



Provocative thinking, transformative insights, tangible outcomes



<b>30</b>	<b>Trend 3: The Dilemma of Smart Things</b> Overcome the "beta burden"	<b>62</b>	References
<b>20</b>	<b>Trend 2: Al and Me</b> Reimagine the business through human and Al collaboration	<b>60</b>	About the Technology Vision
12	<b>Trend 1: The I in Experience</b> The five trends most likely to impact insurance in 2020 and beyond	<b>58</b>	Conclusion
10	<b>Technology Vision Trends</b> The five trends most likely to impact insurance in 2020 and beyond	48	<b>Trend 5: Innovation DNA</b> Create an engine for continuous innovation
4	Introduction  4 We, the Post-Digital People  6 People are changing; companies must, too  8 Leaving the roadmap behind	38	<b>Trend 4: Robots in the Wild</b> Growing the enterprise's reach—and responsibility



2

3

1

#### We, the Post-Digital People

People's love for technology has let businesses weave it—and themselves—into our lives, transforming the way we work, live and interact with the world. But that unconditional love is starting to fray, and the approaches companies took to reach this point won't take them any further. Even as people's expectations for their future with technology grow, many enterprises' attempts to deliver on those expectations are being rejected. Leading companies will need to take a new path forward, developing models that bring a human focus.

Digital is everywhere and people's interactions across society are changing. They are reevaluating their relationships with businesses and governments. Many are rethinking their actions in a globally interconnected economy and seeking more sustainable products and services. And a growing number are reexamining whether the offerings that enterprises deliver are fully aligned with their core values.

In a post-digital world—one where digital is not new to people and no longer a differentiating advantage for organizations—technology is deeply embedded in how we work and live. Insurance enterprises have furthered this reliance by weaving technologies into their product and service offerings and how they are delivered to consumers and commercial customers. Many of the world's leading insurance organizations have embarked on bold, wide-ranging digital transformation programs to reshape how they interact with people and other businesses.

Generali, one of Europe's largest insurers, in 2018 committed €1 billion in investment to a range of strategic innovation and technology initiatives. Its aim? To become a trusted life partner to customers, able to deliver 360° advisory services, and comprehensive, 24/7 assistance. Following digitization and simplification of many core processes, Generali now aims to be a partner to customers in the moments that matter across the mobility, home, business and health ecosystems.<sup>1,2</sup> Its transformation efforts have been deep and wide-ranging—from launching a pan-European mobility platform and developing B2B2C ecosystems to digitizing agent-customer relationships and embedding artificial Intelligence (AI) in its core operations.

Chinese insurance company, Ping An, has, to date, invested an eye-popping \$7 billion into technology and R&D and plans to spend another \$15 billion over the next decade. With 32,000 researchers and a combined 101,000 tech staff, Ping An is a bigger technology company than most big technology companies—its fintech and cloud computing products are used by 3,600-plus Chinese financial institutions.<sup>3,4</sup>

And Ping An's goals go far beyond being one of the world's largest online financial services supermarkets. It aims to be at the heart of five ecosystems in Asia: finance, property, automotive, healthcare, and services for the "smart city". These ecosystems are already bringing in about one-third of the group's new financial-services clients, and more than 576 million users and 100 Chinese cities are connected to at least one of them.

Similar trends are unfolding even in segments of insurance where the product has been difficult to understand and cumbersome to purchase online. For example, direct digital platforms for small commercial insurance in the US are maturing as companies come to market with simpler offerings that don't need to be explained by a broker.

Insurtech unicorn, Next Insurance, offers tailored insurance offerings for some 1,000 types of small and micro business on its digital platforms,<sup>5</sup> while Berkshire Hathaway has created Three as an online one-stop shop providing a transparent, three-page policy covering workers compensation, multiple liability coverages, and property and auto.<sup>6</sup>

#### People are changing; companies must, too

Enterprise investments such as those mentioned above mean that technology plays a central role in people's lives and in business today. But the increasingly strong and symbiotic connection between people and technology is starting to take strain. Not because technology has ceased to be valuable, but because enterprises have not yet re-oriented to just how personal and meaningful technology has become in most people's lives.

This isn't surprising. Just 20 years ago, digital access was limited by dial-up connections and desktop PCs, and individuals remained predominantly anonymous online. Tools like e-mail, forums and e-commerce were more efficient or far-reaching than analog counterparts, but hardly vital to people's existence. Companies didn't need to closely consider the impact of technology in their customers' lives; our digital lives were distinctly separate from our "real" ones.

It's hard to find that kind of separation today as technology has become an inextricable part of the human experience. More than half the world's population—a whopping 4.5 billion people—have access to the internet.<sup>7</sup> People are ever-connected on every type of device, globally spending an average of 6.4 hours online daily.8

Given the starring role technology has in people's lives, it makes sense that we take technology personally. It also explains why we expect so much more from it going forward. Just as many current models fail to account for the growing impact of technology, our once unconditional love for unlimited technology is becoming conditional on us having control and agency.

Some are labeling today's environment a "tech-lash," or backlash against technology. But that description fails to account for the fact that we're using technology more than ever. Rather, it's a tech-clash—a collision between old models that are incongruous with people's current expectations.

> **Enterprises have not yet** re-oriented to just how personal and meaningful technology has become in most people's lives.

The tech-clash arrives at a time that insurance carriers are under growing pressure to accelerate their digital transformation, especially with people's lives disrupted by the COVID-19 outbreak and with usage of digital channels accelerating in the wake of the pandemic. The Accenture Disruptability Index 2.0 ranks insurance in 2018 as the fourth most disrupted sector, the most susceptible to future disruption, and one of the least innovative sectors.<sup>9</sup>

Insurance has lagged many other sectors in adopting digital technologies to transform its core, embrace customer-focused experience design, and weave its offering into people's daily lives and into organizations' daily operations. But with compressed margins, slowing growth, new competition and the erosion of traditional industry strengths, change is imperative for the incumbents.

Having enabled their organizations for remote work to ensure business continuity during COVID-19-related national lockdowns, leading insurers are looking beyond stabilizing their businesses to strategic growth. They are asking how they can scale the emergency digital programs they implemented in these times into sustainable transformation and exploring how emerging technologies can meet people's evolving needs.

Consider the example of a southern European insurance company that wanted to do more than survive the pandemic—it wanted to come out of COVID-19 more resilient and able to take advantage of new opportunities. It is embracing an omnichannel customer relationship model that includes a "phygital" strategy with new virtual channels and remote agents. The carrier will also leverage data and analytics for more successful lead generation and management.

Some insurers are looking at a "living business" model to reignite growth and enhance profitability.

This approach sees insurers aim to provide products, services and experiences that "wrap around" individual customers, constantly learning more about their needs, intents and preferences. Making this transition will not be possible without winning customers', employees' and intermediaries' confidence that insurers are using digital technology in ways that benefit them.





4









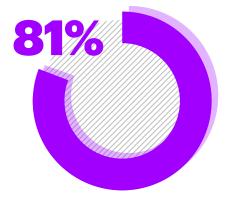
# Leaving the roadmap behind

The roadmaps that digital pioneers used to build their platforms will need to change, considering the ongoing tech-clash. What does that mean for insurance enterprises? There's no defined path left to follow. Insurance companies should be guided by the core values and concerns of their commercial and personal lines customers, agents, employees and other stakeholders. Here's their opportunity to invent a virtuous circle of trust, data and deeper experiences—a more human future.

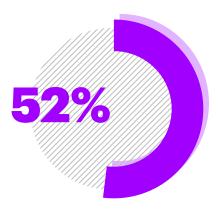
Consider just one of the challenges today's models create. People's information—whether medical, shopping or other data—is generated, stored, shared, accessed and controlled by the companies and ecosystems with which they do business, and sometimes even by businesses with whom they have no direct relationship. As these ecosystems grew to provide expansive personalization and valuable services, companies were relied on to steward more data and manage increasingly complex relationships.

But now customers are growing hungry for more input on how their data is used, and many businesses lack the mechanisms needed to provide that engagement. In this absence, consumers and business customers can grow wary of a business and potentially distrust it. Governments, sensing that distrust, are looking to impose consumer access and control requirements on personal data.

As a variety of technology models hit their breaking point, they herald a bigger shift that enterprises must note: people will no longer be bystanders when it comes to technology.



of the 539 insurance business and IT executives worldwide that Accenture surveyed for the Technology Vision report this year, 81 percent acknowledge that technology has become an inextricable part of the human experience.



of the 2,000 consumers surveyed this year, 52 percent say that technology plays a prominent role or is ingrained into almost all aspects of their day-to-day lives.



#### **Technology Vision Trends**

To truly bring a human touch to the next decade, the new models that insurance businesses build must be rooted in collaboration. As technology's level of impact grows ever higher throughout society, successful insurers will be those that use new models to invite people—customers, employees, partners, intermediaries and the public—to co-create their new course for the future.

#### Five key trends have been identified:



## The I in Experience

#### Helping people choose their own adventure

Redesign digital experiences with new models that amplify personal agency. Turn passive audiences into active participants by transforming one-way experiences into true collaborations.



#### Al and Me

## Reimagine the business through human and Al collaboration

Take a new approach that uses AI to bring out the full power of people. Move beyond deploying AI for automation alone and push into the new frontier of co-creation between people and machines.



## The Dilemma of Smart Things

#### Overcome the "beta burden"

Address the new reality of product ownership in the era of "forever beta." Transform pain points into an opportunity to create an unprecedented level of businesscustomer partnership.



### Robots in the Wild

#### Growing the enterprise's reach—and responsibility

Prepare for robotics to move beyond the walls of the enterprise. Companies in every industry will unlock new opportunities by introducing robots to the next frontier: the open world.



#### **Innovation DNA**

#### Create an engine for continuous innovation

Tap into the unprecedented scale of disruptive technology available today. Build the capabilities and ecosystem partnerships necessary to assemble the organization's unique innovation DNA.



As customers demand more ownership over their digital lives, insurers must find ways to provide individuals with more agency and make them co-creators of their experiences. Those that do will find more active, engaged and loyal customers.



The I in Experience

2

3

4



#### Leaders that explore new avenues to include customer agency today will be laying the foundation for long-term success.

Insurance products and services are gradually becoming more interactive, seamless and personalized as carriers use new digital interfaces in cars, homes, personal devices and workplaces to transform their relationships with customers. Some 77 percent of insurance executives in the 2020 Technology Vision survey agree that organizations need to dramatically reengineer the experiences that bring technology and people together in a more human-centric manner.

Take the rise of vehicle telematics and usage-based insurance (UBI) in markets such as the US and Italy as an example. This segment of the auto insurance market is steadily growing from a niche product into the mainstream. With GEICO in 2019 joining the ranks of insurers using telematics to track and improve driver behavior, the 10 largest carriers in the US now offer a UBI program.<sup>10</sup>

As of late 2018, there were about 11 million telematics-enabled insurance policies in place out of roughly 200 million insured automobiles in the US, according to the Insurance Information Institute (III). Progressive, one of the pioneers, has logged more than 25 billion miles through its Snapshot program. Extending UBI to bus and truck fleets has helped Progressive to grow its net written premium in commercial auto from \$1.9 billion in 2014 to \$4.4 billion in 2019.

Not only are more carriers offering UBI policies; their products and services are becoming more sophisticated. Beyond using smartphone sensors and a beacon device fitted to the vehicle to detect hard braking, excessive speed, harsh acceleration and hard cornering, some telematics-driven insurance solutions also offer variable monthly premiums depending on how often and well you drive, including whether you're a focused or distracted driver.\(^{14}\)

#### **Digital discomfort**

Over the years, insurance businesses have built robust data gathering and analytics practices for pooling risk. But a shift towards assessing risk and determining pricing on an individualized level through models like UBI may bring a set of unintended consequences. Commercial and personal lines customers alike may wonder whether the algorithms that drive customization really work in their interests—will carriers, for example, scoop up low-risk customers and penalize others with unfair or unaffordable pricing?

Discomfort with the results of customization is only part of the issue. Consumers also worry about the data gathering practices and black-box techniques companies use to personalize their offerings. Two-thirds of consumers surveyed for this year's Tech Vision report they are as concerned about the commercial use of their personal data and online identity for personalization purposes as they are about security threats and hackers.

More than 80 percent of consumers are willing to share personal data in exchange for benefits such as more competitive prices; faster, easier services; priority service; and more relevant advice for their personal circumstance, according to Accenture's 2019 Global Financial Services Consumer Study.<sup>15</sup> However, 38 percent would leave their insurer over concerns about data security.

These privacy issues will be exacerbated by the pandemic: in today's world, people are relying on technology more than ever before to connect, work and live. Long term, the purpose of a digital experience will be transformed. Initially, most digital platforms and experiences were designed to supplement, not replace, in-person experiences.

Now, these are becoming many people's primary source of interaction and demand is soaring for truly shared digital experiences and digital communities. This is only heightening people's expectations of technology and insurers that provide digital experiences, meaning that they are more sensitive than ever about how their data is used for personalization.

While commercial and personal lines insurance customers welcome customized experiences, they don't want these experiences to be overly determined for them without their knowledge. They are asking insurance enterprises to be their partners: working with them to create experiences, helping them reach their goals and giving them the option to change the experience when their needs or circumstances change.

More than creating a personalized touchpoint for their customer, insurers can use technology to begin building long-term partnerships and fostering loyalty. But it means sharing control and power in the relationship, giving customers agency. It starts with carriers learning to understand their customers better and doing more to design more compelling customer experiences. This is a potential game-changer in an industry that has traditionally had little ongoing contact with customers outside billing cycles, policy renewals and claims.

For instance, TrueMotion, the provider of smartphone data platforms to auto insurers, found in an 18-month trial for a distracted-driving app, that users opened the app 12.1 times per week and spent an average 13.2 minutes with the app. By contrast, consumers think about their insurer for only 9 minutes in the course of a year. Gamification and rewards were the key to the app's success—end-users felt it was beneficial to them and that it helped them to become more aware of their driving behavior.<sup>16</sup>

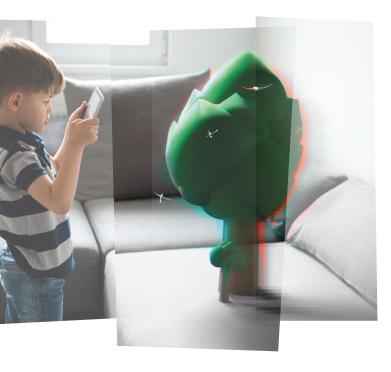


The I in Experience

2

3

5



#### A new role for insurance

Giving people and businesses the ability to make relevant choices that inform their experiences could transform experience delivery from a one-way street to dynamic and responsive collaborations. Not only could this give customers more choice and flexibility in their insurance experience; it could also empower them to reduce or avoid risks, in turn driving down claims.

But to do so successfully, insurance companies need to take on a new role—shifting the focus from simply making sales or paying claims, to how they can best utilize customer input, guidelines and choices to shape their experience. Customizing those experiences effectively means understanding when to make the process seamless and invisible for customers, and when to step back and give the individual control. There is a delicate balance that needs to be struck. For example, a commercial customer might appreciate advice about how it can reduce claims across its fleet, when it is based on aggregated data. It may not welcome its premium being adjusted according to the times of the day its vehicles are on the road or the routes it uses. And in personal lines, using telematics to track and gamify driving behavior across a family may come across as intrusive and creepy.

The new imperative for enterprises is to reposition themselves from an administrator to an enabler and a guide. For instance Assurance IQ, a direct-to-consumer life insurance platform in the US, uses data science and machine learning to speed up applying for and purchasing personalized health, life, home, and auto solutions from over 20 providers.

Prudential Financial last year agreed to acquire Assurance IQ for \$2.3 billion, with an additional earnout of up to \$1.1 billion. The insurer plans to offer its own financial wellness solutions on the Assurance platform alongside those of third-party providers. The idea is to create a new end-to-end engagement model for "customers who want to shop on their own terms, when, where and how they want." <sup>17</sup>

Mapfre in Spain, meanwhile, has launched a spin-off digital platform called Savia to enable people to take control of their own and their families' health. Users can use chat or video to contact healthcare professionals, store personal information in a secure cloud, and access pay-per-use medical services. Users can purchase a single service or buy a subscription plan. The plans can be activated and deactivated on demand, with no contracts or cancellation fees.<sup>18</sup>

Insurtechs and incumbents alike are also launching on-demand auto, home, life and personal liability products that offer more flexible terms than the products of old—enabling customers to pick and mix the cover they want, how long they want it, and when they want it. The Toggle brand from Farmers Insurance, in the US, for example, offers renters' insurance for young adults that gives customers the freedom to toggle different elements of coverage up, down, on or off at any time.<sup>19</sup>

#### **Revolutionizing experience delivery**

Although many of the technologies that will truly revolutionize experience delivery—like augmented reality (AR) and 5G—are still in early stages, there are others that can help insurance carriers get started. For instance, many insurers are already investing in machine learning in functions such as underwriting and claims. These systems have traditionally left little room for customer input; however, the technology can be repurposed to enable greater levels of interaction.

AXA XL's Connected Cargo solution, for example, is a real-time digital cargo tracking solution designed to help customers optimize their supply chain. Connected Cargo gives clients 24/7 monitoring as well as access to AXA XL's risk engineers' expertise to develop loss prevention plans.<sup>20</sup>

The solution uses data from sensors placed on containers—such as geolocation, temperature and humidity fluctuations, door opening and shock—to enable risk engineering experts to develop impactful prevention services for transportation and logistics risks. With every shipment, the data produced by these technologies becomes richer and more valuable, enabling underwriters to more accurately price and underwrite risk.

Enterprises that are exploring cooperative experiences today are launching a new generation of customization, fit for future capabilities and expectations.

Those wanting to keep up, and stay competitive and relevant, will need to start building reputations as insurance companies that amplify customers through curated experiences, rather than marginalizing them.

Choose-your-own-adventure stories, customization with live user input and tools that let people design their own experiences are all ways that insurers are embracing cooperative experiences that provide value and align to customers' values.

#### It's a major shift away from how they have operated in the past, but a necessary one. Becoming a true partner to customers will be a defining aspect of insurers' future.



of insurance executives believe organizations need to elevate their relationships with customers as partners to compete in a post-digital world.



of consumer respondents are concerned about data privacy and commercial tracking associated with their online activity, behavior, location, and interests.



The I in Experience



## **Decision Points**

#### To what extent does your business understand consumers' trust (perceived or lack thereof) in your business?

- Consider the risks and benefits associated with the business growing its personalization strategy, and the methods used to generate those experiences.
- Seek out opportunities to generate more customer feedback. Build a holistic understanding of how individuals experience your digital products and services today. Use these insights to inform your approach to designing future interactions.

## Does your current method for designing experiences lend itself to sharing control of experience design?

- Find points within your customer journeys where individuals may want more control over their experiences. These points are opportunities to give people using your digital products and services the agency that will drive long-term partnerships.
- Identify and invest in the technologies that will enable your next wave of cooperative experiences. Scalability, immersion and participation will be key to sharing control and co-creating unique customer engagements.

## How is your company preparing for data regulation that impacts customer experiences?

- Prepare the enterprise to address an increasingly regulated digital landscape. Review your current data collection and management practices to identify potential points of risk.
- Ensure that your policies for consumer management of data are fully documented and made available to consumers and regulators.
- Revise your data collection and storage strategies to support cooperative experiences while complying with regulation that requires consumer privacy.



Insurance organizations 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.



AI and Me

4

#### Although 68 percent of insurance companies in this year's research are piloting or adopting AI in one or more business units, most are realizing only a small slice of their AI potential.

While insurers are plugging AI and other tech tools into existing workflow, many are focusing on automation and execution rather than its true transformative potential. Simply using AI to make their organizations run faster and cheaper is to limit its impact. The leaders look at AI differently: not only as a way to transform how businesses do work, but also what their people actually do as well as how their business operates, delivers its services and interacts with customers. AI is becoming an agent of change across the organization.

However, Al can't reinvent the business on its own. To tap into the unique strengths of the technology, insurance businesses will rely on people's ability to steward, direct and refine Al. They will need to engineer the opportunity for human employees to couple their unique talents and knowledge with the capacity of machines to explore new possibilities.

Those that do so successfully will build the next generation of intelligent businesses—where humans and AI systems work together to reimagine what's possible. MetLife's claims organization is one example of people and intelligent automation working hand in glove to enhance the customer experience and increase operating efficiencies. Robotic automation has freed up 200,000 hours per year for the US carrier's case managers.

MetLife uses a robust analytical engine to segment and analyze claims, with eligible claims automatically adjudicated in real-time. This has reduced turnaround from 12 days to 15 minutes. Case managers can use AI, text analysis and visualization solutions to review and reassess in seconds rather than minutes. In addition, an AI platform provides real-time alerts to help employees listen to and understand their customers regardless of language or dialect.<sup>21</sup>

Al can also compensate for human fallibility—for example, improving data quality. In small commercial insurance in North America, it is estimated that 20 percent of data from agents and customers is incorrectly captured. Al can radically improve accuracy, improving pricing and performance.

Another use case is the work a large carrier in Japan is doing to develop an integrated, Al-driven platform that supports P&C agents with sales support. Where the sales reps used to seek—and try to convert—leads based on their own relationships and experiences, they now get next-best-action recommendations from the Al engine. The system is constantly improving based on agent feedback.

#### **Human-machine collaboration**

As these examples show, untethering creativity and catalyzing change begin at the level of human-machine collaboration. Insurers must think beyond a linear "command and response" relationship and engineer an interactive, exploratory and adaptable experience. This requires an innovative set of capabilities that most enterprises aren't actively building today.

Automation requires designing the skills to get a job done, but collaboration demands the ability to communicate and iterate with partners. Insurers will need to explore and master the tools and advancements that enable humans and machines to better engage each other. Natural language processing (NLP), explainable AI and extended reality (XR) are examples of tools that will all unlock new ways for humans and machines to interact.

Meaningful collaboration begins with communication, yet machines have historically struggled to understand human language. Machines typically are precise in their actions and operation, while language is anything but. Between slang, regional variations in dialect, sarcasm and single words that have multiple meanings, the challenges of language have complicated communication with machines.

These challenges are starting to disappear for text and spoken words through advancements in NLP. Google's BERT and Baidu's ERNIE—which are both open-source frameworks—enable AI systems to move from understanding just one word to understanding phrases in context.<sup>22,23</sup> NLP systems are increasingly able to understand the intent behind a human's words, letting them better inform outcomes without constant intervention.

Look at insurtech, Shift Technology, which has developed an Al solution to detect claims anomalies and combat fraud. The solution analyzes structured and unstructured data from internal claims and contract data as well as external sources such as meteorological data, satellite images or even web data. The system uses NLP to extract structured data for use in fraud detection. Customers include the likes of Generali France, AXA and CNA Financial Services <sup>24, 25</sup>





Al and Me



4





#### **Speaking the same language**

Language is just one element that machines will need to understand to better collaborate. For many employees, these technologies are most valuable when they can understand the physical context of humans. Companies must ensure the tech can sense—and make sense of—a person's surroundings to enhance human-machine collaboration. Image recognition and machine learning allow Microsoft's HoloLens 2 mixed reality headset to not only see, but also understand the wearer's physical environment.<sup>26</sup>

While previous XR devices might only know that something exists in the field of vision, the HoloLens 2 identifies an object and understands what that object is: for instance, a couch is not just a series of pixels, but something that can be sat on and belongs in a living room. This contextual understanding of the environment unlocks new capabilities for the device, like being able to identify dangerous equipment and warn the wearer if the equipment is operating hazardously.<sup>27</sup> Perhaps the technology could, one day, alert novice adjusters to damage in a home during an inspection after a hurricane.

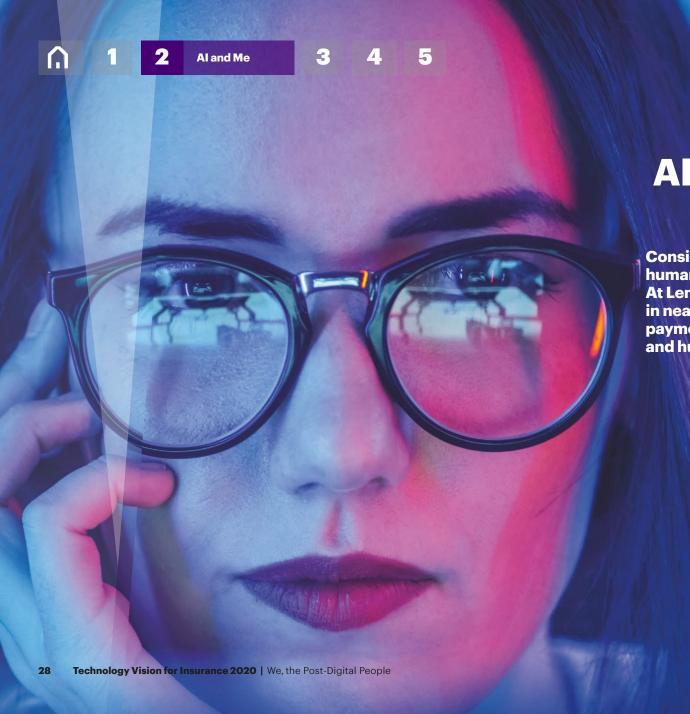
Collaboration can't just be one-way; insurance companies must complete the feedback loop and build the capabilities that allow humans to better understand machines. True iteration will require understanding the decision-making

process of an AI system, so that people can fine-tune it or correct biases as needed. The growing field of explainable AI is letting humans de-mystify the output of previously "blackbox" AI systems—even if the AI wasn't designed to explain its decision-making process.

Work at Accenture Labs demonstrates this using data from loan applications. If an applicant is denied a loan, the system explains the reasons for the denial and offers the smallest number of changes the applicant would need to make to have the application approved, such as having more cash on hand or increasing annual income.<sup>28</sup> In insurance, explainable AI should be able to tell a person why their claim was flagged as potentially fraudulent or the reason for an unexpected premium hike.

Once enterprises enable the full scope of human-AI collaboration, they can jump on the new opportunity before them—employing AI to reimagine everything: from the way their organizations are structured, to the way they approach work, to the value their enterprise creates.

By structuring their organizations with human and machine collaboration at the core, insurance pioneers are already positioning AI to be a driver of change.

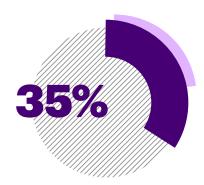


#### **Al-native insurance**

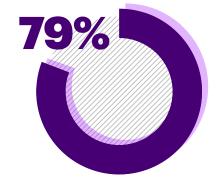
Consider Lemonade, a startup natively designed to use human-Al collaboration to offer a more seamless experience. At Lemonade, Al is embedded in the organization and present in nearly every workflow. Particularly, the company's claims payment process was designed to play to the strength of Al and humans working together. <sup>29</sup>

Lemonade customers file claims with a chatbot that both logs the claim details and instantly compares the claim to others within the insurer's database—a first wave of defense against fraud. If everything is okay, the claim can be paid out immediately to the customer. If a claim is too complex or problematic, the AI shares the information with a human agent, who steps in to manage the case. <sup>30</sup> This division of labor is the root of why Lemonade can offer competitive pricing within the insurance industry.

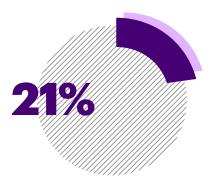
By structuring their organizations with human and machine collaboration at the core, insurance pioneers are already positioning AI to be a driver of change. The value at stake is significant: Juniper Research estimates the value of global insurance premiums underwritten by AI will exceed \$20 billion by 2024, up from an estimated \$1.3 billion in 2019. The research forecasts that industry cost savings from AI will grow from \$340 million in 2019 to \$2.3 billion by 2024.<sup>31</sup>



of insurance executives say they have inclusive design or human-centric design principles in place to support human-machine collaboration.



of insurance executives believe collaboration between humans and machines will be critical to innovation in the future.



of insurance organizations report they are preparing their workforce for collaborative, interactive, and explainable AI-based systems.



AI and M

3

4

5

# **Decision Points**

## Is your company thinking collaboratively?

- Determine the role that AI is playing in your business alongside your existing workforce. Think beyond which tasks could be replaced and imagine how you can build a new kind of workforce with humans and AI collaborating side by side.
- Determine what tools are available internally to introduce the AI solutions needed to move your organization in this direction. If none is available, evaluate if employees have the skills to build the solutions, or engage partners to generate the necessary capabilities.

## How will you roll out collaborative Al initiatives across the organization?

- Evaluate where your industry is headed. Where are partners or competitors finding success in deploying AI?
- To ensure transparency and trust, gather workforce perspectives into the design and implementation of AI systems. Ultimately, these employees will be the ones who determine the success of your AI investments.
- If you're not already using AI in the company, find an area to begin piloting the technology, such as co-designing a new product, coaching or training employees or reinventing customer engagement strategies.
- Spend time "training" AI to ensure that it is smart and useful when launched to the wider workforce. This will help to drive human/machine collaboration and adoption of AI tools.

#### How will you address explainability?

- Evaluate the scope of decision-making that AI is being given in your organization. Identify sensitive areas where additional oversight may be needed and prioritize post-implementation explainability solutions, such as counterfactual explanations, for those systems.
- For all future AI projects, plan for explainability by design. Develop policies and principles that will guide the development, building and implementation of new AI systems.



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



3

**The Dilemma of Smart Things** 

4

5

Enterprises across all industries are making big bets on a connected future. The internet of things market is expected to grow to 75.44 billion connected devices by 2025, with a projected market value of \$1.1 trillion by 2026. 32,33 Insurers, too, are looking at ways that they can play a role in the smart device ecosystems emerging in homes, public spaces and workplaces, often in partnership with industrial equipment companies, tech companies, auto manufacturers, insurtechs, home appliance brands and other innovators.

Generali in Italy, for example, has spun out an independent business called Generali Jeniot to focus on opportunities in connected insurance. In partnership with organizations such as Fiat Chrysler Automobiles, DriveNow and Google, the company is developing a growing set of products powered by the internet of things and designed for the urban mobility, smart home, smart health and connected workplace ecosystems.<sup>34</sup>

As enterprises begin to design updateable products with the ability to expand services and experiences in the future, they are making it possible to respond to changing customer demands and expectations at a moment's notice. This sets the stage for feedback loops that support true partnerships, where companies can get closer to customers and customers can see the value and utility of products grow over time.

This applies to insurance as much as it does to other industries— a once stable product is evolving into a set of dynamic living services with insurers like Generali embracing mobile apps and smart devices as customer interfaces. In some cases, the aim is not only to gather richer data for underwriting or marketing, but also to interact with customers more often and deliver value-added functions such as lifestyle services or business advice.

Enterprises across all industries are making big bets on a connected future.

#### **Updating now**

Around 70 percent of insurance executives in the 2020 survey say that their organization's connected products and services will have more, or significantly more, updates over the next three years. Groupama is not only one of France's leading insurance groups but also one of its largest agricultural insurers. Its application, Gari, illustrates how connected insurance services may evolve.

Groupama launched the farmtech app in 2019 with three free services (basic weather, market prices for crops and a task scheduling tool) and three paid services (temperature sensors in haystacks, video surveillance and high-precision meteorological data). The plan is to evolve the platform through field-testing and validating new features with farmers.<sup>35</sup>

As companies introduce this state of constantly evolving products and services, they are challenging traditional perspectives on ownership. Without proper care, this living connection can quickly drift from a wellspring of opportunity, to products that feel completely beyond the control of the people using them.

The risk is customers constantly having to play catch-up, not knowing if the next system update is bringing exciting new capabilities, a critical security refresh, a new user interface to learn or a dramatic change to functionality. Call it the beta burden: the unintended consequences when products, and their contained experiences, are constantly in flux.

At its worst, it can prompt customers to disengage from product ecosystems and go back to old ways of doing things. Farmers in the American Midwest, for example, are reportedly buying 40-year-old secondhand tractors rather than put up with smart tractors they can no longer repair themselves. The issue for them is a loss of ownership and control over a vital piece of equipment.<sup>36</sup>

A similar effect is seen in auto insurance, where claims expenses are rising because of the higher costs of the parts and labor needed to repair high-tech automotive components like sensors and onboard computers. The number of insurance claims where a vehicle is deemed a total loss are also rising as the cost of parts continues to climb faster than new car prices. Claims severity is rising, but the frequency of claims is not falling fast enough to compensate. The result? The technologies meant to make driving safer may be contributing to higher premiums for customers and lower profits for carriers. <sup>37</sup>





3

**The Dilemma of Smart Things** 

4

5

#### Who owns it?

The question of ownership and the challenges of the beta burden are two sides of the same coin. Ownership of products is now effectively shared among companies and their customers. An evolving digital experience is designed to be an intrinsic part of the usefulness and differentiation of a product. That's possible because the enterprise can take control of a product to improve or expand the experience throughout its lifecycle.

But this is a huge departure from the past, when what you bought (and insured!) was what you got. The real value is often embedded in software like apps and firmware. Tesla customers have seen their cars transform without ever visiting a mechanic as new functions like autonomous driving, accommodations for pets and enhanced safety features are pushed through firmware updates.

Insurance companies that leverage sensors and apps to interact with customers may need to evolve their strategies and operating models to align with a new role. To deliver the wide-ranging experiences they hope to achieve through flexible, updateable products, companies must rethink the way the entire organization develops, delivers and supports its outputs.

Evolutions in the engineering space started businesses down this path. Agile and DevOps processes allowed the organization to move and respond to the demands of customers, while application programming interfaces (APIs) opened the door for robust and evertransforming ecosystems. But as adoption of this new generation of products continues to grow, the impact is being felt far beyond the technology organization alone.

Insurance companies must expand the approach that began in the engineering space to permeate every aspect of their organization, whether it's sales, customer support, development, design, claims, underwriting or others. If leaders ignore this imperative, even the most successfully delivered product or service will look like a failure when the businesses can't keep up with its evolution.



#### **Digital death**

As insurers work with ecosystem partners to integrate digital technology into products, they will increasingly have to contend with the "digital deaths" of devices and apps. For example, that Apple Watch a life insurer gave to a customer to use as a calorie counter and fitness tracker won't be much use when Apple ends support for that model.

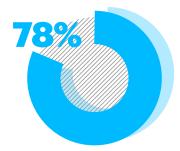
Not only will old devices limit the business in its ability to deliver the most cutting-edge experience; they will also begin to generate risk for the whole ecosystem as aging technology is often rife with security vulnerabilities. Building a strategy to smoothly transition customers

from one generation of product to the next will be a key component of customer retention and loyalty in the future.

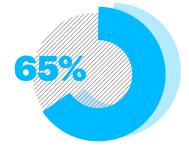
Under today's new models of ownership, products are more than just the object in someone's hands. That may affect not only how insurers interact with customers, but also the nature of certain insurable risks.

What if, for example, a software update "bricks" an electric car? How do insurers mitigate business continuity risks related to breakdowns of internet of things devices or robots?

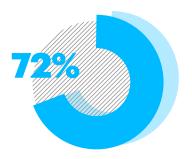
Enterprises across industries are transitioning to experience-driven products because they see the potential of continuous interactions with their customers. Reimagining the organization to support these products' new lifecycle is how insurance leaders will bring that potential to life for their own businesses.



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



of insurance executives believe customers generally don't mind, or even welcome, software updates to their organization's connected products and services.



of consumers are tolerant of software updates that address security issues; 46 percent believe software updates often bring new problems with them.



**The Dilemma of Smart Things** 

4

5

# **Decision Points**

## How is your business responding to the changing nature of ownership with the products you sell?

Traditional models of ownership are shifting as devices gain the capacity to significantly change their functionality. Evaluate your organization's current ability to support a shared model of product ownership: everything from how customers are on-boarded, to how they are engaged with over time can present myriad new opportunities to build relationships with customers. But it requires changes across the organization.

### What is your company's long-term plan for products?

- As the focus turns to selling continuous experiences, your company will need a different strategy for the products that support those experiences. Explore ways of helping customers through this transition to ensure long-term loyalty.
- Identify the biggest stakeholders in your ecosystem. This will include customers as well as app developers or other device providers. Design a review process that will uncover what obstacles these stakeholders may face as software updates change the functionality, interoperability and features of their products.
- Help customers meet their sustainability goals. What can they do with aging hardware, and what expenses will they incur over time? Explore new strategies like developing a recycling and trade-in program or allowing people to repair devices themselves.

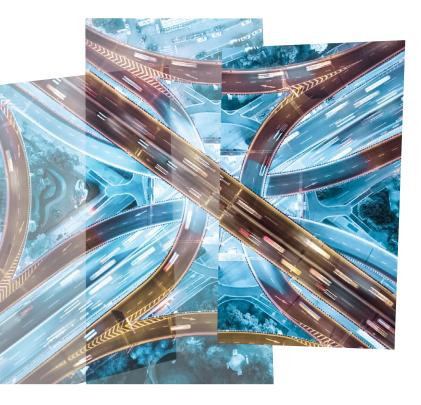
### How are you creating maximally valuable products?

- Design products to evolve and grow over time in response to customer usage and insights. Build a feedback loop by identifying what data would be necessary to understand your customers' evolving needs. Develop the tools and platforms to capture that data.
- Make future-focused design thinking a part of every product development process. Explore what customers might want in five years and work backward to consider what sensors or technologies might be necessary to support those ambitions.



Businesses are starting to extend their robotics capabilities into uncontrolled environments and the open world, and robot use cases are expanding from specialized industries to every industry. Insurance will have a key role to play in facilitating the exciting possibilities of a world of ubiquitous robots.





Many companies have already seen the benefits of robotics in controlled spaces, from lower production costs to higher productivity and increased capacity for analytics. Advanced robotics is offering a path to push the intelligence of the digital world out into the physical one, amplifying these advantages and unlocking new capabilities in industries that have not traditionally benefited from robotics in the past.

Advances in robotics, sensors, speech recognition and computer vision are combining with shrinking hardware costs to make robots accessible for companies and individuals that haven't traditionally used them.<sup>38,39</sup> IDC predicts that the global robotics market will reach \$210 billion by 2022; only half of that will be in manufacturing, the traditional mainstay of robotics sales.<sup>40</sup>

At the same time, the rollout of 5G networks will unlock opportunities for all industries to extend their autonomous capabilities outside of contained settings like warehouses and production facilities—and into the open world. More than half (54 percent) of insurance executives expect their organizations will use robotics in uncontrolled environments within the next two years.

Some of the world's biggest companies are already using this shift to find new ways to serve customers and improve operations. Amazon's small, six-wheeled delivery vehicle, called "Scout," can autonomously navigate realworld obstacles like trash cans, pets and snow blowers. 41 In the building industry, Advance Construction Robotics' TyBot is using repurposed self-driving-car technology to automate the physically demanding task of tying rebar, allowing the job to get completed faster and more safely.<sup>42</sup>

#### The robot migration

These technologies are setting the stage for a massive robotmigration, beyond controlled environments into uncontrolled spaces and from specialized industries to every industry. Some 72 percent of insurance executives surveyed for this report believe robotics will enable the next generation of services in the physical world.

As this process unfolds, it creates new risk exposure for insurers tocover, threatens traditional business lines, and opens opportunities for insurance companies to weave robots into their own processes. The migration will take many years, but the impact on the insurance sector, particularly commercial lines, could be profound.

Industrial robots, constrained to the confines of plants, warehouses and factories, are not more dangerous than most industrial equipment. According to incident reports from the Occupational Safety and Health Administration (OSHA) agency in the US Department of Labor, there were just 38 robot-related accidents between 1984 and 2017.

But how might this change as mobile robots start interacting with people in settings such as homes, public roads, hospitals, shops, construction sites, universities and restaurants? In many cases, companies' robots will interact with people with whom they have no employee or customer relationship. By contrast, when robotics remained confined to companies' own controlled environments, they were likely to interact only with a company's workforce or existing customers.



2

3

4

Robots in the Wild

5

#### **New liabilities**

As such, robotics may introduce new coverage and liability issues in lines such as commercial general liability, product liability, workers' compensation, and cyber-insurance. A report from Lloyd's and the University of Surrey says, for example, that the risk profile for employers' liability and public liability could shift as liability is pushed back onto the robot product manufacturer.

New risks, according to the researchers, include the potential for robots in motion to cause damage to public or private property—for example, a delivery robot colliding with a privately-owned vehicle—and cyberrisks related to the level of sensitive data robots will gather in homes and workplaces.<sup>44</sup> Many traditional commercial insurance products are not yet tailored to these risks.

Some insurance companies may find opportunities to underwrite specialist products for personal and commercial robots. The drone market may point the way. Pay-as-you-fly insurance for commercial and recreational drone pilots is available on hourly, monthly and annual plans from insurtechs and insurance carrier/startup partnerships, a model that could be emulated in the robot-as-a-service space. 45,46

Robots will not only create new risks—they may also reduce old ones. Many of these devices will do jobs that are not only boring and repetitive for humans, but also potentially dangerous and dirty—for example, lifting heavy items or navigating unsafe environments such as a building after an earthquake. Thus, insurers could see a drop in employee injury claims.

Though the pool of data for assessing risks associated with robots is small for now, the data that robots (along with internet of things devices) will generate in years to come could also benefit insurance companies in the longer term. Insurers may be able to leverage this data to better understand and price risk in the workplace, and perhaps even work with clients to reduce risks in lines such as workers' compensation.

#### **Lessons from the self-driving car**

Auto insurers are perhaps the most advanced in their thinking about robots—they have spent years evaluating, and preparing for, the potential impact of autonomous vehicles on their industry. They foresee that auto insurance could, by 2025, look very different to today due to the rise of the self-driving car. And many of the same trends may apply to the wider robotics market.

Nearly two-thirds (64 percent) of insurance respondents to last year's Tech Vision survey agreed that vehicle manufacturers will—via product liability coverage—assume a bigger share of the auto insurance market. This is already happening. Tesla's insurance division, for example, professes to offer premiums 20 percent to 30 percent lower than rivals on Tesla vehicles for eligible customers.<sup>47</sup> It would not be surprising if major robot makers followed Tesla's lead.

Many insurers anticipate that there will be fewer accidents, lower claims and less fraud in a world of widespread autonomous vehicles because human error will be removed from the equation and insurers will have better data to assess risk and detect fraud. The experience in connected cars to date indicates that more expensive vehicle repairs could offset the benefits of fewer accidents and claims in the short term. The longer-term downside might be lower premium income and perhaps even a reduced need for insurance products and services.





3

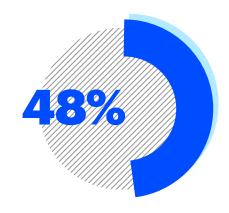
4

**Robots in the Wild** 



### Facilitating the rise of the robots

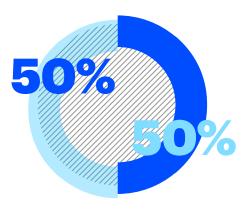
Across industries, the proliferation of robots from the traditional controlled warehouse and manufacturing environments into the open world offers enormous opportunity. Increased customer interaction, data collection and even branding occasions will be possible, as limitations on the physical services companies can provide in customers' lives disappear. But capturing this opportunity will never be as simple as buying a robot and sending it out the door.



Finding the right way to integrate robots into organizations and the world includes challenges around talent, questions of human -computer interaction and a testbed that quite literally consists of the whole world—with no boundaries or built-in fail-safes. Insurance has an as-yet underappreciated but vital role to play in ushering in this era of disruption.

By working with robotics manufacturers and enterprises, insurers can help organizations to understand and transfer the risks associated with robots in the wild, in turn facilitating confident adoption of the new technology. Robotics is likely to change the world in unexpected ways in the years to come—and insurance companies can help to make it happen.

Consumers surveyed for the 2020 Technology Vision believe robots are poised to make their lives easier (48 percent), more efficient (42 percent), or more fun (30 percent).



Insurance executives surveyed are equally split in their views of how their employees will embrace robotics: half say their employees will be challenged to figure out how to work with robots; the other half believe their employees will easily figure it out.



2

3

4

**Robots in the Wild** 

# **Decision Points**

## How will the advent of openworld robotics impact your business?

- Conduct a discovery initiative to identify the latest advancements in robotics underway in your customers' lives and industries.
- Assign a cross-functional group to study these insights and forecast where the company stands to grow, or be threatened, based on the trends.
- Develop a strategy to build, buy or partner in order to develop the necessary capabilities to support the shift to robotics.

## Is your business ready to engage a wider set of partners?

To ensure the success of robotics innovations, companies need to be prepared to interact with a larger set of stakeholders. Engage government regulators to create policies for autonomous devices in new environments and identify vendors for collaboration to shape strategic agendas.

# Are you tracking the launch of 5G networks in relevant markets—or exploring new markets based on 5G availability?

Increased access to 5G networks will help spur widespread adoption of connected assets, including robotics. Increased mobile network speeds and lower latency are major factors that will enable autonomous devices in new environments. Look for opportunities to capitalize on nearby launch markets and explore the industrial applications that 5G networks present.

## How will your business build trust for robots among the variety of stakeholders who will encounter them?

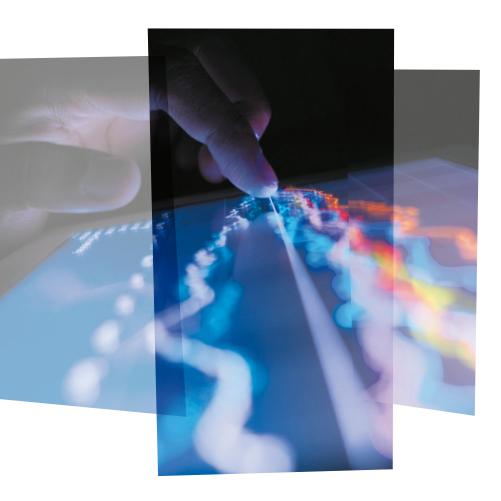
Take steps to help people who are interacting with these devices to understand machine behavior. Consider the user experience and human-machine interaction expertise your company will need to navigate these uncertain waters.



Businesses cannot look at innovation as an incremental effort; they must design the capabilities to make it an ongoing practice in the organization. Determining where they hold an advantage, where they are lagging and what their future ambitions are will help insurers construct their innovation DNA.







Insurance carriers have had to set aside their reservations about being too experimental and changing too fast in order to innovate at the speed necessary to navigate the COVID-19 crisis. Opportunities for which carriers expected to have years to prepare are quickly approaching and slow-growing pain-points are rapidly rising to the surface.

A transformation of the magnitude required to stay the pace of the new world won't be easy, and incremental change won't be enough. But it starts in a familiar place. The path forward begins with a renewed focus on the building blocks that have allowed insurance companies to get to this point of opportunity in the first place: technology. To turn the enterprise into an engine for transformation, businesses must first assemble their unique innovation DNA.

The building blocks of this innovation DNA include 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.

#### The strands of innovation DNA

Leaders are weaving these areas of innovation together, forming their own unique triple helixes and setting their course for the future. To develop an innovation DNA fit for the future, businesses must find their unique combination of the different building blocks. This starts with understanding the opportunities and risks of each.

Maturing digital technology—the social, mobile, analytics and cloud (SMAC) stack—is no longer an advantage, though insurance has lagged many other industries in embedding SMAC into its DNA. Those insurers that have advanced further down the road to SMAC maturity are, however, finding new value by commoditizing their systems.

For instance, Metromile, a telematics-driven auto insurer in the US, has started licensing its claims platform to other insurers around the world. Japan's Tokio Marine has deployed the digital first notice of loss REPORT product from Metromile across its auto insurance book. The platform enables drivers to report accidents online and through an app.<sup>48</sup>

Some of these partnerships are making advanced technologies more accessible to the market, in turn making digital transformations increasingly straightforward—threatening any incumbent that gets too comfortable. Consider the implications of a partnership between Allianz, the major German-based insurance carrier, and Microsoft.

The two companies are working together not only to move Allianz's global insurance platform to the Azure cloud, but also to develop insurance-as-a-service offerings. Syncier, a startup founded by Allianz, will offer a new open-source solution built on Microsoft Azure. It will also operate an insurance software marketplace based on Azure cloud, offering solutions like customer service chatbots and Al-based fraud detection. Allianz's approach highlights how digitally innovative players can tap into new revenue streams—by helping laggard competitors to catch up.<sup>49</sup>





4

Ł

**Innovation DNA** 

#### **Broadening beyond digital**

Meanwhile, scientific advancements are broadening enterprises' innovative efforts beyond digital technology and turning into competitive advantage faster than ever before. Advances in material sciences, energy, genomic editing and more are deeply disruptive in related industries, but also beginning to challenge boundaries and pull businesses in new and unexpected directions.

Consider climate change as an example—ranked by insurance executives in the Technology Vision survey as the number one challenge in society that scientific research and advanced technology can address. Reinsurers Swiss Re and Munich Re have studied changing climate patterns for decades. According to Munich Re, there were 820 natural catastrophes in 2019, with losses from these disasters amounting to \$150 billion.<sup>50</sup>

Now, reinsurers are looking for ways to apply their expertise in this field not only in their own businesses, but also to scaling global responses to extreme weather. Swiss Re, alongside other members of the Insurance Development Forum, has partnered with the UN Development Program (UNDP), jointly committing \$5 billion of capacity to support climate resilience in developing countries.<sup>51</sup>

At the same time, DARQ technologies are steadily growing in utility and adoption, except for quantum computing, which looms further on the horizon. Whereas many insurers took a conservative stance on DARQ technologies before the pandemic, the need to innovate at speed will compel them to embrace these technologies faster than some of them had originally planned to.

Leading insurers are exploring solutions that blend DARQ technologies, building their foundation for a world with digital everywhere. Farmers Insurance is developing a virtual humantraining program in collaboration with Talespin. The training modules are intended to help improve the overall customer experience by focusing on the moments that may matter most.

The solution uses virtual reality and AI to realistically simulate critical workplace conversations. Training scenarios built with the platform use virtual environments, speech recognition, NLP, and realistic body language to simulate conversations with customers and colleagues. The virtual environment offers employees a safe space to hone their communication skills. This application builds on Farmers' success in using VR to help claims representatives practice home damage assessments.<sup>52</sup>

#### **Scaling and integrating innovation**

Differentiation in the future will be driven by powerful combinations of the different innovation building blocks. While leading insurance enterprises should have efforts across all three spaces (maturing digital technology, scientific advancements, DARQ), what will truly set companies apart is the way they merge and combine the technologies with the core competencies of their business.

The winners will not be those that simply build innovation "petting zoos"—endless proofs of concept, red teams and insurtech partnerships that are never scaled—but those that also develop the capabilities to mainstream new ideas. COVID-19 has changed the world faster than anyone expected it to change, and insurance businesses will need to rapidly incorporate new thinking and ideas in their core business to remain relevant.

Well-executed strategies will not only combine the different blocks, but also accelerate the discovery process by forging new partnerships, fueling experimentation, and building a culture and ecosystem that will drive those efforts into disruption at scale. While insurtech partnerships and acquisitions, innovation labs, incubators and venture capital investments all have a role to play, leadership comes from successfully scaling innovation and embedding it into the wider business.

The thriving insurtech landscape remains an important source of innovative ideas for insurance incumbents, which are keen investors in insurtech startups. Willis Towers Watson estimates insurtech investment reached nearly \$6.4 billion in 2019. Some of the funding rounds contributed towards the creation of five new insurtech unicorns (privately held start-ups valued at over \$1 billion).<sup>53</sup>

Insurers are also looking to big tech for support in driving and scaling innovation. USAA last year announced a collaboration with Google Cloud to develop machine learning models that nearly instantly predict vehicle damage from digital images, allowing for faster and more cost-efficient estimates.<sup>54</sup> It pairs such tech partnerships with a relentless focus on internal innovation strategies.

USAA, which provides financial services to US military members, harvests ideas through its "Always on Ideas Platform," a portal available to all employees, and encourages employees to submit innovative ideas. A telling point is that among 900 or so patents held by the company, 25 were authored by a single security guard during his tenure at USAA.55

AXA, the multiline, multinational insurer, is driving innovation under the banner of a company called AXA Next. This vehicle consolidates and coordinates the group's venture capital arm, incubators, tech labs, corporate partnership division and parametric insurance business, with the goal of stretching beyond insurance and becoming a closer partner in customers' lives. 56

Under AXA Next, AXA is working on or investing in a range of ventures that could, in the future, become major revenue streams or disruptive industry forces—among them, a remote medical teleconsultation startup called Qare; Happytal, which offers concierge services at French hospitals; insurtechs like Anorak Technologies; cyber-risk startup, Security Scorecard; and the Fizzy blockchain-powered parametric travel insurance product.



2

3

4







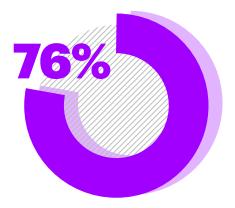
#### Innovation as an ecosystem play

Not every business has the resources to open a dedicated innovation hub or make big bets on insurtech investment. But all can translate the innovation attitude and mindset into their own strategies. Plus, there are some problems that will be best solved through ecosystem-based innovation strategies, be it those venture-backed partnerships, academic research engagements or relationships with other companies.

The Institutes RiskStream Collaborative, an initiative from more than 40 members of The Institutes—a non-profit knowledge partner for the risk and insurance industry—shows how this approach could benefit the industry and its customers. The members of the consortium are working together to develop DLT use cases and solutions for the wider industry.

The Collaborative facilitates joint development of DLT use cases and creation of shared services between a community of insurance carriers, reinsurers, brokers, and agents. Based on proof of insurance and first notice of loss use cases in auto personal lines, the RiskStream Collaborative estimates its members could save between \$19 million and \$68 million in the first year of use and between \$99 million and \$277 million in year three by implementing blockchain applications in the US market.<sup>57</sup>

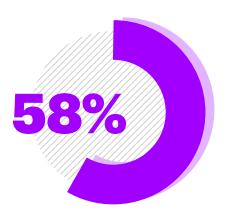
Innovation, then, is evolving. Success in the future means constantly exploring what's ahead, around and inside of the business. Insurance leaders will seize opportunities through each of today's innovation building blocks and form their own unique innovation DNA. Those that do will thrive in the next wave of industry transformation.



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



of insurance executives rank climate change as society's biggest challenge that scientific research and advanced technology can address. Next are sustainable development (22 percent), energy (19 percent) and health & wellness (19 percent).



of insurance executives surveyed this year believe that rapid advancements in new technologies and scientific innovations are poised to disrupt their industry.



**Innovation DNA** 

### **Decision Points**

## How is your enterprise exploring multiple fronts of innovation today?

- Examine your current approaches to the three categories of innovation. Identify where your strengths are and what areas may be untouched.
- Set organizational goals and strategies that build towards a comprehensive innovation DNA. Grow existing efforts or stake out new areas across all three fronts.

## Is your organization developing an integrated innovation strategy?

Gather input from internal groups to determine the breadth of each team's innovation agendas. With this input, work with your organization's leadership to recalibrate and reflect the shared goals of the various teams.

## Does your company have resources (time, space, people) dedicated to continuous innovation?

As your organization develops and refines its innovation strategy, explore the potential of launching a dedicated innovation practice. These practices can present a more straightforward way of exploring multiple innovation frontiers in a systematic fashion, while giving other groups in your organization a resource when they are interested in a technology with future potential.

## Which organizations are possible partners for co-innovation efforts?

Seek out industry and ecosystem partnerships to help your company establish a dedicated innovation practice or oversee specific co-innovation projects. Your organization's ability to innovate around multiple innovation frontiers will depend on looking outward and understanding advances that are happening. A strong set of partners is necessary for this to succeed.



Many industry assumptions and entrenched approaches are up for review and reinvention towards people-centric models. Insurance companies must reengineer the experiences that bring people and technology together; they must raise questions about the democratization of data and technology; and they must reevaluate the application and value of intelligence—what technology is providing for people, and the ways it's changing people in the process.

The success of the next generation of products and services will rest on insurance companies' ability to elevate the human experience. Companies that have a shared-success mindset—and invite collaboration with customers, employees, ecosystem partners, governments and the public—will create new opportunities for growth in a way that benefits all.

This reimagination of the enterprise offers tremendous opportunities for those that take the lead. Getting there is one of the greatest challenges the C-suite will face during the next decade. When insurance leaders successfully build technology that delivers a human focus, they will be poised to do far more than meet expectations. They'll set the new standard that every competitor—in every industry—will be forced to try to meet.



#### **About the Technology Vision**

Every year, the Technology Vision team partners with Accenture Research to pinpoint the emerging IT developments that will have the greatest impact on companies, government agencies and other organizations in the 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 from around the world, to understand their perspectives on the impact of technology in business. This year, 539 insurance executives participated in the survey. Survey responses help to identify the technology strategies and priority investments of companies from across industries and geographies.

In parallel, a consumer survey is conducted to understand the use and role of technology in people's lives. The consumer survey canvassed 2,000 people in four countries, the US, the UK, India and China. The survey asked consumers about their viewpoints and use of technology in their daily lives, including voice assistants, robots and connected products.

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.

#### References

#### **References**

- 1 "Generali 2021: Leveraging Strengths to Accelerate Growth", Generali, November 21, 2018. https://www.generalicee.com/article/press-releases/generali-2021-leveraging-strengths-to-accelerate-growth
- 2 "Generali Italia: Life Partner for Value Growth", Generali Jeniot, March 5, 2019. https://generali-jeniot.it/media/03\_05\_2019\_CS\_GENERALI-ITALIA\_LA%20NUOVA\_STRATEGIA\_DI\_COUNTRY-2021\_PARTNER-DI-VITA.pdf
- 3 "Chinese Insurance Giant Ping An Morphs into a Tech Company", DigitalInsurance, December 3, 2019. https://www.dig-in.com/articles/ chinese-insurance-giant-ping-an-morphs-into-a-tech-company
- 4 "Ping An's \$22b Push to Shed Old-School Insurance Skin", Bank Innovation, October 24, 2019. https://bankinnovation.net/allposts/ operations/cap-fund/ping-ans-22b-push-to-shed-old-schoolinsurance-skin/
- 5 "Next Insurance Raises \$250M from Munich Re, Becomes a Unicorn", TechCrunch, October 7, 2019. https://techcrunch.com/2019/10/07/ next-insurance-raises-250m-from-munich-re-becomes-a-unicorn/
- 6 "Big News for Small Business from Berkshire Hathaway", BusinessWire, February 11, 2019. https://www.businesswire.com/ news/home/20190211005143/en/Big-News-Small-Business-Berkshire-Hathaway
- 7 Internet World Stats: Usage and Population Statistics, Retrieved February 17, 2019, https://internetworldstats.com/stats.htm
- 8 "More Than Six Hours of Our Day Is Spent Online", Digital Information World, February 4, 2019. https://www.digitalinformationworld.com/2019/02/internet-users-spend-more-than-a-quarter-of-their-lives-online.html
- 9 "Breaking Through Disruption", Accenture, June 26, 2019. https://www.accenture.com/us-en/insights/consulting/business-disruption-innovation
- 10 "GEICO Gets Progressive, Joins Auto Insurers Offering Telematics", Insurance Journal, August 5, 2019. https://www.insurancejournal.com/ news/national/2019/08/05/534817.htm
- "State Farm Bets on 'Real Time' Telematics as GEICO Scoffs", Insurance Journal, June 19, 2019. https://www.insurancejournal.com/ news/national/2019/06/19/529885.htm

- 12 "Get Snapshot from Progressive", Progressive Insurance, retrieved February 16, 2020. https://www.progressive.com/auto/ discounts/snapshot/
- 13 "'Powerful Predictiveness' May Be Key to Reversing Commercial Auto", Claims Journal, February 12, 2020. Losses https://www.claimsjournal. com/news/national/2020/02/12/295065.htm
- 14 "Why Noblr is One of the Most Exciting New Auto Insurers", TrueMotion, June 27, 2019. https://gotruemotion.com/blog/why-noblris-one-of-the-most-exciting-new-auto-insurers/
- 15 "2019 Global FS Consumer Study Insurance", Accenture, June 26, 2019. https://www.accenture.com/us-en/insights/insurance/ consumer-study-2019
- 16 "The Mojo Experiment Was a Success. Now It's time for the Next", TrueMotion, July 22, 2019. https://gotruemotion.com/blog/the-mojo-experiment-was-a-success-now-its-time-for-the-next/
- 17 "Prudential Has Acquired Insurtech Assurance for \$2.3 Billion", Business Insider, September 9, 2019. https://www.businessinsider. com/prudential-acquires-assurance-for-hefty-price-2019-9?IR=T
- 18 "MAPFRE Launches Savia in Spain, a Digital Health Services Platform That Allows Users to Take Control of Their Health", February 20, 2019. https://noticias.mapfre.com/en/mapfre-launchs-savia-spain/
- 19 "Toggle Launch Marks Arrival of a Reimagined Insurance Brand Built for Digitally-Powered Consumers", PR Newswire, November 12, 2018. https://markets.businessinsider.com/news/stocks/toggle-sm-launch-marks-arrival-of-a-reimagined-insurance-brand-built-for-digitally-powered-consumers-1027717571
- 20 "AXA XL Teams Up with Contguard to Launch Connected Cargo in France", AXA XL, April 11, 2019. https://axaxl.com/press-releases/axaxl-teams-up-with-contguard-to-launch-connected-cargo
- 21 "Insurance Trend #3: Smart Automation", EFMA, January 6, 2020. https://www.efma.com/article/detail/32037
- 22 "Open Sourcing BERT: State-of-the-Art Pre-training for Natural Language Processing", Google Al blog, November 2, 2018. https://ai.googleblog.com/2018/11/open-sourcing-bert-state-of-art-pre.html

- 23 "Baidu's Optimized ERNIE Achieves State-of-the-Art Results in Natural Language Processing Tasks", Baidu research website, July 30, 2019. http://research.baidu.com/Blog/index-view?id=121
- 24 "Al-Native Fraud Detection for the Global Insurance Industry", Shift Technology, retrieved March 3, 2020. https://www.shift-technology. com/wp-content/uploads/2019/09/Shift\_Force\_2Pager\_EN\_RGB-1.pdf
- 25 Shift Technology, retrieved March 3, 2020. https://www.shift-technology.com/p-c/
- 26 "HoloLens 2: inside Microsoft's new headset", The Verge, February 24, 2019. https://www.youtube.com/watch?v=6lxGU66w0NM
- 27 "New HoloLens 2 gives Microsoft the edge in the next generation of computing", Microsoft Innovation Stories, February 24, 2019. https:// news.microsoft.com/innovation-stories/hololens-2/
- 28 "Interpretable Credit Application Predictions with Counterfactual Explanations", arXiv.org, November 16, 2018. https://arxiv.org/ abs/1811.05245
- 29 Lemonade, retrieved February 17, 2019. https://www.lemonade.com/
- 30 "Al for Claims Processing and Underwriting in Insurance A Comparison of 6 Applications", Emerj, March 5, 2019. https://emerj. com/ai-sector-overviews/ai-for-claims-processing-and-underwriting-in-insurance/
- 31 "Global AI Insurance Premiums to Exceed \$20bn by 2024", Juniper Research, August 13, 2019. https://www.juniperresearch.com/press/ press-releases/global-ai-insurance-premiums-exceed-20-bn-2024
- 32 "Internet of Things Connected Devices Installed Base Worldwide from 2015 to 2025", Statista, November 27, 2016. https://www.marketwatch. com/press-release/internet-of-things-market-2019-global-industrygrowth-size-share-demand-trends-and-forecasts-to-2026-2019-11-22
- 33 "Internet of Things Market 2019: Global Industry Growth, Size, Share, Demand, Trends and Forecasts to 2026", MarketWatch, November 22, 2019. https://www.marketwatch.com/press-release/internet-of-things-market-2019-global-industry-growth-size-share-demand-trends-and-forecasts-to-2026-2019-11-22
- 34 Generali Jeniot, retrieved February 16, 2020. https://generali-jeniot.it/

- 35 "GARI, an aggregator of innovative services", Paysan Breton, March 15, 2019. https://www.paysan-breton.fr/2019/03/gari-un-agregateur-deservices-innovants/
- 36 "Why Farmers Still Insist on Buying Really Old Tractors", Popular Mechanics, January 9, 2020. https://www.popularmechanics.com/ technology/a30449069/farmers-buying-old-tractors/
- 37 "5 Reasons Your Car Insurance Rates May Be Rising", Personal Finance, February 21, 2020. https://www.businessinsider.com/why-carinsurance-rates-rise-increase?IR=T
- 38 "Industrial Robot Cost Declines Should Trigger Tipping Points in Demand", ARK Invest, April 17, 2019. https://ark-invest.com/research/ industrial-robot-cost-declines
- 39 "Robots and the Workplace of the Future", InternationalFederation of Robotics, March 2018. https://ifr.org/downloads/papers/IFR\_Robots\_ and\_the\_Workplace\_of\_the\_Future\_Positioning\_Paper.pdf
- 40 "Industrial Robotic Arms Race Leaves Experts Asking 'What Manufacturing Slowdown'?", Forbes, January 9, 2019. https://www. forbes.com/sites/richblake1/2019/01/09/industrial-robotic-arms-race-leaves-experts-asking-what-manufacturing-slowdown/#4508f4144278
- 41 "What's Next for Amazon Scout?", The Amazon blog, August 6, 2019. https://blog.aboutamazon.com/transportation/whats-next-for-amazon-scout
- 42 "TyBot Is An Autonomous Rebar Tying Robot That Delivers Huge Productivity Gains", Equipment World, February 14, 2020. https://www.equipmentworld.com/tybot-is-an-autonomous-rebartying-robot-that-delivers-huge-productivity-gains-video/
- 43 "Robots Are Coming to Work. Are They Safe?", ZDNet, October 10, 2017. https://www.zdnet.com/article/robots-are-coming-to-work-arethey-safe/
- 44 "Taking Control: Robots and Risk", Lloyd's and University of Surrey, 2019. https://exeterindex.org/wp-content/uploads/Robotics\_2019.pdf
- 45 "Airware Partners with Insurance Carrier to Boost Drone Inspections", Drone Life, July 2, 2018. https://dronelife.com/2018/07/02/airware-partners-with-insurance-carrier-to-boost-drone-inspections/

- 46 "Flock Enterprise Makes Drone Insurance for Larger Enterprises That Much Easier", Commercial UAV News, July 8, 2019. https://www.commercialuavnews.com/europe/flock-enterprisedrone-insurance-enterprises
- 47 "Why Is Tesla Selling Insurance and What Does It Mean for Drivers?", Yahoo Finance, February 6, 2020. https://finance.yahoo.com/news/ why-tesla-selling-insurance-does-134056575.html
- 48 "Tokio Marine Licenses Metromile Claims Technology", Digital Insurance, February 12, 2020. https://www.dig-in.com/news/tokiomarine-licenses-metromile-claims-technology
- 49 "Allianz is Partnering with Microsoft to Drive Insurance Industry Innovation", Business Insider, November 18, 2019. https://www. businessinsider.com/allianz-inks-deal-with-microsoft-for-insurance-industry-innovation-2019-11?IR=T
- 50 "Fires, Storms and Floods Cost \$150 Billion in 2019", CNN Business, January 8, 2020. https://edition.cnn.com/2020/01/08/business/ munich-re-climate-change-natural-disasters/index.html
- 51 "Climate Change Adaptation Must Happen at Scale: Swiss Re's Scotti at Davos", Reinsurance News, January 27, 2020. https://www.reinsurancene.ws/climate-change-adaptation-must-happen-at-scale-swiss-res-scotti-at-davos/
- 52 "Farmers Insurance and Talespin Announce Collaboration on Leadership and Communication Skills Training with Al-Powered Virtual Human Technology", PR Newswire, May 1, 2019. https://www. prnewswire.com/news-releases/farmers-insurance-and-talespinannounce-collaboration-on-leadership-and-communication-skillstraining-with-ai-powered-virtual-human-technology-300840739.html
- 53 "2019 InsurTech Investment Reaches All-Time High with One-Third of Historic Total Almost \$2 Billion Invested in Q4 Alone", AlThority, February 7, 2020. https://www.aithority.com/technology/2019-insurtech-investment-reaches-all-time-high-with-one-third-of-historic-total-almost-2-billion-invested-in-q4-alone/
- 54 "USAA's Latest Customer Experience, Insurtech Innovation: An AI Collaboration With Google Cloud", Forbes, October 14, 2019. https://www.forbes.com/sites/micahsolomon/2019/10/14/usaas-latest-ai-powered-customer-experienceinsurtech-innovation-is-a-collaboration-with-google-cloud/#43653f2f2347

- 55 "How USAA Bakes Customer Experience Innovation Into Its Company Culture", Forbes, September 30, 2018. https://www.forbes.com/sites/ micahsolomon/2018/09/30/how-to-build-a-culture-of-customerexperience-innovation-the-usaa-way/#3b19e7592378
- 56 "Bringing Innovation to The Next Level", AXA, January 24, 2019. https://www.axa.com/en/newsroom/news/bringing-innovation-to-the-next-level
- 57 "Study by The Institutes RiskStream Collaborative Reveals Blockchain Applications Could Save Insurance Industry Millions", The Institutes RiskStream Collaborative, August 13, 2019. https://www.theinstitutes. org/about-us/media-center/articles/study-institutes-riskstreamcollaborative-reveals-blockchain











uthors

#### **AUTHORS**

#### **SUBJECT MATTER EXPERTS**



Abizer Rangwala
Managing Director – North America,
abizer.a.rangwala@accenture.com



Andrew Starrs
Senior Managing Director – Europe,
andrew.starrs@accenture.com



Emmanuel Viale\_
Managing Director –
European Accenture Technology Labs,
emmanuel.viale@accenture.com

#### **INSURANCE SECTOR LEADERSHIP**



Daniele Presutti
Managing Director – Europe,
daniele.presutti@accenture.com



Jim Bramblet
Managing Director –North America,
james.w.bramblet@accenture.com



**Kenneth Saldanha**Managing Director – Global,
kenneth.i.saldanha@accenture.com



Naoyuki Shibata\_ Managing Director - Growth Markets, naoyuki.shibata@accenture.com

#### **About Accenture**

Accenture is a leading global professional services company, providing a broad range of services in strategy and consulting, interactive, technology and operations, with digital capabilities across all of these services. We combine unmatched experience and specialized capabilities across more than 40 industries powered by the world's largest network of Advanced Technology and Intelligent Operations centers. With 505,000 people serving clients in more than 120 countries, Accenture brings continuous innovation to help clients improve their performance and create lasting value across their enterprises. Visit us at

www.accenture.com

#### **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. For more information, visit www.accenture.com/research



regulatory, audit, or tax advice. Readers are responsible for obtaining such advice from their own legal counsel or other licensed professionals.