

The Work Ahead: Europe's Digital Ambition Scales

As European businesses assess the wreckage of the pandemic, the region seems more ready than ever to grasp the opportunities offered by digital tools and techniques and their role in the future of work, according to our recent Work Ahead study.

Executive Summary

After years of seeming indifference, business and political leaders in Europe appear to be waking up to what the future of work means and the defining role technology will play in it – a fact emphatically underscored by the pandemic.



Historically, the most damning indictment of Europe’s digital prowess was that it wasn’t even considered a contender in the question of world domination in the [Fourth Industrial Revolution](#).¹ Among the U.S., China and Europe, the continent was barely an afterthought: “Europe? Europe regulates the digital economy, right?”

Not quite. Europe is still gunning for Amazon and Google, but after years of seeming indifference and inaction, business and political leaders appear to be waking up to what the future of work means and the defining role technology will play in it – a fact emphatically underscored by the pandemic. European companies quickly recognized during the COVID-19 crisis that digital touchpoints with customers, employees and suppliers were essential survival tools.

The mesh between the old and new – between the physical and the virtual – is where European businesses could thrive in the work ahead. Everything from smart appliances, to smart cars, to intelligent factories to smart cities are now being built in Europe, changing industry structures and value chains in their wake. This part of the world is now scaling digital – and its predilection to regulate digital business could end up being the greatest gift Europe could offer to the world: a safe and secure digital economy fit for the 21st century.



To understand the changing nature of work in a world dominated by digital and disrupted by COVID-19, we surveyed 4,000 global executives globally and across industries, 1,400 of whom were in Europe (see methodology, page 24). We found an executive class eager to apply artificial intelligence (AI), intelligent machines and Internet of Things (IoT) to change how work gets done and forge a modern businesses able to withstand markets moving at lightning speed. It took a pandemic to accelerate this long-overdue modernization drive, but European businesses now realize the opportunities and the hard work ahead.

Five key themes emerged from our research and analysis:

- 1 **The pandemic is a level setter, and Europe must up its game.** More than half of respondents believe the virus will catalyze more data-intensive and digitally oriented ways of working in Europe, as well as more flexible and multi-disciplinary teams. The majority are convinced that the pandemic will take a wrecking ball to businesses that don't move toward more digital approaches.
- 2 **IoT, AI and alternative sourcing models are set to reshape how work gets done.** Executives are bullish on new forms of technology, with 47% expecting hyperconnectivity (and its corollary IoT) and AI-driven systems to dynamically shape the future of work. The rise of hyperconnectivity and AI will trigger more data-oriented technology investments to dramatically change how goods are produced and sold and how value chains connect together. Our research also records a steep rise in alternative sourcing strategies, with the percent of respondents naming this as a key driver rising 12 percentage points from our [2016 Work Ahead study](#).²
- 3 **More and more enterprise work is pivoting toward intelligent machines.** The ratio of work performed by humans vs. machines continues to tip in favor of machines, particularly in the areas of data organization, complex decision support and rules-based decision making. As the explosion of process data moves beyond human-scale ability to manage and draw insights from it, thriving in the post-pandemic world calls for data mastery at the core.
- 4 **Teaming people with machines boosts business performance.** Although greater operational efficiency is a leading benefit of augmenting processes with technology, other significant outcomes include better decision-making and improved customer and employee experiences. In our analysis, businesses that use technology to augment multiple processes achieve even greater business benefits, with a five- to seven-percentage-point upside across the board.
- 5 **Fast-changing work calls for an equally accelerated skills renaissance.** Needed skills have shifted away from global operating and strategic/ analytical skills, toward innovation, practical decision-making and leadership. In a time of intense disruption and change, the ability to create new and better ways of working is regarded as paramount, together with finding the skills the organization needs to thrive.

COVID-19 rips up the status quo

Amid the sudden changes spurred by the crisis, half of respondents now believe that traditional, non-digital businesses will not survive in the post-pandemic world.

The COVID-19 pandemic dealt an early blow to Europe. Italy, Belgium and France were the first to lock down outside China, and it was still early days when Britain’s prime minister was hospitalized with the virus. As towns and cities emptied of people and workplaces shut down, the economic and social impact for Europe was a warning to the rest of the world.

As the disruption intensified, organizations scrambled to revise their business, operating and technology models. Europe’s employees weren’t accustomed to working from home, and online shopping and behaviors were nowhere near the scale found in the U.S. or China.

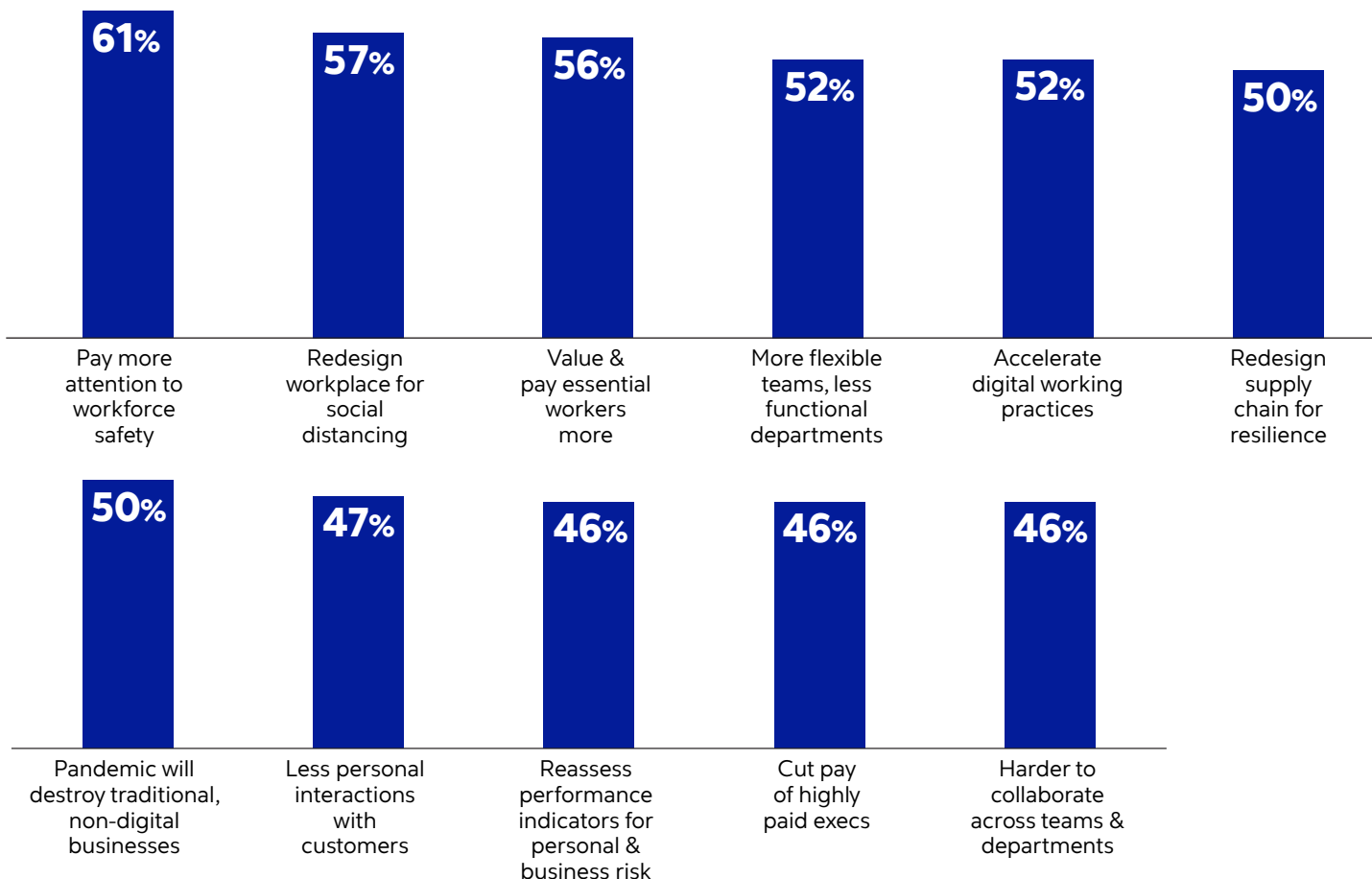
In just a few painful weeks, elegant, secure, scalable online content with a plethora of digital touchpoints went from nice-to-have to essential for every consumer-facing industry in the region. The online habit rocketed, literally overnight. One study

shows online grocery shopping [increased 10%](#) among urban dwellers in Europe during the lockdown.³ One respondent, a French retail executive, reported a 20% jump in e-commerce at his company as a result of the pandemic.

Amid this sudden change, half of respondents now believe that traditional, non-digital businesses will not survive in the post-pandemic world, and executives across industries are assessing which imperatives are temporary, and which will persist once the prolonged pandemic becomes a distant memory (see Figure 1).

COVID catalyzes significant and far-reaching workplace changes

Respondents were asked to rate how strongly they agree or disagree with the following statements about the likely impact of the pandemic over the medium term on their business and workforce. (Percent of respondents saying they agree or strongly agree)



Response base: 1,400 senior executives
 Source: Cognizant Center for the Future of Work
 Figure 1

A key point of agreement is the need to prioritize employee welfare and safety (61%), as well as valuing and paying frontline workers more (56%). The workforce is no longer seen as a mere labor resource, and a richer, more complex understanding of the value employees offer is moving into focus.

Additionally, more than half of respondents (52%) expect flexible and multi-disciplinary teams to emerge as a lasting impact. In this work model, agile processes will be executed by networks of teams, operating in a work culture characterized by flatter management styles and worker autonomy, rather than departmentalized, bureaucratic structures. Rapid learning

and fast decision cycles are enabled by a strong IT foundation and a common purpose of co-creating value for stakeholders. The same number of respondents expect their business to accelerate adoption of data-intensive, digital-oriented processes and work tasks.

Businesses are also working to reconfigure their supply chains (50%). As the pandemic unfolded, many manufacturers quickly established new procedures to ensure steady production, using stockpiling, excess capacity and duplicate systems as survival mechanisms.



Out of the ashes: the quest for leadership

Mastery of AI will be the hinge for future success for European businesses, as these technologies will do the heavy lifting of meaningfully consuming and acting on vast volumes of data.



When we asked executives to name which forces would have the most significant impact on their organizations’ work by 2023, the top two responses were hyperconnectivity and AI (see Figure 2). On a global basis, there’s relatively little differentiation regarding these trends among respondents in Europe, North America and Asia Pacific, revealing that European businesses are on par with their counterparts throughout the world.

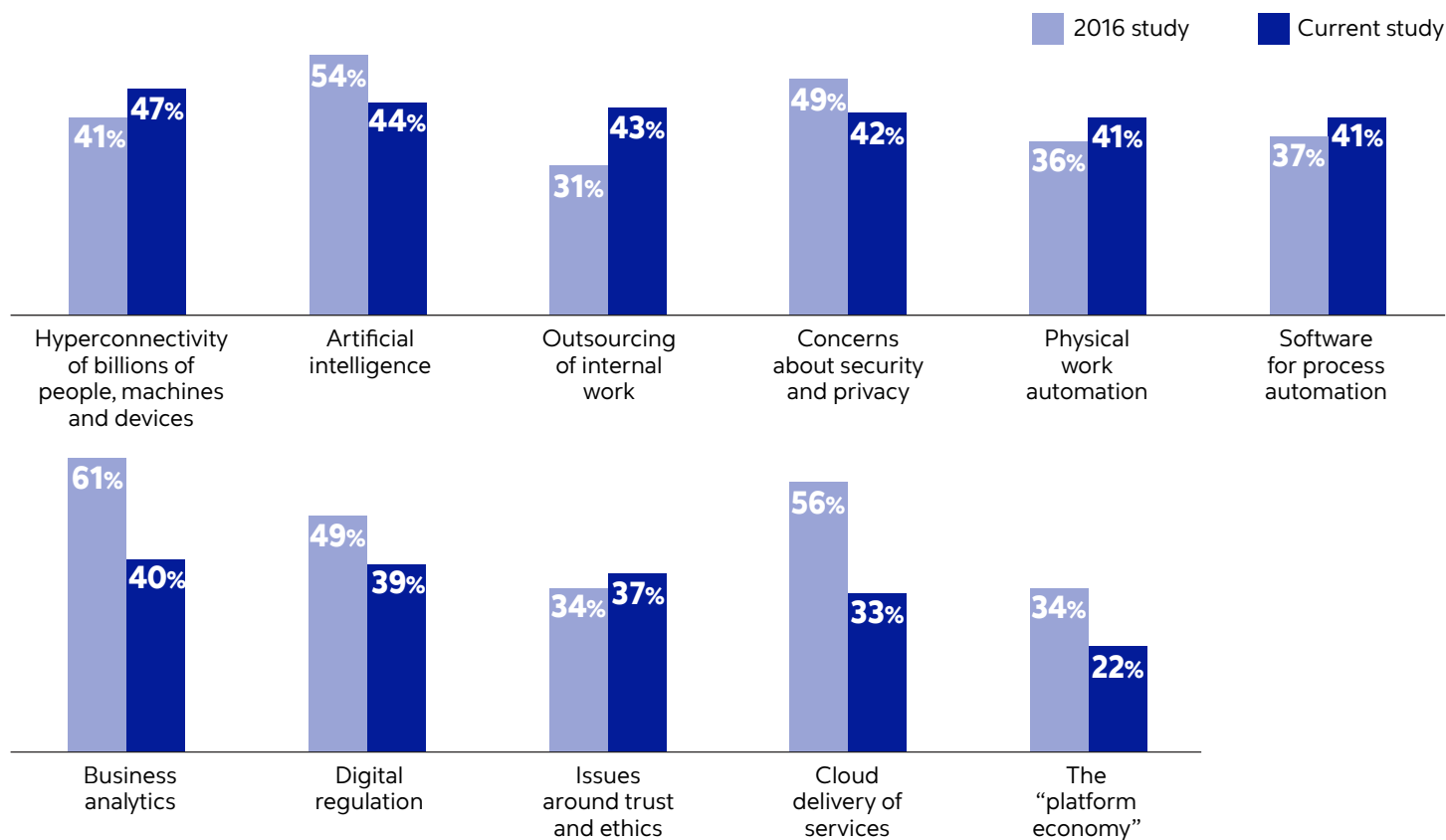
While the percent of respondents citing hyperconnectivity increased from our 2016 report (from 41% to 47%), the opposite is true for AI, which declined 10 percentage points, from 54% to 44%. While this may suggest a diminishment in European businesses’ enthusiasm for AI, we believe the dropoff is likely more related to respondents’ maturing attitudes toward this powerful set of technologies. Businesses now realize AI is not a “magic wand” that can easily be deployed and produce magical results. Rather, AI is a sophisticated set of complex tools

that need detailed understanding, practice and perfecting – just as sophisticated, complex tools have always done.

Cloud is another technology that saw a sharp drop between 2016 and our current study. This is likely because businesses now regard cloud as being “table stakes” for any organization seeking to modernize, given how mature and commonplace this infrastructure technology now is. Simply put, this is the way a modern business operates.

Europe embraces hyperconnectivity and AI

Respondents were asked how strong an impact the following forces would have on work in the next three years. (Percent of respondents saying strong impact)



Response base: 1,400 senior executives (current study); 800 senior executives (2016 study)
 Source: Cognizant Center for the Future of Work
 Figure 2

In our executive interviews, European respondents said they were turning to AI, predictive analytics and algorithms to do practical things – like accelerating an insurance process, reducing fraud risk or increasing disease detection rates through pattern recognition. Even at the government level, predictive software is being applied to process work, shaping better services for European citizens. [In Finland](#), authorities analyze data to predict when citizens might move to another city and plan out the impact on healthcare, housing and education; [in Estonia](#), they use predictive tools to calculate the risk of job seekers becoming long-term unemployed.⁴

The growth in hyperconnectivity – and, as a corollary, IoT – will further generate an explosion of process data that will need sifting for meaning and value at scale. Mastery of AI will be the hinge for future success for European businesses, as these technologies will do the heavy lifting for organizations to meaningfully consume and act on the vast volumes of

continuously growing and always changing data. It's a way for organizations to work and see meaning at a scale that's bigger than themselves. And it's now clear that serious policy work at the macro level is currently underway to ensure the AI revolution doesn't pass Europe by (see Quick Take, next page).

In addition to investing in technology, respondents also reveal a strong interest in exploring new sourcing strategies, rising by 12 percentage points between 2016 and today. Undoubtedly, COVID has [triggered an interest](#) in alternative sourcing models, with severe cost-cutting pressures and the need to accelerate digital initiatives pushing leaders to consider third-party support for IT infrastructure and operations management, as well as business process outsourcing.⁵ The interest in technology initiatives shows no sign of slowing down – and external sourcing is a means of catching up quickly.

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 Quick Take

Can Europe build an Airbus for AI?

The penny has finally dropped. When newly installed European Commission President Ursula von der Leyen [laid out her vision for Europe](#) in late 2019, she urged European “mastery and ownership of key technologies,” citing quantum computing, AI, blockchain and critical chip technologies.⁶

However, Europe will not win the arms race for AI as it currently stands. (How, for example, could Europe possibly match China’s 10-year, \$150 billion strategy to be a leading AI power by 2030?) Europe is behind on R&D investment, and it’s going to take a generation to catch up on the innovation required. Exhibit A: startups, the lifeblood of tech innovation. Despite rising numbers of successful startups and capital raised, Europe [is far behind the rest of the world](#): The number of startups in the U.S. is roughly four times higher than that of Europe, and they raise eight times more funding than their European counterparts.⁷

The structure of the European economy, particularly in its large core nations, shows why technology leadership matters. The first wave of digital played well to consumer services and was dominated by U.S. tech businesses offering a host of intangible services (search, social media, e-commerce, ridesharing), transforming service delivery. This second wave, predicated on AI and IoT, works for Europe’s traditional industries like manufacturing that drive the economy (particularly in Germany, which accounts for one-fifth of European GDP).

The nexus between emerging digital technologies and the challenge from new forms of international competition (read China) is signaling a need for a more active European industrial policy, and a desire to own the technologies that will dominate the Fourth Industrial Revolution.

What Europe needs is another Airbus event – this time for AI. At the 1965 Paris Air Show, the major European airlines informally discussed their requirements for a new aircraft capable of transporting 100+ passengers over short to medium distances at low cost. While many European aircraft manufacturers were more innovative than their U.S. peers, even the most successful didn’t have the scale to challenge U.S. manufacturers.

Two years later, and Airbus was formed from a patchwork of small-scale aviation manufacturers eager to challenge the status quo, and the rest is history.

Perhaps we need to look at Europe’s quest for digital sovereignty in a similar way. What if Europe’s industry titans got together at a Davos-like event to discuss how they could form the equivalent of a European Palintir or DARPA that channels regional R&D AI funding for impact? While Europe needs to rely on others for AI capabilities for now, its newly minted industrial policy, a strong commitment to climate change, and a patchwork of digital capability means it’s got the right ingredients for long-term success.

The power of technology never sleeps

Of all the technologies, IoT systems are seeing the highest percentage of full deployments, at 17%. This mesh between the old and new worlds is where Europe's businesses will thrive.



We asked respondents to identify the business processes that had been augmented (or improved) by the application of technology, and to then say which technology tools were used.

As Figure 3 reveals, the most widely used technology tools are those that do the heavy lifting on consuming and deriving insights from massive volumes of process data, with about 70% of respondents having implemented data analytics or AI as full implementations or pilots. With increasingly automated processes, data is continuously growing and changing and needs sifting, organizing and analysis to convey meaning. Machine learning, data analytics and process automation tools working alone or in tandem enable leaders to see meaning from their data at scale.

For example, the CFO at a German insurance company said robotics and process automation tools “have improved our customer service and enhanced service delivery – we have been able to reduce claim processing time by more than 75% in the last 15 months.”

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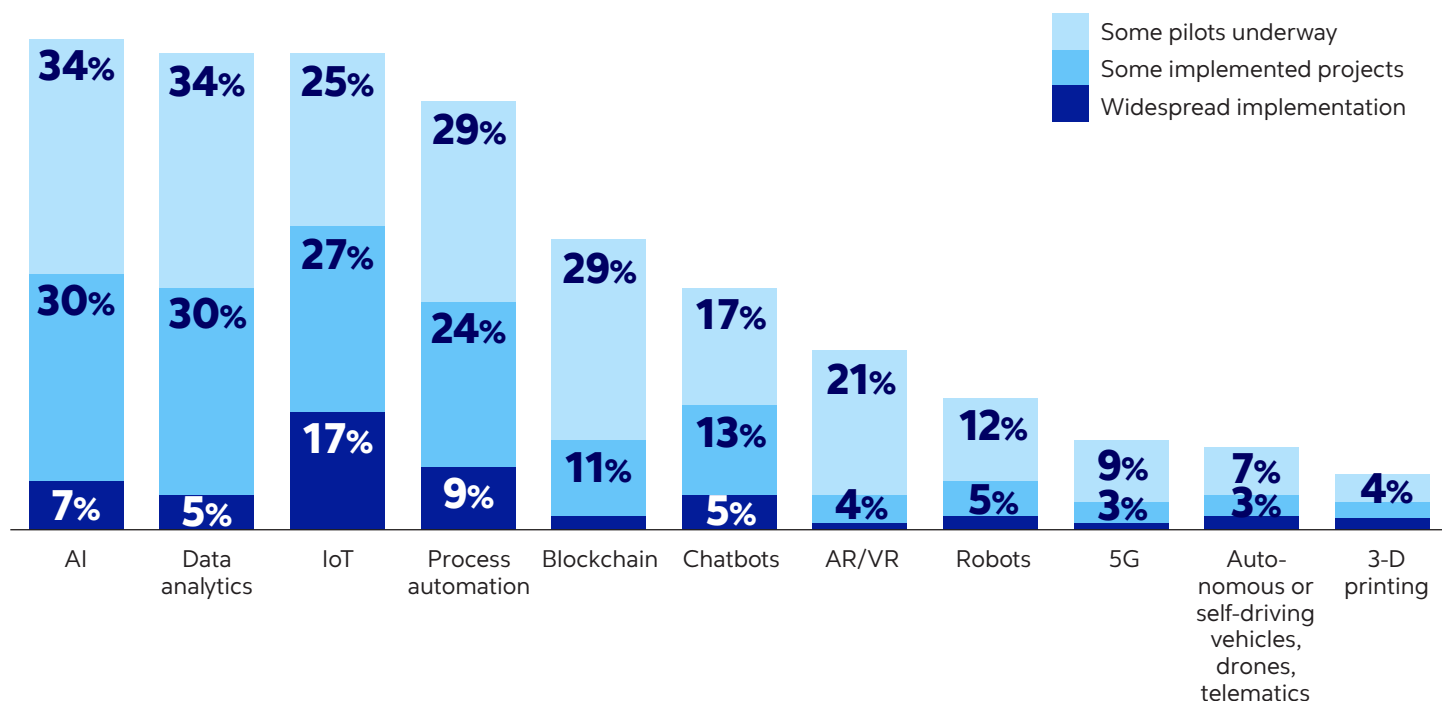
likely expect IoT to trigger more data-oriented technology investments in the future as these sensors generate growing amounts of data and are used to control a variety of physical systems, creating a “flywheel” effect. IoT will become increasingly powerful as the cloud service providers (AWS, Microsoft Azure, etc.) get even better at connecting disparate hardware and software solutions.

As a process manager from a Scandinavian oil and gas company said, “[We] are particularly bullish over IoT devices and sensors as it can potentially fetch real-time data from machinery, drilling area, storage and transportation – with simple investments, the risk of failure of millions of dollars can be potentially avoided.”

Our study reveals an executive class fully primed for success in the coming era of IoT as everything from smart fridges and smart cars, to intelligent factories move into play, disrupting industries and value chains. This mesh between the old and

Exploding process data demands a technological response

Respondents were asked about the progress they’d made on implementing the following technologies to augment their business processes. (Percent of respondents naming each implementation phase)



Response base: 1,400 senior executives
 Source: Cognizant Center for the Future of Work
 Figure 3

new worlds is where Europe’s businesses will thrive. Already, European auto manufacturers include millions of lines of code in the latest Mercedes or Peugeots rolling off their factory floors; the next phase of autonomous driving needs the engineering prowess and digital smarts to design, produce and distribute successful cars. New opportunities and partnerships could emerge to build, deliver and consume products and services based on the insights across the value chain.

Although 5G is still at an early stage of adoption (only 9% of respondents have a 5G pilot underway currently), over time the “mesh of machines” created by IoT and 5G will serve as the foundation for new levels of functionality and possibility. Some of these pilots are already showing impressive results. Worcester Bosch, a UK manufacturer of domestic boilers, has launched [a 5G-driven factory](#) with ultra-low latency that makes it easier to implement smarter manufacturing techniques on the fly. The company can deploy AI and machine learning techniques and insights quickly, without disrupting the production line or supply chain through infrastructure changes. The factory has already optimized machine performance and increased output by 2%.⁸

More (and more) work pivots to machines

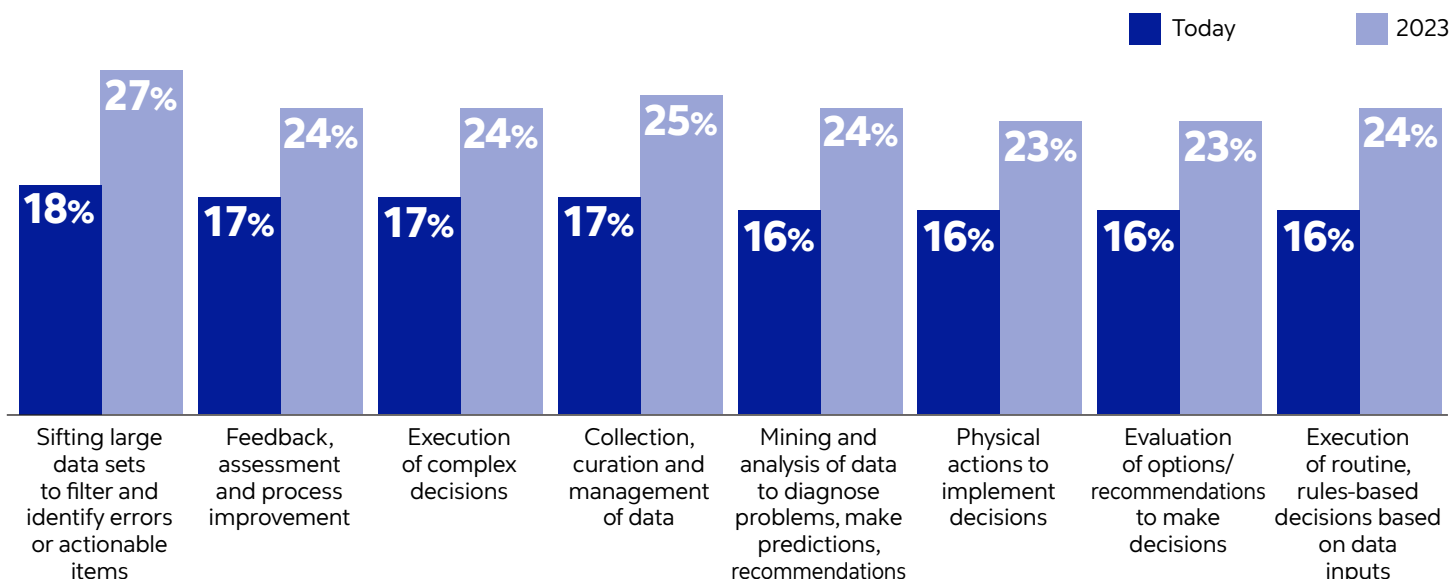
Taking in combination, IoT, AI and 5G will profoundly change human work by rebalancing the relative contributions of human workers and machines to processes and tasks. The ratio of work performed by humans vs. machines is already continuing to tip in favor of machines, particularly in the areas of data organization, complex decision support and rules-based decision making (see Figure 4).

With data organization – which encompasses data cleansing and data modernization – machine learning systems are used to prepare data to ensure it’s accessible, reliable and timely enough to be of business value. Like businesses in other regions, European organizations are surrounded by data but struggle to determine which data is relevant. Given the high volumes, this is beyond a human-scale problem and better handled by machine-learning software.

Over the next three years, machines will perform over one-quarter of this task, as opposed to 18% currently. New configurations are now emerging, as revealed by a CFO from a UK financial services company: “We have dedicated teams for digital strategy, robotics, cloud infrastructure, analytics and business transformation.”

The march of the machines continues

Respondents were asked to what extent the following activities are executed by machines vs. employees, now and in three years. (Percent of work done by machines)



Response base: 1,400 senior executives
 Source: Cognizant Center for the Future of Work
 Figure 4

Forging a modern business, process by process

The more that respondents used technology to augment and improve their processes, the greater the business benefits realized, according to our study.



For Europe to lead the next stage of digital, organizations must take the necessary steps to modernize. To that end, businesses that make their technology a “partner-in-work” can generate multiple and significant opportunities that extend beyond pure efficiency; they can begin to fundamentally reshape how the business performs – with benefits for customers and employees, alike.

When AI, for example, is applied to a specific business process, the underlying knowledge assets within that process have the potential to become smarter and be used (and reused) in productive ways. Our respondents are bullish on unlocking new operational efficiency thresholds with AI and other technologies (see Figure 5). While they’ve already realized a 12% increase in operational efficiency today, they expect that to increase to 17% by 2023.

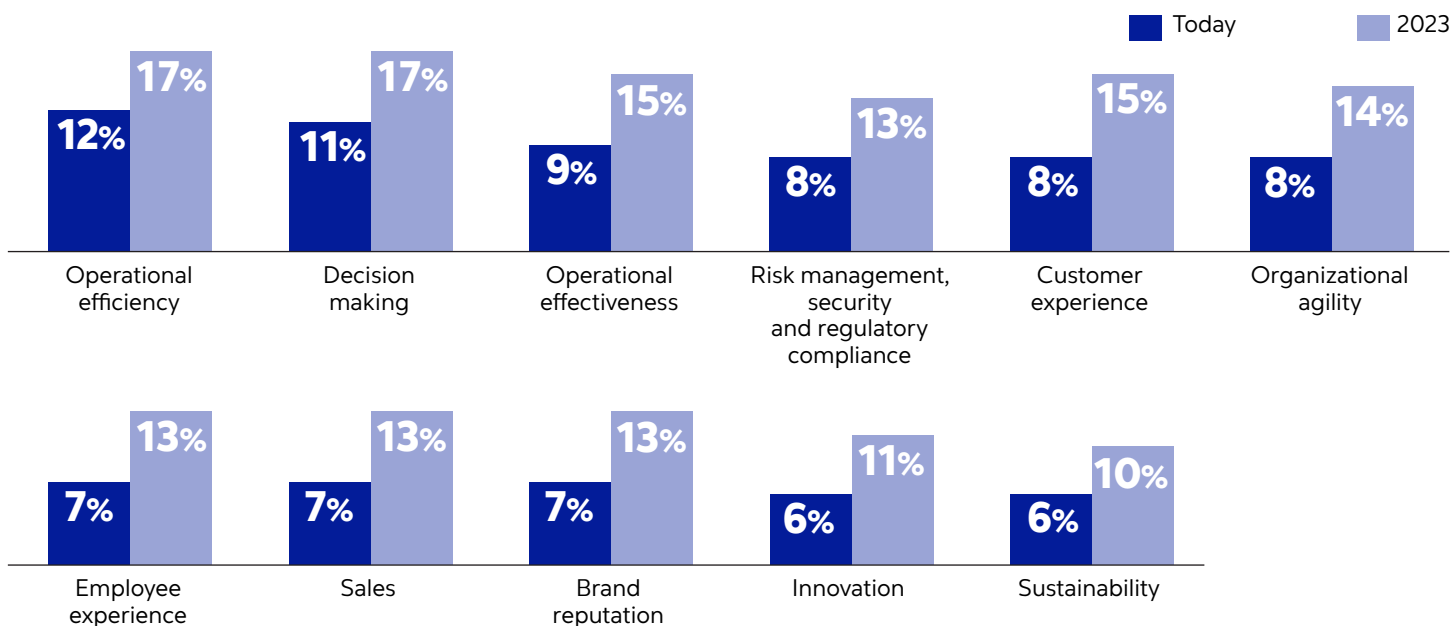
In addition to efficiency improvements, respondents are also changing the basis of competition from the outside, using technology to rewire customer-focused processes. Business expect to nearly double their technology-driven customer experience improvements by 2023. To get there, they are looking to eliminate friction points from the customer journey.

Cognitive computing-based customer service will soon become a make-or-break factor for succeeding in any fast-paced, competitive business environment. One CMO from a utility said his company is using voice-activated chatbots to serve as advisors, reducing average “on-call time” by more than 40% in the last 12 months.

By processing in real-time the content of phone calls made to a call center, as well as the caller’s underlying emotions through natural language processing and sentiment analysis, cognitive systems can guide chatbots and agents to de-escalate tense situations, resulting in higher customer retention, lower agent turnover and the insights to create a better customer experience.

Workforce augmentation improves outputs across multiple dimensions

Respondents were asked about the progress they expect to make by 2023 in the following areas. (The mean percent increase today and in 2023)



Response base: 1,400 senior executives
 Source: Cognizant Center for the Future of Work
 Figure 5

Leaders drive outsize impacts

We also identified a subset of respondents who had augmented two or more business processes with technology than all other respondents – we call this group “high augmenters.” Interestingly, these respondents report significantly higher business benefits across the board (see Figure 6), with outcomes that are four percentage points higher in all categories. They are experiencing greater improvements in decision-making, operational efficiency, risk management and security and regulatory compliance. The upshot: The more that businesses use technology to augment processes, the greater the business benefits.

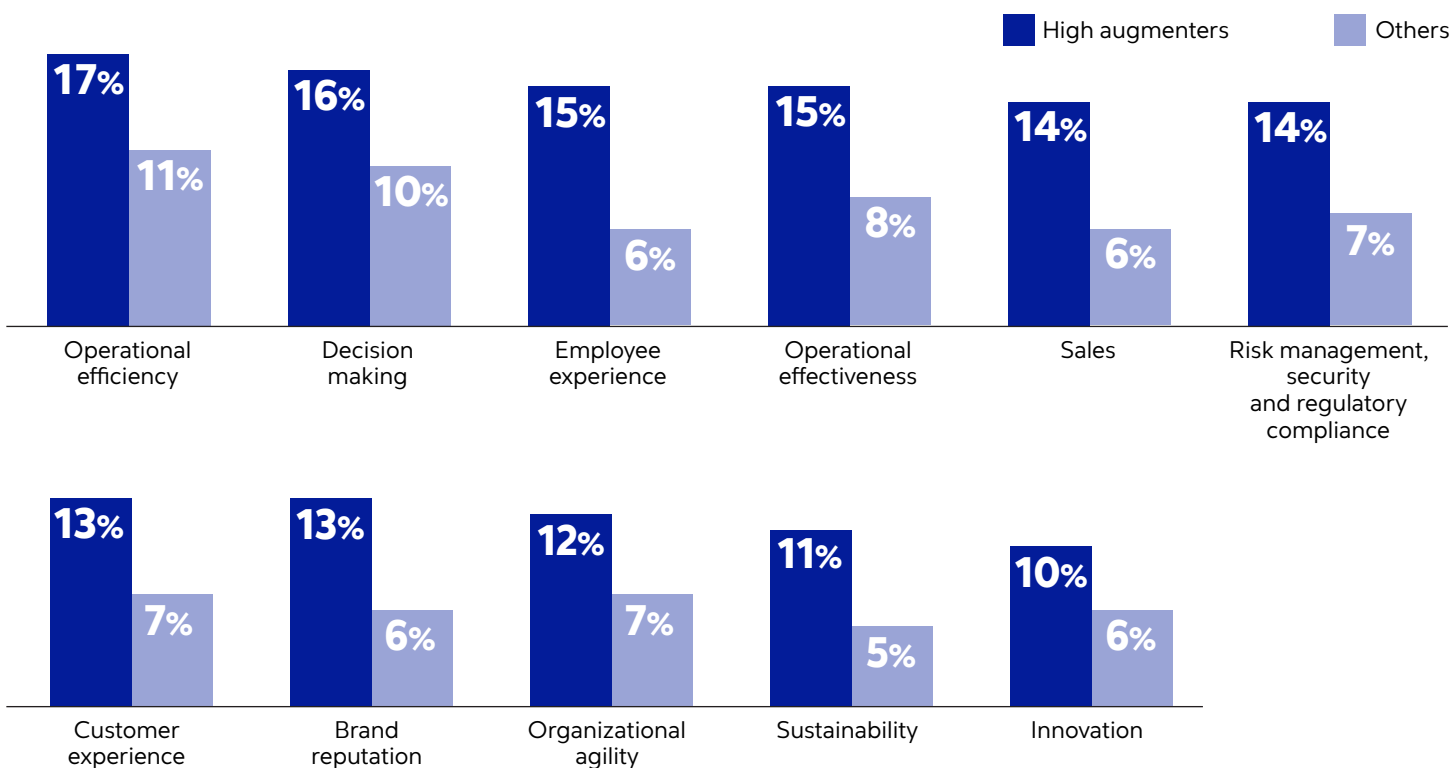
Imagine what this speed and efficiency could mean in your own business context. What if a bank could evaluate and

approve a loan while the customer was still admiring the car in the showroom; what if the new owner had a digital wallet linked to their bank account so that when they drove out of the showroom and accelerated through the Autobahn tools and then recharged and parked, payments were automatically deducted from their wallet? What if an AI-, cloud-, 5G- and IoT-based claims solution automatically kicked in if the driver were to suffer an accident?

By injecting AI into the back-, middle- and front-office processes, companies can accelerate their operational speed and their ability to derive insight into all aspects of their operations in material ways. The task for any leader is to help the workforce visualize what it means to become a modern enterprise (see Quick Take, next page).

High augmenters experience greater business benefits

Respondents were asked about the progress they expect to make in the following areas with the application of advanced technologies. (Mean percent increase today and in 2023)



Response base: 178 high augmenters; 1,400 all respondents

Source: Cognizant Center for the Future of Work

Figure 6

Quick Take

Learn what a modern business looks like

It's time to offer an explanation – not a vision – of what a modern business is, and put it in simple black-and-white terms that everyone gets instinctively. Do this and everyone can play a part in building it.

Of course, in the \$20 trillion European economy, with companies operating in thousands of markets with millions of niches, the idea of one platonically ideal modern business is improbable. But there are certain high-water marks that everyone in Europe will understand – the listener experience of Spotify; the presentation layer of FT.com; the one-click technology of Amazon; the banking experience of Starling; the check-in process of Heathrow's Terminal 5; the customer experience of Emirates; the sheer utility of Booking.com.

The job of the modern business leader is to mix these inspirational cross-industry examples with ones specific to the particular race their organization is trying to win. How will people work together in a smart factory? How does a call center answer a customer query in a modern business? How does a modern business resolve a customer complaint (without lowering its net promoter score or seeing the issue disastrously flashed around the world on Twitter)? What does the office of a modern business look like, and where should it be based? How much IT infrastructure does it really need to own?

The simple and painful truth is that after a decade in which the power of the digital transformation message has waned and has left some asking, "What's beyond digital? What's next?", the actual answer is "digital." Much more digital. Decades' more digital. Digital for the rest of your working life – be you 55 or 25. Digital aimed at building and operating a modern business. The modern business that you probably don't work in today. That you know is not long for this world. That is an OK(ish) place to work but is never going to be on the cover of a magazine. Will you, and your future employees settle for that?

Start a renaissance in skills where you work

In 2016, respondents were lukewarm on the importance of decision making and innovation to business success; today, these are the top two most important skills.



Technology is reshaping not just how European businesses work but also how they think about work. This is especially true as the lines between work and home blur (accelerated by COVID and the rise of working at home) and we seek greater meaning from work in a time of existential questioning. If machines can do more work as time goes on, and if human-kind sees itself as more than machines, then it raises the question: How do we continue to be valued and valuable?

Central to answering this question is the concept of “upskilling” – of having skills and capabilities that cannot be supplied by even the smartest of machines. The apprentice system in Germany and Switzerland is a tried and tested way to train workers in the skills that employees want, but the key is knowing what skills will be required.

This is clearly uppermost in the minds of European respondents. In 2016, respondents were lukewarm on the importance of decision making and innovation to business success; today, these are the top two most important skills (see Figure 7). This is reflective of the data lakes that decision-makers must wade through, with paralysis taking hold because of an inability to continuously model, simulate and recommend the “next best

action.” Moreover, in a time of intense disruption and change, the ability to create new and better ways of working is regarded as paramount.

In tandem, “strategic thinking” has declined in relative importance, falling from first-ranked in 2016 to the sixth most important skill today. While there will always be a need for strategic thinking in the business world, this could be a reflection that the importance of high-level, “big-picture” thinking about relatively stable and well-understood operating conditions is becoming subservient to more agile and disruptive ways of thinking and working. The world is changing faster than ever – the only response is to disrupt others before they disrupt you.

Skills shift from strategic thinking and selling to decision-making and innovation

Respondents in our two studies were asked whether each skill was more or less important today for succeeding at work. (Percent of respondents naming each skill as more important)

2016	IMPORTANCE	Current study
Strategic thinking (69%)	1	(40%) Decision-making
Selling (65%)	2	(39%) Innovation
Global operating (63%)	3	(34%) Analytic
Leadership (61%)	4	(33%) Leadership
Decision-making (60%)	5	(30%) Selling
Innovation (60%)	6	(30%) Strategic thinking
Analytic (60%)	7	(28%) Communication
Customer care (56%)	8	(27%) Customer care
Social media (50%)	9	(27%) Interpersonal
Communication (56%)	10	(20%) Learning

Response base: 1,400 senior executives (current study); 800 senior executives (2016 study)

Source: Cognizant Center for the Future of Work

Figure 7

Fusing smart people with smart machines

The ability of an organization and its leadership team to blend and extend the strengths of its people with the capabilities of intelligent machines will determine its digital maturity and success in fundamentally changing – and improving – how work gets done. An acute focus on the relationship between humans and machines is essential, from how the two will collaborate to how the current workforce and the business will adapt.

New workflows need constructing where the most predictable, rote and repetitive activities can be handed off to machines, while humans specialize in using judgment, creativity and language. This is now the work that the modern business needs to do. A Swiss CEO of a media company reported that the company's adoption of intelligent systems has resulted in employees being free to take on higher-value work. "Employee

satisfaction is getting better, and we see employees more involved in value-add and thinking of new business ideas. Their work on routine tasks has reduced considerably."

This reconfiguration between people and machines is happening now. Think of the construction site, where digital hubs connect and empower engineers, construction workers and tradesmen through intelligent workflows and synchronized tasks and activities. Or the state-of-the-art factory floor newly festooned with sensors and algorithms sequencing intricate hand-offs between teams of people and banks of machines. Our interviews revealed big data specialists, process automation experts, security analysts, human-machine interaction designers, robotics engineers and machine learning experts will be highly valued skills for the next phase of the digital revolution. Every business needs a strategy for securing the talent and skills they'll need moving forward.

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Embracing the Fourth Industrial Revolution

As businesses survey the wreckage of the pandemic on Europe's economies, the region seems ready to grasp the opportunities offered by digital tools and techniques.



23789
156
31
672
53
98735098 25

Category	Value
1	23789
2	156
3	31
4	672
5	53

The Fourth Industrial Revolution has been a siren call for Europe for years. Historically, the mandate has been muzzled as the continent continuously fails to scale its digital capabilities or falls back on its propensity to regulate. However, as businesses survey the wreckage of the pandemic on Europe's economies, the region seems ready to grasp the opportunities offered by digital tools and techniques.

Alone and in combination, technology innovations are ushering in decades of change across industries in Europe. Look around, and you'll see Europeans increasingly living in smart cities, driving smart cars and looking to return to work in smart (and

healthy) buildings. This is just the start of a modern, knowledge-intensive and digitally-oriented economy. Harnessing the forces swirling around work will deliver jobs and prosperity for decades to come.



Methodology

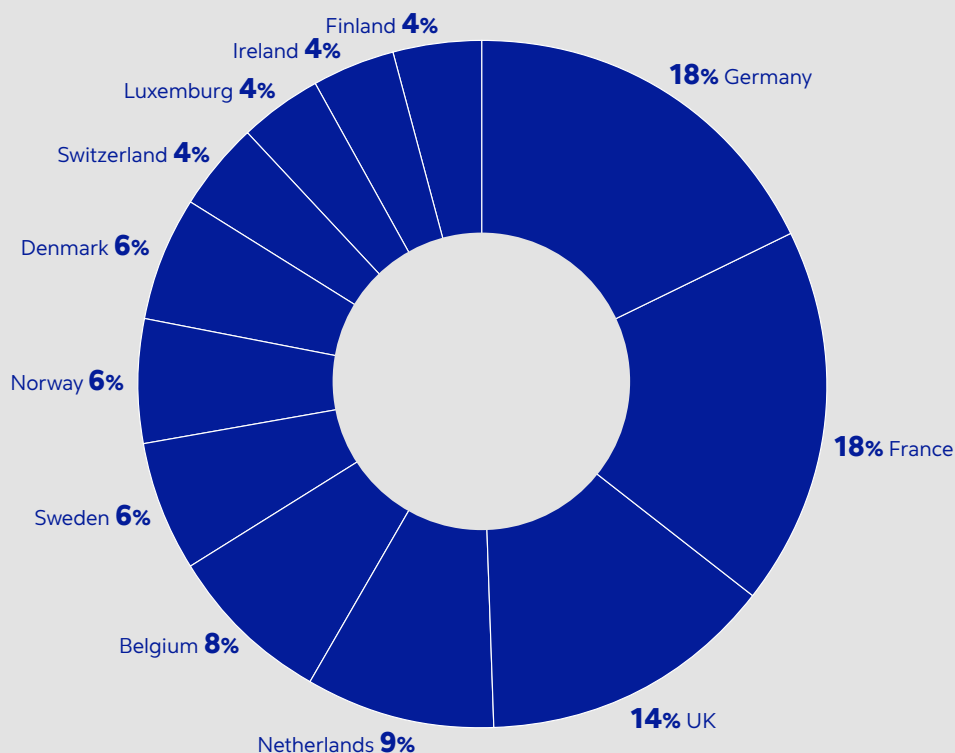
We commissioned Oxford Economics to design and conduct a survey of 4,000 C-suite and senior executives, 1,400 from Europe. The survey was conducted between June 2020 and August 2020 via computer-assisted telephone interviewing (CATI). Approximately one-third of the questions were identical to those asked for the 2016 Work Ahead study, allowing us to compare responses and track shifting attitudes toward technology and the future of work.

Respondents come from the U.S., Canada, UK, Ireland, France, Germany, Switzerland, Benelux (Belgium, Luxembourg, 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, spread 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.

Respondents by geography



(Percentages may not equal 100% due to rounding)

Endnotes

- ¹ Klaus Schwab, *The Fourth Industrial Revolution*, Currency, January 2017, www.weforum.org/about/the-fourth-industrial-revolution-by-klaus-schwab/.
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- ³ “Lockdown, Shake Up: The New Normal for Shopping in Europe,” PwC, www.pwc.de/en/retail-and-consumer/european-consumer-insights-series-2020-new-normal.html.
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