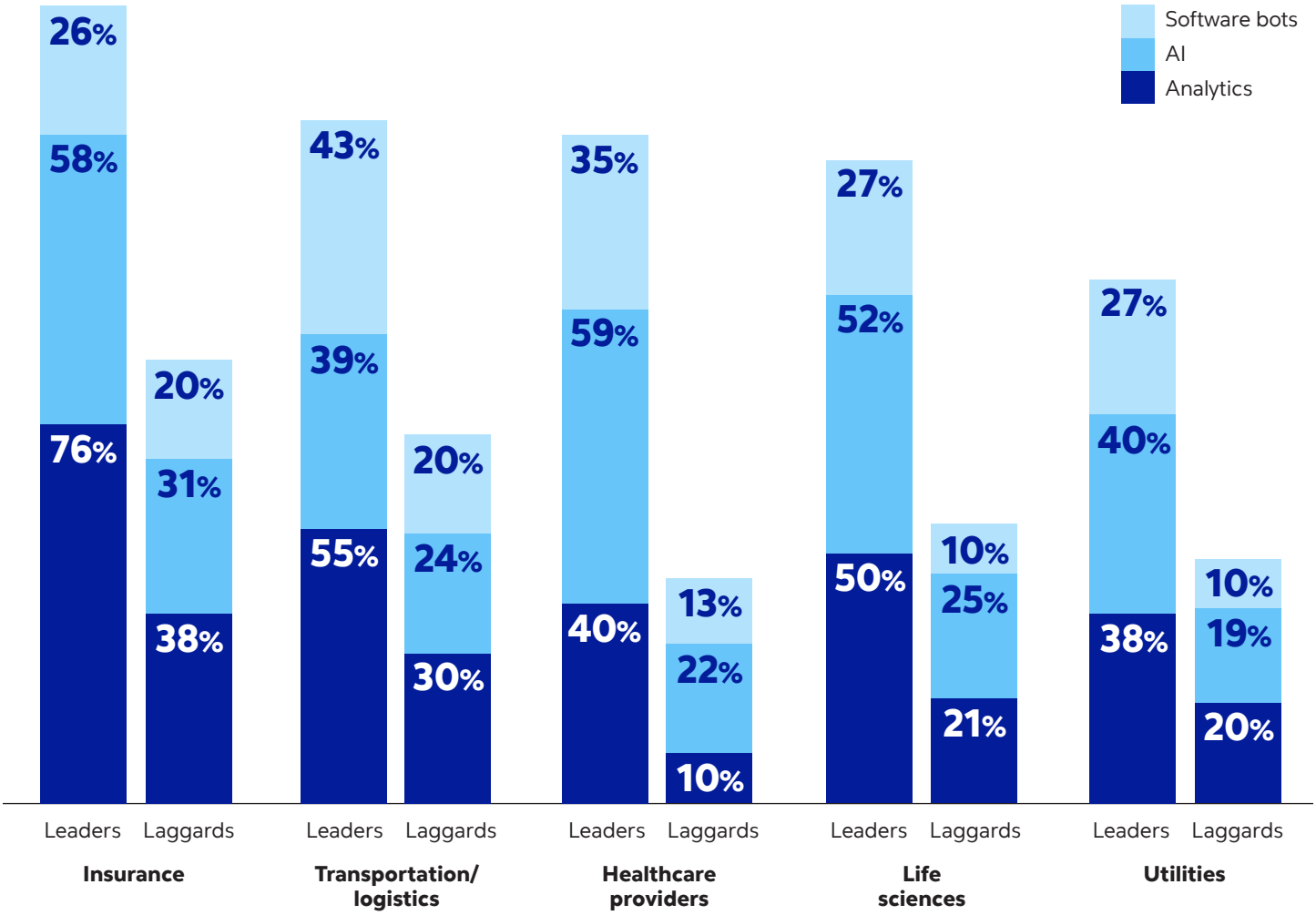
Respondents were asked about their progress in implementing key digital technologies. (Percent of respondents)



Response base: 4,000 senior executives
Source: Cognizant Center for the Future of Work
Figure 2

Industries with high tech adoption can better scale IoT

Respondents were asked about their progress in implementing key digital technologies. The figure depicts the industries that are furthest ahead with deploying the technologies that help scale IoT initiatives. (Percent of respondents saying "some implemented projects" or "widespread implementation")



Response base: 4,000 senior executives
Source: Cognizant Center for the Future of Work
Figure 3

A digital flex: Getting from big to smart data

The strategy of leveraging IoT with AI and other digital technologies casts a new light on manufacturers' IoT abilities. While the manufacturing-intensive companies in our study are very strong in IoT adoption, they are comparatively weak in the adoption of other digital technologies compared with non-manufacturing-intensive respondents, including AI, analytics software robots, blockchain and chatbots. On average, the manufacturing-intensive industries, when seen as a group, lag non-manufacturing industries in adoption by 4%.

One of the strongest adopters of digital technologies across the board is IoT leaders in the insurance industry, particularly when it comes to AI and analytics (see Figure 3).

Well over half (58%) have deployed AI, compared with 31% of insurers that are IoT laggards. Another 26% are using software bots compared with 20% of insurance IoT laggards. The resulting industry changes will go beyond the traditional data gathering and processing routines, to using digital technology to better predict underwriting on a custom basis (see Quick Take, next page).

Quick Take

IoT makes unknowns known in a risky business

Pick any industry, and the impact of IoT is clear. In manufacturing, RFID tags track components through supply chains and reveal how they relate to products and inventory as a whole. In healthcare, wearables and implanted devices provide critical data to providers and payers as they monitor patients and the population through the remote care demanded by the pandemic.

Arguably, one of the more intensive IoT applications is happening with auto insurance. The average car operates with millions of lines of code (for perspective, the Apollo 11 mission relied on fewer than 200,000 lines), with dozens of microcomputers and sensors collecting and transmitting data collected as you drive.

These data centers on wheels coordinate virtually everything we've come to associate with auto performance: coordinating fuel injection with ignition, throttle and timing; calibrating safety features such as anti-lock brakes, traction control and air bags; and managing comfort controls including navigation, music, climate and driver-assist programs. Because of IoT digital sensors, auto dealers more likely know a customer's tire pressure is low well before they do.

Privacy concerns will need to be balanced, but this data is gold to insurance companies. It separates the good drivers from the bad. If you drive fast or suddenly brake — they will know. This data is changing the risk calculus in underwriting and will antiquate generalized actuarial tables.

Add AI and machine learning to the mix, and auto insurance is poised to become very personalized, with policy adjustments made in near real-time. It is not surprising that over half (51%) of insurance industry IoT leaders believe the pandemic will accelerate the destruction of many traditional, non-digital businesses.

Machine learning widens the gap

On average, IoT leaders report that 19% of the work involved in the range of tasks in our study is executed by intelligent machines, which is a 30% advantage over IoT laggards' machine adoption of 15%. By 2023, on average, those percentages are expected to grow to 26% for leaders and 21% for laggards.

IoT leaders demonstrate a steadily increasing adoption of machine learning across all eight measured tasks in our study (see Figure 4).

Intelligent machines, which can detect environmental changes and use learned intelligence to respond, are on their way to augmenting and displacing many different human-performed tasks — particularly, now, for routine processes.

On average, IoT leaders report that 19% of the work involved in the range of tasks in our study is executed by intelligent machines, which is a 30% advantage over IoT laggards' machine adoption (15%). By 2023, on average, those percentages are expected to grow to 26% for leaders and 21% for laggards.

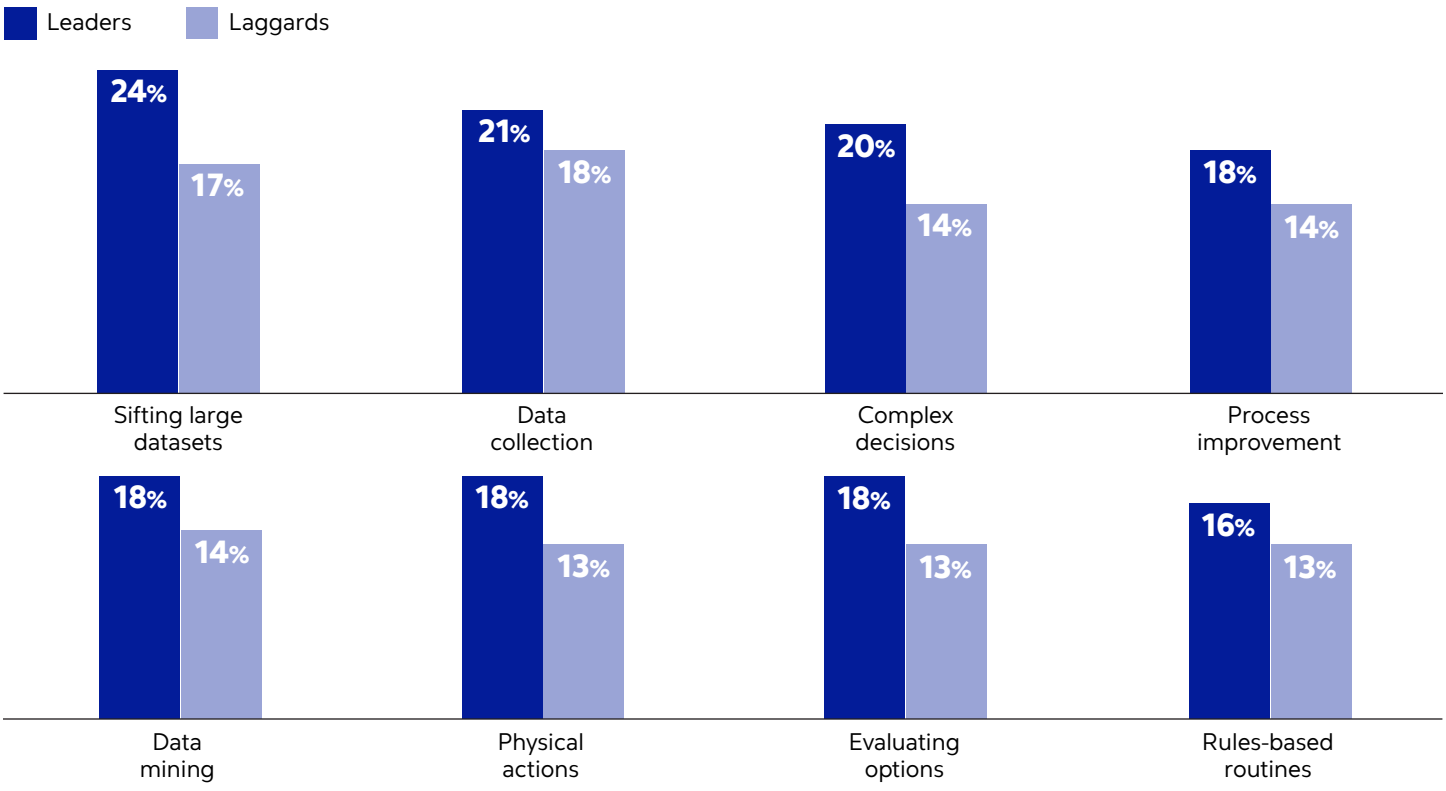
Not surprising, the top priority for machine learning by IoT leaders is, by far, sifting large data sets to filter and identify errors or actionable items (24%). In fact, every measured group (IoT leaders and laggards across industries) cited data sifting as the top priority. The delineating factor here is how aggressively it is being adopted.

As a CMO at a manufacturer in our study said, "AI or analytics or bots or IoT cannot reach 100% of their potential if the key prerequisites working at the back end are not accurate. The higher the proportion of accurate data, the better the chances are of the right predictive model."

Meanwhile, IoT laggards may soon find themselves in a situation of too little, too late with machine-learning adoption. The inability to adopt ML indicates process or decision response systems that are still ad hoc and dependent on tribal knowledge.

IoT leaders are more apt to use machine learning

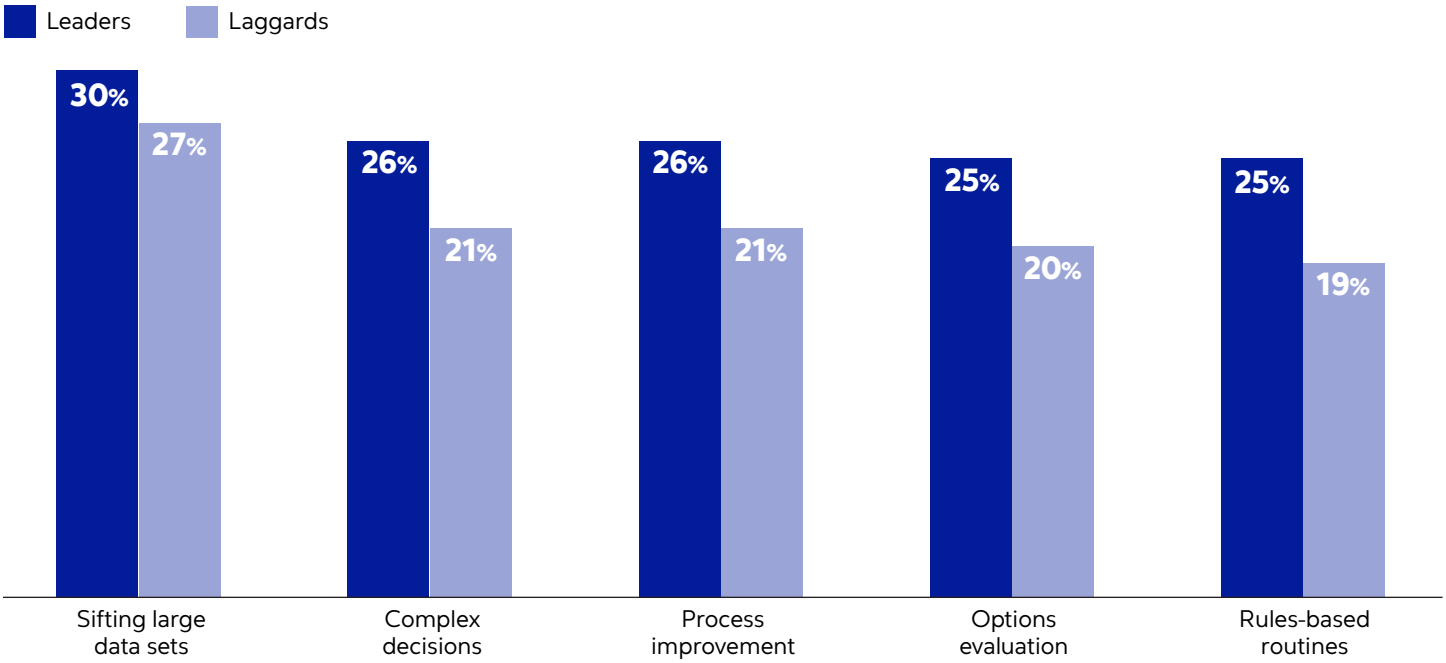
Respondents were asked to what extent the following activities are carried out by machines vs. employees.
(Median percent of work executed by machines)



Response base: 4,000 senior executives
Source: Cognizant Center for the Future of Work
Figure 4

IoT leaders look to machine learning for decision making

Respondents were asked to what extent the following activities will be carried out by machines vs. employees by 2023. (Median percent of work executed by machines)



Response base: 4,000 senior executives
Source: Cognizant Center for the Future of Work
Figure 5

The average gap between IoT leaders and laggards is sizable now (six points, or a 30% difference) and is expected to widen (to seven points, or a 35% difference) by 2023. If this dynamic pans out, it will be very difficult to catch up as IoT leaders have signaled they are preparing a pivot from data collection and sifting toward decision-making.

Heading toward 2023, in fact, IoT leaders expect to use machine learning for complex decisions (26%, up from 20% now), which becomes the second highest priority (to data sifting) for leaders (see Figure 5). In addition, leaders will use machine learning for feedback, assessment and process improvement, options evaluation and rules-based routines. In contrast, aside from sifting data sets, laggards are expected to barely scratch the 20% adoption mark.

IoT laggards may soon find themselves in a situation of too little, too late with machine-learning adoption.

Balancing digital success with quality of life

Roughly half of respondents expressed concern about the ramifications of the digital workplace: being overwhelmed by information, and stressed. In all of these measures, IoT leaders outscored laggards and were also more likely to say that digital technology would 'take jobs from people like me.'

That IoT is the only digital technology to have cracked the 40% level of implementation among respondents makes clear that there is a lot of change yet to happen for how the workplace — and the people in it — function.

Consider that at least 90% of respondents say jobs and skills will change significantly as a result of using digital tools and techniques; that automation will make work more strategic; that they will have the tools to make better decision; and that they will collaborate more with smart machines to do their jobs. It will be the role of company executives to ensure that employees appreciate and understand their role in this equation.

A CXO from a manufacturer in our study contends that the company's employees are keenly aware of the benefits of IoT, asset monitoring and predictive models, as it has helped reduce the failure rate and improve the operational maintenance of their machines and equipment. "Change is welcomed because employees can do more activities that add value to the business," he said.

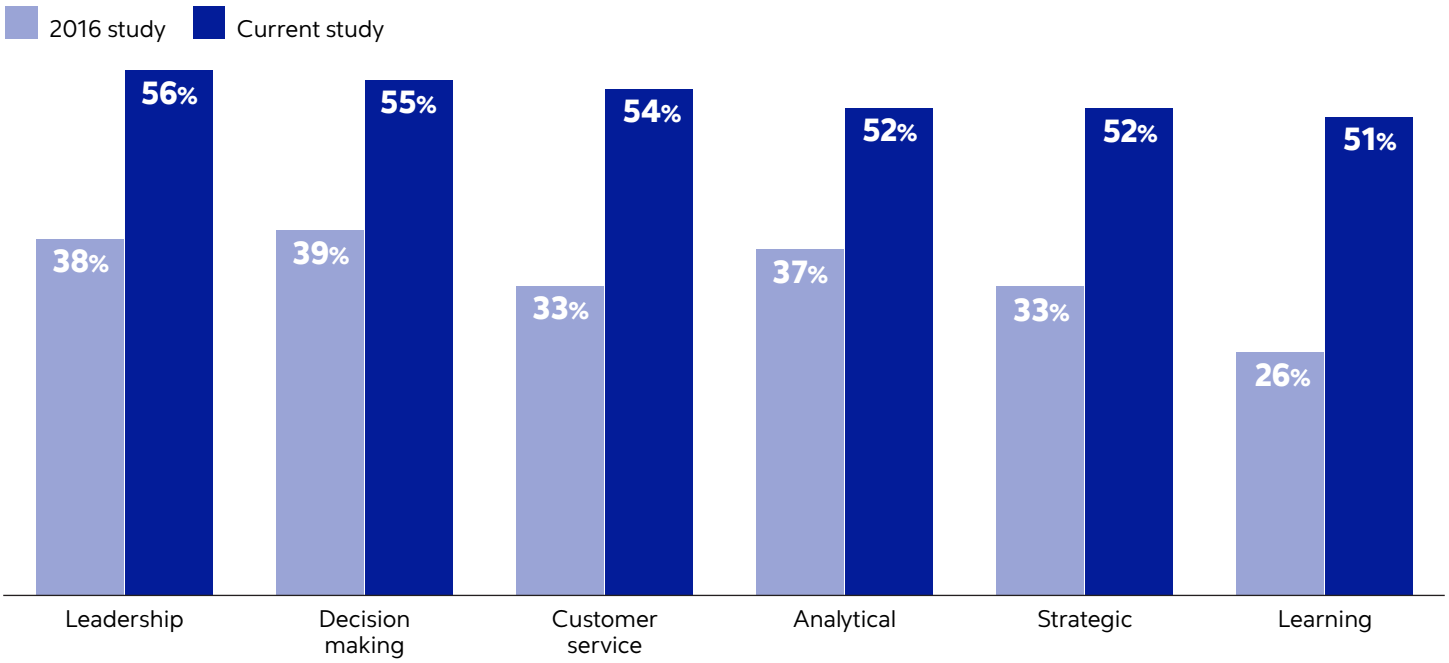
Still, companies will require a deeper and broader skill set than what they now have to continue with their digital journey. Our study also found strong evidence that many IoT leaders are struggling to meet their workforce needs. Among IoT leaders, 89% said they are facing a global talent shortage (48% to a significant extent) while another 87% of leaders say they will now seek talent on-demand (40% to a significant extent).

In all likelihood, the impact of the pandemic on corporate strategies has impacted the amount and type of talent needs (see Figure 6). Currently, the top skill needs for IoT leaders include decision making (39%), followed by leadership (38%) and analytical skills (37%). By 2023, top skills shift to leadership (56%), decision making (55%) and customer management (54%). The strongest skill growth area for IoT leaders are in learning (up 25 percentage points), customer care (up 21 points) and social media (up 20 points).

Respondents also said the digital transition was taking a toll on their personal well-being. A large majority (89%) said they were concerned about the impact of hyperconnectivity on their work. Roughly half of respondents expressed concern about the

Post-pandemic skill requirements come into focus

Respondents were asked to rate which skills had become more important than previously and which would become more important in three years. (Percent of respondents)



Response base: 4,000 senior executives
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Figure 6

ramifications of the digital workplace: being overwhelmed by information, and stressed. In all of these measures, IoT leaders outscored laggards and were also more likely to say that digital technology would "take jobs from people like me."

These concerns resonated even more strongly within a number of industries. IoT leaders were more apt to say they were concerned about "always being on" in insurance (74% of IoT leaders vs. 56% of laggards), transportation and logistics (66% vs. 50%) and manufacturing-intensive companies (61% vs. 44%). These are amber warning lights flashing for digital leaders, backed by studies that determine hyperconnectivity can negatively impact cognitive performance, and ultimately result in negative performance and burnout.[5,6] Altogether, these findings suggest that respondents anticipate a price may be paid for IoT success.

The changes to work wrought by technology are usually difficult to absorb, and the associated change management is even harder. To succeed with digital technology-driven change requires that leaders embrace the toll it will take on employees.

Usually, the largest barrier to technology adoption is not technology — it's the people who are expected to use it. And in the case of IoT and AI, it will be employees, or more aptly, teams that will likely determine the success of digital augmentation. Managers are wise to stay ahead of the effort and focus not only how technology will impact processes and operations, but also how it will impact teams, trust and perceptions of how employees will grow as digital technology thrives.

Finding value in hyperconnectivity

While our study found that IoT leaders have likely achieved competitive advantage over laggards, it's also clear that everyone — including IoT leaders, and regardless of industry — has a long way to go to become fully digital companies in terms of the operational, financial, staffing, technological and cultural needs of their organization.

Coming out of the pandemic, companies will likely be in one of two places regarding IoT: behind the curve by a little or a lot. IoT is a major undertaking, which ultimately impacts many areas of the business and the associated stakeholders.

While our study found that IoT leaders have likely achieved competitive advantage over laggards, it's also clear that everyone — including IoT leaders, and regardless of industry — has a long way to go to become fully digital companies in terms of the operational, financial, staffing, technological and cultural needs of their organization.

To shift their IoT strategies in a value-driven direction, businesses should consider the following:

- **Start being specific on what IoT can do for your company.** Move the conversation from talking about IoT, to talking about what IoT can do for your organization. For example, if you are a utility company, you may be focused on IoT as an enabler of a broad smart-grid initiative, or on how to improve the performance of specific assets, like transformers.In healthcare, the focus could be on enabling real-time healthcare information to patients and doctors. Start by developing a cross-functional advisory team and asking questions about how IoT can deliver value to internal operations or improve your strategic position in markets.
- **Stop approaching IoT in isolation.** IoT is a general-purpose technology that can lower costs, improve efficiency and drive better decisions, but IoT scales when combined with other technologies. Our research shows that enterprises scale IoT when it's combined with companion technologies like machine learning, automation and advanced analytics. Examine the broader bundles of technologies and determine what creative solutions and offerings would contribute to business success when they are used in conjunction with each other.
- **Continue to scale IoT.** With so much data being transmitted, it is difficult to determine which bits and bytes should receive attention. Scaling IoT calls for leaders to develop a decision architecture that offers contextual relevance to data that can support insight-driven decisions and actions. You can then scout out opportunities across the enterprise that deliver strategic value. Look outside-in and bring an external perspective to the organization to identify new IoT ecosystems that you might not control but can leverage.

Move the conversation from talking about IoT, to talking about what IoT can do for your organization.

Methodology

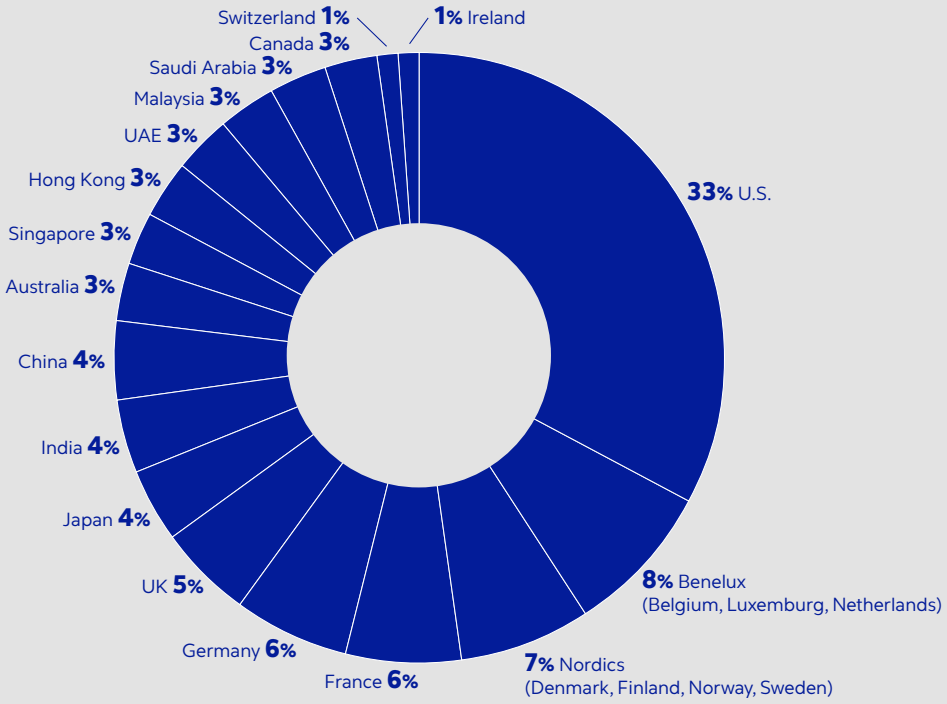
Cognizant commissioned Oxford Economics to design and conduct a study of 4,000 C-suite and senior executives. The survey was conducted between June 2020 and August 2020 via computer-assisted telephone interviewing (CATI). Approximately one-third of the questions were identical to those included in the 2016 Work Ahead study, allowing us to compare responses and track shifting attitudes toward technology and the future of work.

Respondents were from the U.S., Canada, UK, Ireland, France, Germany, Switzerland, Benelux (Belgium, Luxemburg, Netherlands), Nordics (Denmark, Finland, Norway, Sweden), Singapore, Australia, Malaysia, Japan, China, Hong Kong, India, Saudi Arabia and UAE. They represent 14 industries, evenly distributed across banking, consumer goods, education, healthcare (including both payers and providers), information services, insurance, life sciences, manufacturing, media and entertainment, oil and gas, retail, transportation and logistics, travel and hospitality, and utilities. All respondents come from organizations with over $250 million in revenue; one-third are from organizations with between $250 million and $499 million in revenue, one-third from organizations with between $500 million and $999 million in revenue, and one-third with $1 billion or more in revenue.

In addition to the quantitative survey, Oxford Economics conducted 30 in-depth interviews with executives across the countries and industries surveyed. Interviewees who responded to the survey have a track record of using emerging technology to augment business processes. The conversations covered the major themes in this report, providing real-life case studies on the challenges faced by businesses and the actions they are taking, at a time when the coronavirus pandemic was spreading around the world and companies were formulating their strategic responses. The resulting insights offer a variety of perspectives on the changing future of work.

The following figures represent the demographics of the 4,000 respondents from the full global study.

Respondents by geography



(Percentages may not equal 100% due to rounding)

Respondents by role

- **13%** Vice President
- **13%** Chief Operating Officer
- **13%** Director reporting to senior executive
- **13%** Senior Vice President
- **12%** President
- **12%** Chief Executive Officer
- **12%** Chief Financial Officer
- **12%** Other C-suite Officer

About the authors

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Euan Davis leads Cognizant's Center for the Future of Work in EMEA. A respected speaker and thinker, Euan has guided many Fortune 500 companies into the future of work with his thought-provoking research and advisory skills. Within Cognizant's Center for the Future of Work, he helps ensure that the unit's original research and analysis jibes with emerging business-technology trends and dynamics in Europe, and collaborates with a wide range of leading thinkers to understand how the future of work will look. Previously, Euan held senior analyst, advisory and leadership positions at Forrester Research, IDC and CEB.

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Manoj Mathew is a Cognizant Digital Business & Technology VP who focuses on the product, manufacturing, service and logistics space and leads advisory engagements in the Industry 4.0 space across EME and APAC markets. He has over 20 years of experience defining and delivering connected product solutions for mission-critical applications such as deep-water drilling, connected car solutions, gas turbine monitoring, autonomous agriculture and building-monitoring solutions. Manoj's current focus is on smart products and smarter businesses — helping manufacturers transform their processes to leverage ever-increasing pools of sensor data and live telemetry. Manoj earned his degree in electrical engineering and is based in the Netherlands.

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Endnotes

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The Future of Work

About the Center for the Future of Work

Cognizant's Center for the Future of Work™ is chartered to examine how work is changing, and will change, in response to the emergence of new technologies, new business practices and new workers. The Center provides original research and analysis of work trends and dynamics, and collaborates with a wide range of business, technology and academic thinkers about what the future of work will look like as technology changes so many aspects of our working lives. For more information, visit Cognizant.com/futureofwork, or contact Ben Pring, Cognizant VP and Director of the Center for the Future of Work, at Benjamin.Pring@cognizant.com.

About Cognizant

Cognizant (Nasdaq-100: CTSH) engineers modern businesses. We help our clients modernize technology, reimagine processes and transform experiences so they can stay ahead in our fast-changing world. Together, we're improving everyday life. See how at www.cognizant.com or follow us @Cognizant.

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