20th CEO Survey: Healthcare industry key findings

Globalisation: Underway but under siege? / The short term: Prospects for growth/ Further out: Addressing new challenges / The best of times, the worst of times

A new treatment?: Healthcare findings from the 20th Annual Global CEO Survey

56

healthcare CEOs interviewed in 27 countries

80%

of healthcare CEOs are worried about geopolitical uncertainty

86%

of healthcare CEOs see technology reshaping their industry in the next five years

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About the 20th Annual Global CEO Survey

In this year's Survey we canvassed the views of

56

Healthcare CEOs from

27

countries about where we are now, what the future may hold, and what business can do to make a positive difference.

In *20 years inside the mind of the CEO...What's next?*, we explore what 1,379 CEOs in 79 countries in 2017 think about three imperatives: managing man and machine to create a workforce that's fit for the digital age; preserving organisational trust in a world of increasingly virtual interactions; and making globalisation work for everyone by ensuring the benefits are distributed more fairly.

The challenge common to all three imperatives is leadership. In a time of heightened anxieties juxtaposed with the highest levels of transparency we have experienced, how leaders engage with employees and stakeholders (both public and private) has never been more important.

The world has changed more in the last 20 years than in any other previous two decades in its history. Globalisation and technological advances have transformed how and where we live and work, the balance of global political power has shifted, more people than ever are living in cities, and the world is facing the enormous challenge of combatting climate change. The business world has also been confronted by these same megatrends—some have created new risks; others have led to significant opportunities. No organisation has been immune.

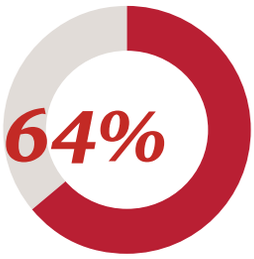
The ascendancy of corporations around the globe has boosted prosperity: it's created jobs, raised living standards and delivered pioneering products and services that have improved people's lives. Now, however, the world is at a crossroads, and CEOs recognise that. The momentum behind globalisation and technological change shows no sign of slowing, but the direction of travel is no longer as clear as it was. We could be moving towards a more inclusive society, or we could be facing a more dangerous and divergent world, with a much greater risk of conflict. Specifically for CEOs, it is time to raise the role of business in society and engage more broadly to help government and the public. It is time to step forward with their own solutions and collaborate with multiple players in society to boost trust and build the world we need for the future—because if executed properly, business is a force for good.

In this year's Survey we canvassed the views of 56 Healthcare CEOs from 27 countries about where we are now, what the future may hold, and what business can do to make a positive difference.

Globalisation: Underway but under siege?

Business has unquestionably benefited from globalisation—not just trade, more connectivity and greater productivity, but lower barriers to entry mean that agile start-ups can compete effectively with multinationals. In our survey, 64% of Healthcare CEOs think globalisation has facilitated greater connectivity, and 59% see a greater flow of goods and trade as a result, both broadly in line with the global results.

Companies, therefore, have been one of globalisation's big winners. But CEOs across all sectors have not been blind to the challenges; in fact ever since the financial crisis, CEOs have been warning that despite the fact that nearly a billion people have been lifted out of poverty, the gap between rich and poor was growing. Only 14% of Healthcare respondents believe globalisation is helping to close this gap, and only 32% believe it's creating a more skilled and educated workforce. Likewise only 11% say it's promoted the development of fairer tax systems versus 14% globally. Healthcare CEOs are even more pessimistic on climate change—only 7% believe globalisation is helping there, compared with a global average of 15%.



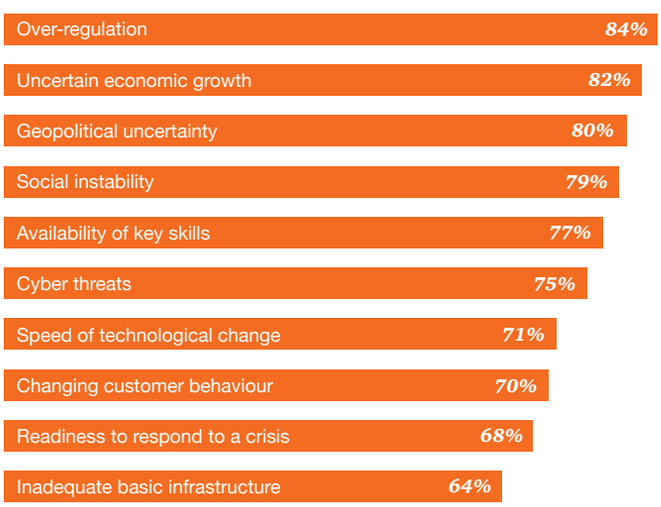
of Healthcare CEOs think globalisation has facilitated greater connectivity

CEOs' long-held scepticism has been amply borne out by recent events. Greater international competition has led to job losses in some countries, and increased migration has put pressure on public services. In emerging economies, the middle class is growing and doing well, but many millions of people have not seen the same improvement in their living standards. 2016 was characterised by political upheavals that went against most expectations, and the rise of a populist sentiment which is leading to significant political instability, and could also impact economic prosperity by forcing governments to become more protectionist. No wonder Healthcare CEOs are so concerned about uncertain economic growth: 82% are worried about this, but they are more concerned than their peers about geopolitical uncertainty—80% versus 74%—and markedly more so about social instability: 79% compared with 68% (see Figure 1). But at the very top of their list is over-regulation, which is hardly surprising, given the nature of the healthcare market (84% as against an average of 80%). They agree with their peers in seeing more closed national policies as detrimental to growth (57%).

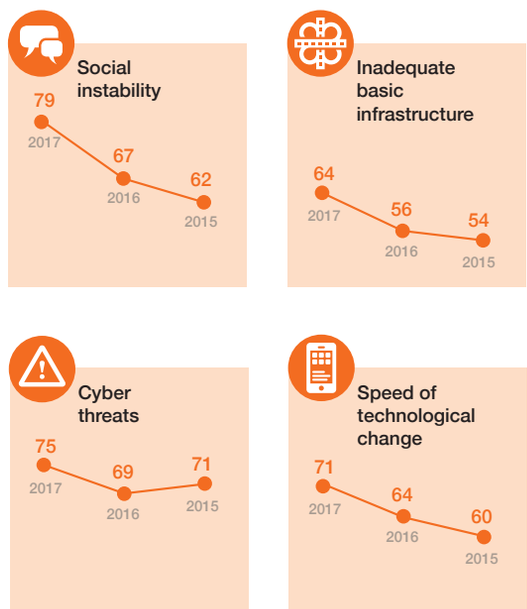
Figure 1: Over-regulation and uncertain economic growth are top concerns for Healthcare CEOs

Q: How concerned are you about the following economic, policy, social, environmental and business threats to your organisation's growth prospects?

Top ten threats



Top four risers since 2015



Source: PwC, 20th Annual Global CEO Survey
Base: All respondents (Healthcare, 2017 = 56, 2016 = 70, 2015 = 68)

The short term: Prospects for growth

CEOs may be more worried about the big picture, but they remain sanguine about the prospects for their own businesses. Fifty-two percent of Healthcare CEOs are very confident about revenue growth over the next three years, up from 37% last year, and 46% are equally positive about the next 12 months, which is noticeably higher than the global average of 38%. The most optimistic sector of all is Pharmaceutical and Life Sciences, at 63% for the next 12 months and 61% for the three-year horizon.

In terms of internal priorities, Healthcare has the same top three priorities as the global average, and broadly tracks that average on organic growth (77% versus 79%), and cost reductions (68% versus 62%) but is significantly more focused on new strategic alliances (59% versus 48%).

The latter has been a strengthening trend for some time, reflecting the evolution of new business models and more flexible ways of working. As Alex Gorsky, CEO of Johnson & Johnson, says, "At Johnson & Johnson, our R&D model is not only research and development—it's also search and development. We build relationships and connections with academic centres, with the venture world, with other entrepreneurs who are creating new technologies but who may not have the clinical development, the regulatory capabilities, the commercial capabilities that J&J possesses to scale on a global basis. By finding partners who need our skills as much as we need their knowledge, we bring those two things together rapidly, allowing us to deliver safe, effective products to consumers and patients around the world."

In terms of the key markets for the future, Healthcare is targeting the US (43%), China (23%), and the UK (20%). Only 5% are focusing on India or Japan, and Germany is noticeably lower than it is globally (9% versus 17%).

52%

of Healthcare CEOs are very confident about revenue growth over the next three years

59%

of Healthcare CEOs are focused on new strategic alliances.

Further out: Addressing new challenges

The themes we discussed here were threefold: Technology, Talent, and Trust.

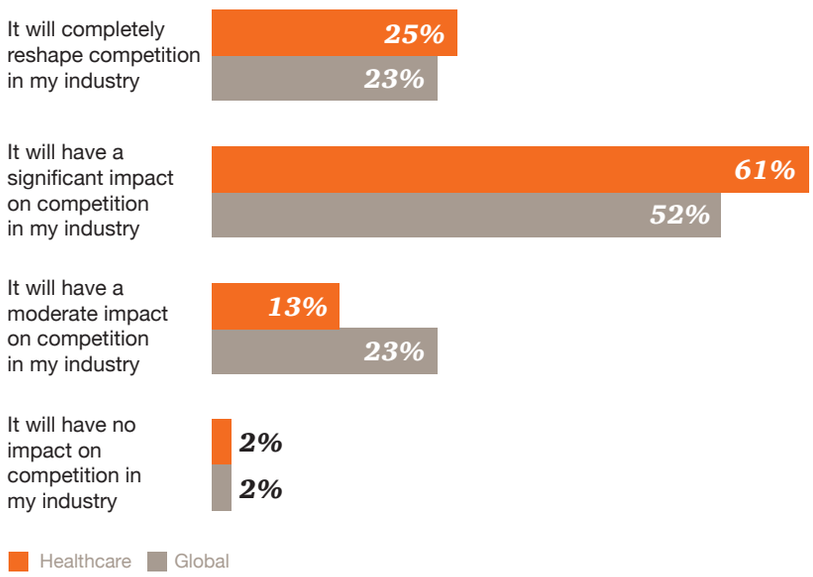
Technology

Most CEOs believe technology has changed the shape of competition in their industry: in Healthcare, 54% say it has done so either significantly or completely in the last two decades.

And the speed of change is accelerating: a huge 86% of Healthcare CEOs see technology reshaping competition in the next five years (see Figure 2). Alex Gorsky of Johnson & Johnson puts it this way: "How can we better use Big Data? How can we better use artificial intelligence to identify the next breakthrough compound or to understand all the clinical evidence available in a particular molecule? How can we take sensing, visioning technology and embed it in our existing metal technology to create the next approach to managing hip, knee, or spinal replacements? Last but not least, how can we better communicate with our customers? When you think about all the ways we have to engage with customers—the physicians, the nurses, and the consumers who are using our products—incredibly exciting opportunities open up."

Figure 2 **More Healthcare CEOs believe technology will have a greater impact on the competition over the next 5 years than the global average**

Q: To what extent do you think technology will change competition in your industry over the next 5 years?



Source: PwC, 20th Annual Global CEO Survey
Base: All respondents (Global = 1379; Healthcare = 56)

This new reality is reflected in the fact that 71% of Healthcare respondents are concerned about the speed of technological change, and 70% worry about shifts in customer behaviour. However, they are markedly more concerned about cyber threats (75% versus 61%). Given the sensitivity of healthcare data, this comes as no surprise, and according to PwC's *The Global State of Information Security® Survey*, 2016 saw some of the biggest healthcare data breaches in history.[1] Innovation was the second most important strategic priority for Healthcare (20%), with digital and technological capabilities scoring 13%, and human capital topping the list at 21%. As Gorsky states: "Innovation is our lifeblood. I can't think of a more exciting time to be living than now, just in terms of scientific breakthroughs. We're not only focusing on the products that we're innovating on, we're innovating how we innovate."

CEOs are also meeting these challenges by enhancing their personal digital skills. Healthcare CEOs are extremely confident about those skills (73% believe they are strong here versus 55% globally), 55% are on social media, and 73% use digital media more than print. 57% are using home automation.

1 PwC, *Transformation and turnaround in cybersecurity: Healthcare payers and providers; Key findings from the Global State of Information Security® Survey, 2016*

Talent

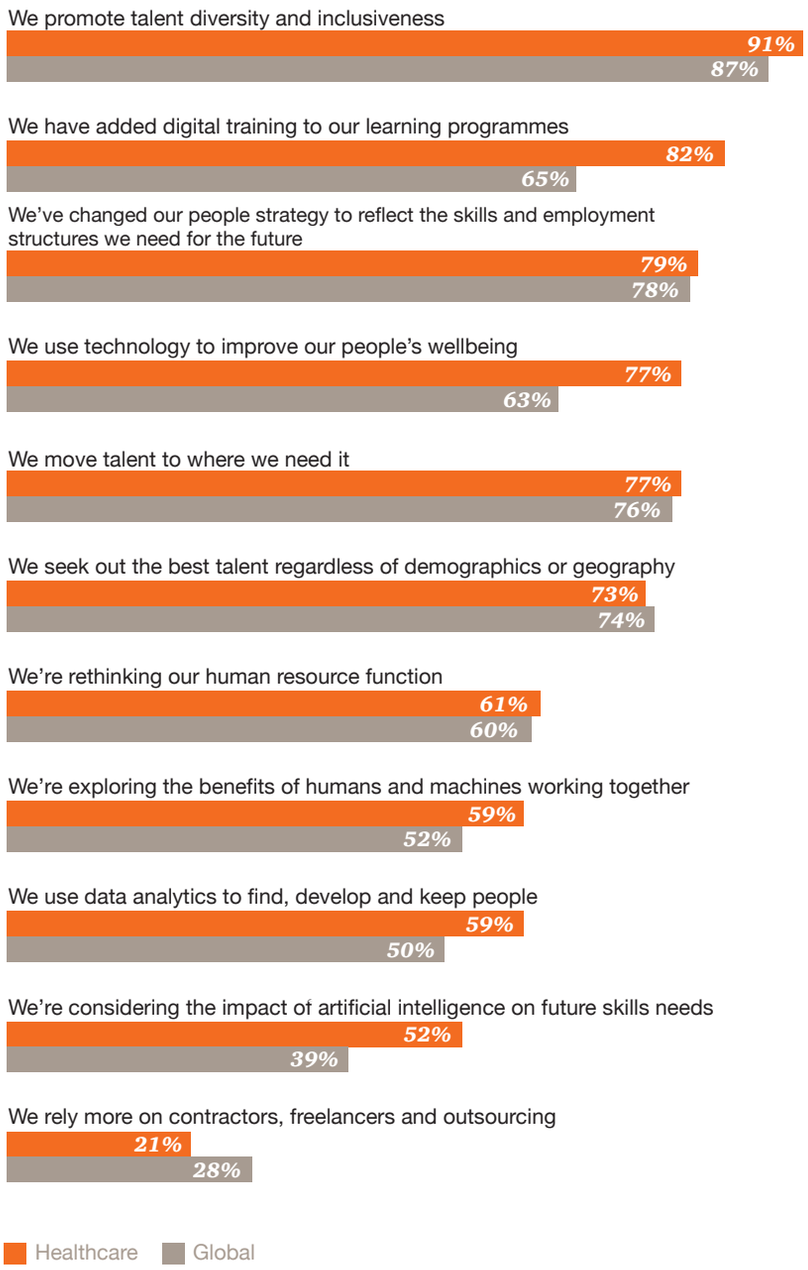
One theme that's been emerging over the last few years of the Survey is the gradual convergence of the technology and talent agendas. As more and more tasks can be automated or taken on by machines, companies are reshaping their workforces and individual roles are changing. This year, 79% of Healthcare respondents told us they have changed their people strategy to reflect the skills and employment structures they need for the future, which is in line with the global average.

However, the majority of global CEOs are actually planning to hire more people this year, not fewer, and Healthcare is noticeably ahead of the average: 64% intending to increase recruitment over the next 12 months, compared to 52% in general, and the equal highest of any sector. That said, 59% of the sector's CEOs are exploring the benefits of humans and machines working together (compared to an average of 52%) and 52% are considering the impact of artificial intelligence on future skills needs, which is much higher than the 39% average figure (see Figure 3).

Likewise, of the 13% of Healthcare respondents who plan to cut their headcount, 57% cite automation and other technologies as a factor to at least some extent (see 'Technology in healthcare: Then and now' box-out for more detail).

Figure 3 Healthcare CEOs are using technology to enhance their workforce training, retention and recruitment

Q: To what extent do you agree or disagree with the following statements about your organisation's talent activities?



Source: PwC, 20th Annual Global CEO Survey
Base: All respondents (Global = 1379; Healthcare = 56)

Technology in healthcare: Then and now

Twenty years ago, much of the technology now routinely employed in healthcare was still the stuff of science fiction: telemedicine; phone apps to improve fitness and monitor chronic conditions like diabetes; websites and communities for specific disease areas; wearables that monitor specific biometrics or symptoms and relay that information to a doctor; and handheld tricorder scanners that can capture, analyse, and report key health data. As Dr. Peter FitzGerald, Founder and Managing Director of Randox Laboratories, observes, "In the next 20 years the role of doctor will seriously change, and the patient/doctor balance will change in favour of the patient. That's a very good thing—lives will be saved and in many cases, costs will also come down."

As this suggests, while technological innovations are transforming how healthcare is delivered to the patient and improving outcomes for them as individuals, technology is also reshaping how healthcare businesses operate. Electronic records make it easier to track and analyse patient data (and 87% of physicians in the US use them, as of 2015[2]); working practices are becoming more streamlined which means decisions can be made quicker. Some systems, for example, combine data from the patient's records with clinical expertise, external research and data, and then identifies potential treatment plans for a patient. At the same time, online portals facilitate patient communications and appointment scheduling: Kaiser Permanente's patient portal, for example, is used by 70% of its members, and email and phone now exceed face-to-face consultations.[3]

Digital technology is also enabling far more consultations to be managed remotely, which allows a company like Kaiser Permanente to have an integrated 'care anywhere' strategy, which is not only more efficient for the company, but more convenient for the customer. As CEO Bernard Tyson says, "It has been a tremendous benefit to our members, and that's first and foremost what's critical, but it also has raised issues about how do we redesign the whole work processes to accommodate this new phenomenon that we're living through." At the same time, electronic payments are improving cash flow management across healthcare and can also enhance the patient experience, as problems with this part of the process can detract from excellence elsewhere.

In emerging economies a new digital health model is evolving. According to PwC's report *The Digital Healthcare Leap*, most emerging markets lag behind developed markets in political and business environment, infrastructure, affordability, skills and stakeholder readiness that inhibits the adoption of a traditional digital health model. As a result, emerging markets are 'leapfrogging' traditional systems and resetting the delivery model for electronic medical records (EMR) and electronic health records (EHR) by relying on cloud-based or open-sourced services. The lack of legacy infrastructure can liberate health systems (both public and private) from capital costs and lead to faster deployment and increased benefits for patients.[4]

According to research by Frost & Sullivan[5] we've already seen the impact of new technology and digitisation on medical equipment; what we're seeing now is the impact of big data and analytics on medical services, and in the next decade there will be a shift towards the use of breakthrough technologies like Artificial Intelligence (AI) and Virtual Reality (VR). The health industry has lagged behind in its exploration and adoption of these new technologies, but their disruptive potential is vast—as vast as the opportunity they represent. The chart in the following page sets out how some of them might be used across the healthcare industry, and we are already seeing the widespread use of AI apps, such as the Babylon, the phone-based medical adviser.[6] By 2022, the global market for AI alone could top $6bn.[7]

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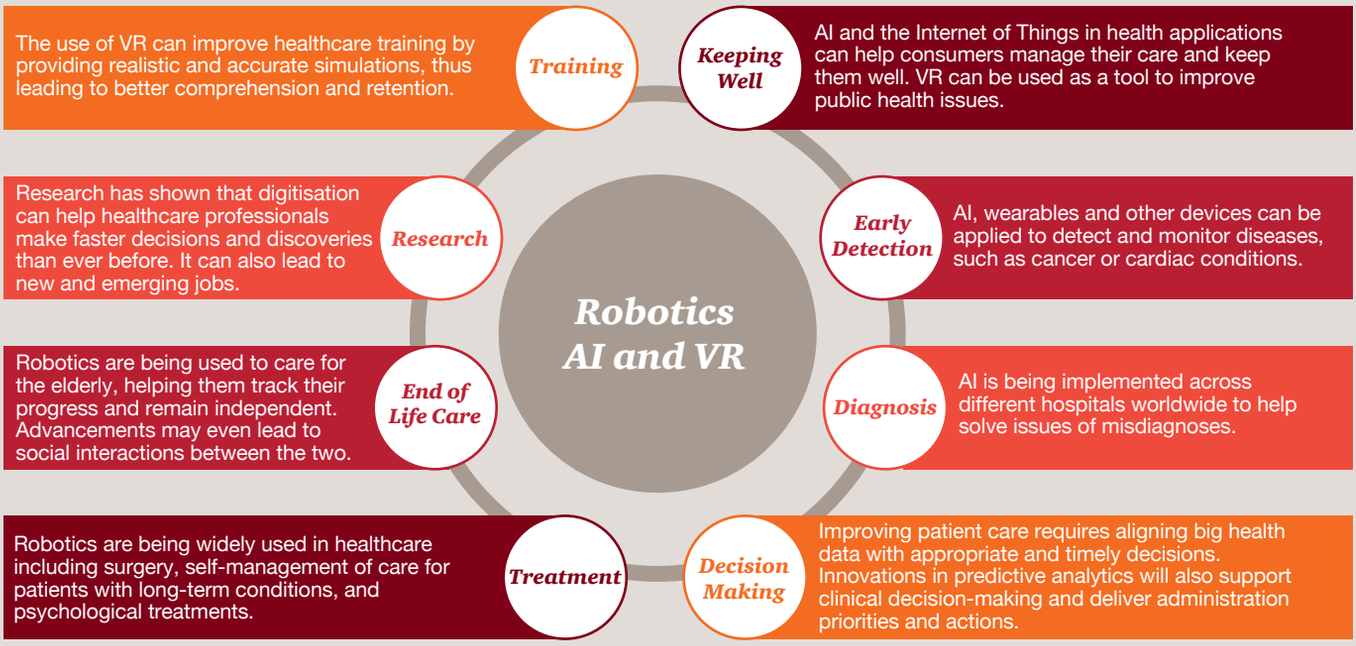
2 Office of the National Coordinator for Health Information Technology. 'Office-based Physician Electronic Health Record Adoption,' Health IT Quick-Stat #50. dashboard.healthit.gov/quickstats/pages/physician-ehr-adoption-trends.php, December 2016.
3 Garrido, Terhilda, Raymond, Brian, and Wheatley, Ben, "Lessons from more than a decade in patient portals", *Health Affairs Blog*, April 7, 2016, healthaffairs.org/blog/2016/04/07/lessons-from-more-than-a-decade-in-patient-portals/, Copyright ©2017 *Health Affairs* by Project HOPE—The People-to-People Health Foundation, Inc.
4 PwC, *The Digital Healthcare Leap,* August 2016
5 Frost & Sullivan, *Artificial Intelligence & Cognitive Computing Systems in Healthcare*, 2015
6 Murgia, Madhumita, "How smartphones are transforming healthcare," *FT Magazine,* 12 January 2017
7 Frost & Sullivan, *Artificial Intelligence & Cognitive Computing Systems in Healthcare*, 2015

Virtual Reality will be especially useful in relation to medical training (and this year's survey shows that the sector is more advanced than others in employing this technology in training). Teaching surgery through VR, for example, eradicates the risk to specific patients, allows the exploration of multiple possible scenarios, makes remote learning possible, and drastically reduces costs while speeding up training programmes. The technology is advancing so rapidly in this field that trainee surgeons will soon be able to pick up a virtual blade and feel the sensation of using it in real life.

But almost all these innovations will be predicated on robust and resilient systems. Patient data sits alongside financial information in terms of its sensitivity, and its potential value to a hacker. Healthcare companies must therefore ensure cyber security is at the top of their agenda, and remains there. And this is a challenge, because, the sector has tended to lag behind in the maturity of its cybersecurity programmes. However, the most forward-thinking organisations are beginning to address this by using technologies such as cloud-based cybersecurity, advanced authentication, and Big Data analytics, and payers and providers have increased their information security budgets by 79% over the past two years.[8] Consumers still trust the healthcare industry with their data more than most other types of organisation, but companies in the sector have to earn that trust every day: cyber security is not a one-off fix, it's a continuing process.

Likewise, the companies that will be the real winners in the sector will be those that find ways to integrate all these new technologies, rather than employing them piecemeal. They will deliver the most value—both to the patient and the business—if they are applied in a coordinated and integrated manner, to support the core capability of the sector, which is the care provided by human beings.

Healthcare Transformation through Robotics, Artificial Intelligence (AI) and Virtual Reality (VR)



Source: PwC analysis

8 PwC, *Transformation and turnaround in cybersecurity: Healthcare payers and providers; Key findings from the Global State of Information Security® Survey,* 2016

It is significant, in this context that the skills all CEOs really want are those that machines cannot really replicate (at least for now). Healthcare CEOs, in particular, value problem-solving (98%), adaptability (98%), collaboration (96%), leadership (91%), creativity and innovation (86%), and emotional intelligence (89%). But creative, innovative leaders with emotional intelligence are very hard to find, and harder—it seems—in healthcare than it is elsewhere: Healthcare CEOs find it difficult or very difficult to recruit people with leadership skills (80% versus 75%), and creativity and innovation (83% versus 77%). There is an even greater disparity when it comes to finding employees who are adaptable (71% versus a global figure of 61%), and with emotional intelligence (80% versus 64%). As Alex Gorsky of Johnson & Johnson observes: "The most important component of our future is our people and making sure that we've got the right leaders and that we attract, hire, develop, and retain highly capable, committed leaders who are deeply committed to our Credo."

All CEOs want a workforce that's agile and well rounded—better able to adapt to the changing world, and find new opportunities in those changes. CEOs also recognise that the human element is as important as it's ever been—indeed perhaps more so, in an increasingly virtual world.

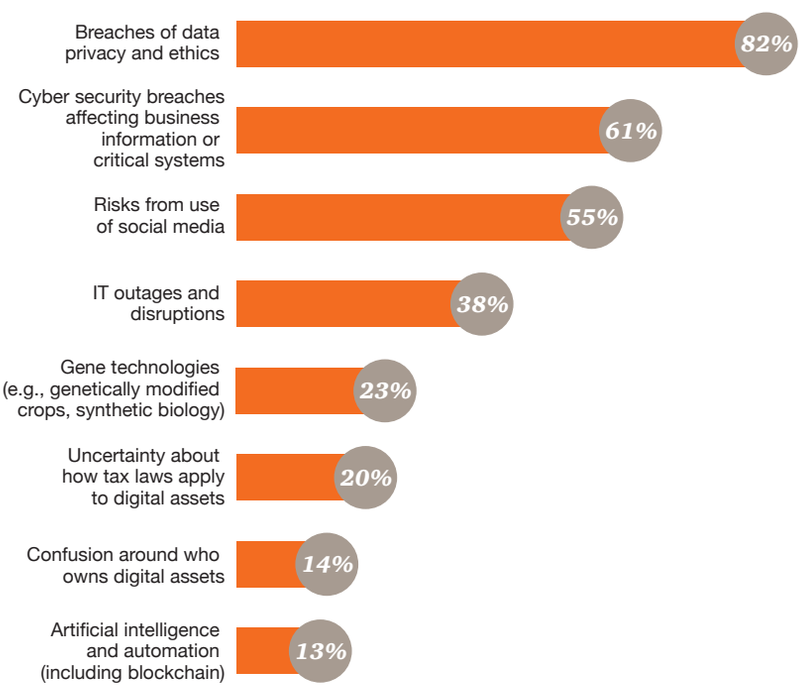
Unlike CEOs in general, Healthcare CEOs put strengthening human capital over innovation, when it comes to their internal priorities. They also put slightly more emphasis on promoting talent diversity and inclusiveness (91% versus an average of 87%). They are slightly more enthusiastic about using data analytics to find, develop and keep people (59% versus 50%), but much more advanced in using digital technology in training (82% versus 65%). See the 'Technology in healthcare: Then and now' box-out for more on this. Healthcare CEOs are also more willing to use technology to improve their people's wellbeing (77% versus 63%).

Trust

Twenty years ago trust wasn't even on the typical CEO's radar; in fact, we didn't ask about it until 2002. Back then, only 29% of CEOs thought an erosion in public trust of the corporate sector posed a serious threat to growth. And this is one area where digital technology is creating a problem, rather than solving it: 69% of global CEOs agree that it's harder for business to gain and keep trust in the new digital world, and the figure for Healthcare CEOs is even higher, at 75%. Breaches in data security and ethics rank as the number one risk to stakeholders' trust for all respondents in the next five years, scoring 55%, but Healthcare CEOs are even more worried, with a figure as high as 82% (see Figure 4). Cyber security incidents rank second for Healthcare (61% versus and average of 53%), followed by risks from the use of social media (55% versus 38%), and IT disruptions (38% versus 47%). Given the acute sensitivity of the data they handle, this is hardly surprising, as noted by Bernard Tyson, CEO of Kaiser Permanente: "Trust is super critical. It is the trust you never want to break, because Healthcare is probably the most intimate of relationships in which you're dealing with the realities and the vulnerability of human life."

Figure 4 Data privacy, security and ethics are the biggest risk to stakeholders' trust, according to healthcare 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?



Source: PwC, 20th Annual Global CEO Survey
Base: All respondents (Healthcare = 56)

Now

more than ever, all CEOs will have to balance the competing interests of shareholders and society, the tensions between short- and long-term thinking, and between the benefits and challenges of globalisation.

While 63% of Healthcare CEOs are taking action now on data security and ethics, higher than the average of 53%, only 48% are taking action on cyber security activity, lagging the global average of 52%. Forty-one percent are addressing social media risks (compared to an average of 26%), and 64% on IT disruptions (versus 55%).

But these risks can also be turned into opportunity: 64% of all respondents believe that the way their business handles data will be a positive differentiating factor in the future. It's no surprise, once again, that the figure is far higher for Healthcare at 73%; only banking and insurance register higher numbers here. However, achieving that competitive advantage demands highly resilient systems, which are constantly updated to address emerging threats, so healthcare companies still have some room for improvement.

The best of times, the worst of times

In 1998, we concluded that these were 'great times to be a CEO'. We still think that's true, and Bernard Tyson of Kaiser Permanente is typical of Healthcare CEOs in seeing his job as a 'journey': "It's full of complexities but also great rewards. Waking up every day, trying to do good, trying to help human life."

All the same, it's becoming clear that a new business paradigm is needed to create the 'better and more harmonious and less divided planet' we talked about in 1998. Now more than ever, all CEOs will have to balance the competing interests of shareholders and society, the tensions between short- and long-term thinking, and between the benefits and challenges of globalisation. And they will need bigger, more diverse C-suites to help them do this.

Perhaps the most resonant message of all this year is that in the race to reap the benefits of technology and globalisation, the human factor has been lost. Recovering a sense of inclusiveness—in the workplace and in society as a whole—may well be what the world needs now. There are few sectors where this is more important than in healthcare. Technology is changing the way the industry operates, and offers the prospect of better, faster, cheaper and more personalised care—but only as long as the industry takes up the vital challenge of addressing the risks that come with those huge rewards. And at the same time, the human touch has never been more important, both to the sector's customers, and in securing its players sustainable competitive advantage for the long term.

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Chairman and Chief Executive Officer
Johnson & Johnson

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