

TECHNOLOGY VISION 2017



# AAMP LIFYYOU

THE SHORT REPORT

## **TECHNOLOGY FOR PEOPLE**

The Era of the Intelligent Enterprise

  
**accenture**


From the Internet to the advent of smartphones, the last three decades have seen people change the way they work and live to adapt to each new technology capability coming to market.

# AMPLIFY YOU

Today, changes are still all around us, and are coming faster than ever. The key point is that we are in control. It's no longer people who are adapting to technology – rather, the technology is adapting to us. In fact, every time an experience is personalized, or technology anticipates people's needs and wants, we are being placed in the driver's seat to realize them. As technology becomes more sophisticated, it's not the technology itself that's driving change – it's us. We're putting technology to work to disrupt ourselves.

The digital revolution we're part of today isn't a cold, dystopian future of robots controlling the world. Rather, it's an age of human empowerment. It's about us designing technology that conforms itself to people, putting us firmly in control of our own fate. No longer are we waiting and wondering how the latest advances will change things; we're shaping the world to fit our needs, large and small.

**More than ever before,  
we as humans control our  
own destiny. But the reasons  
why may surprise you.**



At work, we collaborate with artificial intelligence (AI) and machines to do our jobs better: Rhizabot, for example, simplifies business analysis by listening to a question in natural language and then translating it into queries that can be run across multiple datasets.<sup>1</sup> We use sophisticated communication and collaboration technologies to work with colleagues on the other side of the globe, whether they're human or not, many of whom we'll never meet. We see organizations partnering with competitors to create entirely new ventures using platform technologies, like Philips and Qualcomm Life working together to expand a joint connected health offering.

Areas of practice that once seemed impossible to digitize are fundamentally changing because of the impacts of AI, Internet of Things capabilities and big data analytics, which have many potentially positive implications for society. The company known for creating the Roomba, iRobot, is now working with marine conservationists to launch an ocean-patrolling intelligent robot to hunt and manage invasive species, protecting native fish populations.<sup>2</sup> And evolved industries like precision agriculture are ramping up to help meet the food demands of our increasing population.

It's not just businesses that are being transformed; technology is empowering people. Look at the way the evolution of video has changed both our view of the world and how we interact with it. Early television broadcasts were carefully scripted to present a highly curated picture, forcing us to not only share a common worldview, but also to watch on the creators' terms. In less than a century, we've transitioned to an online world with billions of viewpoints, coming from governments and businesses, and, more importantly, from people. We now have a truly live culture where technologies like Periscope and Facebook Live mean anyone can broadcast what they want, and tune in when they want – on their terms.<sup>3</sup>

The digital age isn't just giving us new tools. As we look toward a future where quantum computing's near-unlimited processing and algorithmic power will solve difficult problems in entirely new ways across multiple industries, to robots and AI that will work side by side with people in every discipline, we are reshaping our entire world and ourselves within it. And with this tremendous and ongoing change, companies have an opportunity to establish their place in the next evolution of society.

# TECHNOLOGY IS STILL THE ANSWER, **BUT TO A NEW QUESTION**

Technology holds the key to shaping the world around us. It's also giving companies that do it right an opportunity to weave themselves into the new digital society. What's the next step forward? Use the power of technology to improve our world.

One company that exemplifies this is CVS Health. The healthcare company has transformed from the corner store that fills prescriptions to a provider of affordable basic healthcare services, deeply embedded in their customers' lives. CVS Health is taking a comprehensive approach to healthcare to enable this shift, deploying technology to put the individual's health at the center of their focus. With the company's smartwatch-compatible mobile app, customers can set personalized reminders for taking their medication, snap pictures of their prescriptions to expedite refills, and scan their insurance card so that store clerks are prepared with up-to-date information.<sup>4</sup>

At the CVS Health-operated Minute Clinics, customers can receive treatment for minor illnesses, flu shots, cholesterol screenings, and more than a dozen other medical services – all of which can be booked and paid for online. For people who can't make it to a physical location, CVS Health is also partnering with various telemedicine services like Teladoc, so patients can receive care via phone or video chat.

And CVS Health is even moving into preventative care: the company is partnering with IBM's Watson for data analysis to predict when a patient will need urgent care.<sup>5</sup>

Technology has empowered people throughout history, from the printing press to smartphones. But this time, we're using it differently. We aren't just incorporating technology into our lives; as it becomes exponentially more sophisticated, we are embedding humanity into the technology itself.

Think about the technology we use today compared to that of just a few years ago: it's increasingly interactive, as touch displays, mixed reality, and natural language processing make it feel more like us. Advanced technology is now capable of learning, with contextual analysis, image recognition, and deep learning algorithms that make it seem to think more like us. And, perhaps best of all, technology can now adapt – by constantly aligning itself to our wants and needs.

This more human technology is paying off for businesses, both in the workforce and in customer relationships. London-based IntelligentX Brewing Company has developed an AI system to continuously collect and incorporate customer feedback, which the system itself uses to brew new versions of the company's beers.<sup>6</sup> "Our AI can have a conversation with all of our customers, and that gives us the feedback that allows our beer to evolve," says Rob McInerney, co-founder of IntelligentX. "You can talk to the algorithm whenever or wherever you're drinking the beer."

"People's tastes are changing faster than ever before...and AI is the perfect way to respond," says the brewer's co-founder Hew Leith. This is how businesses will grow their role in people's lives, and establish a place in the future of society: by being more than just a provider of products and services. With technology that truly responds to people based on their wants and needs, companies can become their partner.

**This more human technology is paying off for businesses, both in the workforce and in customer relationships.**

As technology aligns to what we want, and even interacts with us in ways that are naturally human, it's making the world a more human place. Rather than machines defining our world, they're putting us squarely in the driver's seat. It's delivering unprecedented potential that is enabling us to shape our lives, our industries and our society to fit our needs. What could be more human than that?





# THE PATH TO PARTNERSHIP

## Going Big and Small

Companies are increasingly enabling people via technology, to build on opportunities that are both grand and granular. The power of the hyper-personalization that technology now makes possible drives goals both at the level of entire industries, and the level of individuals. The digital leaders of the world are already starting their journey to make the big plays; Philips is looking to transform healthcare to a connected, comprehensive experience that's both intertwined and accessible throughout people's lives. They'll succeed by focusing technology on individuals and their specific needs, responding to people on a human level, and helping guide them toward personal goals.

From the eyes of patients, connected healthcare isn't an improvement because of the technology itself. The draw is the empowerment it gives individuals over their own health, in an industry long associated with impersonal interactions and untenable wait times. Companies like Philips and CVS Health are leading because their technology strategy focuses on the needs of the individual patient, on their terms. Through apps and connected devices that integrate into people's lives, these companies allow doctors and nurses to live alongside each patient, build a closer, more personal relationship, and provide comprehensive – not just reactive – care.

**The path to leadership is in  
amplifying people, on a global  
and individual scale.**



By empowering people with more human technology, businesses will transform the relationship with them from provider to partner. Through this process, they'll also transform internally. By helping people reach their goals, these new partnerships will help companies cement a place in the next evolution of society. The path to leadership is in amplifying people, on a global and individual scale.

As a business, becoming a true partner to people – both customers and employees – starts with technology. But there will be big challenges along the way, starting with trust: barely half of the public say they trust businesses to do what's right, with even fewer considering business leaders a source of credible information.<sup>7</sup> For people to value these new partnerships, companies must work to gain and keep trust at every interaction – and putting the power in the hands of customers and employees is the best way to do it.

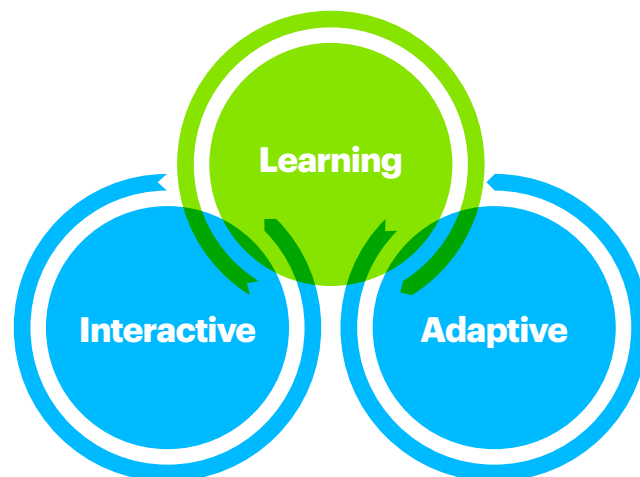
Changing the relationship with people in a digital age means changing their relationship with technology. If companies are to be partners, and technology is how companies will empower people, then the goal is to design technology to be on their side. But making this happen also means changing the way companies think about their business models, and their relationship with both customers and employees.

**Putting the power  
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# THE FIRST STEP TO EMPOWERING PEOPLE **PROVIDING TECHNOLOGY THAT WORKS WITH THEM**

## **Adapting technology to people**

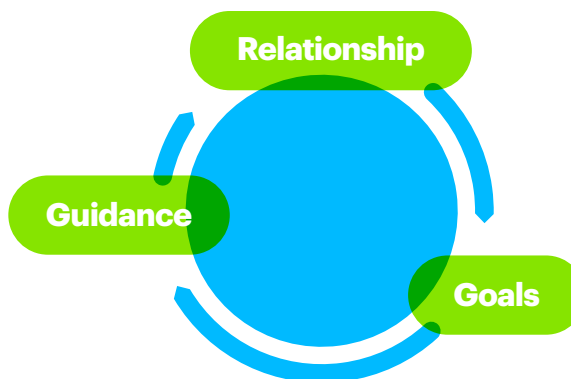
The first pillar of partnership is designing technology that works for people, not because of them. That means putting an end to technology tools with power that is only unleashed when customers and employees adapt to them. No longer: technology's great new strength is in its growing humanity. Tools that interact with people, learn from those exchanges, and adapt for future interactions make the experience of using them all the more human. That's the first step to empowering people – providing technology that works with them.





## Aligning goals to people's goals

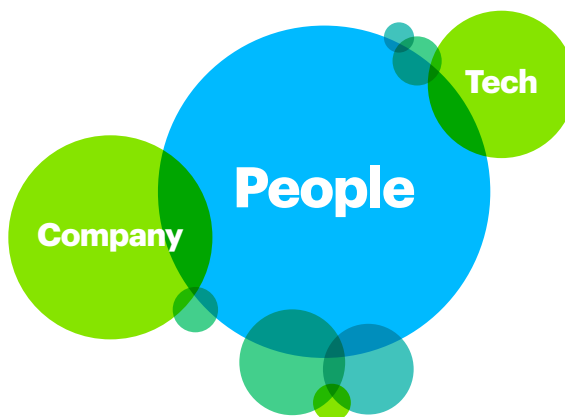
To put these new adaptive technologies to use, businesses must adopt people's goals as their own. This is a sea change for companies that have long sought to maximize each opportunity for profit: from the analog business's perspective, the ideal relationship is one where every interaction with a customer results in an immediate sale. But these relationships are only as strong as the customer's need for products and services.



A partnership, by contrast, is much more powerful – and enduring. To become a true partner, companies will need to shift their thinking, and replace the immediate sales goals of the past with the goals that customers and employees have for themselves. Doing so will change the game: the more goals a company helps people achieve, the more confident they will be in the partnership, and the relationship will grow stronger with each interaction. When it's established that a company truly wants to help people reach their goals, they'll come to the company first for as many of the goals that can be addressed. And when people succeed, so does the company.

## The People First approach to business and technology

Making all of this work means dedication to a People First approach. Whether it's customers or employees, their goals and needs must come first. Companies will meet this demand with their technology, which becomes inherently more focused on helping people as it becomes more human. More than ever, technology is an agent of change – and now it can empower people in an interactive, collaborative way, on each individual's own terms.



When companies truly enable people, they're contributing to growth at both the individual level and the societal scale. Leaders have always strived to solve big problems. But the digital age brings opportunities to attack larger challenges than ever, by combining the strength of enterprise with the passion and power of individuals. Technology that works for and with people means it's possible to have it both ways: companies can empower the individual and the group at the same time.



**CHANGING  
GOALS**

MEANS

**CHANGING  
ROLES**

**As technology becomes a trusted colleague, the line between business and personal endeavors fades. Companies will become partners with customers and employees, and with the rising ecosystems of businesses beyond their own walls.**

With these reimagined relationships, success is tied not only to the success of products and services, but also to the success of partners. Relationships are no longer about keeping customers or employees happy as the company guides them toward a goal; they will be about walking with people on a path that they define, and designing technology to help them navigate it as they choose. Leaders will empower people – customers and employees – by transforming technology from tools they must learn to use, to a powerful partner that will work with them rather than just for them. When people reach their goals, so does your company – because they’re now the same. The reimagined relationship isn’t business. It’s personal.



## 2017 VISION TRENDS

# TECHNOLOGY FOR PEOPLE

**Every business is digital. But today, our biggest innovations will not be in the technology tools themselves, but in how we design them with people in mind.**

In this year's Technology Vision, we've identified five trends that underscore the importance of focusing on 'Technology for People' to achieve digital success. Tomorrow's leaders are taking these trends on board and executing strategies to secure their clear digital advantage.

## TREND 1

**AI IS THE NEW UI****Experience Above All**

Artificial intelligence (AI) is about to become a company's digital spokesperson. Moving beyond a back-end tool for the enterprise, AI is taking on more sophisticated roles within technology interfaces. From autonomous driving vehicles that use computer vision, to live translations made possible by artificial neural networks, AI is making every interface both simple and smart – and setting a high bar for how future interactions will work. It will act as the face of a company's digital brand and a key differentiator – and become a core competency demanding of C-level investment and strategy.

## TREND 2

**ECOSYSTEM POWER PLAYS****Beyond Platforms**

Companies are increasingly integrating their core business functionalities with third parties and their platforms. But rather than treat them like partnerships of old, forward-thinking leaders leverage these relationships to build their role in new digital ecosystems – instrumental to unlocking their next waves of strategic growth. As they do, they're designing future value chains that will transform their businesses, products, and even the market itself.

## TREND 3

**WORKFORCE MARKETPLACE****Invent Your Future**

The future of work has already arrived, and digital leaders are fundamentally reinventing their workforces. Driven by a surge of on-demand labor platforms and online work management solutions, legacy models and hierarchies are being dissolved and replaced with open talent marketplaces. This resulting on-demand enterprise will be key to the rapid innovation and organizational changes that companies need to transform themselves into truly digital businesses.

## TREND 4

**DESIGN FOR HUMANS****Inspire New Behaviors**

What if technology adapted to people? The new frontier of digital experiences is technology designed specifically for individual human behavior. Business leaders recognize that as technology shrinks the gap between effective human and machine cooperation, accounting for unique human behavior expands not only the quality of experience, but also the effectiveness of technology solutions. This shift is transforming traditional personalized relationships into something much more valuable: partnerships.

## TREND 5

**THE UNCHARTED****Invent New Industries, Set New Standards**

Businesses are not just creating new products and services; they're shaping new digital industries. From technology standards, to ethical norms, to government mandates, in an ecosystem-driven digital economy, one thing is clear: a wide scope of rules still needs to be defined. To fulfill their digital ambitions, companies must take on a leadership role to help shape the new rules of the game. Those who take the lead will find a place at or near the center of their new ecosystem, while those who don't risk being left behind.



# CONCLUSION

## These themes represent the newest expression of Accenture's People First view of the changing digital landscape.

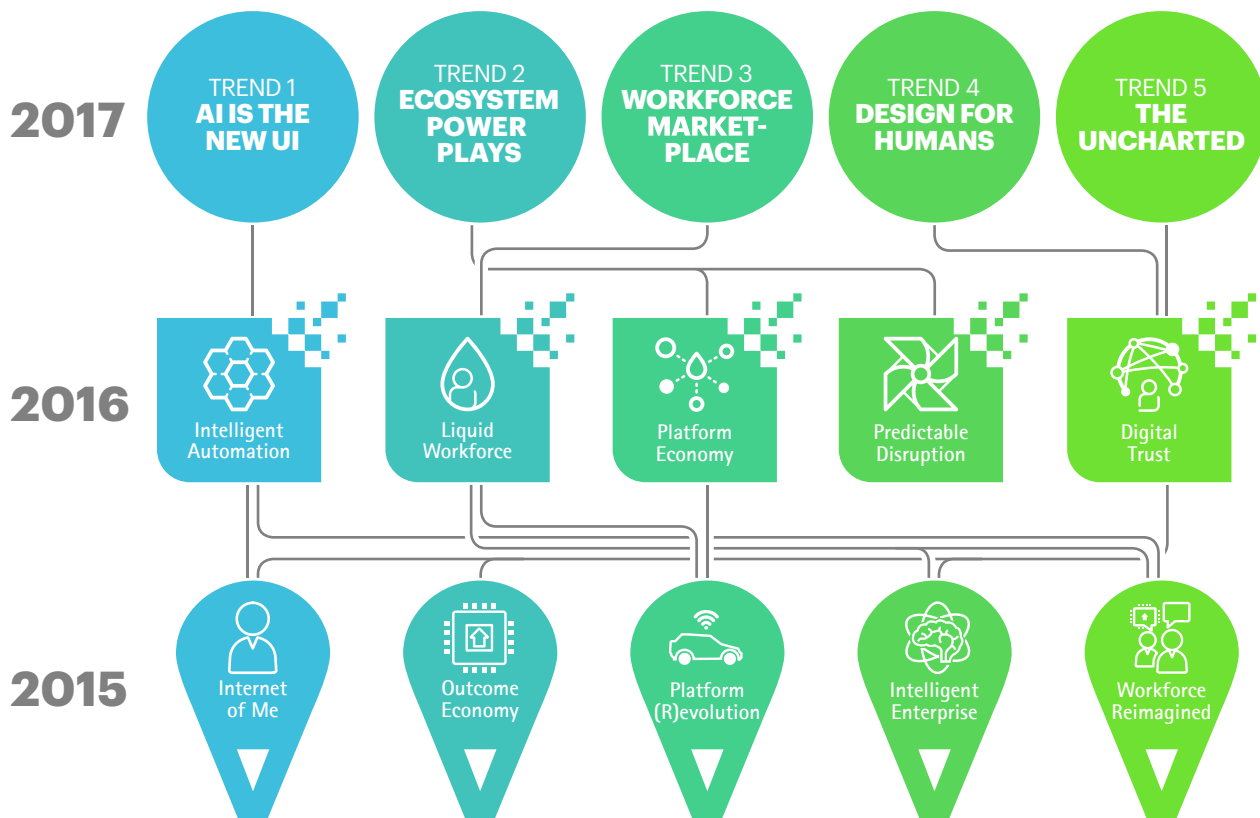
As part of Accenture's multi-year perspective on technology's impact on enterprise, they reflect the continuously evolving digital culture that creates challenges and opportunities for organizations worldwide.

Each individual theme from each year highlights the evolution of a key technology. Some of these are already playing important roles in the strategies of leading companies, while others are just beginning to make an impact, or are impacting organizations in unexpected ways. Viewed as a whole, our Technology Vision themes provide a guidepost for the way companies must consider their resources, responsibilities, and opportunities for success in the years to come.

With our world in a state of change at every level, being a leader isn't just about incorporating new technologies. It's about finding a place in the next evolution of society, by empowering people – your people, whether they are customers or employees – and becoming a partner, embedded throughout everyday life.

The world will continue to evolve, but leading enterprises that embrace this deeper dive into a People First mindset will find benefits at every scale. Across every industry, at every level of business, the one thing every company has in common is their people.

### Technology Vision trend evolution



# COMPLETING THE PICTURE

The current three-year set of technology trends relating to Accenture's Technology Vision includes these reports from 2016 and 2015:

Accenture's Technology Vision comprises a three-year set of technology trends. While each year we highlight the latest trends, it's important to recognize that each trend represents just part of the picture. As companies continue their journey toward becoming digital businesses, they will need to keep up with the latest

evolutions in technologies, and continue to master those that have been maturing. These technologies are quickly becoming the base for how enterprises build their next generation of business, as well as the catalysts for many of the trends that we discuss this year.

# 2016



## INTELLIGENT AUTOMATION

### The essential new co-worker for the digital age.

Leaders will embrace automation not just to take advantage of the breakneck pace of digital change, but also to create a new digital world where they hold competitive advantage. Machines and artificial intelligence will be the newest recruits to the workforce, bringing new skills to help people do new jobs, and reinventing what's possible.



## LIQUID WORKFORCE

### Building the workforce for today's digital demands.

Companies are investing in the tools and technologies they need to keep pace with constant change in the digital era. But to achieve their ambitious goals, leaders are refocusing on an often overlooked factor: the workforce. They are looking at technology as not just a disrupter, but also an enabler to transform their people, projects, and entire organizations into a highly adaptable and change-ready enterprise.



## PLATFORM ECONOMY

### Technology-driven business model innovation from the outside in.

Industry leaders are unleashing technology's power by developing not only new technology platforms, but also the platform-based business models and strategies they enable. But the technology changes are only the beginning.



## PREDICTABLE DISRUPTION

### Looking to digital ecosystems for the next waves of change.

Fast-emerging digital ecosystems – think precision agriculture, the industrial Internet or smart cities – create the foundation for the next big wave of enterprise disruption. Digital ecosystems like these, and the businesses that power them, are already straddling markets and blurring industry boundaries.



## DIGITAL TRUST

### Strengthening customer relationships through ethics and security.

To gain trust in the digital economy, businesses must possess strong security and ethics at each stage of the customer journey. And new products and services must be ethical- and secure-by-design. Businesses that get this right will enjoy such high levels of trust that their customers will look to them as guides for the digital future.

# 2015



## INTERNET OF ME

### Our world, personalized.

Forward-thinking businesses are creating highly personalized experiences that engage and exhilarate consumers without breaching their trust. The companies that succeed in this new 'Internet of Me' will become the next generation of household names.



## OUTCOME ECONOMY

### Hardware producing hard results.

Intelligent hardware is bridging the gap between the digital enterprise and the physical world. As leading companies master the Internet of Things, they are uncovering opportunities to embed hardware and sensors in their digital toolboxes. These 'digital disrupters' know that getting ahead is no longer about selling things – it's about selling results.



## PLATFORM (R)EVOLUTION

### Defining ecosystems, redefining industries.

Digital industry platforms and ecosystems are fueling the next wave of breakthrough innovation and disruptive growth. Rapid advances in cloud facilities and mobility not only are eliminating the technology and cost barriers associated with such platforms, but also are opening up this new playing field to companies across industries and geographies.



## INTELLIGENT ENTERPRISE

### Huge data, smarter systems – better business.

The next level of operational excellence will emerge from the latest gains in software intelligence. Business and technology leaders must now view software intelligence not as a pilot or a one-off project, but as an across-the-board functionality – one that will drive new levels of evolution and discovery, propelling innovation throughout the enterprise.



## WORKFORCE REIMAGINED

### Collaboration between humans and machines.

The push to go digital is amplifying the need for humans and machines to do more together. Advances in natural interfaces, wearable devices, and smart machines will present new opportunities for companies to empower their workers through technology.



## ABOUT THE TECHNOLOGY VISION

Every year, the Technology Vision team partners with Accenture Research to pinpoint the emerging IT developments that will have the greatest impact on companies, government agencies, and other organizations in the next three years.

The research process begins with gathering input from the Technology Vision External Advisory Board, a group comprising more than two dozen experienced individuals from the public and private sectors, academia, venture capital, and entrepreneurial companies. In addition, the Technology Vision team conducts interviews with technology luminaries and industry experts, as well as nearly 100 Accenture business leaders from across the organization.

The team also taps into the vast pool of knowledge and innovative ideas from professionals across Accenture, using Accenture's collaboration technologies and a crowdsourcing approach to uncover the most interesting emerging technology themes. The 'Trend Spotting' campaign encourages global participation from individuals at every level and throughout every segment of Accenture. Nearly 3,000 participants actively engaged in the campaign, contributing valuable ideas and voting on others' inputs, and the effort saw a 19% increase in the number of people submitting ideas compared to the previous year.

As a shortlist of themes emerges from the research process, the Technology Vision team reconvenes its advisory board. The board's workshop, involving a series of 'deep-dive' sessions with Accenture leadership and external subject-matter experts, validates and further refines the themes.

These processes weigh the themes for their relevance to real-world business challenges. Specifically, the Technology Vision team seeks ideas that transcend the well-known drivers of technological change, concentrating instead on the themes that will soon start to appear on the C-level agendas of most enterprises.

Themes are prioritized using the following criteria:

- Actionable today
- Highly relevant to an organization's transformation within three years
- Having significant impact beyond any one industry 'silo'
- Disruptive beyond a straightforward one-for-one replacement of an existing solution
- Transcending any one vendor or discrete product technology.

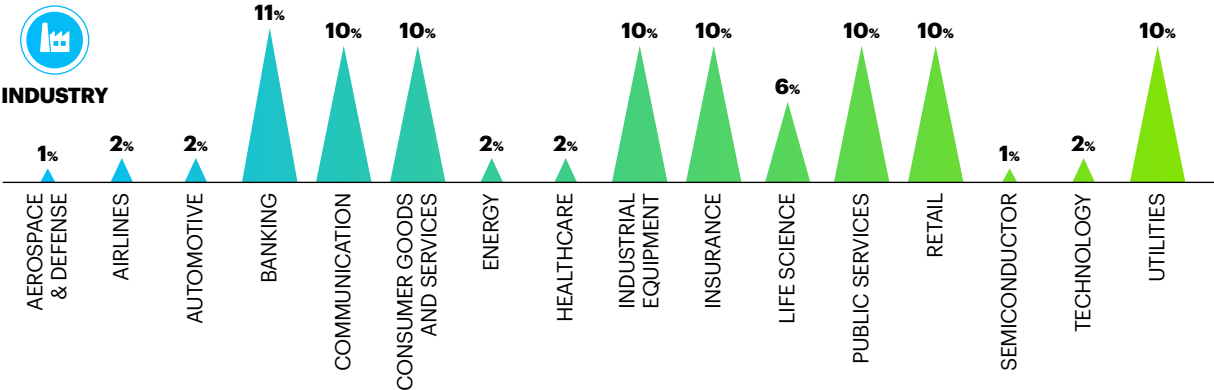
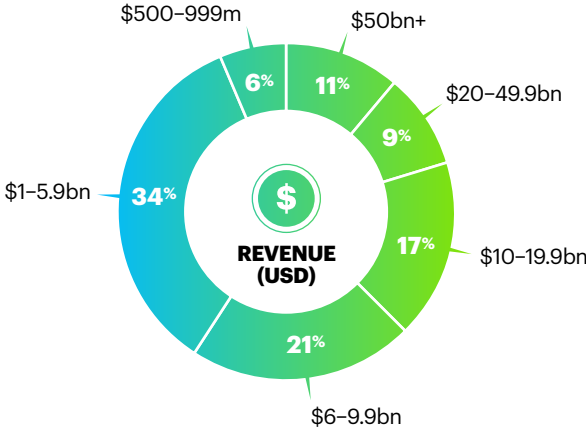
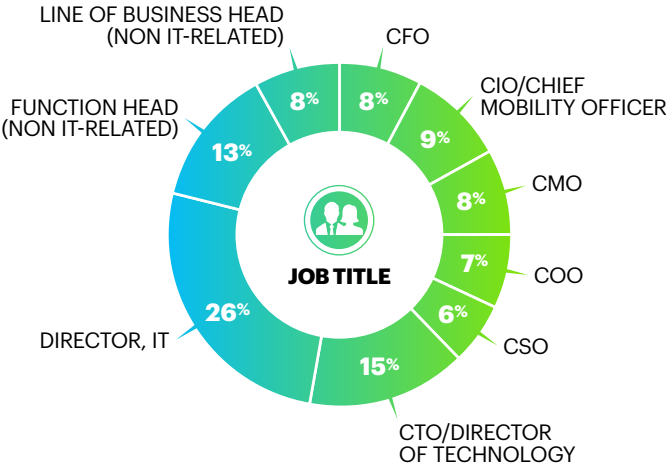
These tests produce a handful of robust hypotheses that are synthesized into the five overarching trends, presented in the final report.

# TECHNOLOGY VISION 2017 SURVEY DEMOGRAPHICS

For the third year, we conducted a global survey of more than 5,400 business and IT executives across 31 countries to understand their perspectives on the impact of technology on their organizations, and to identify their priority technology investments over the next few years. The survey was fielded from November 2016 through January 2017.

**31**  
COUNTRIES  
SURVEYED

- ARGENTINA
- AUSTRALIA
- AUSTRIA
- BRAZIL
- CHILE
- CHINA
- DENMARK
- FINLAND
- FRANCE
- GERMANY
- INDIA
- INDONESIA
- IRELAND
- ITALY
- JAPAN
- MALAYSIA
- NORWAY
- PORTUGAL
- QATAR
- RUSSIA
- SAUDI ARABIA
- SINGAPORE
- SOUTH AFRICA
- SPAIN
- SWEDEN
- SWITZERLAND
- THAILAND
- TURKEY
- UAE
- UNITED KINGDOM
- UNITED STATES



## ABOUT ACCENTURE

Accenture is a leading global professional services company, providing a broad range of services and solutions in strategy, consulting, digital, technology and operations. Combining unmatched experience and specialized skills across more than 40 industries and all business functions – underpinned by the world’s largest delivery network – Accenture works at the intersection of business and technology to help clients improve their performance and create sustainable value for their stakeholders. With more than 394,000 people serving clients in more than 120 countries, Accenture drives innovation to improve the way the world works and lives. Visit us at [www.accenture.com](http://www.accenture.com).

## ABOUT ACCENTURE LABS

Accenture Labs incubate and prototype new concepts through applied R&D projects that are expected to have a significant near-term impact on clients’ businesses. Our dedicated team of technologists and researchers work with leaders across the company to invest in, incubate and deliver breakthrough ideas and solutions that help our clients create new sources of business advantage. Accenture Labs is located in seven key research hubs around the world: Bangalore, India; Beijing, China; Dublin, Ireland; Silicon Valley, California; Sophia Antipolis, France; Washington D.C.; and Israel.

## ABOUT ACCENTURE RESEARCH

Accenture Research shapes trends and creates data-driven insights about the most pressing issues global organizations face. Combining the power of innovative research techniques with a deep understanding of our clients’ industries, our team of 250 researchers and analysts spans 23 countries and publishes hundreds of reports, articles and points of view every year. Our thought-provoking research – supported by proprietary data and partnerships with leading organizations such as MIT and Singularity – guides our innovations and allows us to transform theories and fresh ideas into real-world solutions for our clients.

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