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DIGITAL HEALTH
TECHNOLOGY
VISION 2020

How leaders are amplifying
digital value in the wake of COVID-19

July 2020

The global pandemic has spurred a massive innovation effort from companies, governments, universities and individuals. Robots are disinfecting cities, cooking hospital food and delivering packages. Smart devices are monitoring patients' health and collecting valuable health data. Human-AI collaboration is becoming a critical tool for scientists studying the virus. But in this rush to accelerate innovation, it is also critical that organizations think long-term.

While people have come to rely on digital technology, amid the pandemic, it became a lifeline. It was necessary for receiving healthcare, accessing information about the virus, communicating with loved ones and even entertaining ourselves during the extended lock-down to reduce feelings of isolation. COVID-19 has not slowed digital technology innovation, it's amplifying it to historic levels.

85%

of health executives acknowledge that technology has become an inextricable part of the human experience.

Foreword

In our 2020 Digital Health Technology Vision, we explore how people's values are shifting, and digital age technology models are increasingly out of sync with them. Despite broadly benefitting from technology, people are expressing concerns about how it is used and what it is used for. And they are advocating for change. Consider how people have grown increasingly concerned about data privacy. Now, the need for location and health data to track the spread of the virus has made this debate more complicated.

As people today strive to find normalcy and stability as the world reopens, they are turning to health more than ever for answers about their day to day. Organizations—especially those in technology leadership roles—must elevate the technology agenda within their organizations to help people to feel safer about using technology tools. Healthcare payers and providers can take action during this time of change to win back the trust and consumer confidence that has eroded.

Those organizations that design future services to provide transparency, choice and more control will differentiate themselves and begin to earn back consumer confidence—one interaction at a time.

This year's Accenture Digital Health Technology Vision highlights five trends that emerged before the global crises and that the pandemic accelerated. These trends are shaping the near future for healthcare organizations: The I in Experience, AI and Me, The Dilemma of Smart Things, Robots in the Wild and Innovation DNA.

Throughout these trends, you will see that to unleash innovation in the new future of healthcare, emerging business and care models must be rooted in collaboration. As technology's level of impact grows ever higher throughout society, successful organizations will be those that use new models to invite people—patients, employees, partners or the public— to co-create their new course for the future.

Accenture's Digital Health Technology Vision report comprises a three-year set of technology trends. It's important to recognize that each year's trends are part of a bigger picture. Tracking how they evolve over time offers a glimpse into how they may continue to grow in the future.

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Senior Managing Director
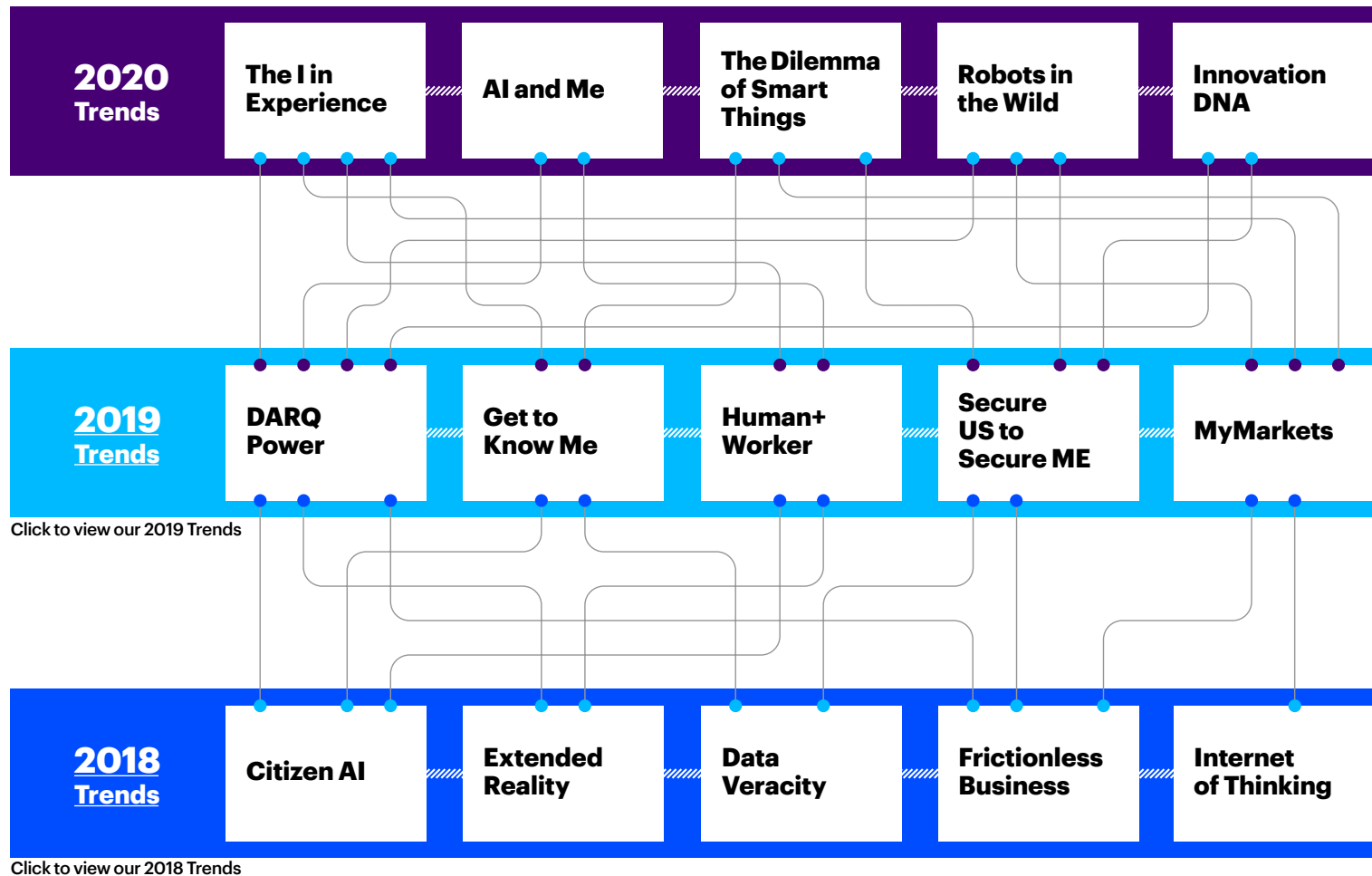Accenture Health

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70%
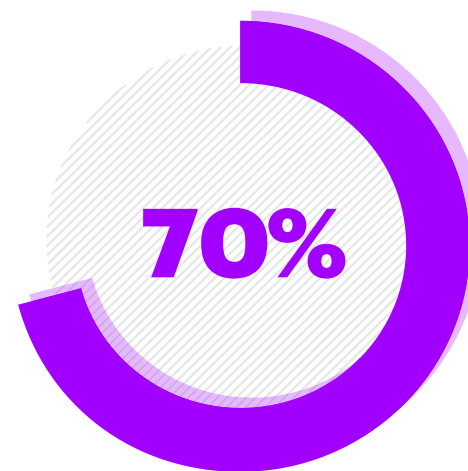
of consumers globally expect that their relationship with technology will be more prominent or significantly more prominent in their lives over the next 3 years.

Completing the picture

about digital health tech trends of the past few years

| 2020 Trends | The I in Experience | AI and Me | The Dilemma of Smart Things | Robots in the Wild | Innovation DNA |

| 2019 Trends | DARQ Power | Get to Know Me | Human+ Worker | Secure US to Secure ME | MyMarkets |

Click to view our 2019 Trends

| 2018 Trends | Citizen AI | Extended Reality | Data Veracity | Frictionless Business | Internet of Thinking |

Click to view our 2018 Trends

The I in Experience

Helping people choose their own care journey

People today expect more from their digital experiences. They want to feel important and as if the healthcare organization recognizes and takes notice of them. Gone are the days of mass services and black box personalization.

Leading healthcare organizations are becoming collaborative partners in creating—not just providing—experiences that help consumers to feel important and informed. They are working with healthcare consumers themselves to create new digital experiences.

People still want the many benefits of customization, but they are skeptical of the non-transparent methods that organizations use to deliver it. They want more ownership of their data and of the experience itself. The rise of 5G and augmented reality (AR) put more pressure on leaders to make this a reality.

Amplified options

COVID-19 forced people to interact at a distance, leading to a rise in telehealth visits and other options for receiving care. We've seen a 15-20x increase in virtual visit volume for telehealth providers during the pandemic[1] and our estimates show that in the future, 1 in 3 healthcare visits will be conducted virtually.[2] Doctors and patients alike are warming to the idea of using video and digital means to interact. People are increasingly open to using technology to solve problems in new ways. This willingness to explore alternatives shows consumers' openness to new service delivery options. And as people become more versed in and familiar with the technology, these care models will stick.

To adapt, healthcare payers and providers need to redesign digital experiences with new models that amplify personal agency and thereby their capacity to act. Consumers must feel comfortable with how their information is used; they want some control in the process. Healthcare organizations can help turn these formerly passive audiences into active participants by transforming one-way experiences into true collaborations. Doing this well is a way to differentiate in a market where virtual is becoming more mainstream.

90%
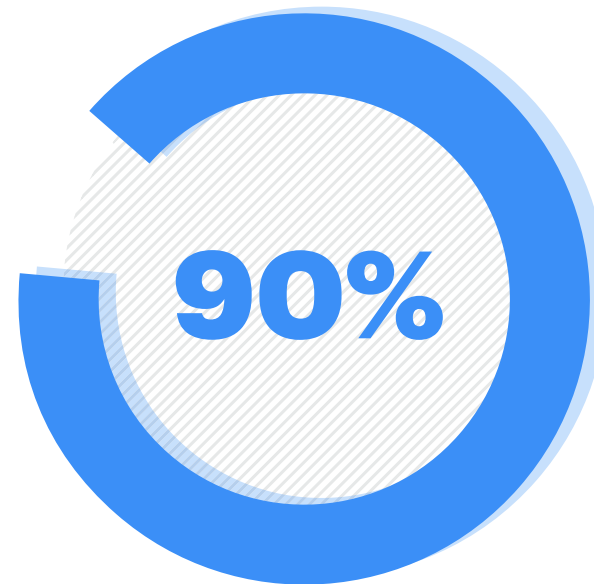
of health executives believe that to compete in a post-digital world, organizations need to elevate their relationships with customers as partners.

Connecting care through data

We have access to more data than ever. A person's Apple Watch can tell their heart rhythm. Their FitBit can show oxygen saturation levels. Useful and actionable data is everywhere, but the healthcare industry is missing opportunities to offer a truly integrated experience by combining these bits of data that are coming in.

Connecting the dots of data allows healthcare organizations to predict what a patient might need next (just as an airline predicts your meal selection and desired seat choice based on data). People want these types of experiences. Patients—especially those with multiple comorbidities—want tools such as apps that can guide them through their care journey.

70%

of healthcare consumers are "concerned about data privacy and commercial tracking associated with my online activities, behaviors, location and interests."

Establishing transparency and trust

Healthcare payers and providers are customizing digital experiences, but they haven't mastered providing the transparency people want. Organizations need to provide people with the choice to determine whether they want to choose their own experience or not. When they choose their own experience, how is that information used during the care experience and after?

It will be critical to adopt a data privacy mindset and convert it into a set of capabilities. For instance, creating a granular profile and preferences page where users can select what they are willing to share or not, and decide how much tailoring they want. Organizations can build trust with their users by offering more transparency about data collection and other important topics like pricing.

Bind health insurance allows people to better understand out-of-pocket costs for not just for a provider, but for an entire set of services. They use a comprehensive claim history to model costs and provide a "total cost to me" figure that includes everything from facility charges to lab testing. Patients gain insight into exactly what they are paying for before they choose a provider or service.

Data sharing for the greater good

MIDATA, a nonprofit cooperative that serves as a trustee for data collection, helps to ensure citizens' control over their personal data. Members with an account can grant access to their personal data to actively contribute to medical research and clinical studies. Users select which data they want to share. Members are informed and can participate in decision making processes—and they can withdraw their personal data at any time. All datasets are encrypted and only the user can access his or her data set.
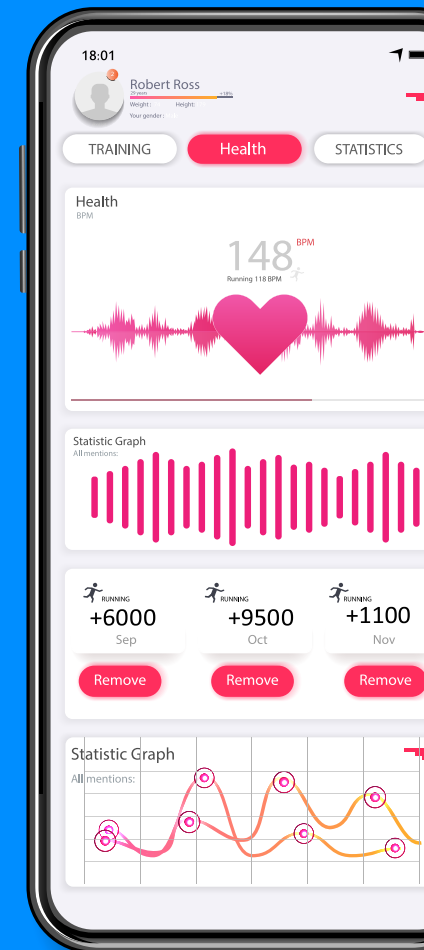
What can healthcare leaders do next?

Personalize experiences

Providing immersive and meaningful digital experiences is how leading businesses in healthcare and beyond are connecting with their customers. But as demand for customized experiences grows, people are becoming increasingly wary of the methods organizations use to provide it. Healthcare organizations need to become a true partner to patients and embrace cooperative experiences.

Empower consumers

As consumers demand more ownership over their digital experiences, healthcare technology leaders must find ways to provide individuals with more agency and make them co-creators of their experiences. Those that do will differentiate, engage consumers and build loyalty.

Set up for future success

Emerging technologies such as 5G have the potential to make experience customization ubiquitous across people's lives. But that future will be unachievable if people continue to feel out of the loop. Healthcare leaders that explore new avenues to include customer agency today will be laying the foundation for long-term success.

# Reimagine healthcare through human and AI collaboration

The evolving and growing importance of artificial intelligence (AI) as a fundamental technology changing healthcare forever has been a constantly tracked trend in the course of the past three year's <u>Digital Health Technology Vision reports.</u>

This year's AI and Me trend explores how leading organizations are fostering human-AI collaboration at the frontline. Healthcare organizations have plugged AI and other tech tools into existing workflows, focusing on automation and execution. Consider how AI systems are powering chatbots that help health providers screen and triage patients, or how they are enabling the rapid reconfiguration of supply chains impacted by COVID-19.[3] AI has helped to eliminate rote work for clinicians. For instance, digital assistants performing electronic medical record documentation so that doctors may spend more time on patient care. But simply using AI to make an organization run faster and cheaper is limiting its

impact. Instead, AI can become an agent of change, transforming not just how organizations do work—but also what they actually do.

AI offers a unique advantage that has helped startups disrupt decades-old incumbents: the technology doesn't approach a problem based on years of experience or inherent human biases. It hasn't yet learned what not to try. This blank slate offers fertile ground for transformation in healthcare.

39%
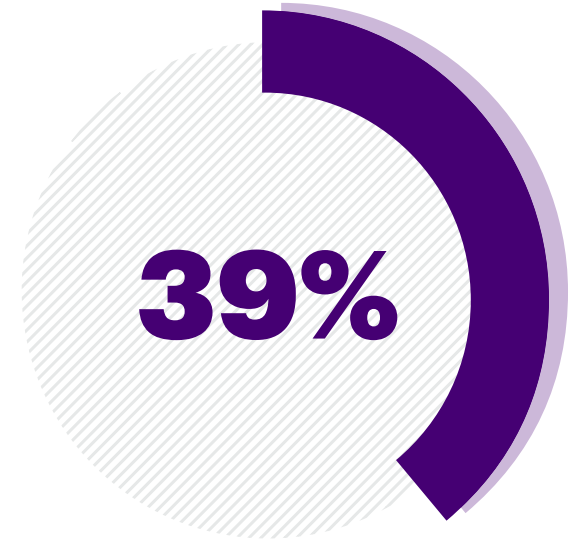
of healthcare organizations report that they have inclusive design or human-centric design principles in place to support human-machine collaboration.

Designing for AI

In this new era where physical distance has become a requirement, not a preference, AI can help treat people at home. Smartphones equipped with sensors can continuously monitor a variety of health issues, including respiratory conditions. Algorithms identify and classify the severity of coughs or flag breathing irregularities so that care providers can intervene when issues arise, no matter where the person is when they arise.[4] Human-AI collaboration is playing a role in the race to find a COVID-19 vaccine. Insilico Medicine, a Hong Kong-based biotech company, has repurposed its AI platform to help expedite the development of a COVID-19 drug, using machine learning to speed up the drug discovery process.[5]

Payers and providers can look at any care model or process and ask, "what am I trying to accomplish, and how can AI make it better or easier?" There is ample opportunity in the back office where there is heavy burden that machines could minimize. Cogito shows this potential in practice. This AI solution analyzes voice signals in phone conversations to help call center agents infuse empathy in every conversation. Imagine how that real-time emotional intelligence could help hospital customer service agents, patient navigators and others to have better interactions.

69%

of healthcare organizations are piloting or adopting AI.

No touch triage

Partners HealthCare created the AI-based COVID-19 Screener to help assess whether patients should be evaluated for COVID-19. A simple chat interface asks a series of questions to help with pre-hospital triage. The system can screen high numbers of patients rapidly to alleviate burden on the organization's hotline and reduce the number of patients visiting facilities in person for assessment.[7]

Skills for a blended workforce

To tap into the unique strengths of AI, healthcare organizations will rely on people's ability to steward, direct and refine the technology. Accenture conducted research into the possibilities for humans to train AI for medical coding, seeing if the medical knowledge of humans would improve the system's performance at identifying links. We established a process and training so that medical coders could train the AI, giving AI a front seat to knowledge generation—which allowed it to learn better, thus making it a better tool for coders. The coders learned to think like data scientists and the AI learned to think like coders. We learned that human-machine collaboration, along with embedding AI in the process and feedback loop, enabled explainable, more trustworthy results.[6]

This is just one example of work potentially being carried out and shared differently. When machines take on simple tasks, people can work at a higher cognitive level—but not around the clock. Healthcare organizations must look at the new skills needed to enable fluid interactions between human and machines, and the workforce models needed to support these new forms of collaboration.

What can healthcare leaders do next?

Collaborate, don't just automate

Healthcare C-suite leaders are only realizing a fraction of the potential of AI—and ultimately their employees. By finding more collaborative use cases and building the capabilities needed for AI and people to work together seamlessly, they will amplify the best qualities of both.

Context matters

To collaborate successfully, humans and machines need to better understand one another. Advances in natural language processing (NLP) and computer vision can help machines understand people and their surroundings. And prioritizing explainability will help IT leaders in healthcare to ensure that people understand AI.

Reimagine what you do

Providers and payers that facilitate human-machine collaboration today will be able to reimagine every aspect of their organization, from the way they care for patients, to the way they hire and train employees. True pioneers will use these capabilities to reinvent care delivery.

Managing forever beta

The very notion of product ownership is radically changing. When people buy products, they are in many cases no longer purchasing physical, finished items but conduits for evolving experiences.

Enterprises are beginning to design updateable products with the ability to expand services and experiences in the future, making it possible to respond to changing customer demands and expectations at a moment's notice. Healthcare organizations must recognize this new "co-ownership" paradigm with customers and work to design their products and ecosystems to accommodate ongoing change.

In the short term, smart and updatable devices are becoming tools in the fight against COVID-19. The beta burden isn't gone, but fighting the pandemic is temporarily taking precedence. Smart health devices can help identify symptoms, can monitor patients, and have troves of valuable health data that can help researchers and governments save lives.

COVID-19 sparked an urgency to deploy new technology quickly—from digital contact tracing that requires people to opt in, to collaboration technologies that allow the new remote workforce to collaborate.

To help fight the virus, people are inviting more smart devices into their lives, and many are more willing to share health-related data.[8] The world moved fast to adopt new technology, but weaknesses were soon revealed. For instance, the Zoom platform skyrocketed from 10 million daily meeting participants in December to 300 million by April, but security issues and privacy risks quickly came to light[9] and the company had to address these immediately.

Furthermore, governing bodies during the pandemic have liberalized restrictions and regulations about who owns the data these products create, making it easier to get products to market. But what happens when we go back to tighter controls?

Pre- and post-COVID questions have emerged about who owns the data. And what happens to consumers' data when companies and products go bust? Consumers are beginning to understand their data may be sold or monetized by another third party. Today, consumers may own the physical piece of technology, but the business administers the digital side—effectively retaining ownership over part of what makes the product valuable. Consumers are becoming more aware of this relationship, so businesses need to do more to demonstrate how their intentions are aligned with consumers.

76%

of health business and IT executives report their industry is moving toward offering more variety in ownership models for their connected products and/or services.

Test and learn

New never-ready products require a new deployment method. Even the technology itself will be different a month or two after an organisation deploys it. Therefore, healthcare entities have to build a test and learn capability into the operating structure. Testing and learning poses challenges for healthcare as it is a higher liability industry that commonly seeks to minimize variation within a process. So how do you reconcile the need for higher reliability with test and learn?

Reliability is about outcomes and not process. Healthcare organizations will find that their ability to iterate and improve products (and outcomes) over time will continue to grow exponentially as the data they use becomes more granular. With the right data, an organization can create a mirror image—a digital twin—that is testing hypotheticals or simulating scenarios related to never-ready products and sending information back to vendors to continue to improve the solutions. Testing products and services in hypothetical ways will allow the organisation to understand how to maximize the value of the technology and to mitigate risk of deployment in critical areas.

58% of health organizations believe customers generally don't mind, or even welcome, software updates to their organization's connected products and services.

Design for trust

Experience-driven products are redefining the relationship between people and organizations. Healthcare organizations are not only buying physical goods, but also opting into an ongoing collaboration with the companies managing those products. This is an important consideration for healthcare organizations increasingly deploying hardware with a service component.

Service consumption models are changing and becoming more circular. Products are no longer static; they are now "living." So, if you have an old robot and you're running on an old operating system, it presents a massive security risk. In healthcare, it's especially important to design technology products and services with trust and extendibility in mind. Think through connected products and ensure the business has a strategy and clear understanding around maintaining the security of any devices they bring into their work environments.

Quality care at home

ChristianaCare rolled out a virtual primary care subscription service to monitor and treat patients at home. The service includes ongoing monitoring of those with chronic conditions. Patients can use a portable device to allow providers to check vitals and perform other diagnostics. The organization shifted its use of this service during the pandemic to monitor patients for COVID-19. Healthcare workers check in many times per day with patients to see how their symptoms are progressing. Responses are logged and doctors and nurses monitor these responses 24/7 through a dashboard system. Patients that show signs of decline are scheduled for video visits to determine whether in-person care is needed.[10] ChristianaCare has increased its outreach to vulnerable populations by providing devices and broadband data plans so patients can safely receive medical advice about COVID-19 from home.[11]

What can healthcare leaders do next?

Understand the "beta burden"

As products become conduits for experiences, their features and functionality are constantly in flux. While this state of "forever beta" opens up a wellspring of opportunity, if mishandled it risks leaving people overwhelmed, frustrated, endangered and wary of what's around the corner.

Consider how ownership is changing

Experience-driven and updatable products are introducing a new model of ownership—one where healthcare organizations must retain some control and responsibility over a device, even after a consumer adopts it. This shift has implications for the whole organization, and businesses must ensure their strategies and operating models are aligned with this new reality.

Design for the journey

Organizations have to design products to evolve and transform over time, while simultaneously becoming more comfortable releasing products they might conventionally see as "unfinished." Products will gain value from the ecosystem of experiences that form around them, if the healthcare organization properly fosters and guides them.

Growing reach and responsibility

COVID-19 has moved robots out of warehouses and factories and into the spotlight. The rollout of 5G networks along with lower hardware costs to make robot technology will unlock opportunities for all industries to extend their autonomous capabilities outside of contained settings like production facilities—and into the open world. This is especially exciting in healthcare where need has no boundaries and workers are already spread thin. As robotic capabilities extend beyond controlled environments, healthcare organizations will face new challenges around talent investments, data collection, and human-machine interaction and collaboration. Now, the robotics testbed for healthcare consists of the entire world.

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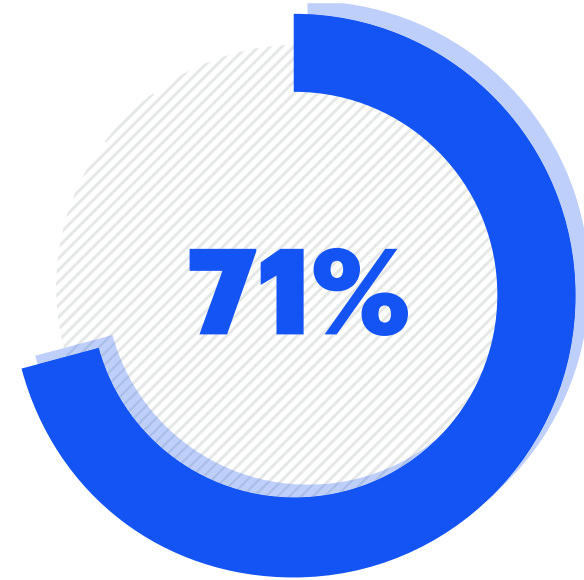
of health executives believe robotics will enable the next generation of services in the physical world.
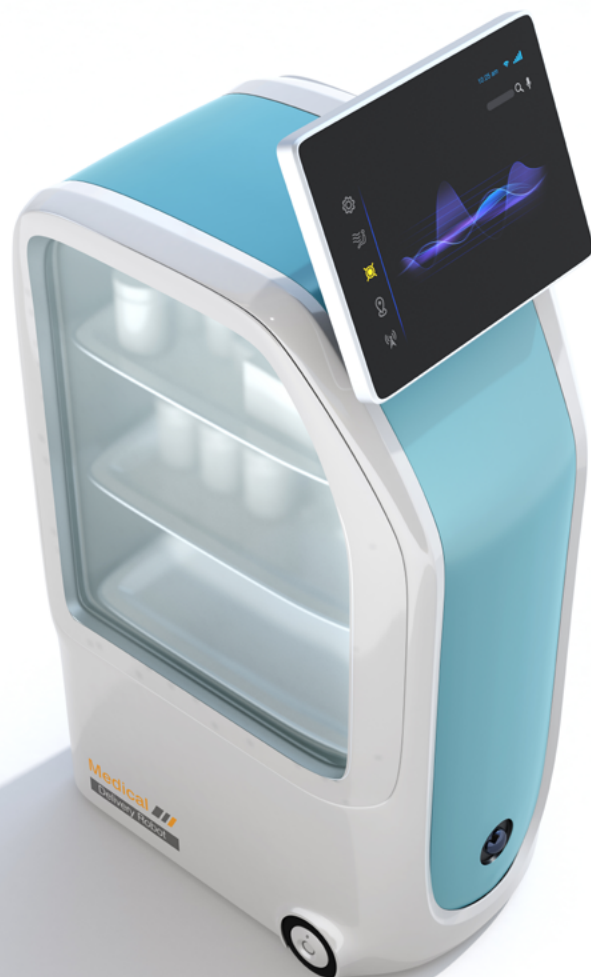
The relevance and range of robots

In healthcare as in many industries, robots have typically been tethered to a fixed place. For example, surgical robots used in an operating room or prescription-dispensing robots used in a pharmacy. Now, robots are moving freely through hospital spaces and in the community. It's a big leap.

The ability for robots to move has become highly important in this era of decided distance. When distance is mandatory to keeping humans safe, robots can help by performing physical tasks, such as delivering supplies and checking temperatures. Robots are even helping to enforce social distancing measures. In the wake of a spike on COVID-19 cases, officials in Singapore piloted use of Boston Dynamics' robot dog to patrol public areas, broadcasting a pre-recorded reminder about the importance of maintaining physical distance.[12]

Imposed distance can lead to mental health issues, such as loneliness, among the most vulnerable populations. Robots can help with that, too. Human-size robot "Stevie" has been programmed to lead singalongs, tell stories and call bingo numbers, helping to boost morale and reduce feelings of isolation for those in group care settings in the US and UK.[13]

A new workforce is emerging

Robots can do things that humans cannot. This is especially important in healthcare where there is a labor shortage—a shortage that has been further exacerbated due to the pandemic. By mid-April, the Centers for Disease Control and Prevention reported more than 9,000 healthcare workers in the US alone had tested positive for the virus.[14] Healthcare workers that were sick or required to self-isolate couldn't deliver care when the need for it was at a tipping point.

In times of crisis or calm, robots free up humans to focus on more pressing responsibilities by performing routine tasks, such as taking vital signs and sterilizing rooms. In Thailand, engineering students at Chulalongkorn University repurposed "ninja" robots, originally designed to monitor stroke patients, to measure patients' fevers and help doctors communicate with them remotely.[15] And in Shenzhen, a startup called YouIbot built an antivirus robot in just two weeks. It has six ultraviolet bars that can sanitize surfaces, and an infrared camera to scan for fevers among patients and the public.[16] Denmark's UVD Robots take just 10 minutes to disinfect hospital rooms, killing 99.9% of bacteria thereby reducing the amount of hospital-acquired infections. It's not about pulling away work from humans. It's about alleviating the burden and allowing people to focus on where they can add the most value.

The new human + robot care team will look quite different. This blended workforce will require new skills, so organizations must figure out where they find new talent, such as data scientists and product technicians as well as start with retraining new skills to existing talent.

Robots can do things that humans cannot. This is especially important in healthcare where there is a labor shortage

54%

of health executives say their employees will be challenged to figure out how to work with robots.

Robot runners help during the crisis

The Mayo Clinic in Florida is using autonomous vehicles to safely transport medical supplies and COVID-19 tests that are collected via drive-thru testing locations. Mayo Clinic Florida's CEO Dr. Kent Thielen said, "Using artificial intelligence enables us to protect staff from exposure to this contagious virus by using cutting-edge autonomous vehicle technology and frees up staff time that can be dedicated to direct treatment and care for patients." [19]
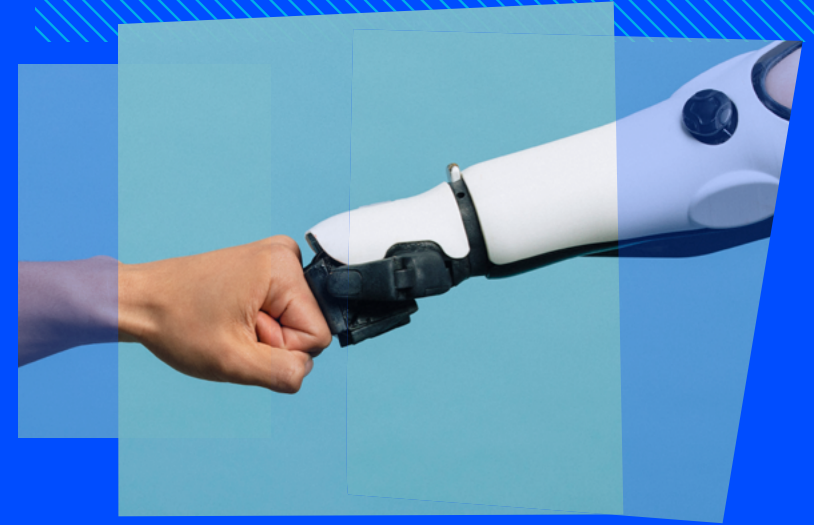
Remove the fear factor

While having more helping hands is a benefit, healthcare organizations must be careful of how they roll out and integrate robots in the workforce. Robots must be deployed in a way that supports trust. Building trust may differ among cultures, so it's important to understand what the human needs and attitudes are, and then design services with these factors in mind. Adjusting to cultural attitudes and beliefs will help to ensure robots are accepted, not rejected.

Developers of robots should consider how to make them "cool" over "creepy." MIT developed the Huggable ™ robotic companion to help provide therapeutic benefits to children and other patients. It looks like a teddy bear and is more adorable than alarming.[17] In contrast, researchers at Osaka University developed robot child Affetto.[18] The robot's android face moves and expresses emotion in a very realistic manner. Robot developers must consider the pros and cons of humanistic robots. What is the role of a human appearance and will it help or hinder adoption?

What can healthcare leaders do next?

Prepare to introduce robots

A proper introduction matters when it comes to bringing robots into healthcare settings. Gauge the sentiment, attitudes and fears of employees and consumers alike—and adapt accordingly. Continuously engage with stakeholders to build critical support and trust to set a strong foundation for new technologies in the future.

Extend robots into the business

No matter the use case, advanced robotics offer organizations an opportunity to push the intelligence of the digital world out into the physical one. Healthcare technology leaders can take advantage of robots to take on difficult and dangerous tasks and also to engage, delight and care for patients like never before.

Look to the ecosystem

Every healthcare organization can, in part, be a robotics company. This means forging new collaboration, hiring new talent, retrain existing talent and finding new vendors that will grant access to the skills, tools and machines that healthcare companies need to tackle their biggest ambitions.
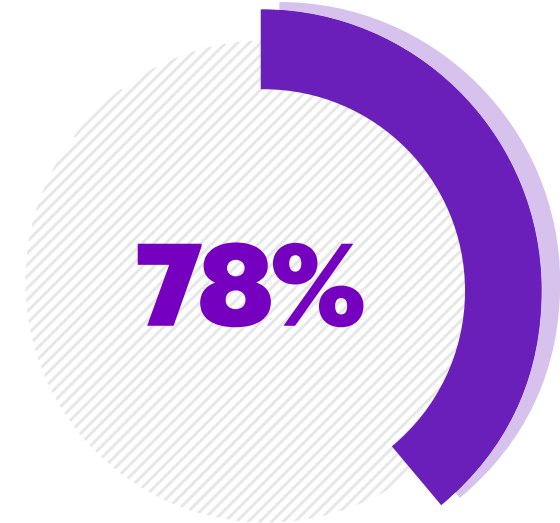
Innovation DNA

Decoding opportunity

Just as human DNA determines individual traits, innovation DNA will define an organization as it grows into the future. Innovation DNA has building blocks, too: maturing digital technology that is more commoditized and accessible; scientific advancements that are discrete yet deeply disruptive; and emerging DARQ (distributed ledgers, artificial intelligence, extended reality and quantum computing) technologies that are poised to scale rapidly.

COVID-19 has accelerated DARQ technologies beyond expectations. Look at how the World Health Organization, Oracle, Microsoft, IBM and others are collaborating on HACERA's MiPasa, a blockchain-based open data hub that aims to quickly identify COVID-19 carriers and hotspots.[20] Or look at Los Angeles' Cedars-Sinai hospital, which is using VR simulations to train doctors to treat infectious diseases.[21] Healthcare IT leaders are weaving technological building blocks together to set a course for the future. AI offers a unique advantage that has helped startups disrupt decades-old incumbents: the technology doesn't approach a problem based on years of experience or inherent human biases. It hasn't yet learned what not to try. This blank slate offers fertile ground for transformation in healthcare.

78%

of health executives believe that the stakes for innovation have never been higher—getting it 'right' will require new ways of innovating with ecosystem partners and third-party organizations.

Necessity is the mother of invention

Difficult times can lead to creative problem solving. COVID-19 forced healthcare organizations to innovate as life and death situations called for urgent action. Many unleashed innovations within their own organizations and partnered with the ecosystem to accomplish great feats in short time. Automaker General Motors teamed with Ventec Life Systems to make thousands of ventilators. Medical device companies rapidly developed new virus tests. Shoe manufacturers altered their business models to make protective masks instead of Mary Janes.[22]

The complexity and uncertainty of the pandemic highlights the pressing need to formalize new ways of innovating more widely and effectively. It starts at the top. Leaders need to develop the capability to innovate and do so quickly. Response methods must keep pace as problems emerge and potentially become more challenging. Team structures should be built to enable fast pivots to innovation. In the future, there is likely to be increased need for "extreme teaming" that reaches across sectors and across nations to co-collaborate for innovations that address major public health challenges.

Make room for innovation

Innovation will not happen in a vacuum. Healthcare organizations must promote creativity, collaboration and unconventional thinking. Having the "space" for innovation isn't just about have innovation centers and R&D hubs. It's about making the space to test, learn and recalibrate. Most healthcare organizations—as with many businesses—are focused on positive outcomes. This is the desired end goal, but the path to success may involve some flubs.

This is especially tricky in countries where healthcare is government-funded. Citizens may view failed experiments as wasteful of public funds. The reality is, if we cannot test and learn, we cannot innovate. For every innovation that works, there may be three of four that did not. That's how we explore, how we grow and how we embed innovation into the organization's DNA.

45% of health executives say rapid advancements in new technologies and scientific innovations are poised to disrupt their industries.

Technology enables innovation at scale

As healthcare organizations adapt to new ways of working coming out of the crisis—and as they pursue innovation—they are realizing that digital is not a differentiator. It is essential to doing business and it a building block of innovation. Maturing digital technologies, scientific advancements, and emerging DARQ technologies: (distributed ledger tech, artificial intelligence, extended reality and quantum computing) will help bring new ideas to fruition. These technologies proved essential in supporting COVID-19 triage efforts. For instance, hospitals in China used AI to read CT scans of lungs, reducing the burden on hospitals and enabling earlier intervention.[23] Hospitals in the United States are using AI to guide and triage individuals with COVID-19 symptoms, helping to prevent them from needing to go to a hospital for care.[24]

Technology is fueling scientific advancements in coming up with a vaccine and other treatment methods for COVID-19. For instance, Massachusetts General Hospital formed a joint venture with Hoth Therapeutics to speed vaccine development. They are using a technology platform to quickly generate and test "self-assembling" vaccines that use heat shock proteins to elicit an immune response to the virus.[25] And AppliedVR, a therapeutic VR company, is partnering with Red One Medical to offer VR stress management programs to healthcare workers on the frontlines.[26]

Clearly new technologies can help save lives, but businesses need the right infrastructure to support them. Healthcare organizations must remove legacy barriers before they can explore emerging digital technologies, scientific advancements and DARQ technologies. Legacy systems hold valuable data that is trapped. Digitally decoupling unlocks data and allows legacy systems to run in parallel with new technologies as modernization initiatives roll out, steadily reducing technical debt along the way.

Stemming the spread

Contact tracing mobile apps are being quickly developed to track the spread of COVID-19. The Australian government launched public health app COVIDSafe in April and two million citizens downloaded it in the first 24 hours it was live.[27] In South Korea, the Corona 100m app alerts users if they come within a 100-meter radius of a recently tracked COVID-19 patient. The app was downloaded more than 1 million times within approximately its first two weeks of launching.[28] Such apps spark questions about data and privacy—issues that must be a key consideration as more innovations like these continue to emerge.

What can healthcare leaders do next?

Explore unprecedented innovation opportunities

There is an unprecedented range of innovation opportunities for healthcare pioneers to capture. The industry frontrunners will take advantage of this diversity and develop strategies for prioritizing the emerging technologies that will help the organization and find the right partners to help bring these opportunities to fruition.

Build your innovation DNA

Healthcare technology leaders can assemble their unique innovation DNA from three building blocks: maturing digital technologies, scientific advancements and DARQ capabilities—and then merging new technologies with the core competencies of the organization.

Create an innovation engine

The C-suite across payers and providers should not look at innovation as an incremental effort. Instead, they must design the capabilities to make it an ongoing practice inside the organization. Ensure a constant injection of new skills, technologies and ideas—and make it OK to fail.

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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.

The research process also includes a global survey of thousands of business and IT executives, 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. Accenture Research interviewed more than 6,074 executives from 25 countries and 21 industries, including 85 health payer and 174 health provider executives in the US, UK and Australia. The survey was fielded from November 2019 through January 2020.

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