

20th CEO Survey

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20 years inside the mind of the CEO

Technology industry results



148

CEOs interviewed in 42 countries

87%

confident of company growth over the next 12 months

93%

say technology will significantly or completely reshape competition in their industry in the next five years



Introduction

The last 20 years have seen unprecedented changes in technology and the next 20 are looking equally dynamic. While mobile and cloud computing and the Internet of Things mature and become ubiquitous, there is a new wave of transformation emerging from artificial intelligence, virtual reality and robotics bringing hitherto futuristic concepts into our day-to-day lives both at work and at home. At the same time, technology has become a vital component of every industry, bringing unprecedented opportunities for growth along with challenges and competition from traditional and new arenas. Overall, tech CEOs are optimistic about growth, but are well aware of the challenges they face.

In this, our 20th CEO survey, we asked technology industry CEOs what they're excited about, what worries them and how they see their industry and their businesses moving forward in the next year and beyond. As in previous years, we've divided our questions into four main topics: growth, talent, trust and globalisation. On the following pages you will find a summary of our findings. To get more detailed responses, or to explore the data through a variety of filters, please visit our web site at <http://www.pwc.com/gx/en/ceo-agenda/ceosurvey/2017/gx/industries/technology.html>.

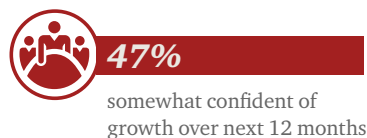
Figure 1 Tech CEOs bullish on economic growth

Q: Do you believe global economic growth will improve, stay the same, or decline over the next 12 months?

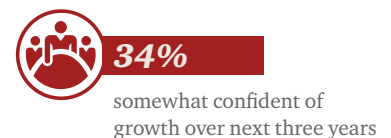


Tech CEOs even more confident of their own businesses' growth

Q: How confident are you about your company's prospects for revenue growth over the next 12 months?



Q: How confident are you about your company's prospects for revenue growth over the next three years?



Source: PwC, 20th Annual Global CEO Survey.

Growth and competition

37%

of tech CEOs are focusing on innovation to capitalise on new opportunities

“You need to create strategic partnerships across the board to strengthen your own position in the marketplace, and also need to know when you might need to pivot or change course to be even more relevant.”

Anya Babbitt
CEO
SPLT, United States

Slightly more optimistic than CEOs from other industries, 82% of tech CEOs think global economic growth will improve or stay the same over the next year, with half confident that it will at least stay the same. This is a slight improvement over the 78% from last year.

But when asked about their own prospects for growth, tech CEOs are much more optimistic, with 87% saying they are very or somewhat confident of revenue growth in the next 12 months. When asked about prospects over the next three years, that number jumps to 91%. Clearly, the increasingly vital role technology plays in all industries is driving this confidence.

Tech CEOs pursue diverse strategies to achieve growth

With sensors embedded in everything from refrigerators to tractors, and software becoming a key component of automobiles and medical devices, the growth opportunities for technology companies in all subsectors are many and varied. This is clearly reflected in tech CEOs' growth plans for the next year and

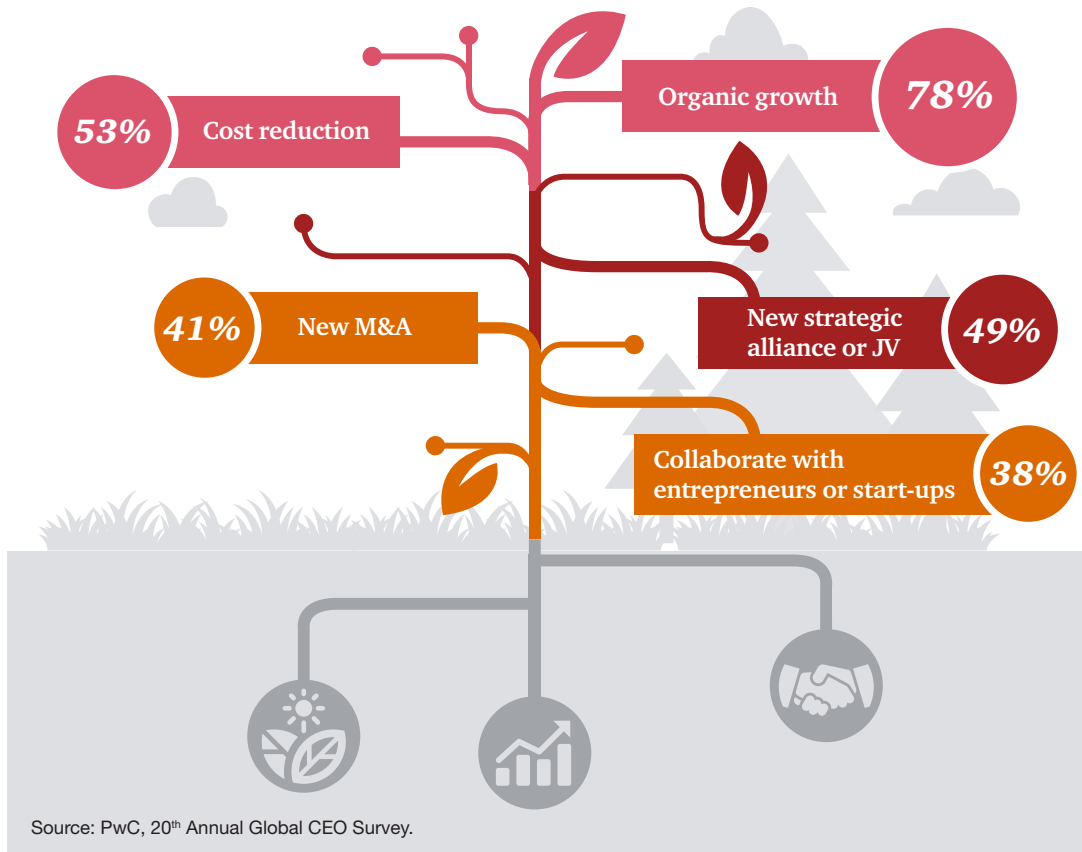
beyond. Organic growth and strategic alliances are two of the top three strategies. So whether it's the next big thing in tech—artificial intelligence and robotics—or an alliance with a partner in another industry such as healthcare or industrial manufacturing, tech CEOs see plenty of opportunity for their companies to thrive. And while cost reduction remains a priority, second on the list, it's not nearly as important to tech CEOs as it is to CEOs overall (53% vs. 62% overall).

But challenges remain

Despite confidence in their ability to grow their businesses, tech CEOs are well aware of the variety of challenges—internal and external—that can derail their growth plans. At the top of the worry list is the still-uncertain global economy. Almost 80% of tech CEOs are concerned about uncertain economic growth. With Brexit looming over the UK and the European Union, a new administration in the US and on-going sluggish growth in China, there are plenty of unknowns.

Figure 2 Tech CEOs pursue diverse strategies to achieve growth

Q: Which of the following activities, if any, are you planning in the coming 12 months in order to drive corporate growth or profitability?



From a business perspective, the availability of key skills, cyber threats and the speed of technological change top the list of concerns. Given the current rise in nationalism impacting everything from immigration to trade agreements and highly visible security breaches making global headlines, not to mention competition arising from both traditional and non-traditional sources, there's plenty for CEOs to worry about. So why are they still confident of growth? For the same reason technology

companies have always been confident and able to grow—a focus on innovation. In fact, when asked about how they plan to capitalise on new opportunities, 37% cited innovation, more than twice that of any other capability. At 14%, digital and technological capabilities came in a distant second. Given all the buzz around emerging technologies such as AI, blockchain, service robots and self-driving cars, there's no doubt of the growth opportunities innovation in the tech industry can and will bring.

Human versus tech

“All of that diversity really yields a high-performing team, and also one that’s very tolerant and very collaborative.”

Anya Babbitt
CEO
SPLT, United States

Since the majority of tech CEOs foresee growth, have a variety of strategies to achieve that growth, it’s no surprise that they plan to increase headcount over the next 12 months. In fact, more than half plan to do just that while another almost one third foresee keeping headcount steady. But a closer look at other results indicates that when asked about causes of decreasing headcount, a whopping 75% said

automation and other technologies would to some or a large extent be the reason. And another almost 50% indicated that they are considering the impact of AI on future skills needs. So while tech companies may be hiring, the talent they need will most assuredly have a very human element – tasks and attributes that artificial intelligence, robotics and other automation cannot provide.

Figure 3 Tech CEOs plan to hire, but also to automate

Q: Do you expect headcount at your company to increase, decrease or stay the same over the next 12 months? To what extent will the decrease in headcount be the result of automation and other technologies?



of Tech CEOs believe that automation and other technologies will somewhat or largely contribute to future reductions in headcount



of tech CEOs plan to increase headcount

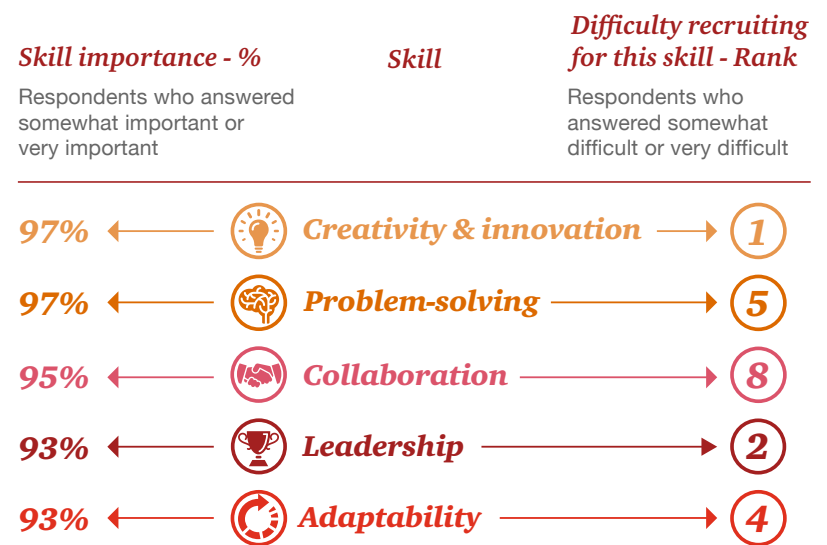
While tech-led automation will result in reduction of headcount, confidence in growth will lead to more hiring.



For tech CEOs, critical skills are hard to find

It’s no coincidence that tech CEOs cite the availability of key skills as the number one threat to their growth prospects (80% say they are somewhat or extremely concerned about this) and that the most important skills they list are the most difficult to find in the workforce. As AI advances, many low-value, repetitive tasks will be automated. Attributes like creativity, problem-solving and leadership become ever-more important and sought-after in the workforce while supplies of those abilities become scarcer. A potential shift towards nationalism may only exacerbate the challenge.

Figure 4 For Tech CEOs critical skills are hard to find



Source: PwC, 20th Annual Global CEO Survey.

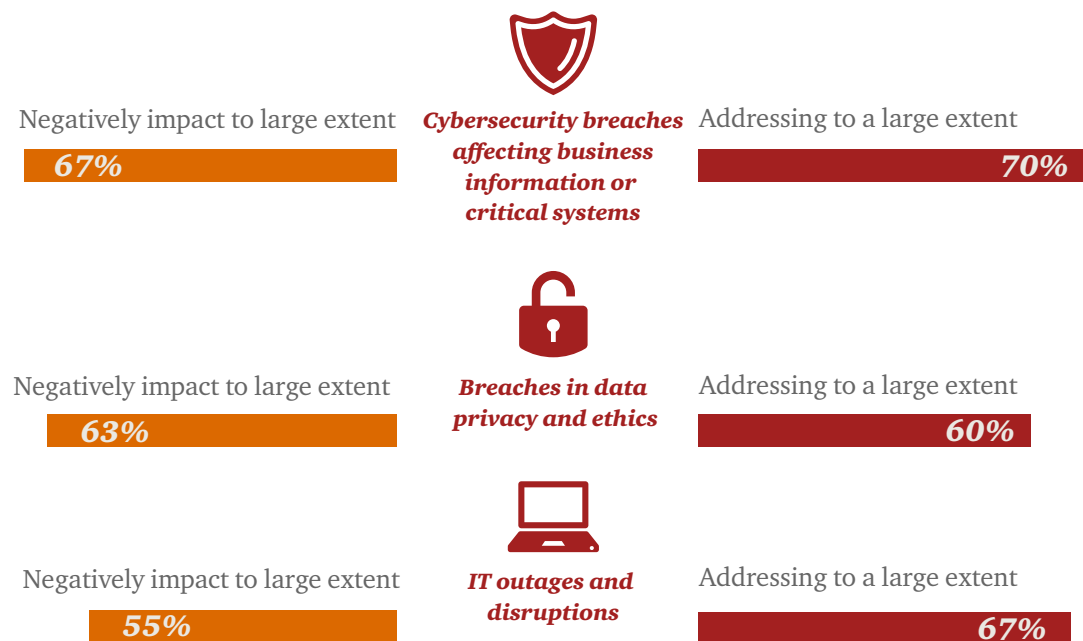
Digital trust

In today’s world of social media, camera phones, and device interconnectivity, there’s no place to hide and no room for error, making trust and transparency more important than ever before. In addition, in a world driven by data, privacy and security are essential and, once lost, almost impossible to recover. Because of their unique position of creating

many of the products and services designed to protect and secure data, technology CEOs are hyper aware of its importance. In fact, when asked about areas that would negatively impact stakeholder trust levels, tech CEOs ranked cyber security issues significantly higher and are addressing them more aggressively than the global sample.

Figure 5 Digital issues top of mind and growing for tech CEOs

Q: To what extent do you think the following areas will impact negatively on stakeholder trust levels in your industry in the next five years? To what extent is your organisation addressing these issues today?



Source: PwC, 20th Annual Global CEO Survey.

Globalisation for all

Rising nationalism a growing concern for tech CEOs

CEOs across the board—and technology CEOs in particular—agree that globalisation has enhanced the quality of life and enabled business growth in a variety of ways, from universal connectivity, to creating a skilled and educated labour force. Having reaped the benefits of a worldwide customer base and a fluid, mobile and diverse talent pool, it's no surprise that more than half of all CEOs (including technology) agree or strongly agree

that the trend toward more closed national policies will negatively impact an open, global market.

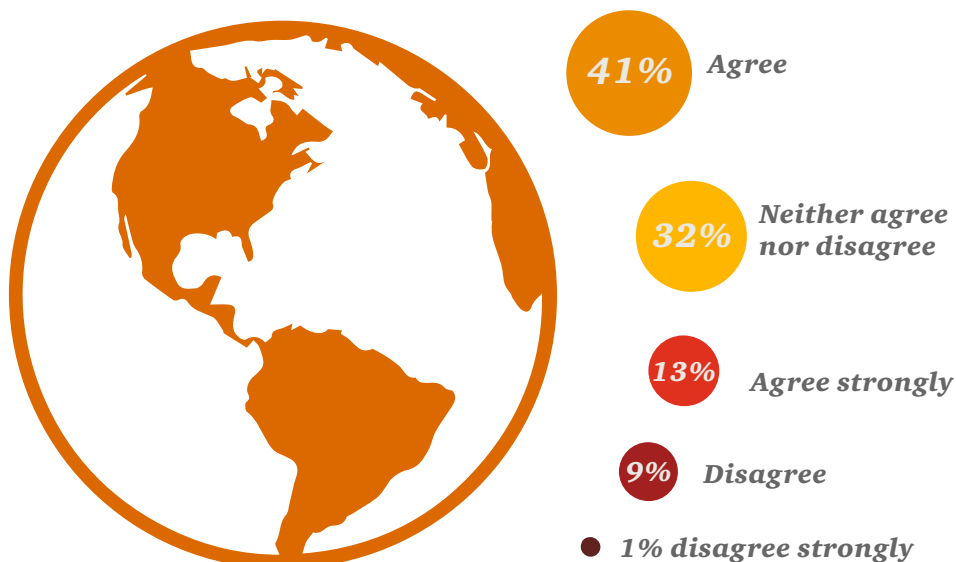
Concern over these policies are reflected in other responses as well. Almost 60% of tech CEOs cited protectionism as a threat to their organisation's growth prospects. In terms of talent, almost three-quarters of tech CEOs say they move talent to where they need it and that they seek out the best talent regardless of geography.

“People on this earth are becoming more intelligent...through globalisation. All issues are relatively similar, and things are relatively easier to understand by different people. It could be said that the gap between cultures has been bridged. This is the biggest change.”

Dr. Charles Zhang
Chairman & CEO,
Sohu.com Inc, China

Figure 6 More than half of tech CEOs are worried about the rising tide of political nationalism

Q: To what extent do you agree or disagree that it is becoming harder for CEOs to balance competing in an open global marketplace with trends toward more closed national policies?



Conclusion

While no one has a crystal ball that accurately predicts the future, our 20th CEO Survey indicates that technology CEOs are feeling good about their growth prospects. With everything from refrigerators in the home to power grids in cities connected to the Internet and gathering data, to drones delivering packages and robots waiting tables, cars driving themselves and devices administering medicine automatically, there's no shortage of exciting opportunities for growth through innovation. And as technology becomes an integrated and essential element of every industry—from healthcare to industrial manufacturing to financial services—more opportunities for growth through collaboration and partnerships appear on the horizon every day.

But in today's complex world, opportunities come hand-in-hand with challenges, whether it's the threat of increasing nationalism and protectionism, the risk of loss of trust and reputation from mishandling data or the lack of essential skills.

Technology CEOs must capitalise on today's opportunities while successfully navigating the challenges if they want to remain or become tomorrow's leading companies. To do this, they must create agile organisations that stay true to their value propositions while being open to the changes today's fast-moving world brings.



About the CEO Survey

PwC conducted 1,379 interviews with CEOs in 79 countries. Our sample is weighted by national GDP, to ensure CEOs' views are fairly represented across all major countries. The interviews were also spread across a range of industries. Further details, by region and industry, are available on request. Twenty-eight percent of the interviews were conducted by telephone, 63% online and 9% by post or face-to-face. All quantitative interviews were conducted on a confidential basis.

We also conducted face-to-face in-depth interviews with 20 CEOs from five continents over the fourth quarter of 2016. Their interviews are quoted in this report, and more extensive extracts can be found on our website at ceosurvey.pwc where you can explore responses by sector and location.

In addition, we surveyed 5,351 members of the public from 22 countries. The interviews were conducted in December 2016 using an online survey community of global consumers.

The technology industry sample was comprised of CEOs from 148 technology companies spanning 42 countries. Fifty-nine percent (59%) of these companies are privately owned while the remaining 41% are publicly traded. Fifty-two percent (52%) of sample companies had revenues of US\$101 million or higher.

We would like to thank Dr. Charles Zhang, Chairman and CEO of Sohu.com Inc of China and Anya Babbitt, CEO of US-based SPLT for sharing their valuable insights with us in for face-to-face, in-depth interviews.

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If you would like to discuss how these findings might impact your business or your future strategy, please reach out to any of our technology industry leaders listed below.

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