

The Post-Digital Era is Upon Us **ARE YOU READY FOR WHAT'S NEXT?**

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Companies are taking their first steps in a new world—one that tailors itself to fit every moment. It's a world where products, services, and even people's surroundings are customized, and where businesses cater to the individual in every aspect of their lives, shaping the very realities they live in.

Japan's biggest e-commerce company, Zozotown, is delivering "custom fast fashion." Its skintight spandex Zozosuits pair with the company's app to take customers' exact measurements; custom-tailored pieces from Zozotown's in-house clothing line in some cases could arrive in as few as 10 days.¹

Gillette is catering to individual preferences in health and beauty, partnering with 3D printing startup Formlabs to offer customized razor designs.² Consumers create their personalized product through the company's website; the digitally-personalized design is then physically printed and assembled, to be shipped directly to their door.

And customizing for the individual doesn't necessarily require Zozosuits or direct design input. Sam's Club developed an app that uses machine learning and data about customers' past purchases to auto-fill their shopping lists, and plans to add a navigation feature, which will show optimized routes through the store to each item on that list.^{3,4} Virgin Hotels greets its guests with a cocktail of their choice and a minibar stocked with their favorites, thanks to a digital platform the company uses in place of a rewards program.⁵

Companies like these are figuring out how they can shape the world around people and pick the right moments to offer their products and services. Looking at these companies individually, there is a story of hyper-personalization and on-demand digital services. But the collective enterprise efforts reveal a fundamental shift in how people will experience the world for generations to come. Soon, each individual will have their own reality, and every moment will represent an opportunity for companies to play a role in shaping it.

What is enabling—and driving—this reality-shaping shift? The emergence of a post-digital world. We as a society are nearing a turning point in digital enterprise, where more businesses will have completed their digital transformations than not. Digital-era technology, which began as a differentiating advantage years ago, is now expected from every business. But its *impact* is still changing

According to our **Technology Vision 2019** survey of 6,672 business and IT executives, **45 percent** report the pace of innovation in their organizations has **significantly accelerated** over the past three years due to emerging technologies.

Significantly accelerated

45%

Accelerated

49%

Stayed the same

6%

Slowed

0%

the relationship between businesses and society, and the expectations of individual people.

Digital-born companies and those completing their transformations have showered consumers with digital products and services. Facebook, Twitter, Snapchat, and a constant rotation of new social media brands have become go-to destinations for finding and sharing information. Smart home devices enable contextual interactions between the digital and physical world (Hey Google, remind me to talk to the accounting staff when I get to the office), direct requests for physical products and services (Alexa, order more dish soap), and even digitally driven social interactions from wherever people choose (Siri, call Mom with FaceTime).

The digital saturation of reality has granted companies with exceptional capabilities. They can understand their customers with a new depth of granularity. They have more channels than ever to reach those consumers. And with every company finally converging on the same digital footing, there are more digital ecosystems and more potential partners to help companies create holistic experiences.

But as we move collectively into the post-digital era, these capabilities and advantages are now available to every organization. Digital itself is no longer differentiating. With every business heavily investing in digital technologies, how will leaders set themselves apart?

As the playing field evens out, companies will need to acknowledge a shift in their reality too—around the level of expectations they face from digitally mature customers, employees, and business partners. Businesses have used technology-driven mass customization to get more granular with consumers through a top-down approach: selling two different options, then 10 different options, then 100 different options. Companies' success with this approach has fostered the illusion that they can meet any need, no matter how personal or custom. Now, to meet expectations in the post-digital world, they need to turn that illusion into reality. That means understanding people at a holistic level and recognizing that their outlooks and needs change at a moment's notice.

In the post-digital world, every moment will represent a potential new market of one. It's where demand is communicated instantly and gratification is expected immediately. What's more, both are constantly changing, creating an infinite and never-ending stream of opportunities to be met through business-to-business (B2B) and business-to-consumer (B2C) engagement, as well as in the public sector. The post-digital world is one where technology is the fabric of reality, and companies can use it to meet people wherever they are, at any moment in time—if they rise to the challenge.

An aerial photograph of several surfers riding a wave in turquoise water. The surfers are wearing wetsuits and are positioned at different points along the wave's face. The water is a vibrant greenish-blue, and the surfers' tracks are visible in the white foam of the wave.

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A PARALLEL TRANSFORMATION

Companies have not been alone on their journey to digital transformation. People have been on a parallel path, incorporating new technologies at an increasingly rapid rate. When mobile phones were first introduced, they took 12 years to reach 50 million users; the internet took just seven to get to the same point.⁶ Looking at purely digital technologies, the rates become frantic: Facebook reached 50 million users in four years; WeChat, one year. Pokémon GO, the augmented-reality gaming app from Niantic? Nineteen days.

People are adopting new technology both quickly and completely, and whether they're customers, employees, or even threat actors, they are beginning to outpace enterprises in their digital transformations. They are more knowledgeable about technology itself and how companies use it, and are becoming selective and demanding of what they adopt, challenging companies to work with them or adapt to them in different ways.

Post-digital consumers are enjoying the results of technology saturation. In a world of unprecedented technology choice, people have strong sentiments

about which technologies they will or won't adopt to get the experiences they want. Companies must pay close attention not only to the choices themselves, but also to the powerful new insights those choices can provide about their customers—and about new market opportunities.

Post-digital workers are incorporating technology to complete tasks in new ways, in new types of jobs, but they are still being hired, trained, and managed in pre-digital ways. With the war for talent continuing to rage, companies must adapt their technology strategies to close the divide between themselves and their digitally mature workforce.

Post-digital threat actors have nearly unlimited points of entry to enterprise. With a global army of connected devices ready to be pressed into service, and an attack surface that includes not only the target company but every partner and vendor in the company's ecosystem, they have the clear advantage. Businesses must respond to this post-digital threat with a collaborative approach, recognizing that they are not just potential victims, but someone else's vector.

Post-digital markets are made up of consumers, business partners, and governments alike enjoying the spoils of the digital revolution. Fully on-demand or fully customized products are now the standard in practically every industry, and sooner than later, customers will expect every organization to achieve both.

This is not to say digital is old or over. Far from it. Companies have used the power of digital transformation to shape themselves, to shape customers and employees, and then to shape people's expectations. What's left is using their ongoing digital efforts to shape the market. Companies face a world of renewed expectations and core digital technologies are more critical than ever. But the time for pilots and experimentation is long past, and leaders must begin to strategize for what's next.

GETTING TO THE NEW “MOMENT”

Realistically, the world is not yet at the point of everything being instantaneous. But post-digital companies are already playing a different game. Companies still completing their digital transformations are looking for a specific edge, whether it's innovative service, higher efficiency, or more personalization. Post-digital companies are looking for much more. They are out to bypass the competition by changing the way the market itself works. From one market to many custom markets—on-demand, in the moment.

Industry lines are no longer a boundary to growth, and the disruption that came in waves as technology matured in the digital era is now ever-present. Any company can compete with any other or carve out a new market. Take Amazon partnering with Berkshire Hathaway, an insurance and holding company, and JPMorgan Chase, a global financial services firm, to tackle challenges in healthcare spending. The three have pooled their resources in a joint effort that has companies in entirely different industries preparing for foundational disruption.

Look at JD.com, an e-retail platform and one of the fastest-growing companies in China. JD is radically differentiating itself with its “Toplife” platform—a service that helps third parties sell through JD by setting up customized stores for unique shopping experiences.⁷ Not only do these third parties benefit from the e-retail personalization, they also have access to JD's supply chain with cutting-edge robotics and drone delivery that can reach rural areas. And through a partnership with Walmart, a physical store in Shenzhen will offer more than 8,000 products available in person or delivered from the store in under 30 minutes.⁸ By offering unprecedented customization and speed, JD is enabling other companies to capture moments, and in doing so creating a new market for itself.

It won't be long before the standout examples of today are the norm. Companies are already investigating the next generation of technologies such as artificial intelligence (AI), distributed ledgers like blockchain, extended reality, and quantum computing. The message is clear: “keeping up with the digitals” won't cut it for what's coming next.

Business leaders looking to do more than just complete their transformations must set new goals in their sights, including:

- *Move your focus to the end.* As companies begin to understand instant demand and supply options expand, they will have more opportunities than they can pursue. Success will mean carefully choosing the specific opportunities companies want to target—and just as important, the ones not to target—then working backward to determine how they will get there.
- *Define what it means for your business to be post-digital as the world moves into a new phase of cooperation.* As companies settle on their new goals and the pathways they will take to reach them, they must also determine which ecosystem partners they need and where their own place in the ecosystem should be.
- *Master SMAC as a core competency and a foundation to rotate to what's next.* When it comes to enterprise-level technology strategies, companies can never stop moving. Social, mobile, analytics, and cloud (SMAC) combined to drive the biggest enterprise and market transformations since the dawn of the industrial era. At this point, the failure to complete a mastery of SMAC will leave businesses unable to serve even the most basic demands of a post-digital world. But success will unlock boundless

future opportunity. **D**istributed ledger technology, **A**rtificial intelligence, extended **R**eality, and **Q**uantum computing (DARQ) are already having an impact in disparate areas of enterprise. DARQ technologies will drive the post-digital wave, but catching that wave will only be possible with the firm foundation of SMAC. Looking even further down the road? DARQ technologies will enable innovation in such core aspects of the business that *they* will be foundational for whatever comes after that.

As companies move to meet these goals, they must also accept a new level of responsibility. As businesses use technologies to reach further into people's lives, shaping the very fabric of reality, they must address the privacy, safety, ethics, and governance questions that come along with that level of access.

Look at drone usage, which companies are incorporating for everything from agricultural services to public safety, utility monitoring, and product delivery. They're even changing what's possible in healthcare, with Switzerland's postal service provider using drones to move time-sensitive lab samples between hospitals and bypass the delays of ground transport.⁹ But this does raise issues of patient safety, privacy, and data protection that the involved organizations must address, as well as navigating potentially restricted airspace. AirMap, which operates an airspace management system for

the low altitudes at which drones fly, partnered with Microsoft Azure to create a platform that gives state and local authorities authorization, enforcement, and restriction abilities for drone operation in their areas.¹⁰ The platform also lets companies incorporate security and compliance checkpoints into drone-related workflows.

By positioning themselves as the curators of reality, companies already have a new level of obligation to society. But being able to deliver for specific and constantly changing moments creates challenging additional questions for businesses that are used to one market of many and long-static circumstances. With limitless opportunities, how do you measure the potential impact of products and services on society? How do you avoid crossing ethical boundaries where there are different lines for every reality and moment? And how does a company responsibly pick the opportunities to target in the first place? When you reach the point of being able to deliver nearly anything instantly, it is critical to remember that "can" doesn't always mean "should."

It's every company's responsibility to understand the impact of its moments at scale.

2019 TECH TRENDS

This year's Accenture Technology Vision highlights five emerging trends that will shape businesses over the next three years. In each trend, you will see how digital saturation is raising expectations, abilities, and risk across industries, and how businesses are seeking new ways to differentiate themselves as the world moves into the post-digital era.

TREND

1

DARQ Power

Understanding the DNA of DARQ

New technologies are catalysts for change, offering businesses extraordinary new capabilities. Distributed ledger technology, artificial intelligence, extended reality, and quantum computing will be the next set of new technologies to spark a step change, letting businesses reimagine entire industries.

TREND

2

Get to Know Me

Unlock unique customers and unique opportunities

Technology-driven interactions are creating an expanding technology identity for every consumer. This living foundation of knowledge will be key to not only understanding the next generation of consumers, but also to delivering rich, individualized, experience-based relationships in the post-digital age.

TREND

3

Human+ Worker

Change the workplace or hinder the workforce

Workforces are becoming human+: each individual is empowered by their skillsets and knowledge plus a new, constantly growing set of capabilities made possible through technology. Now, companies must adapt the technology strategies that successfully created this next generation workforce to support a new way of working in the post-digital age.

TREND

4

Secure US to Secure ME

Enterprises are not victims, they're vectors

While ecosystem-driven business depends on interconnectedness, those connections increase companies' exposures to risks. Leading businesses are recognizing that just as they already collaborate with entire ecosystems to deliver best-in-class products, services, and experiences, it's time security joins that effort as well.

TREND

5

MyMarkets

Meet consumers' needs at the speed of now

Technology is creating a world of intensely customized and on-demand experiences, and companies must reinvent their organizations to find and capture those opportunities as they come. That means viewing each opportunity as if it's an individual market—a momentary market.

THE POST-DIGITAL FUTURE

Just as people no longer say they live in the “age of electricity,” the days of calling something digital to insinuate that it is new and innovative are numbered.

The word is already passé in the consumer space. Soon, it will be the same for enterprise. There is no need to say you are a “digital business.” If you’re still in business, investing in digital is understood.

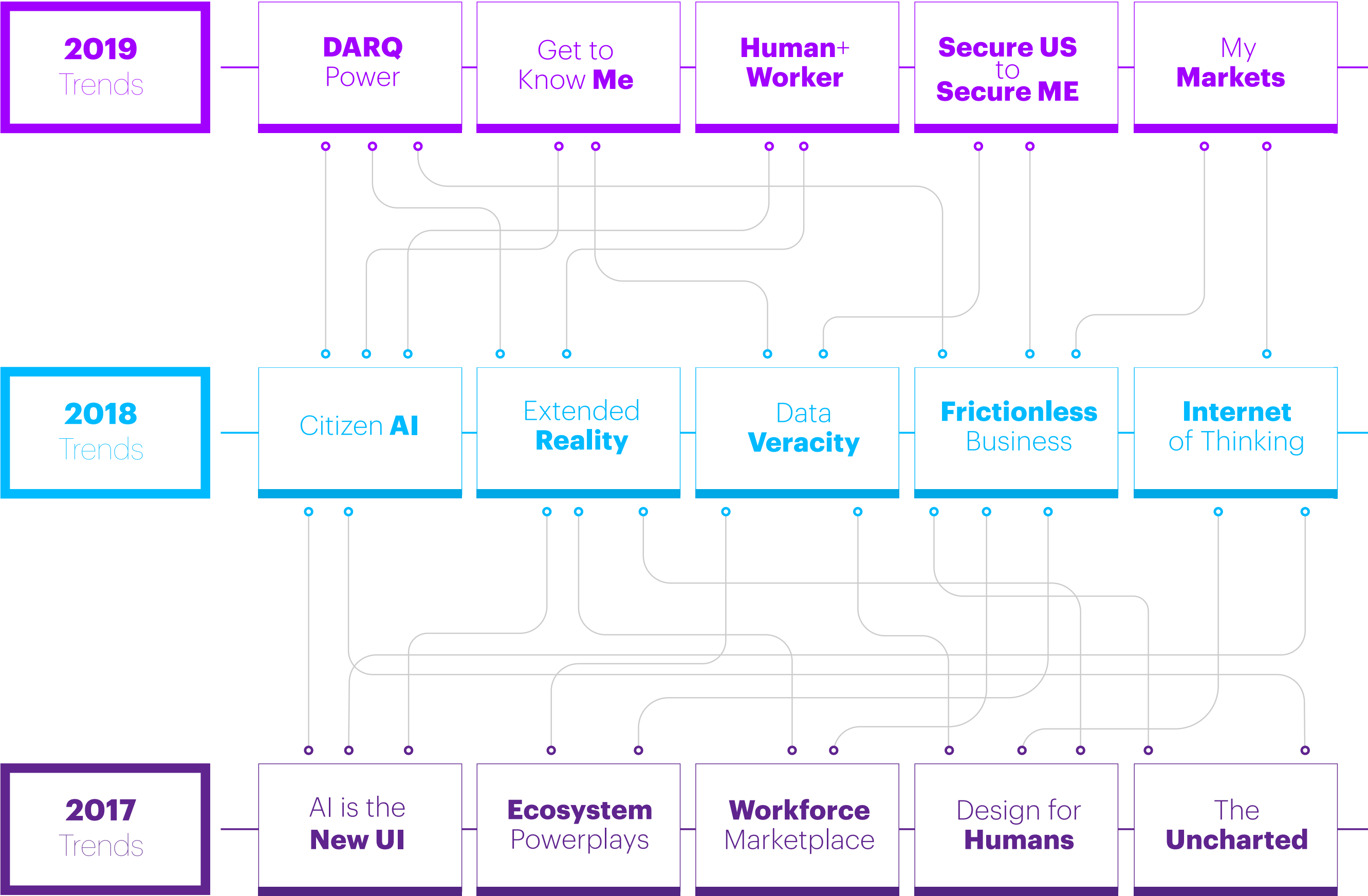
What does “post-digital” mean for companies? Doubling down on completing their digital transformations to get the most value from those investments—and at the same time, turning a strategic eye toward what’s next. By moving the company’s focus to targets of opportunity, finding a place among the ecosystems of the post-digital era, and mastering digital investments with an eye toward the post-digital future, leaders will position themselves for success for years to come. Your digitized organization will be the foundation from which you drive all future innovation.

It’s a tall order; thanks to the power of digital now and post-digital next, the next era will be one of massive customer, employee, and societal expectations. Fortunately, it’s an era of equally tremendous possibility: to deliver for any moment in any reality.

COMPLETING THE PICTURE

The current three-year set of technology trends relating to Accenture’s Technology Vision includes our reports from 2018 and 2017.

Accenture’s Technology Vision comprises a three-year set of technology trends, and it’s important to recognize that this year’s trends are part of a bigger picture. As companies continue to grow as digital businesses, they will need to keep up with the latest technologies, as well as continue to master those that have been maturing. These technologies will collectively inform how enterprises build the next generation of business and create paths toward future growth.



2018 Trends

Trend 1

CITIZEN AI

Raising AI to Benefit Business and Society

As artificial intelligence grows in its capabilities—and its impact on people’s lives—businesses must move to “raise” their AIs to act as responsible, productive members of society.

Trend 2

EXTENDED REALITY

The End of Distance

Virtual and augmented reality technologies are removing the distance to people, information, and experiences, transforming the ways people live and work.

Trend 3

DATA VERACITY

The Importance of Trust

By transforming themselves to run on data, businesses have created a new kind of vulnerability: inaccurate, manipulated, and biased data that leads to corrupted business insights, and skewed decisions with a major impact on society.

Trend 4

FRICTIONLESS BUSINESS

Built to Partner at Scale

Businesses depend on technology-based partnerships for growth, but their own legacy systems aren’t designed to support partnerships at scale. To fully power the connected Intelligent Enterprise, companies must first rearchitect themselves.

Trend 5

INTERNET OF THINKING

Creating Intelligent Distributed Systems

Businesses are making big bets on intelligent environments via robotics, AI and immersive experiences. But to bring these intelligent environments to life, they must extend their infrastructures into the dynamic, real-world environments they want to reach.

2017 Trends

Trend 1

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

Artificial intelligence (AI) is about to become your company's digital spokesperson. Moving beyond a backend 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 **Inspiring New Behaviors**

What if technology adapted to you? The new frontier of digital experiences is technology designed specifically for individual human behavior. This shift is transforming traditional personalized relationships into something much more valuable: partnerships. 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.

Trend 5

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

Businesses are not just creating new products and services; they are shaping new digital industries. 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 that don't risk being left behind. 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.

A close-up photograph of a human eye. The iris is a light blue-grey color with visible blood vessels. In the center of the iris, there is a clear reflection of a person sitting at a desk, working on a laptop. The person in the reflection is wearing a dark jacket and is illuminated by a bright light source, possibly a screen. The background of the reflection shows some blurred indoor elements. The overall image has a high-contrast, artistic feel with a dark, textured background on the right side.

ABOUT THE TECHNOLOGY VISION

About the Technology Vision

RESEARCH METHODOLOGY

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 coming years. These trends have significant impact across industries, and are actionable for businesses today.

The research process begins by gathering input from the Technology Vision External Advisory Board, a group of 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.

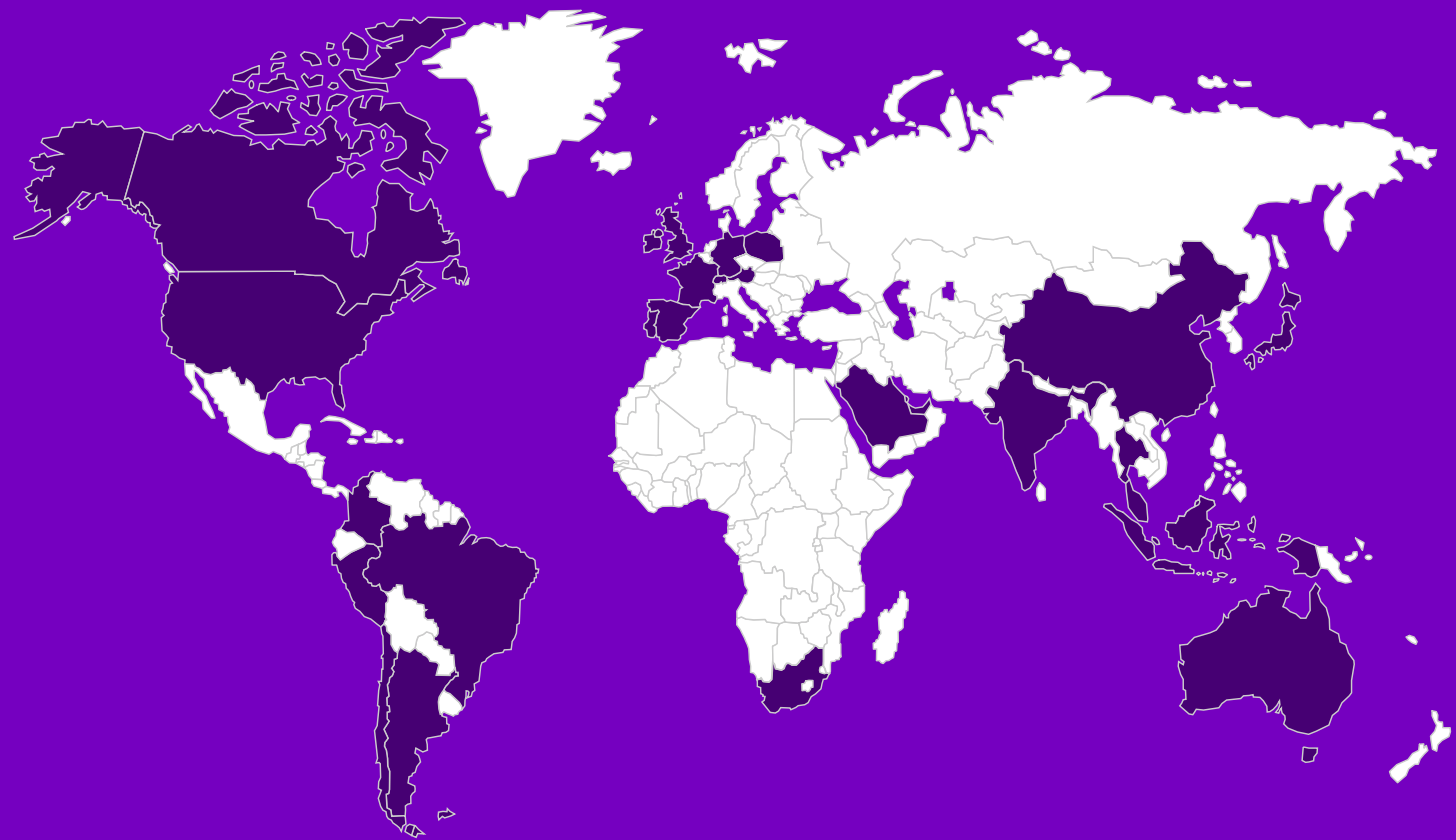
Each year, the research process also includes a global survey of thousands of business and IT executives from around the world, to understand their perspectives on the impact of technology in business. Survey responses help to identify the technology strategies and priority investments of companies from across industries and geographies.

As a shortlist of themes emerges from the research process, the Technology Vision team reconvenes its advisory board. The board's workshop, 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. 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.

SURVEY DEMOGRAPHICS

Accenture Research conducted a global survey of 6,672 business and IT executives to capture insights into the adoption of emerging technologies. The survey, fielded from October through December 2018, helped identify the key issues and priorities for technology adoption and investment. Respondents were C-level executives and directors at companies across 27 countries and 20 industries, with the majority having annual revenues greater than US\$6 billion.



27 Countries:

(Respondent Location)

- | | | |
|--------------|---------------|-------------------|
| 1. Argentina | 10. Germany | 19. Saudi Arabia |
| 2. Australia | 11. India | 20. Singapore |
| 3. Austria | 12. Indonesia | 21. South Africa |
| 4. Brazil | 13. Ireland | 22. Spain |
| 5. Canada | 14. Japan | 23. Switzerland |
| 6. Chile | 15. Malaysia | 24. Thailand |
| 7. China | 16. Peru | 25. UAE |
| 8. Columbia | 17. Poland | 26. UK |
| 9. France | 18. Portugal | 27. United States |

20 Industries:

- | | | |
|--------------------------------|-------------------------|----------------------------|
| 1. Aerospace and Defense | 7. Energy | 14. Public Service |
| 2. Automotive | 8. Healthcare | 15. Retail |
| 3. Banking | 9. Industrial Equipment | 16. Semiconductors |
| 4. Consumer Goods and Services | 10. Insurance | 17. Software and Platforms |
| 5. Chemicals | 11. Life Sciences | 18. Transportation |
| 6. Communications | 12. Media | 19. Travel |
| | 13. Metals and Mining | 20. Utilities |

Revenues (USD):

- | | |
|-------------------------|------------------------|
| 1. \$50 billion or more | 4. \$6-\$9.9 billion |
| 2. \$20-\$49.9 billion | 5. \$1-\$5.9 billion |
| 3. \$10-\$19.9 billion | 6. \$250-\$999 million |

Roles:

(50% Business Executives/50% IT Executives, Director Level and Above)

- | | |
|--------------------------------------|--|
| • Chief Information Officer | • Chief Strategy Officer |
| • Chief Mobility Officer | • Director of Technology |
| • Chief Technology Officer | • Director, IT |
| • Chief Marketing Officer | • Director of Business Function (Non IT-related) |
| • Chief Finance Officer | • Director, Line of Business (Non IT-related) |
| • Chief Operating Officer | |
| • Chief Security Officer | |
| • Chief Information Security Officer | |

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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 469,000 people serving clients in more than 120 countries, Accenture drives innovation to improve the way the world works and lives.

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About Accenture Labs

Accenture Labs incubates and prototypes new concepts through applied R&D projects that are expected to have a significant impact on business and society. Our dedicated team of technologists and researchers work with leaders across the company and external partners to imagine and invent the future.

Accenture Labs is located in seven key research hubs around the world: San Francisco, CA; Sophia Antipolis, France; Washington, D.C.; Shenzhen, China; Bangalore, India; Herzliya, Israel and Dublin, Ireland; and 25 Nano Labs. The Labs collaborates extensively with Accenture’s network of nearly 400 innovation centers, studios and centers of excellence located in 92 cities and 35 countries globally to deliver cutting-edge research, insights and solutions to clients where they operate and live.

For more information, please visit www.accenture.com/labs.

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 300 researchers and analysts spans 20 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 Harvard— guides our innovations and allows us to transform theories and fresh ideas into real-world solutions for our clients.

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