Digital insurance in 2018:

Driving real impact with digital and analytics

December 2018

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Features

COMMENTARY

Introduction

Digital technologies are fundamentally changing how businesses across all industries operate and serve their customers—and insurance is no exception. In recent years, the industry has started to change. We see inspiring stories of technology transforming a given task or function—but often these are more anecdotal and piecemeal than part of a larger, coordinated, and strategic vision.

We believe the industry is now in a position where executives can embark on a digital journey to achieve real impact. The question is no longer "if" digital technologies will change the industry, it's "how" and "when." The challenge—or opportunity—for incumbents in the digital transformation lies in determining the concrete steps they should be taking *right now* to join (if not lead) the digital revolution while maximizing existing assets.

Last year, our digital compendium, *Digital disruption in insurance: Cutting through the noise*, examined how carriers could create a comprehensive framework for digital transformation. These insights are still relevant today, and we encourage you to read (or reread) this compendium for a holistic approach to digital change. This new collection of articles builds on our compendium and extends the discussion to two areas: reinventing the core of insurance and pushing our thinking on disruption and what the future holds for insurance.
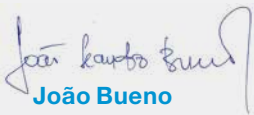
We see insurers moving away from shiny objects and toward measurable impact. Successful carriers are conducting pilots in clearly prioritized parts of the value chain, such as underwriting and claims, and are preparing to scale successful applications across the enterprise.

Furthermore, digital technologies are giving rise to ecosystems that could allow insurers to extend their reach or to partner with companies in other industries. Carriers have an opportunity to differentiate themselves by providing an excellent customer experience across multiple points of contact. At the same time, shareholders also expect to earn their fair share of the digital dividend. The outlook is positive for carriers that move quickly and decisively in a winner-take-all world.

Technology and analytics are critical enablers of these efforts. But there is more work to do to align strategy, processes, and talent with a digital road map. As operations become increasingly automated and analytics enables faster decision making, the future workforce will also become more tech-savvy and shift to comprise more data analysts. Many unknowns remain. Innovation is accelerating and radically reshaping all areas of the organization; how exactly the transformation will unfold or how different parts of the value chain will ultimately be reshaped is on all of us to discover (or shape).

Digital and analytics continue to change how we live, work, and play. They will also be the driving force for the future of insurance—which we believe will be a bright one. This collection of articles seeks to paint a compelling picture of the industry's future and suggests specific strategies that insurance executives should consider when plotting their next move in the digital space.

We hope you enjoy the reading and look forward to hearing from you!

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Claims in the digital age:
How insurers can get started

Attackers are transforming the competitive landscape and elevating customer expectations, so insurance companies must integrate digital technologies into their operations to keep pace. Claims should be a top priority.

Pia Brüggemann, Tanguy Catlin, Jonas Chinczewski, Johannes-Tobias Lorenz, and Samantha Prymaka

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The insurance industry is in the midst of a radical, digitally infused shake-up. Customers are embracing digital channels, and technologies such as the connected car, smart home solutions, and artificial intelligence (AI) have ushered in an era of new products built on data and analytics. Attackers—insurers with pure-play digital business models, such as Lemonade in the United States, Youse in Latin America, or Nexible in Europe—are using digital applications such as chatbots to turn the process of buying a policy or filing a claim into a fast, simple, and satisfying experience. This approach is a far cry from the analog, and often frustrating, processes of traditional insurers.

With new attackers on the hunt for customers, incumbents must move quickly to integrate digital technologies into their operations. For the property and casualty (P&C) industry, digitizing the claims function holds tremendous potential. To capture the value of digital,[1] P&C claims functions must embark on a transformation to become a customer-centric, digitally enabled organization that excels in the three foundational areas of claims—customer experience, efficiency, and effectiveness. In our experience, a digital claims function can boost performance on all three KPIs and generate significant value (Exhibit 1).

Exhibit 1   **Digital claims transformations generate impact across all of claims' foundational key performance indicators.**

Customer experience
Increase customer satisfaction score by
~20% points

Efficiency
Reduce claims expenses by
25–30%

Effectiveness
Improve claims handling accuracy[1]

✚
Improved employee and intermediary satisfaction

[1] Improving accuracy aims at reducing both overpayments and underpayments of indemnity obligations. Next to reducing overpayments, also reducing underpayments can lead to an overall reduction of loss costs through reduced processing times, higher customer satisfaction, and lower incidence of claim disputes and litigation.

So where to start? A true digital redesign of claims integrates a relentless focus on the customer with a value-driven approach. Insurers should adopt a customer-centric mind-set and undertake an end-to-end reassessment of their customer interactions—starting with the most relevant customer journeys (see sidebar "The claims customer journey"). For maximum impact, claims functions should develop a digital value proposition and an aspirational future state for a digital claims function first and then prioritize into a transformation road map. This article examines the five essential elements needed to digitize and transform claims.

Elements of a successful digital claims transformation

In our experience, successful digital transformations in claims begin with developing a new value proposition that sets a high-level aspiration and pursuing an end-to-end digitization of the claims customer journey.[2] The development of a truly innovative customer journey can be achieved by integrating with three other areas—AI and digital technologies, the digital integration of the claims ecosystem, and a new digital operating model (Exhibit 2). Together, these five elements give

The claims customer journey

As companies have attempted to understand the succession of customer interactions across traditional and digital channels, the concept of the customer journey has gained more prominence.[1] Customer journeys comprise a succession of touch points and are typically defined by a specific customer objective. Examining interactions with customers as part of a journey rather than a series of individual touch points allows insurers to better understand how different parts of the organization must work together to provide a seamless experience.

In the insurance industry, discrete customer journeys can be triggered, for example, by the need to buy a policy, change an address, or submit and resolve a claim. For submitting and resolving a claim, the journey starts even before the claim is submitted, as an insurer can take steps to prevent an accident or damage. When a customer does submit a claim, the first notification of loss (FNOL) initiates the claims process, which further consists of claims management, loss assessment and repair, and claims settlement. Digitizing the claims process involves redesigning

the process flow from the customer perspective and applying technology to facilitate each step in the back-end of the customer journey. In this way, insurers can be more responsive to customer requests, automate low-value transactions, and expedite the claims process. Throughout this article, we will revisit this customer journey to demonstrate how the enabling elements support it at each step.

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[1] Nicolas Maechler, Kevin Neher, and Robert Park, "From touch points to journeys: Seeing the world as customers do," March 2016, McKinsey.com.

→ Watch the video feature, "What is customer journey?," on mckinsey.com.

Exhibit 2   **Successful digital claims transformations integrate five elements.**

New digital value proposition

- Customer experience excellence
- Analytics-driven claims handling and automation
- Claims prevention services
- Value-added services
- Continuous improvement from customer feedback

End-to-end digitization of the customer journey

Digital claims prevention	Digital first notification of loss (FNOL)	Automated claims management	Digital loss assessment and repair	Automated settlement

Artificial intelligence and digital technologies

Digital claims ecosystem integration

New digital operating model

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management the strategy and tools to both transform claims into a digital function and improve performance on all of the three foundational KPIs.

New digital value proposition for claims

For the digital age, the claims value proposition—that is, the value an insurer can provide to its customers through the claims process—needs to go beyond traditional after-the-fact claims management. The value proposition sets the aspirational goal of offering excellent omnichannel customer experience supported by intuitive digital processes.[3] Insurers should aim to adopt a faster, analytics-driven approach to claims handling and fully automate the claims handling processes for clear and simple cases. For example, Lemonade has worked to redefine the customer experience with an innovative, chatbot-based FNOL system that creates automated claims payouts within seconds.[4] In addition to working actively with customers to prevent claims, insurers should provide services that add value for and delight customers and draw on customer feedback to continually improve service offerings, usability, and performance.

Instilling this upgraded value proposition within the organization is an often-underestimated element of a digital transformation. Top and middle management in claims should become champions for the new value proposition; otherwise, they risk finding themselves halfway through the digital transformation without the necessary company-wide buy-in to stay the course.

End-to-end digitization of the claims customer journey

At the core of the claim function's digital transformation is a redesign of the claims customer journey. There is no silver bullet interaction that ensures customer satisfaction, but a successful redesign typically involves considering processes from the customer perspective and optimizing back-office processes accordingly to provide simple and fast claims services.

Insurers should start with an "everything is possible" mind-set to unleash truly transformative ideas. Satisfaction surveys in claims consistently show that customers desire a fast and intuitive process as well as transparency on where they are in the process and what happens next. Accordingly, the digital redesign of a claims journey needs to go much deeper than superficial process improvements. Adeslas, a Spanish company, has worked to complete an end-to-end digitization of their claims journey, implementing features such as multichannel FNOL, automated claims segmentation, and digital claims status tracking.

To determine how digital technologies can unlock value and improve the claims customer journey from start to finish, managers should examine each step of the journey with the following areas in mind and start to develop an aspirational future state for claims that is unconstrained by potential short-term, technological barriers:

Product simplification

Customers want simple and fast digital interactions, but complex coverage details that include many specific exceptions can create barriers. Large numbers of legacy products with different coverage details also make it difficult to implement and maintain the technology systems necessary to improve efficiency. A carrier should find ways to simplify products and reduce product generations to ease the development of fully digital customer journeys.

Insurers have the opportunity to shift simple, routine transactions from claims handlers to intermediaries, such as tied agents and brokers, or customers themselves.

Customer and intermediary self-service

Insurers have the opportunity to shift simple, routine transactions from claims handlers to intermediaries, such as agents and brokers, or customers themselves. Examples include an intuitive online tool for FNOL and an online self-scheduling tool for claims adjuster appointments. As with any self-service tool, insurers must precisely define the necessary information, for example, where the customer can find his or her policy number. They must also build in support in case customers need it, such as online-chat with a claims handler or easy-to-find FAQs. Further, seamless handoffs across channels are critical: customers who start their journey online but want to talk to a claims handler or agent halfway through should be able to do so without having to repeat steps or information. This functionality requires that all system interfaces follow an identical structure and logic.

Intelligent case management

After FNOL and throughout the process, handlers typically evaluate claims cases manually to decide on appropriate next steps, such as scheduling an adjuster appointment or providing information about direct repair programs with local repair shops. Supporting the entire journey with automated, intelligent case management is critical to establishing truly end-to-end digital customer journeys. With the help of AI, a digital evaluation automatically identifies the best next step in a specific customer journey, reduces manual touch points, and significantly speeds up the claims process. For example, in a simple claim, this technology can allow a customer to schedule an appointment with a repair shop as part of the FNOL. Enriching these journeys with insights from behavioral economics can help customers to follow the most satisfying and efficient paths in their claims journeys.

Frontline and back-office process digitization

Claims handlers and adjusters manually carry out often-complex tasks, leading to significantly divergent results. Digital tools and systems can simplify and standardize manual processes. For example, tablet-based calculation tools for home damages can help claims adjusters estimate the value of losses faster and more accurately and consistently—even if this means that indemnity payments may increase for certain cases. Standardized reports and calculation methods will leave customers with a comprehensive overview of how their claim was calculated. This results in higher customer satisfaction and a leaner process with reduced follow-ups and recalculations or litigation.

Back-office automation

Insurers can achieve the greatest efficiency gains by fully automating back-office processes.[5] Customers benefit significantly from faster claims processing—for instance, through automated verification of car repair estimates and invoices as well as automatic reimbursements as soon as the repair invoice has been verified. In addition, digital tools can support and assist the decisions of claims handlers, leading to better outcomes.

Communication

Providing customers with the necessary information in digital channels offers customers the sense of control they desire. The quality of communication can raise customer awareness and usage of digital self-service tools throughout their journey. One US insurer, for example, implemented a digital case-tracking tool and reduced the number of status request calls by more than 50 percent.

By examining each of these areas, claims functions can start to rethink the claims customer journey and back-office processes.[6] This approach should be synthesized into an aspirational future state outlining the digital assets needed to achieve the ideal state (Exhibit 3, on pages 8–10). Claims leaders should prioritize these digital assets based on the value they can generate. For example, digitizing invoice reviews and automating payment processing for clear and simple cases often significantly reduces processing time.

Enabling truly innovative customer journeys

Offering truly innovative customer journeys requires a combination of AI and upgrades to technology platforms as well as the digital integration of partners in the claims industry ecosystem. A greater understanding of these elements and the digital operating model needed to bring them to life can help claims managers make the proper investments.

AI and digital technologies

Digital customer journeys require not only the AI-enabled automation of decisions traditionally made by claims handlers but also an IT architecture that supports real-time digital interactions with customers (see sidebar "Defining AI," on page 11).[7] While AI should ideally support the entire customer journey, it can generate significant value by automating claims management. Ageas UK, for instance, is working with Tractable to integrate the latest AI and picture recognition applications to segment claims cases in real time.[8] The following three modules lay the basis for real-time engagement:

Prediction of claims characteristics

AI can help infer as-yet-unknown characteristics of a claim, such as the likelihood of fraud, total loss, or litigation, to speed up its downstream handling. An European insurance carrier, for example, significantly improved its fraud detection accuracy implementing an AI-based fraud detection system resulting in an 18% increase in fraud prevention as well as productivity gains in fraud investigation. And leading players in automotive can estimate a vehicle's damage value in real time at FNOL based on customer pictures or a damage description, using the latest advances in AI and picture recognition.

Claims segmentation

AI algorithms can help segment claims cases by complexity using factual and predicted claims characteristics. Based on this segmentation, claims can be assigned to specific downstream handling processes—either one of the fully digital self-service journeys (such as selecting a direct repair shop in self-service) or a claims handler for more complex cases (for example, with high litigation risk).

Supported claims handling

Going beyond the first two modules, AI can support in finding the optimal claims handling process for a specific claim: A global insurance carrier, for example, leveraged AI to derive business rules to

Exhibit 3

Digitizing the many types of claims customer journeys requires a clear set of digital assets (1/3).

Julia
58 years old
A rock cracked her car's windshield.

Julia receives a push message—"how to prevent glass damage during winter months."

Julia notifies her insurer about the glass damage via a simple, intuitive online notification on her phone.

While in FNOL, Julia's claim is analyzed and fraud checked in real time and classified as a simple claim.

After FNOL, Julia is directly offered to select a repair appointment with a nearby repair shop. Julia's car is picked up at her office for repair.

Julia does not have to worry about any bills. Her insurer digitally receives the repair invoice, which is automatically checked and paid.

Digital claims prevention	Digital first notification of loss (FNOL)	Automated claims management	Digital loss assessment and repair	Automated settlement

Relevant digital assets per customer journey

☐ *Digital assets for customer journey above*

IoT-based driving behavior coaching

Push notifications with safety warnings

Automated FNOL, eg, via telematics

Intuitive, digital FNOL for customers

Simple, digital FNOL for intermediaries

Automated, intelligent case management

Automated fraud detection

Digital, real-time progress tracking

Digital, self-service damage assessment

Digital, appraiser-appointment selection

Digital, repair shop-appointment selection

Digital offering of cash settlement

Digital offering of replacement of damaged items

Automated invoice verification

Automated payment processing

Scott
39 years old
Parking his car, Scott hit his garage wall.

Scott's smartphone reminds him to keep track of speed limits.

Scott's car automatically notifies all relevant details to his insurer.

Scott's claim is analyzed, fraud-checked, and identified as only a minor damage claim.

Scott receives a message from his insurance carrier to upload photos of the damage via an attached web app link.

Scott's damage has been automatically calculated based on his photos.

Now he is offered a cash settlement via a push message.

Scott accepts and within minutes receives the money in his PayPal account.

Digital claims prevention	Digital first notification of loss (FNOL)	Automated claims management	Digital loss assessment and repair	Automated settlement

Relevant digital assets per customer journey

☐ *Digital assets for customer journey above*

IoT-based driving behavior coaching	Automated FNOL, eg, via telematics	Automated, intelligent case management	Digital, self-service damage assessment	Digital offering of cash settlement

Push notifications with safety warnings

Intuitive, digital FNOL for customers

Simple, digital FNOL for intermediaries

Automated fraud detection

Digital, real-time progress tracking

Digital, appraiser-appointment selection

Digital, repair shop-appointment selection

Digital offering of replacement of damaged items

Automated invoice verification

Automated payment processing

Betty
24 years old
A lightning strike in Betty's neighborhood caused her WLAN router to fail.

Betty gets a push message warning her about an upcoming lightning storm.

Betty submits her claim via a simple, intuitive online notification on her tablet.

Betty's claim is analyzed, fraud-checked, and identified as a direct replacement claim in real time.

Right after FNOL, Betty enters the brand and type of WLAN router she has by taking a photo of the router's nameplate.

A few days later, Betty receives a new WLAN router via mail.

For Betty, her claim is resolved. She does not need to worry about any invoices or payments.

Digital claims prevention	Digital first notification of loss (FNOL)	Automated claims management	Digital loss assessment and repair	Automated settlement

Relevant digital assets per customer journey

☐ *Digital assets for customer journey above*

Digital claims prevention	Digital first notification of loss (FNOL)	Automated claims management	Digital loss assessment and repair	Automated settlement
IoT-based driving behavior coaching	Automated FNOL, eg, via telematics	**Automated, intelligent case management**	**Digital, self-service damage assessment**	Digital offering of cash settlement
Push notifications with safety warnings	**Intuitive, digital FNOL for customers**	**Automated fraud detection**	Digital, appraiser-appointment selection	**Digital offering of replacement of damaged items**
	Simple, digital FNOL for intermediaries	Digital, real-time progress tracking	Digital, repair shop-appointment selection	Automated invoice verification
				Automated payment processing

identify clear and simple claims cases suitable for an automated process. An Italian insurance carrier is even going further and developed a "best-match" routing approach to find the best-experienced claims handler for a specific case and this way significantly improves its claims handling accuracy. (Exhibit 4).[9]

Integrating real-time customer interactions and insights from AI modules into customer journeys poses vastly different requirements for the IT architecture.[10] While in the past, online interactions with the customer were only one way (for example, saving the details of an online FNOL into the claims database), interactive digital customer journeys require real-time, bidirectional interactions. A new IT architecture concept—generally referred to as two-speed architecture—is required to complement the stability of the core claims database with responsive features on the front end. A middle layer connects the traditional, slow claims database with customer-facing interfaces and runs AI modules. This functionality connects the information a user submits with insights from AI in real time to populate online forms and offer direct feedback to the customer.

Defining AI

Artificial Intelligence—that is, intelligence exhibited by machines—is brought one step closer by recent advances in algorithms (for example, machine and deep learning).[1] Still, the now-evolving AIs are exclusively "applied AIs." In contrast to generalized AI, they are highly specialized on certain tasks and can learn and operate only within this predefined area. Applied AI is also often referred to as advanced analytics.

Possible applications for applied AI range from uncovering hidden patterns from structured data (for example, the claims database) to harnessing image recognition (for example, Tractable's picture-based claims segmentation) or natural language processing (such as Amazon Alexa or Rasa's enterprise AI platform for chatbots).[2]

→ Watch the video feature, "What's driving today's progress in AI?," on mckinsey.com.

This video is one in a five-part *Ask the AI Experts* series that answers top-of-mind questions about the technology.

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[1] Gaurav Batra, Andrea Queirolo, and Nick Santhanam, "Artificial intelligence: The time to act is now," January 2018, McKinsey.com.
[2] Michael Chui, James Manyika, and Mehdi Miremadi, "What AI can and can't do (yet) for your business," January 2018, McKinsey.com.
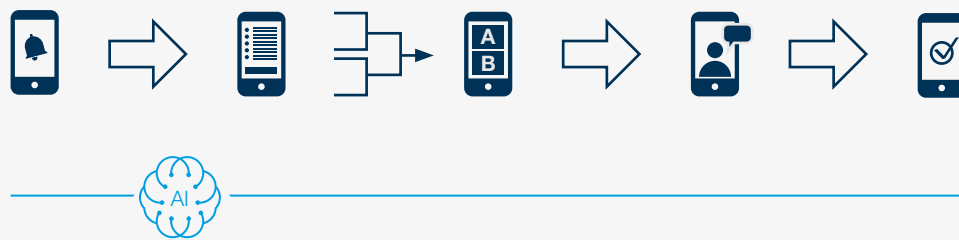
Exhibit 4   Artificial-intelligence modules enable truly innovative customer journeys.

End-to-end digitization of the customer journey

Digital claims prevention	Digital first notification of loss (FNOL)	Automated claims management	Digital loss assessment and repair	Automated settlement

Analysis of IoT sensor data to identify high-risk situations (eg, safest route or parking space prediction)

Claims event prediction based on IoT sensor data

Biometric customer authentication

Chatbot-based FNOL and digital point of contact

Processing time prediction

Real-time prediction of claims characteristics

Real-time segmentation of claims by complexity

Supported claims-handling for optimal case management

Automated damage-value estimation based on picture recognition or sensor data in combination with invoice data

Claims assessor route optimization

Real-time invoice analysis for correction potential based on past invoices and spare-parts catalogs

Subrogation and salvage opportunity identification

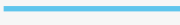## Digital integration of the claims ecosystem

For competitive differentiation and ownership of the customer in a claims case, insurance carriers need to proactively manage more (ideally all) processes related to a customer's claim—also those involving third parties. For example, the German claims solution provider Control€xpert digitally integrates with insurance carriers and repair shops to automate its invoice-verification process. Other providers offer appointment scheduling with repair shops and rental car companies. By providing a fully integrated digital experience, claims functions can become the true and sole owners of customer contact in a claims case.
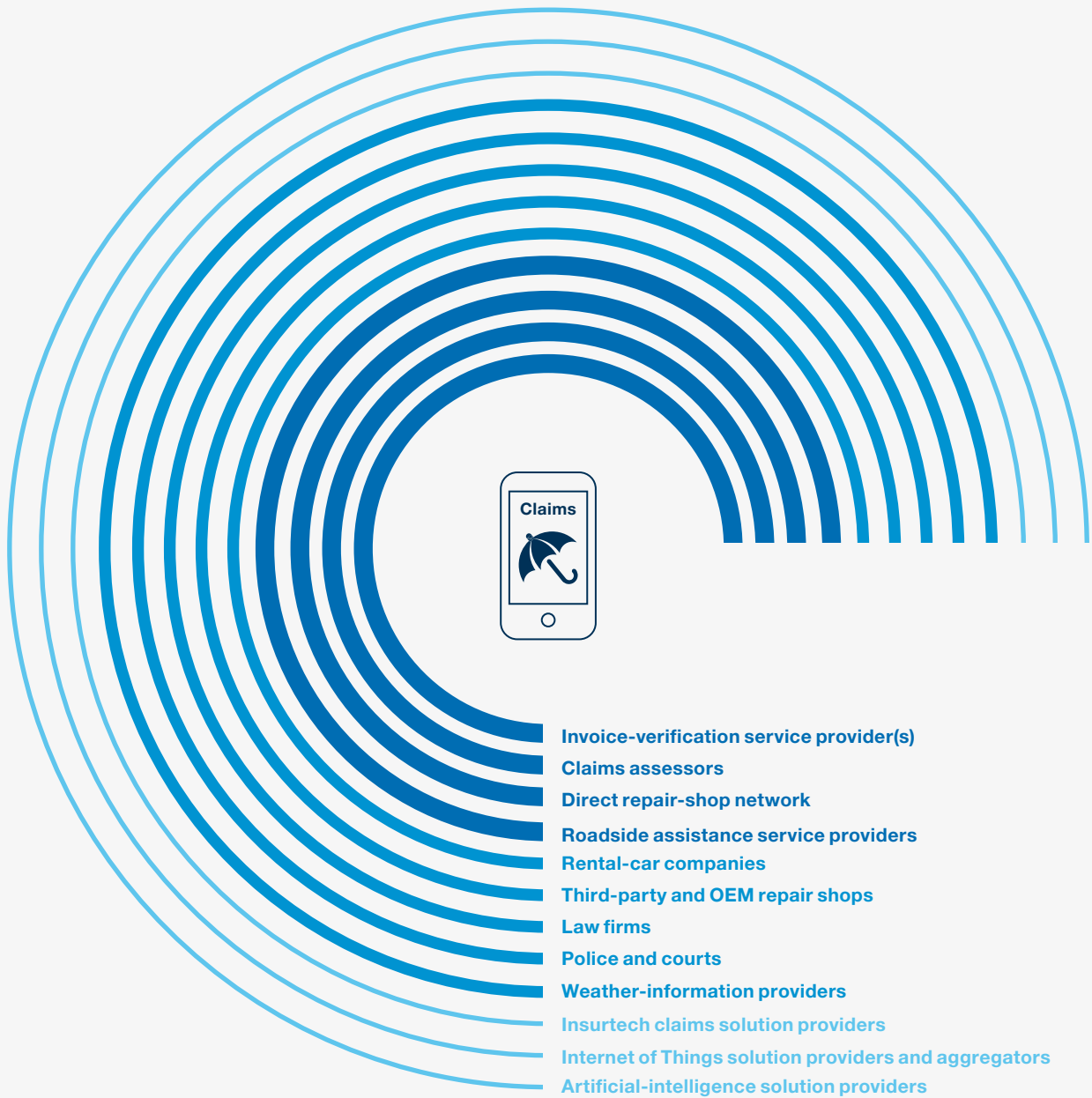
To combine such offers into efficient, digital, self-service journeys, insurance carriers need to digitally integrate with relevant players in the larger claims ecosystem (Exhibit 5). In addition, a digital integration

Exhibit 5 A digital integration of the claims ecosystem helps to maintain customer ownership and streamline customer journeys.

Digitally integrate via common ecosystem platform

Connect to ecosystem platform

Institutionalize dialogue and adapt existing technologies

Claims

Invoice-verification service provider(s)

Claims assessors

Direct repair-shop network

Roadside assistance service providers

Rental-car companies

Third-party and OEM repair shops

Law firms

Police and courts

Weather-information providers

Insurtech claims solution providers

Internet of Things solution providers and aggregators

Artificial-intelligence solution providers

can vastly improve efficiency in communication between the ecosystem parties and speed the claims processing for the customer. As this type of digital integration is currently rare, a carrier can become the ecosystem integrator, harnessing the best of the ecosystem for its customers.

Given the complexity of this integration, carriers should prioritize pursuing digital interfaces with the players that are involved in a high number of claims cases. In auto insurance, for example, these players would be roadside assistance services, claims assessors, and repair-shop networks, as well as invoice control service providers. Insurers don't need to start from zero. In many markets, insurtechs have started to lead the digital integration,[11] for example, by digitally connecting car repair shops and enabling digital cost-estimate and invoice transmission. Insurers should explore partnerships with existing offerings to further digitize and integrate the claims ecosystem.

New operating model for the digital age

A successful digital transformation radically reinvents the claims customer journey with the help of AI, digital technologies, and the claims ecosystem. To support these efforts, the claims department needs to pursue deep, cross-functional collaboration with other functions such as marketing and IT. Bringing the transformation to life requires new roles, including data scientists, customer journey "owners," and user experience designers, as well as a digital way of working, which must be instilled in the organization. This approach involves learning by doing, which takes time to implement but can be jump-started in the following ways:

- The digitization of each customer journey should start with a short design phase. Ideally, design thinking techniques are used to iteratively develop the best possible end-to-end customer journey. This process directly integrates consumer feedback on ideas and concepts.

- Successful players quickly move from the drawing board to prototype development. Progress is best made with agile development methods, such as creating and improving a minimal viable product in ten-day intervals and then quickly evolving the prototype. Early customer testing and the resulting feedback are continually incorporated into the development of digital channels and solutions to ensure the customer's experience of the evolving digital claims journey continually surpasses expectation.

As this new approach can represent a substantial change, success depends on deeply integrating a digital way of working into the entire organization.[12] For example, Allianz's Global Digital Factory launched a digital delivery hub to achieve change through digital projects, such as developing claims solutions, across its international operations. Successful organizations tap joint cross-functional management teams to lead the effort, develop experts in all digital methods, and provide intensive coaching for all relevant employees.

■   ■   ■

Purely digital industry attackers have raised the bar for performance by showcasing simple and intuitive customer interfaces, making it imperative for incumbent carriers to radically redesign their claims customer journeys. Those insurers that move swiftly and decisively to transform the claims function can equip themselves to deliver against the new, higher customer expectations—while increasing efficiency and improving claims handling accuracy in the process. ■

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[1] In this article, digital refers to an organization's efforts to use technology to digitize customer journeys and interfaces as well as automate back-end processes.

[2] Tanguy Catlin, Johannes-Tobias Lorenz, Bob Sternfels, and Paul Willmott, "A roadmap for a digital transformation," March 2017, McKinsey.com.

[3] Ido Segev and Amy Vickers, "What the new world of insurance could look like," August 2017, McKinsey.com.

[4] Paul Sawers, "Lemonade raises $120 million from SoftBank, others to take its chatbot-based insurance service global," VentureBeat, December 19, 2017, venturebeat.com.

[5] Sanjay Kaniyar, Chandresh Kothari, and Brandy Smith, "Automation at scale is driving transformative change across insurance," June 2017, McKinsey.com.

[6] Johannes-Tobias Lorenz, Christopher Morrison, Pradip Patiath, and Ido Segev, "Capturing value from the core," March 2017, McKinsey.com.

[7] Federico Berruti, Graeme Nixon, Giambattista Taglioni, and Rob Whiteman, "Intelligent process automation: The engine at the core of the next-generation operating model," March 2017, McKinsey.com.

[8] "UK insurer Ageas uses artificial intelligence to manage motor claims," *Insurance Journal*, May 19, 2017, insurancejournal.com.

[9] This was achieved by reducing both overpayments and underpayments of indemnity obligations.

[10] Krish Krishnakanthan, Jens Lansing, Markus Löffler, and Björn Münstermann, "Modernizing IT for a strategic role," March 2017, McKinsey.com.

[11] Tanguy Catlin, Johannes-Tobias Lorenz, Björn Münstermann, Braad Olesen, and Valentino Ricciardi, "Insurtech— the threat that inspires," March 2017, McKinsey.com.

[12] Tanguy Catlin and Julie Goran, "Building momentum for cultural change," March 2017, McKinsey.com.

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Digital Insurance Forum 2018: Making digital and analytics a reality in insurance

At the Digital Insurance Forum 2018, more than 80 attendees from 12+ countries and 60+ companies discussed five imperatives that will play a central role when rethinking the existing business model.

Johannes-Tobias Lorenz

We are leaving the valley of digital uncertainty. The insurance industry's digital maturity is progressing, and we see leading organizations today creating real impact with digital analytics. According to McKinsey's Digital Quotient, which measures an organization's performance across four key dimensions of digital maturity (strategy, culture, organization, and capabilities), the insurance industry is well on its way toward effecting tangible change with digital technologies. Indeed, the insurance industry outpaces the global average in terms of digital maturity and outranks several other industries, such as automotive and banking, in the race to create real impact (exhibit). This progress is led by the insurance industry's strategy score, which assesses the cohesiveness of an industry's shared digital vision and its short- and long-term goals to meet digital business aspirations.

This is exciting. Despite doomsday anecdotes about the industry, we see the glass half full—yet there is much to be done, especially when it comes to rethinking the insurance business model and institutionalizing digital skills and capabilities. For me, one of the best ways to track the insurance industry's digital transformation is through our annual Digital Insurance Forum, where digital experts and leaders meet to discuss the state of the industry and road ahead.
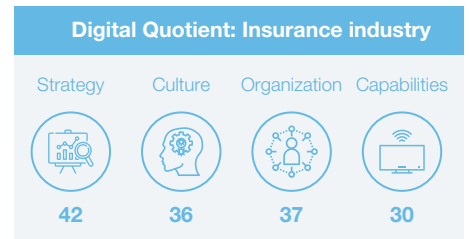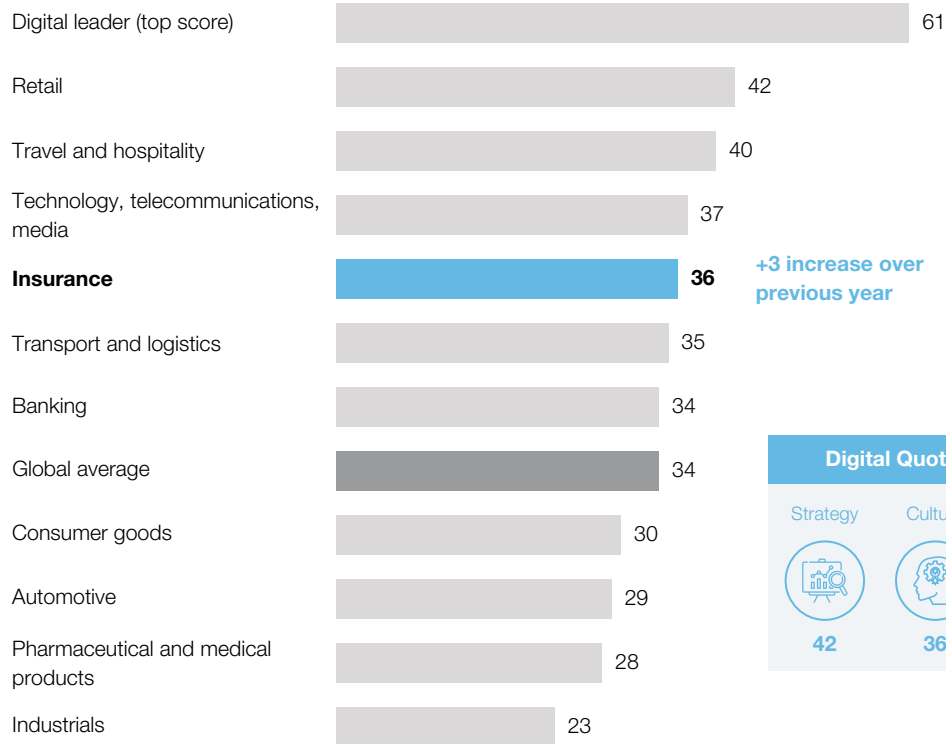
Two years ago, the industry was far from where it is today. Our Digital Insurance Forum theme in 2016 was "Digital Insurance—Reimagining Our Industry," and we talked about the big picture of digital change. At the time, our digital future was presented as a visionary—but fuzzy—picture. A year later, our discussions focused on the lack of visible impact. In many cases, despite all efforts, there were pilot applications but no fundamental changes. This obscurity gave way to our 2017 theme: "Digital Disruption—Cutting through the Noise," in which we looked at defining value beyond the hype.

Today, the industry is in a position where executives can start the journey toward measurable impact. At our forum this year, we discussed five imperatives that will play a central role in rethinking existing business models. In what follows, we will give some insights into each of these moves.

Exhibit

The insurance industry's digital maturity is progressing.

Various industry scores according to McKinsey's Digital Quotient (out of 100)

Category	Score
Digital leader (top score)	61
Retail	42
Travel and hospitality	40
Technology, telecommunications, media	37
Insurance	**36** +3 increase over previous year
Transport and logistics	35
Banking	34
Global average	34
Consumer goods	30
Automotive	29
Pharmaceutical and medical products	28
Industrials	23

Digital Quotient: Insurance industry

Strategy	Culture	Organization	Capabilities
42	36	37	30

Note: Total DQ™ score is calculated on a scale of 0 to 100 as the average of the four dimension scores. Therefore, culture, strategy, capabilities, and organization have the same weight in the calculation of the total DQ™ score. To calculate a dimension score, we average the scores of the management practices that pertain to that dimension.

1. Invest—Make big bets

The biggest question on the journey to seeing results is typically on how bold companies should be in their transformation. Based on extensive research across different industries, we have observed that "real hockey sticks"—sharp growth after a short-term sag—do occur.[1] While most companies observed did not change their relative position over time, about 20 percent of companies significantly outperformed the rest, achieving four times of absolute growth than competitors—earning them reputation as "value creators." What distinguishes these companies is their level of investment. Value creators tend to overinvest significantly in big bets during early phases, often accepting negative economic profit for one to five years, while the rest of the pack optimizes for short-term profitability.

2. Track—Watch digital key performance indicators

Value creators don't just invest significantly in big bets; they also maintain a tight grip of a relevant set of key performance indicators (KPIs). Players such as the DBS Bank (formerly the Development

Bank of Singapore) identified the importance of doubling down on digital processes early on and adapted their KPI tracking accordingly to measure and guide continuous impact. Measuring the right KPIs and linking them back to their operational influencers is crucial.

3. Focus—Implement a stop agenda

Many paths lead toward a digital transformation, but not all will be successful, and pursuing all at the same time will be even less likely to succeed. An important component of a structured transformation approach is deciding not only where to invest but also where not to invest further. Executives must have a "stop agenda" that assigns resources and attention to key aspects of the digital transformation. This typically includes cleaning up project portfolios, reducing business complexity (such as the number of sales partnerships), and streamlining governance.

4. Integrate—Go beyond digital

Transformation approaches must be integrated to achieve an at-scale business model change. A common narrative should support all digital efforts to drive integration across customer experience, journey digitization, cultural change, use cases, and lean management. To rethink the business model, one principal approach needs to combine the (complementary) elements and adapt them to the overall strategy and operational processes.

5. Lead—Move from chief digital officer to chief transformation officer

Around 2012, many companies created chief digital officer (CDO) positions; now we see a maturing of governance along with digital transformations. We are moving from the CDO toward the chief transformation officer (CTO)—a digital transformer who embodies and translates technological change into the broader strategy to prepare an organization for the digital age. A good CTO will focus on key value drivers in advancing a company's digital strategy and should have the full support of the board.

■   ■   ■

There is no short-cut to digital. A digital transformation won't progress in a giant leap or through an abrupt change—and it takes time and commitment. We see the insurance industry climbing out of the valley of uncertainty toward a vision of delivering real impact. Those who act decisively and implement the five imperatives above will be among the leaders. ■

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[1] Martin Hirt, "How to create a real hockey stick strategy," February 25, 2018, McKinsey.com.

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I would like to thank all those who could join us at the Digital Insurance Forum in Berlin this year. We had a great group of more than 80 attendees from 12+ countries and 60+ companies, with a broad mix of traditional insurers, fintechs, and venture capitalists. What's in store next year? We hope you will join us to find out!.

Insurance beyond digital: The rise of ecosystems and platforms

Insurance companies have the opportunity to create new sources of revenue by rethinking their traditional roles and adopting an ecosystem mind-set.

Tanguy Catlin, Johannes-Tobias Lorenz, Jahnavi Nandan, Shirish Sharma, and Andreas Waschto

An ongoing drive toward digitization has put the insurance industry on the verge of a paradigm shift. The pace of change has accelerated thanks to tremendous increases in the volume of electronic data, the ubiquity of mobile interfaces, and the growing power of artificial intelligence. In the early years, companies that digitized were at the forefront of the industry. Today, digitization has permeated every level of the competitive landscape. Society's growing reliance on digital technologies is not only reshaping customer expectations but also redefining boundaries across industries. Insurers cannot avoid this phenomenon: as traditional industry borders fall away, the future of insurance stands to be greatly influenced by platforms and ecosystems.

A platform is a business model that allows multiple participants (producers and consumers) to connect to it, interact with one another, and create and exchange value.[1] The most successful companies in the digital era, including Alibaba, Amazon, and Facebook, were all designed on platform business models. An ecosystem, meanwhile, is an interconnected set of services that allows users to fulfill a variety of needs in one integrated experience. Consumer ecosystems currently emerging around the world tend to concentrate on needs such as travel, healthcare, or housing. Business-to-business (B2B) ecosystems generally revolve around a certain decision-maker—for example, marketing and sales, operations, procurement, or finance professionals.

This article examines the rise of ecosystems and the trend's implications for insurers. To succeed in ecosystems, insurers will have to take a hard look at their traditional roles and business models and evaluate opportunities to partner with players in other industries. They must also understand how ecosystems will shift value pools and change the nature of risk. Adopting an ecosystem mind-set will be an arduous journey for many insurers, but those that understand this evolving landscape can take the first steps to creating new revenue sources.

## Ecosystems will account for 30 percent of global revenues by 2025

Extensive use of digital technologies in everyday life has become the new normal. It is common to vacation in Airbnbs, to hail an Uber from a cell phone, and to order dinner via GrubHub or Seamless. Apple is now much more than a technology manufacturer, and Facebook is a way of life. Customers wake up to a world in which their every need can be addressed through their smartphones. Putting customers at center of every digital activity has not only scaled adoption but also allowed companies to capture previously unimagined value. Seven of the ten largest companies by market capitalization are ecosystem players—Alibaba, Alphabet, Amazon, Apple, Facebook, Microsoft, and Tencent—and that only hints at the power of digital.[2] Uber, founded in 2009, now operates in more than 630 cities across 80 countries,[3] Airbnb amassed an inventory of one million rooms a staggering 50 years faster than Marriott did, and WeWork has sublet ten million square feet of office space globally since its inception in 2010.

Through digital ecosystems, companies are betting big on opportunities that have the potential to realign global markets, thus ushering in an era of "sectors without borders." The benefits of digital ecosystems won't be distributed evenly, however. McKinsey research shows that while digital technology propels some companies to become clear market winners, it depletes corporate earnings and overall value for many others.[4]

By 2025, as this revolution gains speed, McKinsey expects 12 distinctive and massive ecosystems to emerge around fundamental human and organizational needs (Exhibit 1).[5] These 12 ecosystems will account for $60 trillion in revenues by 2025, or roughly 30 percent of all global revenues. The actual shape and composition of these ecosystems will vary by country and region, both because of the effects of regulations and as a result of more subtle, cultural customs and tastes. In this new world, while insurance could be featured as the risk-mitigation service for each of these 12 ecosystems, there's no reason why insurance companies could not constitute their own subecosystems that cater to individuals and institutions (see sidebar "How ecosystems could help cyberinsurance prosper"). The ecosystems most relevant to the insurance industry—and that thus represent the most salient entry points—include mobility, housing, health, wealth protection, and B2B services.

Exhibit 1   **New ecosystems are likely to emerge in place of many traditional industries by 2025.**

Ecosystem illustration, estimated total sales in 2025,[1] $ trillion
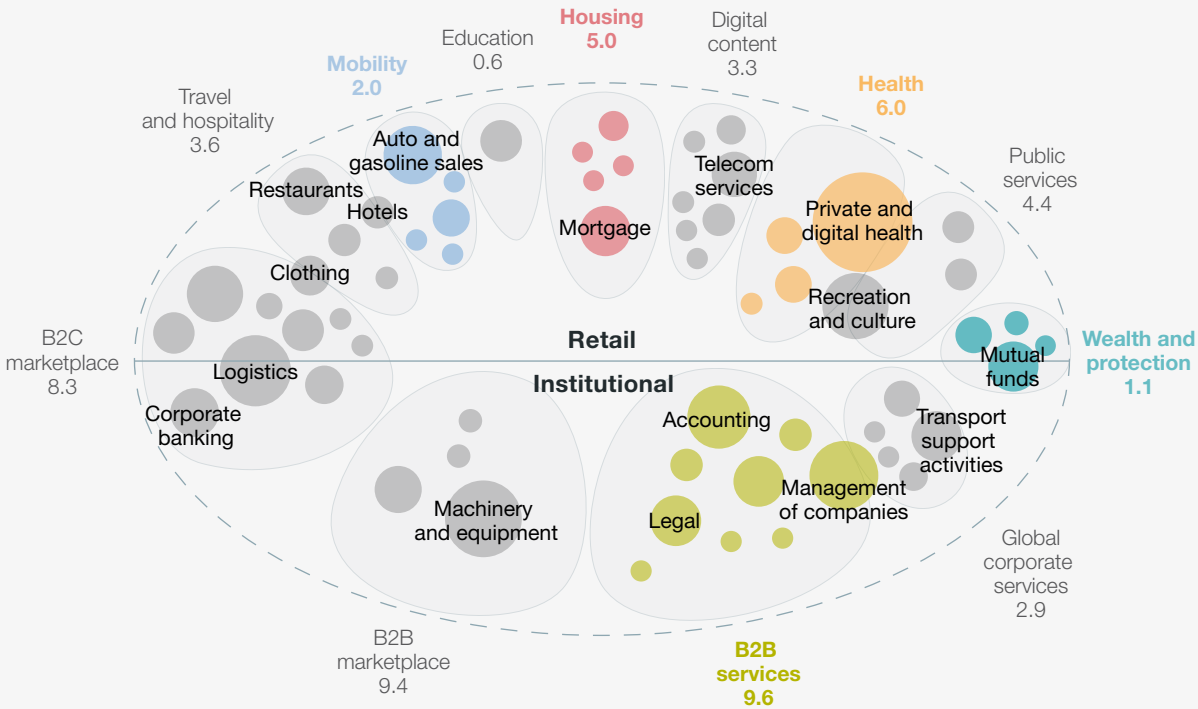
[1] Circle sizes show approximate revenue pool sizes. Additional ecosystems are expected to emerge in addition to those depicted; not all industries or subcategories are shown.

Source: IHS World Industry Service; Panorama by McKinsey; McKinsey analysis

Ecosystems typically provide three types of value:

1. *They act as gateways, reducing friction as customers switch across related services.*
   Facebook Messenger, for example, enables users to shop, check into a hotel, message a friend, read the news, and chat with a doctor—all through a single interface. Users need not toggle between portals, manage separate log-ins, or spend mental energy maintaining multiple services.

2. *They harness network effects.* Google Nest, the maker of an ecosystem of smart-home products, provides its customers with a monthly report card that illustrates their energy use and compares it with that of their neighbors to give the numbers context. At the same time, the company creates value for utility providers by providing consolidated information about demand to help them optimize production.

3. *They integrate data across a series of services.* One healthcare-data company extracts high-fidelity data from the healthcare ecosystem and applies it to patients' lives to improve human health.[6]

Insurers in digital ecosystems

For insurers, shifting from an industry to an ecosystem perspective requires a significant change in how they define their role in the economy. Currently, insurers act primarily as risk aggregators. They have a passive and limited relationship with customers, which increases their exposure to disintermediation, disaggregation, commoditization, and invisibility. If insurers were to lose their distribution and customer relationships, they would be left with few options to reinvent their business models. Adopting an ecosystem perspective—reevaluating the traditional business model and considering partnerships with players both within and outside the industry—could reinvigorate insurers' digital strategies.

Role of the new insurer

Insurers can play multiple roles in an ecosystem. For example, the personal-mobility ecosystem offers a range of opportunities to expand into areas such as vehicle purchase and maintenance management, ride-sharing, carpooling, traffic management, vehicle connectivity, and parking. As a result, insurers have a range of opportunities to expand their roles (see sidebar "Ping An: Ecosystem orchestrator"). Mobility is in the midst of a significant tech disruption, with Lyft and Uber leading the charge in on-demand services, and giants such as BMW entering the fray with car-sharing club DriveNow. In addition, Apple, Google's Waymo, and Tesla are competing to automate cars one function at a time. Most of the traditional automotive players seem to be at a disadvantage in the mobility industry and face a pressing need to reimagine their roles. Some are starting to see opportunities to move toward an ecosystem mind-set. For instance, Toyota has invested $1 billion in the Toyota Research Institute, which seeks to use artificial intelligence to address issues across the mobility ecosystem. The institute articulates its mission as follows: "We are dedicated to making automobiles safer, more affordable, and more accessible to everyone, regardless of age or ability, and to expanding the benefit of mobility technology beyond automobiles, for example to in-home support of older persons and those with special needs."

How ecosystems could help cyberinsurance prosper

In 2016, the annual global cost of cybercrime reached $575 billion, with 26 percent of organizations reporting a material loss of at least 10,000 records due to a breach. The average cost of a cyberattack in the United States is $7 million.[1]

In an executive survey conducted by McKinsey and the World Economic Forum, 65 percent of respondents agreed with the statement, "The risk of cyberattack is a significant issue that could have major strategic implications over the next five years."[2] Yet while cyberrisk has long been among the top ten business risks across industries, cyberinsurance—which can cover data destruction, theft, identity recovery, business interruption, and post-incident public relations, among other things—is far from attaining maturity, primarily due to three factors:

1. Limited robust, publicly available data for underwriters

2. Rapidly evolving scale and scope of cyberattacks

3. Danger of compounded future losses

Covering cyberrisks could put insurers in a precarious situation in which a traditional approach to risk aggregation might prove inadequate. If insurers were to adopt a broader view of risk prevention through partnerships, they could orchestrate risk management in a cyberrisk ecosystem that includes not only insurers but also cloud providers, cybersecurity specialists, and enterprises with confidential customer data. This cyberrisk ecosystem could overlap with a broad spectrum of other ecosystems—most of which are still in the early stages of building resilience to cyberattacks.

Insurers tend to think of coverage as their only cyberinsurance product, but they could establish a robust infrastructure by building partnerships with all the stakeholders. These alliances would enable insurers to move both up the value chain to prevention (using readiness diagnostics and preventive recommendations) and down the value chain to post-breach response and support (from specialist providers in case of attacks). Both of these value-added service streams could build an insurer's comprehensive role in risk prevention, response, and management.

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[1] "Internet security threat report," Symantec, April 2016, symantec.com; "2016 cost of cyber crime study & the risk of business innovation," Ponemon Institute, October 2016, ponemon.org.
[2] David Chinn, James Kaplan, and Allen Weinberg, "Risk and responsibility in a hyperconnected world: Implications for enterprises," World Economic Forum in collaboration with McKinsey & Company, January 2014, McKinsey.com.

A look at today's connected-car ecosystem illustrates the benefits and risks that lie ahead for auto insurers. Innovation has caused significant disruption, resulting in the emergence of four natural stakeholders in the ecosystem: original equipment manufacturers (OEMs), high-tech players, insurers, and telecom providers. As mobility evolves, first movers will have the opportunity to transition from stakeholders to orchestrators in three key areas: customer relationships, network and service management, and analytics. (And for an example from the agriculture industry, see sidebar "John Deere: A pioneer in agriculture ecosystems.")

Insurers already have a strong foundation in mobility thanks to their current customer base, distribution power, and stock of personal data from auto insurance policies.[7] To position themselves as true ecosystem players and to fend off moves by other stakeholders, insurers need to build capabilities in a number of areas, including mobile sensors, analytical tools, and customer interfaces. For example, insurers have made significant inroads using telematics, but profit pools are still under threat due to stiff competition. As more OEMs conceptualize line-fitted telematics devices and ride-sharing providers such as Uber grow ever stronger in network management, it is incumbent on insurers to move from risk aggregation to risk prevention. At the same time, executives must understand that while insurance products and related security services will always be at the core of the insurance business, services such as telematics are a way of developing meaningful customer relationships.

Insurers could work with OEMs higher up in the value chain to develop products that address the added risks auto manufacturers might bear as the market embraces autonomous vehicles. As individuals relinquish control over their vehicles during driving, insurers could shift coverage from personal lines to commercial lines, hence widening the scope of engagement. A stronger relationship with OEMs and high-tech players could allow insurers to assimilate risk into existing offerings: pay-how-you-drive and pay-as-you-drive modeling, loyalty and gamification, emergency and breakdown services, crash assistance, and theft reporting.

Partnerships will be critical

As ecosystems enable and necessitate a focus on risk prevention, forging partnerships will be a critical priority. For reference, executives need look no further than their recent efforts to partner with Internet of Things (IoT) providers, which they pursued in an effort to offset their disadvantage from a lack of customer touchpoints and engagement. Insurers should embrace a similar mind-set to assemble fruitful alliances.

The industry has already seen a number of high-profile partnerships between established insurers and tech and analytics start-ups. Progressive, for example, partnered with Zubie, a vehicle-tracking and engine-diagnostic device, to give customers visibility into how their driving habits affect their premiums. Nest partnered with Liberty Mutual to help offset the cost of a Nest Protect smoke detector and offer a monthly discount on homeowners insurance in the United States. Manulife is collaborating with Indico Data Solutions to develop a deep learning tool that analyzes unstructured financial data. Digital Partners (DP), a global venture established by Munich Re to win the confidence of and subsequently partner with insurance disruptors, is nurturing an ecosystem that supports the development of start-ups, including Trov, an on-demand insurance provider, and Wrisk, an insurtech venture that delivers motor, travel, and home insurance directly through smartphones.

Ping An: Ecosystem orchestrator

Ping An, a giant Chinese insurer with more than one million employees and agents, has expanded its reach to offer healthcare consultations, auto sales, real estate listings, and banking services to more than 350 million online customers through a single customer portal called the One Account. This new activity also generates customer traffic for Ping An's core services and has helped the company become the world's most valuable insurance brand.[1] Ping An serves an enormous and dynamic consumer market, making the company a directionally relevant example for global insurance organizations that seek to replicate its success in other markets.

[1] "Ping An becomes the world's most valuable insurance brand," Brand Finance, accessed November 14, 2017, brandfinance.com.

Ping An as an ecosystem orchestrator

Ping An Bank has more than 36 million retail clients and $400 billion in assets.

Lufax has more than 21 million registered users.

Ping An Good Doctor has more than 77 million registered users; daily consultations number more than 250,000.

Zhong An has underwritten 630 million insurance policies and has more than 150 million clients.

Ping An is a co-investor inHuayi Brothers, one of China's largest entertainment companies.

Autohome attracts 25 million unique visitors each day.

Net income (2016): $176.90

Pinganfang is China's largest online property platform, attracting 1 million visitors daily.

Finance

Peer-to-peer assets exchange

Healthcare

One Account

Ping An

Insurance

CRM/Marketing

Entertainment

Auto

Housing

Source: McKinsey analysis

John Deere: A pioneer in agriculture ecosystems

As a tractor-manufacturing company founded close to two centuries ago, John Deere is an unlikely contender for the role of digital-ecosystem pioneer. However, the company's approach, from selling products to offering digital solutions to increase farmer profits, has truly set it apart. Starting with smart capabilities catering to the needs of farmers, the company introduced a complete farming solution that offers services including John Deere Farm Connect, a field- and water-management provider that combines data with services such as predictive maintenance, tracking and geo-fencing of assets, and improved dispatching.

With these innovations, John Deere optimized product usage while quadrupling search-engine traffic to its redesigned website and increasing lead generation for dealers. Deere has also expanded its focus from the tractor industry to agriculture ecosystems: the acquisition of Blue River Technology, a leader in applying machine learning to agriculture, demonstrates that cutting-edge technology is a part of Deere's core strategy.

Given John Deere's emotional connection and proximity to the customer and access to sensor data, it is well positioned to understand user risk and offer protection and assurance to the customer directly. Indeed, Deere's portfolio currently includes asset insurance sold directly to the customer. As an orchestrator of the agriculture ecosystem, John Deere might consider using its understanding of the industry to help players across the value chain assess, mitigate, and manage risk.

Insurers have been targeted in all parts of the value chain by insurtech companies as much as by other industry players. Although these newcomers are populating every part of the value chain (Exhibit 2), their focus to date has been on the more easily accessible slivers of the industry—mainly distribution, particularly in property and casualty insurance.[8] Since innovation from insurtechs actually aims to contribute to the insurance value chain (except distribution for large players), insurance executives should view potential partnerships with insurtechs as positive.
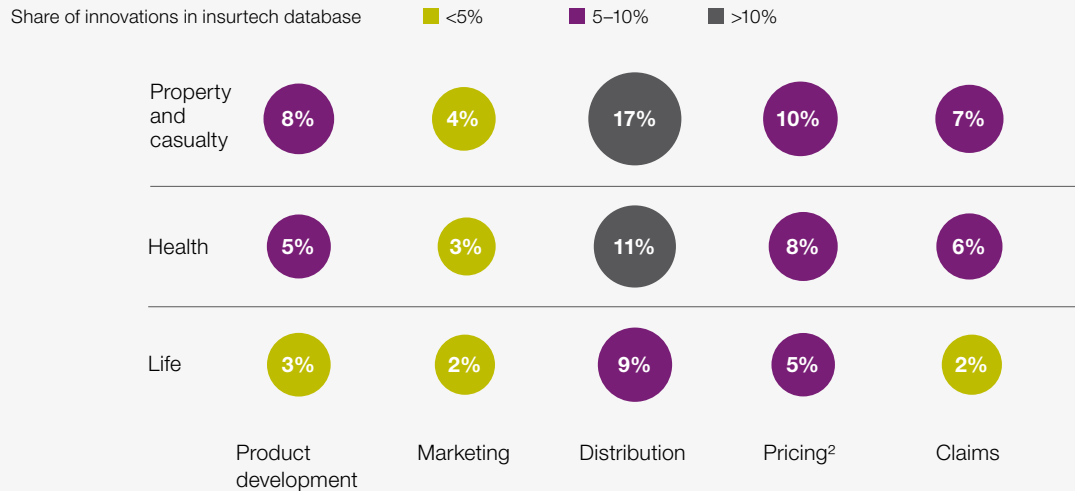
The rise of ecosystems involves multiple firms coming together in symbiotic relationships to achieve greater value for themselves than they could capture alone. For example, in its bid to participate in the health ecosystem, Apple launched the Healthkit open platform, which offers Apple device users the option to share their health and activity data across affiliated applications on their smartphones. This integration allows users as well as participants from the world of medicine—including physicians, researchers, hospitals, and developers of healthcare and fitness apps—to access valuable data to inform patient care, research studies, marketing, product development, and so forth.

Shifting value pools

Although digital leaders have made incursions into different industries based on their ability to own the technology pathway, other focused efforts could offer openings for insurers as they evaluate ecosystems.

Exhibit 2

Where insurtechs are focusing

Number of innovations as % of total in the database[1]

Share of innovations in insurtech database   ■ <5%   ■ 5–10%   ■ >10%

	Product development	Marketing	Distribution	Pricing[2]	Claims
Property and casualty	8%	4%	17%	10%	7%
Health	5%	3%	11%	8%	6%
Life	3%	2%	9%	5%	2%

[1]~500 best-known commercial cases registered in the database (excluding wealth management–related innovations).
[2]Includes underwriting and policy issuance.

Source: Panorama by McKinsey

Ownership of the customer relationship

Distribution has been the target of disruption primarily because digital natives have successfully demonstrated that ownership of the customer relationship is a stepping-stone to an ecosystem play. The core of the insurance industry is highly regulated, which gives insurers a competitive advantage due to their regulatory skills and huge capital requirements. In 2015, *The Economist* observed a similar trend with banks and fintech companies: "If fintech doesn't kill banks, it might instead sap the sector's profitability. A future as a sort of financial utility—ubiquitous but heavily regulated, unglamorous and marginally profitable—is hardly a gratifying outcome for banks."[9]

Ecosystem players such as Amazon and Google are well positioned to permeate the distribution part of the insurance value chain. And they have shown intent. Google launched its Google Compare aggregation tool in UK and US markets in 2012 and 2015, respectively. Google shuttered Compare in 2016, but the tool might have become a threat with more time and marketing. A leading analyst firm anticipates that Google will remain active in the insurance industry, complementing its foundational, ad-based service with a new offering that leverages more of its core skills.[10]

While Google's search engine has already mastered the human-computer interface and changed the customer landscape forever, Amazon's Alexa is set to capitalize on the next frontier of interaction—voice. Companies such as Liberty Mutual have already started launching Amazon Alexa tools in the US market. These tools allow users to obtain insurance estimates and advice on common seasonal home and auto issues. Amazon Protect, which provides extensions to manufacturers' warranties for

items like mobile phones or washing machines bought on Amazon's website, launched last year in Europe.[11]

Strong customer relationships not only directly contribute to the user experience but also provide access to customer information—the Holy Grail of data and an absolute necessity in the ecosystem world. Insurers can harness consumer adoption of IoT to create opportunities for better and more frequent customer interactions (for example, through wearables) and improve efficiency through sensor-based automation (such as trigger-based claims payments and apps).

Risk engine and analytics

Insurers have strong analytics capabilities compared with their peers in other industries; analytics has been a core component of the traditional insurance business model. Digital ecosystems offer traditional insurers valuable opportunities to use analytics to evolve and expand their business models. They could facilitate the evolution of existing insurance businesses by advancing risk assessments, for instance, by considering safety measures such as connected-home solutions. Insurers can also use analytics to enhance pricing and risk-accumulation control.

As different businesses generate growing volumes of data, risk management will continue to demand increasing amounts of data modeling and advanced analytics. Because of their established analytics capabilities, insurers in new digital ecosystems can provide analytics-as-a-service to other industry players. This offering could include predictive-modeling and optimization services that enable faster and smarter business decisions across all industries within the entire analytics value chain.

Changing nature of risks and new markets

The risks that need to be insured are changing significantly for two primary reasons. First, uncertainty will be reduced as tracking and predictive technology improves. For example, connected cars have fewer accidents and breakdowns, predictive maintenance reduces business interruptions, and wearables help ensure a healthier lifestyle. Second, substantial changes in risk distribution and actuarial models (for example, due to an increasing number of long-tail risks) are further aggravating this trend. A resulting demutualization could shift the focus to predicting and managing the risks of individuals rather than communities.[12] As a consequence, premiums can be expected to come under pressure, reducing what have traditionally been rather stable revenue streams. Although the inclusion of new addressable markets could offset lost revenues, insurers must take a more holistic view of the developments and opportunities available.

South African insurer Discovery has set the gold standard for insurers in the wellness ecosystem with its Vitality platform. Today, millions of users track their health using Vitality and participate in activities to earn loyalty points with Discovery's extensive network of partners, including British Airways, Emirates, and Europcar. Discovery's analysis of three years' worth of platform data found that performance tracking reduced health risks by 22 percent. The insurer was able to penetrate international markets through the platform by partnering with AIA across all of Asia, Generali across continental Europe, and in several local markets such as with Manulife in Canada, Ping An in China, and Sumitomo in Japan, resulting in 31 percent annual growth in international markets.

Ecosystem players have the capability to scale at a far faster rate than companies could in the past. Alibaba's Yu'eBao has become the world's largest money market fund, at $165 billion

under management, just four years after its launch. The fund started by encouraging millennials using Alibaba's Alipay, an online virtual wallet, to invest the "spare change" that tends to collect in between adding money to the wallet and making payments from the wallet. These small investments add up, helping users to build Yu'eBao, which is Mandarin for "online treasures." Currently, 99.72 percent of Yu'eBao investors are individuals, who use the Alipay mobile app to deposit savings into Yu'eBao. One of the primary reasons Yu'eBao was able to become the world's largest fund, surpassing JPMorgan's US government money market fund ($150 billion), was that Alibaba's millions of users viewed Yu'eBao as a complementary service of a trusted brand.

Ecosystem strategy can facilitate the expansion of insurers into adjacent and completely new areas of business by using complementary services. Options include offering innovative hybrid solutions in insurance and services offerings with partners from other industries (for example, predictive maintenance, smart parking, and preventive care). Insurers could also enhance their risk engineering by harnessing insights based on sensor data from other industries. Last, insurers could draw on their analytics expertise to offer proprietary data and analytics solutions to third parties—for instance, through data marketplaces.

Devising and implementing an ecosystem strategy will require sustained dedication and commitment. Executives aiming to kick-start an ecosystem strategy should focus on a couple of areas. First, not all of the total value at stake is going to be up for grabs for all players in the distribution economy. Therefore, all players must identify and prioritize the ecosystems in which they can play and win. Second, an ecosystem strategy requires strong performance across multiple dimensions, including culture, technology, and customer engagement. Insurers should determine the critical capabilities that will act as differentiating factors in an ecosystem and assess whether their organization has sufficient horsepower in these areas.

A huge opportunity for insurers who can react fast

The rise of ecosystems is simultaneously one of the greatest opportunities, biggest threats, and most daunting challenges of digitization. Not all industries and players are equally well suited to pursue this opportunity, and companies that dive in might not be able to capture all of the value at stake. Large, at-scale insurers are somewhat better suited to evolve into orchestrators. However, this wave of ecosystems does provide a chance for some players to realign priorities and initiatives and leapfrog the competition in the process.

Becoming an ecosystem player requires far more than technology investments alone. Instead, insurers must take a 360-degree view of the organization across multiple dimensions to ensure that their investments align with the requirements. Answering several key questions can help shape the discussion:

Strategy: Where does ecosystem strategy rank in the organization's priorities?

Customers: How does the organization's customer ownership, access, and engagement look?

Partnerships: Does the organization have a strong network of partners that will allow it to extend beyond traditional industry boundaries?

Technology: Is technology seen as the fuel for the organization's strategy?

Talent: Is the organization positioned to attract and retain the most innovative and entrepreneurial talent?

Culture: Are customers at the center of everything that the organization does?

The rise of ecosystems is the natural result of digitization. Organizations with adaptability at the core of their design and strategy will be poised to use it to their advantage. Evolution has taught us that it is not the strongest species that survive, but the ones most responsive to change. ◼

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Insurance 2030–The impact of AI on the future of insurance
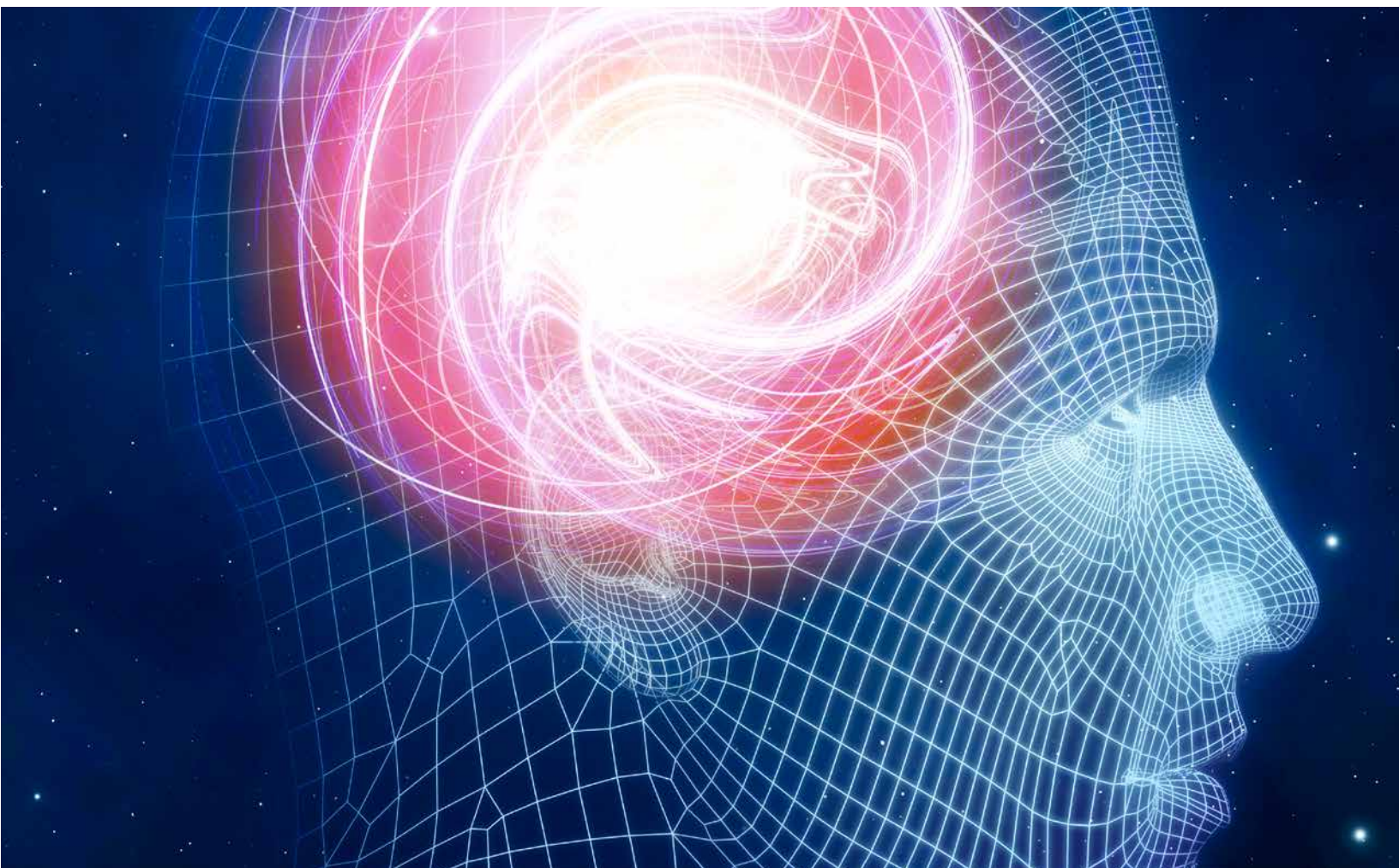
The industry is on the verge of a seismic, tech-driven shift. A focus on four areas can position carriers to embrace this change.

Ramnath Balasubramanian, Ari Libarikian, and Doug McElhaney

© Chad Baker/Getty Images

Welcome to the future of insurance, as seen through the eyes of Scott, a customer in the year 2030. His digital personal assistant orders him an autonomous vehicle for a meeting across town. Upon hopping into the arriving car, Scott decides he wants to drive today and moves the car into "active" mode. Scott's personal assistant maps out a potential route and shares it with his mobility insurer, which immediately responds with an alternate route that has a much lower likelihood of accidents and auto damage as well as the calculated adjustment to his monthly premium. Scott's assistant notifies him that his mobility insurance premium will increase by 4 to 8 percent based on the route he selects and the volume and distribution of other cars on the road. It also alerts him that his life insurance policy, which is now priced on a "pay-as-you-live" basis, will increase by 2 percent for this quarter. The additional amounts are automatically debited from his bank account.

When Scott pulls into his destination's parking lot, his car bumps into one of several parking signs. As soon as the car stops moving, its internal diagnostics determine the extent of the damage. His personal assistant instructs him to take three pictures of the front right bumper area and two of the surroundings. By the time Scott gets back to the driver's seat, the screen on the dash informs him of the damage, confirms the claim has been approved, and that a mobile response drone has been dispatched to the lot for inspection. If the vehicle is drivable, it may be directed to the nearest in-network garage for repair after a replacement vehicle arrives.

While this scenario may seem beyond the horizon, such integrated user stories will emerge across all lines of insurance with increasing frequency over the next decade. In fact, all the technologies required above already exist, and many are available to consumers. With the new wave of deep learning techniques, such as convolutional neural networks,[1] artificial intelligence (AI) has the potential to live up to its promise of mimicking the perception, reasoning, learning, and problem solving of the human mind (Exhibit 1). In this evolution, insurance will shift from its current state of "detect and repair" to "predict and prevent," transforming every aspect of the industry in the process. The pace of change will also accelerate as brokers, consumers, financial intermediaries, insurers, and suppliers become more adept at using advanced technologies to enhance decision making and productivity, lower costs, and optimize the customer experience.

As AI becomes more deeply integrated in the industry, carriers must position themselves to respond to the changing business landscape. Insurance executives must understand the factors that will contribute to this change and how AI will reshape claims, distribution, and underwriting and pricing. With this understanding, they can start to build the skills and talent, embrace the emerging technologies, and create the culture and perspective needed to be successful players in the insurance industry of the future.

Four AI-related trends shaping insurance

AI's underlying technologies are already being deployed in our businesses, homes, and vehicles, as well as on our person. Four core technology trends, tightly coupled with (and sometimes enabled by) AI, will reshape the insurance industry over the next decade.

Exhibit 1

Artificial intelligence can deliver on industry expectations through machine learning and deep learning.

Artificial intelligence
The science and engineering of making intelligent machines

Machine learning
A major approach to realize artificial intelligence

Deep learning
A branch of machine learning

1950s 1960s 1970s 1980s 1990s 2000s 2010s

Artificial intelligence (AI)
Intelligence exhibited by machines, whereby machines mimic cognitive functions associated with human minds; cognitive functions include all aspects of learning, perceiving, problem solving, and reasoning.

Machine learning (ML)
Major approach to realizing AI by learning from, and making data-driven predictions based on, data and learned experiences. ML comprises several categories including reinforcement learning, supervised learning, and unsupervised learning.

Deep learning (DL)
Branch of ML where algorithms attempt to model high-level abstractions in data. DL connects artificial, software-based calculators that approximate the function of brain neurons. Neural networks, formed by these calculators, receive, analyze, and determine inputs and are informed if determination is correct.

Source: Nvidia; *Science in the News*, Rockwell Anyoha, "The history of artificial intelligence," August 28, 2017, sitn.hms.harvard.edu

Explosion of data from connected devices

In industrial settings, equipment with sensors have been omnipresent for some time, but the coming years will see a huge increase in the number of connected consumer devices. The penetration of existing devices (such as cars, fitness trackers, home assistants, smartphones, and smart watches) will continue to increase rapidly, joined by new, growing categories such as clothing, eyewear, home appliances, medical devices, and shoes. The resulting avalanche of new data created by these devices will allow carriers to understand their clients more deeply, resulting in new product categories, more personalized pricing, and increasingly real-time service delivery. For example, a wearable that is connected to an actuarial database could calculate a consumer's personal risk score based on daily activities as well as the probability and severity of potential events.

Increased prevalence of physical robotics

The field of robotics has seen many exciting achievements recently, and this innovation will continue to change how humans interact with the world around them. Additive manufacturing, also known as 3-D printing, will radically reshape manufacturing and the commercial insurance products of the future. By 2025, 3-D-printed buildings will be common, and carriers will need to assess how this development changes risk assessments. In addition, programmable, autonomous drones; self-driving cars; autonomous farming equipment; and enhanced surgical robots will all be commercially viable in the next decade. By 2030, the proportion of autonomous vehicles on the road could exceed 25 percent, having grown from 10 percent just four years earlier.[2] Carriers will need to understand how the increasing presence of robotics in everyday life and across industries will shift risk pools, change customer expectations, and enable new products and channels.

Experts estimate there will be up to one trillion connected
devices by 2025.[3]

Open source and data ecosystems

As data becomes ubiquitous, open source protocols will emerge to ensure data can be shared and
used across industries. Various public and private entities will come together to create ecosystems
in order to share data for multiple use cases under a common regulatory and cybersecurity
framework. For example, wearable data could be ported directly to insurance carriers, and
connected-home and auto data could be made available through Amazon, Apple, Google, and a
variety of consumer-device manufacturers.

Advances in cognitive technologies

Convolutional neural networks and other deep learning technologies currently used primarily
for image, voice, and unstructured text processing will evolve to be applied in a wide variety of
applications. These cognitive technologies, which are loosely based on the human brain's ability to
learn through decomposition and inference, will become the standard approach for processing the
incredibly large and complex data streams that will be generated by "active" insurance products
tied to an individual's behavior and activities. With the increased commercialization of these types
of technologies, carriers will have access to models that are constantly learning and adapting to the
world around them—enabling new product categories and engagement techniques while responding
to shifts in underlying risks or behaviors in real time.

The state of insurance in 2030

AI and its related technologies will have a seismic impact on all aspects of the insurance industry,
from distribution to underwriting and pricing to claims. Advanced technologies and data are already
affecting distribution and underwriting, with policies being priced, purchased, and bound in near real
time. An in-depth examination at what insurance may look like in 2030 highlights dramatic changes
across the insurance value chain.

Distribution

The experience of purchasing insurance is faster, with less active involvement on the part of
the insurer and the customer. Enough information is known about individual behavior, with
AI algorithms creating risk profiles, so that cycle times for completing the purchase of an auto,
commercial, or life policy will be reduced to minutes or even seconds. Auto and home carriers
have enabled instant quotes for some time but will continue to refine their ability to issue policies
immediately to a wider range of customers as telematics and in-home Internet of Things (IoT) devices
proliferate and pricing algorithms mature. Many life carriers are experimenting with simplified

issue products, but most are restricted to only the healthiest applicants and are priced higher than a comparable fully underwritten product. As AI permeates life underwriting and carriers are able to identify risk in a much more granular and sophisticated way, we will see a new wave of mass-market instant issue products.

Smart contracts enabled by blockchain instantaneously authorize payments from a customer's financial account. Meanwhile, contract processing and payment verification are eliminated or streamlined, reducing customer acquisition costs for insurers. The purchase of commercial insurance is similarly expedited as the combination of drones, IoT, and other available data provides sufficient information for AI-based cognitive models to proactively generate a bindable quote.

Highly dynamic, usage-based insurance (UBI) products proliferate and are tailored to the behavior of individual consumers. Insurance transitions from a "purchase and annual renewal" model to a continuous cycle, as product offerings constantly adapt to an individual's behavioral patterns. Furthermore, products are disaggregated substantially into microcoverage elements (for example, phone battery insurance, flight delay insurance, different coverage for a washer and dryer within the home) that consumers can customize to their particular needs, with the ability to instantaneously compare prices from various carriers for their individualized baskets of insurance products. New products emerge to cover the shifting nature of living arrangements and travel. UBI becomes the norm as physical assets are shared across multiple parties, with a pay-by-mile or pay-by-ride model for car sharing and pay-by-stay insurance for home-sharing services, such as Airbnb.[4]

The role of insurance agents has changed dramatically by 2030. The number of agents is reduced substantially as active agents retire and remaining agents rely heavily on technology to increase productivity. The role of agents transitions to process facilitators and product educators. The agent of the future can sell nearly all types of coverage and adds value by helping clients manage their portfolios of coverage across experiences, health, life, mobility, personal property, and residential. Agents use smart personal assistants to optimize their tasks as well as AI-enabled bots to find potential deals for clients. These tools help agents to support a substantially larger client base while making customer interactions (a mix of in-person, virtual, and digital) shorter and more meaningful, given that each interaction will be tailored to the exact current and future needs of each individual client.

Underwriting and pricing

In 2030, manual underwriting ceases to exist for most personal and small-business products across life and property and casualty insurance. The process of underwriting is reduced to a few seconds as the majority of underwriting is automated and supported by a combination of machine and deep learning models built within the technology stack. These models are powered by internal data as well as a broad set of external data accessed through application programming interfaces and outside data and analytics providers. Information collected from devices provided by mainline carriers, reinsurers, product manufacturers, and product distributors is aggregated in a variety of data repositories and data streams. These information sources enable insurers to make ex ante decisions regarding underwriting and pricing, enabling proactive outreach with a bindable quote for a product bundle tailored to the buyer's risk profile and coverage needs.

Regulators review AI-enabled, machine learning–based models, a task that requires a transparent method for determining traceability of a score (similar to the rating factor derivations used today with regression-based coefficients). To verify that data usage is appropriate for marketing and underwriting, regulators assess a combination of model inputs. They also develop test policies for providers when determining rates in online plans to ensure the algorithm results are within approved bounds. Public policy considerations limit access to certain sensitive and predictive data (such as health and genetic information) that would decrease underwriting and pricing flexibility and increase antiselection risk in some segments.

Price remains central in consumer decision making, but carriers innovate to diminish competition purely on price. Sophisticated proprietary platforms connect customers and insurers and offer customers differentiated experiences, features, and value. In some segments, price competition intensifies, and razor-thin margins are the norm, while in other segments, unique insurance offerings enable margin expansion and differentiation. In jurisdictions where change is embraced, the pace of pricing innovation is rapid. Pricing is available in real time based on usage and a dynamic, data-rich assessment of risk, empowering consumers to make decisions about how their actions influence coverage, insurability, and pricing.

Claims

Claims processing in 2030 remains a primary function of carriers, but head count associated with claims is reduced by 70 to 90 percent compared with 2018 levels.[5] Advanced algorithms handle initial claims routing, increasing efficiency and accuracy. Claims for personal lines and small-business insurance are largely automated, enabling carriers to achieve straight-through-processing rates of more than 90 percent and dramatically reducing claims processing times from days to hours or minutes.

IoT sensors and an array of data-capture technologies, such as drones, largely replace traditional, manual methods of first notice of loss. Claims triage and repair services are often triggered automatically upon loss. In the case of an auto accident, for example, a policyholder takes streaming video of the damage, which is translated into loss descriptions and estimate amounts. Self-driving vehicles that sustain minor damage direct themselves to repair shops for service while a self-driving replacement car is dispatched in the interim. In the home, IoT devices will be increasingly used to proactively monitor water levels, temperature, and other key risk factors and will proactively alert both tenants and insurers of issues before they arise.

Automated customer service apps handle most policyholder interactions through voice and text, directly following self-learning scripts that interface with the claims, fraud, medical service, policy, and repair systems. The turnaround time for resolution of many claims is measured in minutes rather than days or weeks. Human claims management focuses on a few areas: complex and unusual claims, contested claims where human interaction and negotiation are empowered by analytics and data-driven insights, claims linked to systemic issues and risks created by new technology (for example, hackers infiltrate critical IoT systems), and random manual reviews of claims to ensure sufficient oversight of algorithmic decision making.

Claims organizations increase their focus on risk monitoring, prevention, and mitigation. IoT and new data sources are used to monitor risk and trigger interventions when factors exceed AI-defined thresholds. Customer interaction with insurance claims organizations focuses on avoiding potential loss. Individuals receive real-time alerts that may be linked with automatic interventions for inspection, maintenance, and repair. For large-scale catastrophe claims, insurers monitor homes and vehicles in real time using integrated IoT, telematics, and mobile phone data, assuming mobile phone service and power haven't been disrupted in the area. When power goes out, insurers can profile claims by using data aggregators, which consolidate data from satellites, networked drones, weather services, and policyholder data in real time. This system is pretested by the largest carriers across multiple catastrophe types, so highly accurate loss estimations are reliably filed in a real emergency. Detailed reports are automatically provided to reinsurers for faster reinsurance capital flow.

How insurers can prepare for accelerating changes

The rapid evolution of the industry will be fueled by the extensive adoption and integration of automation, deep learning, and external data ecosystems. While no one can predict exactly what insurance might look like in 2030, carriers can take several steps now to prepare for change.

1. Get smart on AI-related technologies and trends

Although the tectonic shifts in the industry will be tech-focused, addressing them is not the domain of the IT team. Instead, board members and customer-experience teams should invest the time and resources to build a deep understanding of these AI-related technologies. Part of this effort will require exploring hypothesis-driven scenarios in order to understand and highlight where and when disruption might occur—and what it means for certain business lines. For example, insurers are unlikely to gain much insights from limited-scale IoT pilot projects in discrete parts of the business. Instead, they must proceed with purpose and an understanding of how their organization might participate in the IoT ecosystem at scale. Pilots and proof-of-concept (POC) projects should be designed to test not just how a technology works but also how successful the carrier might be operating in a particular role within a data- or IoT-based ecosystem.

2. Develop and begin implementation of a coherent strategic plan

Building on the insights from AI explorations, carriers must decide how to use technology to support their business strategy. The senior leadership team's long-term strategic plan will require a multiyear transformation that touches operations, talent, and technology. Some carriers are already beginning to take innovative approaches such as starting their own venture-capital arms, acquiring promising insurtech companies, and forging partnerships with leading academic institutions. Insurers should develop a perspective on areas they want to invest in to meet or beat the market and what strategic approach—for example, forming a new entity or building in-house strategic capabilities—is best suited for their organization.

This plan should address all four dimensions involved in any large-scale, analytics-based initiative—everything from data to people to culture (Exhibit 2). The plan should outline a road map of AI-based pilots and POCs and detail which parts of the organization will require investments in skill building or focused change management. Most important, a detailed schedule of milestones and checkpoints

is essential to allow the organization to determine, on a regular basis, how the plan should be modified to address any shifts in the evolution of AI technologies and significant changes or disruptions within the industry.

In addition to being able to understand and implement AI technologies, carriers also need to develop strategic responses to coming macrolevel changes. As many lines shift toward a "predict and prevent" methodology, carriers will need to rethink their customer engagement and branding, product design, and core earnings. Auto accidents will be reduced through autonomous vehicle usage, in-home flooding will be prevented by IoT devices, buildings will be reprinted after a natural disaster, and lives will be saved and extended by improved healthcare. Likewise, autonomous vehicles will break down, natural disasters will continue to devastate coastal regions, individuals will require effective medical care, as well as support when a loved one passes. As these changes take root, profit pools will shift, new types and lines of products will emerge, and how consumers interact with their insurers will change substantially.

Winning carriers of the future will create and enact strategic plans that position their brand, products, customer interactions, and technology successfully to take advantage of the new economic structure on the horizon.

All of these efforts can produce a coherent analytics and technology strategy that addresses all aspects of the business, with a keen eye on both value creation and differentiation.

Exhibit 2   **There are four core elements in defining a successful AI strategy.**
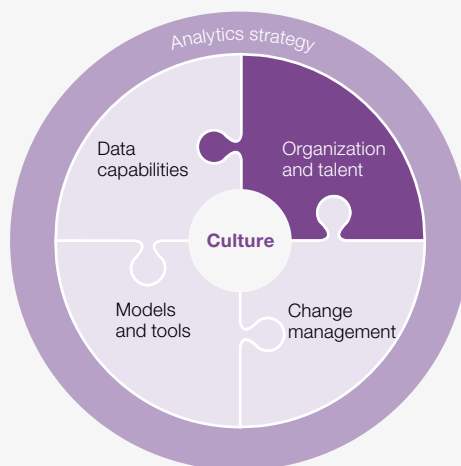
Source: McKinsey analysis

3. Create and execute a comprehensive data strategy

Data is fast becoming one of the most—if not the most—valuable asset for any organization. The insurance industry is no different: how carriers identify, quantify, place, and manage risk is all predicated on the volume and quality of data they acquire during a policy's life cycle. Most AI technologies will perform best when they have a high volume of data from a variety of sources. As such, carriers must develop a well-structured and actionable strategy with regards to both internal and external data. Internal data will need to be organized in ways that enable and support the agile development of new analytics insights and capabilities. With external data, carriers must focus on securing access to data that enriches and complements their internal data sets. The real challenge will be gaining access in a cost-efficient way. As the external data ecosystem continues to expand it will likely remain highly fragmented, making it quite difficult to identify high-quality data at a reasonable cost. Overall, data strategy will need to include a variety of ways to obtain and secure access to external data, as well as ways to combine this data with internal sources. Carriers should be prepared to have a multifaceted procurement strategy that could include the direct acquisition of data assets and providers, licensing of data sources, use of data APIs, and partnerships with data brokers.

4. Create the right talent and technology infrastructure

In augmented chess, average players enabled by AI tend to do better than expert chess players enabled by the same AI. The underlying reason for this counterintuitive outcome depends on whether the individual interacting with AI embraces, trusts, and understands the supporting technology. To ensure that every part of the organization views advanced analytics as a must-have capability, carriers must make measured but sustained investments in people. The insurance organization of the future will require talent with the right mind-sets and skills. The next generation of successful frontline insurance workers will be in increasingly high demand and must possess a unique mix of being technologically adept, creative, and willing to work at something that will not be a static process but rather a mix of semiautomated and machine- supported tasks that continually evolve. Generating value from the AI use cases of the future will require carriers to integrate skills, technology, and insights from around the organization to deliver unique, holistic customer experiences. Doing so will require a conscious culture shift for most carriers that will rely on buy-in and leadership from the executive suite. Developing an aggressive strategy to attract, cultivate, and retain a variety of workers with critical skill sets will be essential to keep pace. These roles will include data engineers, data scientists, technologists, cloud computing specialists, and experience designers. To retain knowledge while also ensuring the business has the new skills and capabilities necessary to compete, many organizations will design and implement reskilling programs. As a last component of developing the new workforce, organizations will identify external resources and partners to augment in-house capabilities that will help carriers secure the needed support for business evolution and execution. The IT architecture of the future will also be radically different from today's. Carriers should start making targeted investments to enable the migration to a more future-forward technology stack that can support a two-speed IT architecture.[6]

■ ■ ■

Rapid advances in technologies in the next decade will lead to disruptive changes in the insurance industry. The winners in AI-based insurance will be carriers that use new technologies to create innovative products, harness cognitive learning insights from new data sources, streamline processes and lower costs, and exceed customer expectations for individualization and dynamic adaptation. Most important, carriers that adopt a mind-set focused on creating opportunities from disruptive technologies—instead of viewing them as a threat to their current business—will thrive in the insurance industry in 2030. ∎

[1] Convolutional neural networks contain millions of simulated "neurons" structured in layers.
[2] *Deep shift, technology tipping points and societal impact,* World Economic Forum, September 2015, weforum.org.
[3] World Economic Forum, 2015.
[4] Some insurtech companies are already beginning to design these types of products; Slice, for example, provides variable commercial insurance specifically tailored for home sharing.
[5] This shift to a more automated claims function has already begun. Fukoku Mutual Life Insurance, for example, has been using IBM's Watson Explorer since January 2017 to do the work of 34 claims adjusters—30 percent of its claims staff.
[6] Driek Desmet, Markus Löffler, and Allen Weinber, "Modernizing IT for a digital era," September 2016, McKinsey.com.

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Friends or foes: The rise of European aggregators and their impact on traditional insurers

After grappling with aggregators for 20 years, many European insurers have embraced them as an effective way to reach customers. We estimate that today almost 50 percent of online insurance in Europe is sold via aggregators. The implications for insurers are significant.

Simon Kaesler, Johannes-Tobias Lorenz, and Felix Schollmeier
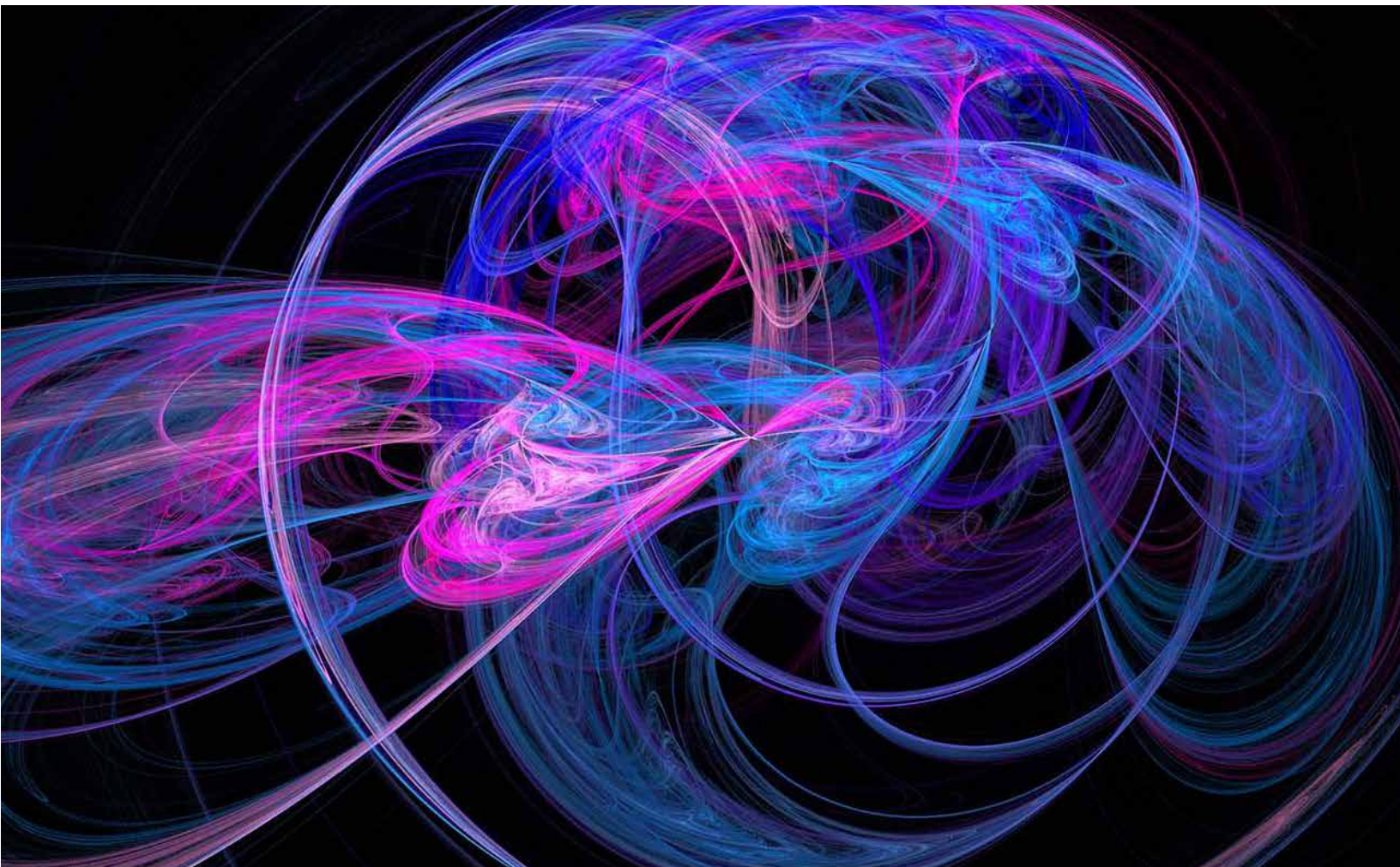
European aggregators—digital brokers and expert advisers that connect customers with product providers—have evolved significantly over the past two decades. What started as simple lead-generation websites are now—in some cases—advisory platforms with advanced broker functionalities and robo-adviser features that help consumers choose between a wide range of products, from insurance contracts to rental cars. Customers increasingly use aggregators both at the start of their buying journey, to get an overview of the market, and at the end, by purchasing directly from the aggregator rather than the product provider. In fact, we estimate that today almost half of online insurance in Europe is sold via aggregators.

For many insurers, aggregators have become, in effect, the customer-facing side of their business. This change has led to a strong networking effect: rising use leads more product providers to employ aggregators as a sales channel while increasing market coverage attracts more users. Increased coverage also leads to better conversion rates, effectively driving down acquisition costs for the aggregator. The result is an outstanding business model for aggregators—which, according to McKinsey analysis, typically enjoy high profit margins of up to 30 to 40 percent of earnings before interest, taxes, depreciation, and amortization (EBITDA) as well as a surge of M&A interest from potential acquirers.

The implications for insurers are significant. To respond, they must first develop a deep understanding of the hallmarks of leading aggregators as well as the pros and cons of aggregators' business models. Then they must choose how to react: steer clear completely, cooperate by designing products for aggregator channels, or actively pursue acquisition. The choice of how to approach aggregators will have far-reaching effects on insurers' overarching business models and market positions.

Mapping the European aggregator landscape

Most aggregators either offer a wide range of relatively simple products or focus on more complex single-product segments. The most successful are becoming one-stop shops for a wide range of customer needs. Since they first emerged in the late 1990s, European aggregators have followed four stages of maturity:

1. Price-comparison only. At the most basic level, aggregators offer a simple price-comparison service financed through ads or listing fees.

2. Lead-generation only. In this model, aggregators generate leads and sell them to brokers or product providers. If aggregators can generate traffic more cheaply than product providers, there is an opportunity for arbitrage. The initial technology investment for this model is low, and the focus is on marketing.

3. Broker. Some aggregators act as brokers, providing digital advice and recommendations in addition to lead generation. This arrangement increases the risk for aggregators, as they are liable for bad advice, but also increases potential rewards through higher commissions. The process is more complex, increasing technology costs.

4. Product provider. In the most advanced scenario, the aggregator starts to fill in gaps where provider coverage is minimal or nonexistent, or where it can compete in attractive customer segments with proprietary products. These products are often white-label solutions offered at a lower price than the providers' own brand.

Aggregators often start out as specialists in one area but ultimately broaden their reach by incorporating more verticals. For example, Check24 started out in insurance, MoneySuperMarket in mortgages, Verivox in energy—but all three of these larger players are now active in finance, insurance, travel, and energy. A larger portfolio of verticals enables aggregators to apply lessons from their initial vertical to other areas, expand marketing reach, and increase user conversion.

Insurance policies were among the first products to be successfully sold or brokered by aggregators. In many major European markets, insurance products still account for 75 percent or more of aggregators' total revenue (Exhibit 1).[1]

Exhibit 1   **Insurance products are the main source of revenue for European aggregators.**

Share of total aggregator revenue, %, 2015

	Netherlands	United Kingdom	Germany	Spain
Telecommunications	3	8	10	8
Energy and utilities	5	6		8
Retail banking products	12	6	15	5
		12	15	
Insurance	80	74	60	79
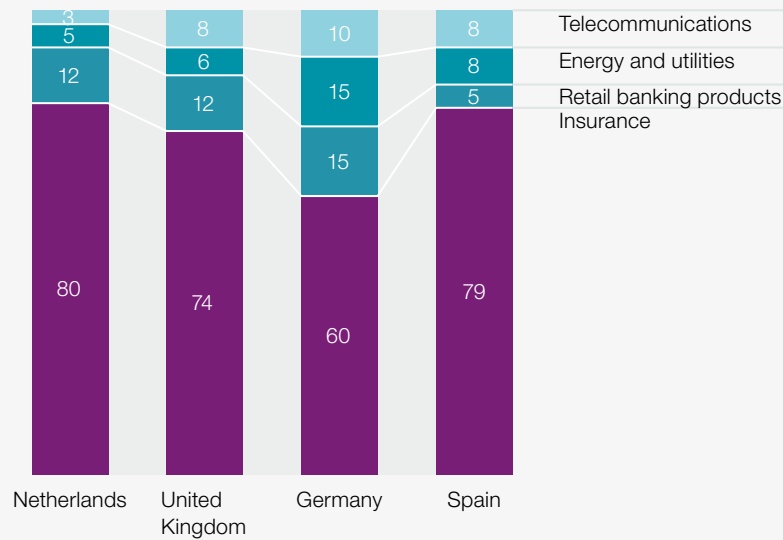
Source: Admiral; expert interviews; MoneySuperMarket

As European aggregators have evolved, they have helped insurers dramatically expand their customer reach—at a predictable cost. Consumers have also been keen adopters: aggregators open up the market, make it more transparent, and force insurers to compete on price and, depending on the vertical, on product performance. Aggregator transparency automatically puts significant pressure on insurers' pricing; as the aggregator channel grows in importance for an insurer, that price pressure has increasing

impact on its overall margins. Furthermore, as its market strength and brand grow, an aggregator typically shifts toward adding more value for consumers rather than service providers.

Monopolies or oligopolies of aggregators have been forming in every European market (see sidebar "The US market exception"). In some countries, however, aggregators compete against fintechs, insurtechs, and insurers that sell policies directly. These players are fighting hard to keep their B2C model and have yet to challenge the overall dominance of aggregators. In fact, aggregators are maintaining—and in many cases tightening—their grip on both leads and customer access. In almost every European market, aggregators' motor gross written premiums (GWP) grew at double-digit compound annual growth rates from 2007 to 2016 (Exhibit 2). In some markets, such as the United Kingdom, Italy, and Germany, aggregators claimed more than one-third of market share in

Exhibit 2

Growth of European aggregators is strong across all markets.

Size of aggregator markets, motor gross written premiums (GWP) €, millions

■ Aggregator market share in direct sales, 2017E[1]

Note: UK numbers are in British pounds due to FX volatility across years.
[1] Estimated.
Source: McKinsey analysis

The US market exception

Unlike the European landscape, the US market has, relative to its size, fewer aggregators. While there are some large aggregators in the financial and loans segment, such as LendingTree or Bankrate, the insurance segment is dominated by direct players. This is partially explained by the hurdle of needing to work with different regulations, agents, and brands per state, but more importantly by the massive spending direct players invest in their own brands. However, we have observed increasing activity in recent years with funding rounds to start-ups such as Compare. com or Coverhound and the recent acquisition by QuoteWizard.

2017; in others, such as the Netherlands, aggregators have captured a smaller share, with ample room for growth.

One reason for the growth of European aggregators is their ability to cross-sell beyond insurance, which allows them to justify a higher cost-per-order (CPO) for insurance products. This is an advantage over direct insurance providers, which solely offer insurance products and cannot profit from cross-selling. In addition to this structural aspect, aggregators are also able to acquire customers more cheaply than their competitors. However, they still face relatively high marketing costs, given the importance of branding and the rising costs of paid search in the face of increasing competition from other aggregators or product providers' own direct channels. Some aggregators have begun to consciously shift marketing budgets to better invest in their own brand, which has resulted in increased search traffic and website visits (Exhibit 3).

Aggregators' operating costs, which include technology as well as sales and call center staff, increase as products become more complex and commissions increase in value. Back-office functions and maintenance (for example, providing an insurance policy) are cost drivers, though technology can reduce these costs; larger aggregators have begun to automate post-sale services using direct interfaces to assist product providers.

Despite the high costs, revenues are substantial. According to our analysis, leading European aggregators enjoy profit margins of 30 to 40 percent. For example, the UK-based aggregator MoneySuperMarket had an adjusted EBITDA of 38.6 percent in 2017. Players typically adopt one of two revenue models: lead-based compensation or performance-based commission (see sidebar "Aggregator revenue models come in two flavors").

Four success factors distinguish the top performers

Although the fundamentals of the aggregator business are strong, top performers share four common factors: strong brands, a tight grip on key technology, customer loyalty, and favorable agreements with providers. As more aggregators continue to emerge, these factors will determine their success.

Exhibit 3

Investing in branding pays off.

Example of structured branding approach
Check24 and Verivox desktop organic traffic, 2010–18

— Check24   — Verivox

Jan 2018
TV travel
campaigns

Sept 2016 Launch of
*2 unvergleichliche
Familien* TV and
online campaign

Mid-2017
Sport sponsoring
(eg, soccer)

June 2015
Investment from
ProSiebenSat.1

Jan 2014
David Hasselhoff
Travel TV campaign
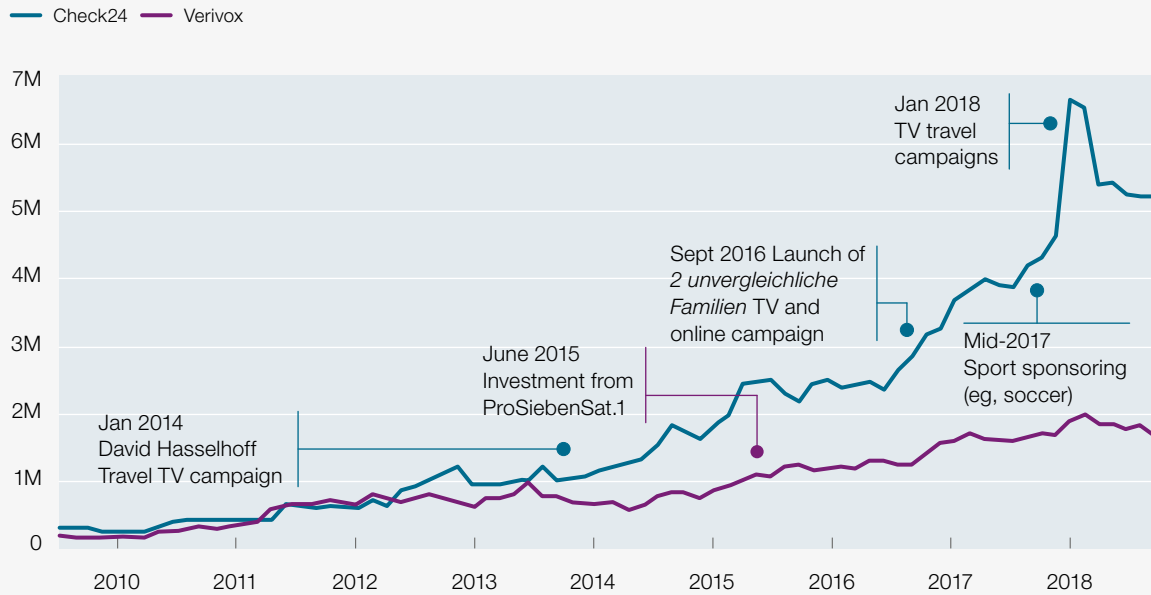
Key takeaways		**Check24**	**Verivox**
Effective investments in brand marketing streamline realization of OCP key success factors:			
•continuous reinforcement of brand awareness	**Revenue 2016** €, millions	~500	~110
•shared budget under umbrella brand; halo effect for promotion of brands	**Marketing spend 2016** €, millions, estimates	~150	50–90
•increased share of organic traffic and brand searches (reduction of acquisition costs)			
•market endorsement for new products			
•more customer touchpoints strengthen the brand awareness and increase the chance of repurchase			

Source: McKinsey analysis

Strong brands. Top performers have strong brands that typically have lower search costs because customers are more likely to find them by entering the company's URL directly into their browser (incurring zero cost for the aggregator) or by searching for the brand itself (incurring a very low cost as specific brand keywords cost less in paid search than generic keywords such as "insurance"). Similarly, the stronger the brand, the more likely customers are to return for other products or for next year's shopping comparison. Exhibit 4 shows just how far behind insurers are in terms of brand strength.[2]

Exhibit 4   **Top UK aggregators outpace UK insurers in 2017 Buzz Rankings for online services.**

■ Aggregators   ■ Insurers
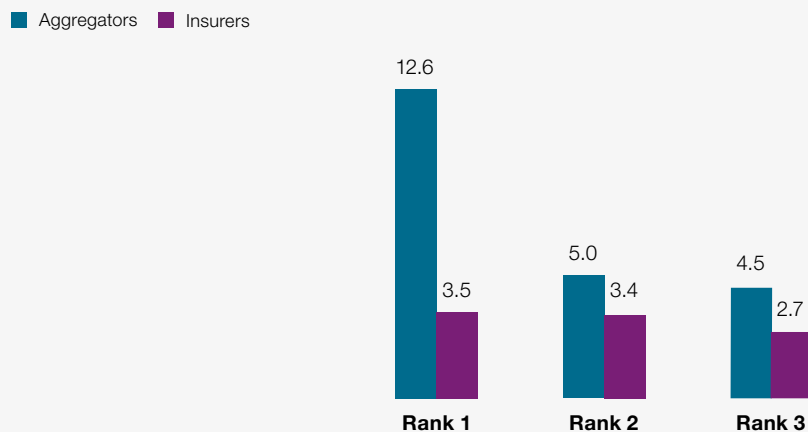
Source: 2017—Buzz Rankings: UK online services and 2017—Buzz Rankings: UK Finance: Insurance and Investments, YouGov BrandIndex, accessed June 6, 2018, brandindex.com

A tight grip on key technology. Top performers control their technology and, as such, their conversion funnel. Aggregators are usually better than insurers at converting customers. The most successful aggregators also build and run their own technology rather than buying third-party white-label comparison tools, allowing them to react much more quickly to changes in markets, customer behavior, and provider data. They can also perform rapid A/B testing and delve much more deeply into data analytics, which is becoming an important differentiator. As a result, the most advanced aggregators are moving up the insurer value chain, going beyond sales and distribution toward product development by helping insurers create tailored products for various customer segments.

Customer loyalty. Top aggregators work to own the customer relationship. Successful aggregators tend to offer a wide range of products, which helps them bind customers to the platform, rather than simply act as a passive connector between customers and insurers. As a result, each customer generates more value for the aggregator. Players such as Check24 are expanding broker advisory offerings and starting to offer digital contract folders. Verivox recently acquired an online service that reminds users to cancel their contracts on time to avoid fees, giving it a complete view of its customers—even contracts not generated by the aggregator. By offering cancellation or simple contract-management services, the aggregator can insert itself between the product provider and the customer and become a dashboard. In addition, the aggregator can procure additional insights into existing contracts, supporting its cross-selling efforts.

Favorable agreements with providers. The most successful aggregators have a significant number of providers as partners in order to give consumers a relevant overview of products and prices. They have also been able to optimize their revenue models and negotiate one-off fees from

Aggregator revenue models come in two flavors

When implementing a revenue model, aggregators often choose between lead-based compensation or performance-based commission. The choice depends on the aggregator's maturity and traffic mix. In lead-based compensation, aggregators receive a one-time payment for generating traffic or leads and prospects, while performance-based commission generates revenue only if the lead converts into a customer.

The **lead-based compensation** model is attractive for aggregators in the early phases of maturity because it allows for immediate recovery of customer acquisition costs. However, it is also less stable because it lacks recurring revenue streams and ongoing customer acquisition depends on constant new traffic.

In maturity, aggregators usually switch to the **performance-based commission** model, an attractive option for aggregators that convert leads more efficiently than the product provider. When a provider has a poorly designed sign-up process, aggregators often design and build their own rather than hand over leads and risk losing customers to a bad experience. This strategy helps to ensure that they convert users into customers and thus earn their commission. The commission model also means that the aggregator—not the insurer—"owns" the customer relationship. This improves the aggregator's chances of cross-selling and generating recurring revenue.

The commission model can be used with single-purchase products (such as loans) as well as with subscription products (for example, insurance policies) that require recurring payments. The former allows aggregators to immediately recoup the customer acquisition costs they incurred in the first year, while the latter takes longer to scale but has more revenue potential, assuming the customer stays long enough.

Revenue per unit is lower in the lead-based model than in the commission model. In Germany, for example, we estimate that a lead for a loan (the most important aggregator product after insurance) generates €50 to €150 in compensation, but commission revenue is 2.5 to 3.5 percent per loan. For a typical €10,000 loan, the aggregator therefore receives €250 to €350. Similarly, a private health insurance lead is worth €60 to €120 depending on the quality, while the commission revenue equates to nine monthly premiums (on average €300 per month).

providers to cover their high variable costs in the first year of customer acquisition. Aggregators typically prefer that the provider, not the customer, pays any commission (where regulation allows), allowing customers to see aggregators as a free service. Successful aggregators also avoid one-off commission models with clawback clauses that are triggered if a customer cancels their product too early. In our experience, products with annual contracts and, ideally, nonautomated renewals, can double or even triple revenue from a customer who switches every year. Yet insurers prefer

locking in customers to prevent them from switching too often. While the majority of contracts between insurers and aggregators today still contain one-off fees, this is changing as insurers push for recurring fees.

Aggregators are moving onto insurers' acquisition radars

The aggregator model in Europe has been performing so well that the sector is attracting interest from a range of potential acquirers. Despite the model's strengths, however, European aggregators face some destabilizing risks. Would-be purchasers, particularly insurers, should understand these obstacles. For some insurers, especially those with no standalone direct offering, aggregators are fast becoming the dominant source of leads and customers. If an aggregator fails, the consequences for the insurer could be severe.

Five looming threats to the aggregator business model

Would-be purchasers should consider five elements of aggregators' business models when considering an acquisition.

- Aggregators depend heavily on internet search traffic, making them vulnerable to changes in the algorithms for both organic and paid search (Exhibit 5). To protect themselves from this potential threat, they must build their brands and strengthen brand recognition. Some are already doing this by investing heavily in traditional advertising channels, such as TV commercials, to drive direct traffic or in brand-name search.

- Regulatory changes could disrupt the revenue model—for example, by banning certain commission models or making the commission fee transparent. Such a disruption would almost certainly affect aggregators' competitors (for example, offline brokers), so although the playing field might change shape, it would still be level. In some markets, regulatory changes have already taken place, compelling both brokers and aggregators to charge consumers a fee for advice. Aggregators need to ensure that their fees are on a par with or cheaper than brokers' fees, meaning they must excel in terms of process cost, marketing conversion, or both.

- Aggregators depend on access to a trove of customer data—but as privacy concerns and regulations rise, so do the costs and risks associated. For example, players across industries, including insurance, are scrambling to comply with the European Union's General Data Protection Regulation, which was implemented in May 2018.

- Aggregators are always vulnerable to new competitors, whether direct insurers or fintechs. The more crowded the market, the higher the cost of customer acquisition. Aggregators need to actively monitor the market and buy or build where appropriate. For example, while Verivox has acquired several fintech models in recent years, Check24 has built its own insurance management software—a product launched two years earlier by several insurtech companies.

  Competition can also come from platform companies, which often have leading-edge technology capabilities and very large customer bases. For example, Amazon has already entered the insurance space with Amazon Protect, which insures products bought on its platform, and

Exhibit 5   **Aggregators depend heavily on internet search traffic.**

| | | | Traffic sources | | |
Aggregator	Country	Monthly traffic, millions	Direct, %	Search, %	Other, %
Check24	Germany	18.6	38	52	10
Verivox	Germany	3.5	34	58	8
MoneySuperMarket	United Kingdom	10.3	16	76	8
Confused	United Kingdom	4.9	26	56	18
gocompare	United Kingdom	4.2	20	67	13
facile.it	Italy	3.0	19	74	7
independer	Netherlands	1.4	22	62	16

Source: SimilarWeb, March 2018

industry sources suggest that UK insurers are working with the company ahead of a potential entry into the general insurance sector.[3] Some aggregators may choose to enter white-label partnerships with larger platforms as a way of accessing new customers.

- Finally, the continued evolution of customer needs will result in longer-term structural threats to the aggregator model. For example, demand for third-party vehicle insurance could fall due to a drop in car ownership, and insurance models could change completely with more pay-as-you-go offerings or competitive flat-rate policies sold directly from manufacturers. Aggregators can mitigate some of these risks by continuing to add new product lines on top of existing lines as well as finding new ways to engage with their customers.

Insurers' three strategic options as aggregators expand their reach

Despite these challenges, aggregators are expected to continue expanding their role in the customer journey. They have the potential to become a permanent front end for customers searching for financial products, and insurers should be aware of these dynamics when mapping out their next move in the aggregator sector. Three options are emerging for traditional insurers:

1. Steer clear completely

Some insurers refuse to work with aggregators (for example, HUK-COBURG in Germany). Insurers that successfully take this path need a powerful brand that resonates with customers and usually have either a strong broker network or a high volume of direct sales. They may be able to profit by avoiding direct comparisons with competitors, but they need to invest heavily in their sales channels and brand to lock in and expand their customer base. Because customers increasingly compare prices for services, insurers must refine their marketing to explain why their products are better and highlight additional customer benefits.

2. Cooperate

Aggregators have deep insights into both customer and product data, so they are well positioned to discover underserved customer segments, react to new trends, and test new products faster than single-product providers. Several insurers are taking advantage of these insights by specifically designing products for aggregator channels—for example, insurer HDI and aggregator Check24 jointly developed a vehicle-insurance product called AurumPROTECT that is available exclusively through the aggregator channel. Providing tailored products for this channel is one of many success factors for insurers using the aggregator channel. Other success factors include competitive pricing, an optimized product for the aggregator ratings, and seamless connectivity and user handover between aggregator and insurer. Furthermore, insurers can exploit spillover traffic that is inevitably generated by aggregator users who start researching the brands—that were visible in the aggregator panel—in external channels such as search engines. Insurers can and should try to convert this traffic directly to avoid paying commissions.

3. Pursue acquisition

For an insurer, acquiring an aggregator locks in a sales channel and access to leads. Providers may also acquire an aggregator as a way to hire a fully functioning marketing, tech, and conversion optimization team—for example, ING Direct bought Interhyp in 2008 and Travelers acquired Simply Business in 2017. Targets are likely to be smaller, more affordable niche players—although price comparison website Confused.com, one of the United Kingdom's largest aggregators, is owned by Admiral. The result can be the inevitable challenge of managing conflicting interests and maintaining so-called Chinese walls when competing insurers rely on another company's acquired aggregator.

Yet insurance companies face competition in acquiring aggregators. Private equity firms, media companies, and other aggregators are all looking to buy—and not all aggregators will be acquired. Some will consider an IPO, which is attractive for at-scale players that can still grow by adding product lines, capturing the value chain, expanding geographically, or acquiring competitors for market share or technology. Others will remain independent.

■ ■ ■

Aggregators will continue to grow across Europe and are likely to capture an even bigger share of the online insurance market as customers become increasingly comfortable buying financial products online. Insurers should monitor this growth closely and examine their options for engaging with aggregators to determine how to maximize their opportunities during the next phase of this sales channel evolution. ■

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[1] Since the European market is dominated by a few pure-play online travel agencies (OTA), which mostly do not provide offers outside the core sales segment, we have excluded travel from this analysis.

[2] For more on the methodology for compiling the rankings, see BrandIndex.com: "The 1,300 brands in YouGov BrandIndex were ranked using the Buzz score which asks respondents, 'If you've heard anything about the brand in the last two weeks, through advertising, news or word-of-mouth, was it positive or negative?' Scores are net scores, calculated by subtracting the percentage of negative responses from the percentage of positive responses for each brand. The Buzz Rankings chart shows the brands with the highest average Buzz scores between January and December 2017." 2017—Buzz Rankings: UK online services and 2017—Buzz Rankings: UK Finance: Insurance and Investments, YouGov BrandIndex, accessed June 6, 2018, brandindex.com.

[3] Ida Axling and Sian Barton, "Amazon 'working with' UK brokers and insurers," *Insurance Age,* May 22, 2018, insuranceage.co.uk.

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Commercial lines insurtech:
A pathway to digital

Rather than fear the disruptive potential of insurtechs, commercial insurance executives should view them as a catalyst for digitization.

Ari Chester, Nick Hoffman, Sylvain Johansson, and Peter Braad Olesen

Companies across industries are seeking to embrace digital technologies—to support new business models, improve efficiency, and gain a competitive advantage. Commercial insurance executives clearly recognize the benefits of digital but face some obstacles in making headway. Large incumbents lag behind because the complicated nature of their work often requires human judgment and interaction, transactions are typically low volume and bespoke in nature, and legacy IT systems and processes make the transition resource intensive and complex. What's more, commercial insurance has historically been slow to change, and a lack of companies with clearly demonstrated impact from digital has left many executives focused on their own plan of action.

Enter insurtechs. Most insurtechs are not currently seeking to completely transform commercial lines but instead are more focused on enabling or extending the insurance value chain. In personal insurance, insurtechs played the role of digital attackers and captured market share at specific points in the value chain. Lacking the scale and expertise needed to excel in commercial, insurtechs are viewed by executives not as competitors to be feared but as potential partners that could accelerate their digitization efforts.

The rapid proliferation of commercial insurtechs has created a challenge for large incumbents: how to identify worthy candidates for collaboration. Due to this uncertainty, many commercial insurers have been sitting on the sidelines.

The urgency to embrace digital will only grow in the coming years, however, so commercial insurers would be wise to get in the game—and the sooner, the better. As a first step, executives should become more familiar with the areas in the value chain where insurtechs are concentrating their efforts.

About the research

To assess the current state of insurtechs, we drew on McKinsey's Insurtech database, which includes more than 1,500 commercially successful insurtech start-ups. Each start-up's business model is analyzed in detail to understand its location in the value chain, line of business, customer segment, and monetization model. The database is used to map and navigate the insurtech universe and support efforts to identify investment or partnership opportunities. It also tracks developments and uncovers trends and patterns of the insurance business—critical insights when prioritizing relevant innovations.

Armed with this context, insurers can prioritize their engagement toward insurtechs in ways that can add value to their own strategy. This strategic collaboration can help to usher in new, tech-enabled approaches that should inspire commercial incumbents and accelerate the digitization of their enterprise.

Insurtechs at the gate

Over the past few years, global investment in insurtechs has grown by leaps and bounds—from $250 million in 2011 to $2.3 billion in 2017. Although the United States was the pioneering market for these companies, only 38 percent of all insurtechs are currently headquartered there. According to the latest figures, there are more than 1,500 insurtechs globally, and 37 percent are based in Europe, the Middle East, and Africa (EMEA)—in particular, Germany and the United Kingdom. An analysis from McKinsey's Panorama Insurtech database shows that around 39 percent of insurtechs are focused on the commercial

56   **Digital insurance in 2018:** Driving real impact with digital and analytics

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segment, mostly in small and medium-size enterprises (SMEs), as shown in Exhibit 1. (See sidebar, "About the research.")

How insurtechs will affect incumbents

As the number of commercial insurtechs grows, their influence will take different forms. Some insurtechs will partner with incumbents to provide innovative new products and services, and others will be acquired and integrated into incumbents. The majority of commercial insurtechs (63 percent) are focused on enabling the insurance value chain and partnering with incumbents. Only a small number of insurtechs (9 percent) are attempting to fully disrupt the insurance market (Exhibit 2). These companies don't currently pose a serious threat to incumbents, but in the coming years they might be able to make inroads in certain segments or niches and take market share.

Despite significant digital advances, commercial lines still rely heavily on human judgment—particularly in underwriting. This manual model not only increases operating costs but also limits the ability of incumbents to provide superior customer service (such as risk prevention and loss control) for a select few customers, specifically those with large accounts or where change in risk behavior would have considerable impact. Insurtechs, however, can help scale and expand services, using digital to enable greater interactivity and enhance human judgment with technology. In doing so, companies can extend their services beyond the largest accounts while significantly improving performance and efficiency.

Exhibit 1

Insurtechs are entering the commercial-lines space, especially among small and medium-size enterprises (SMEs).
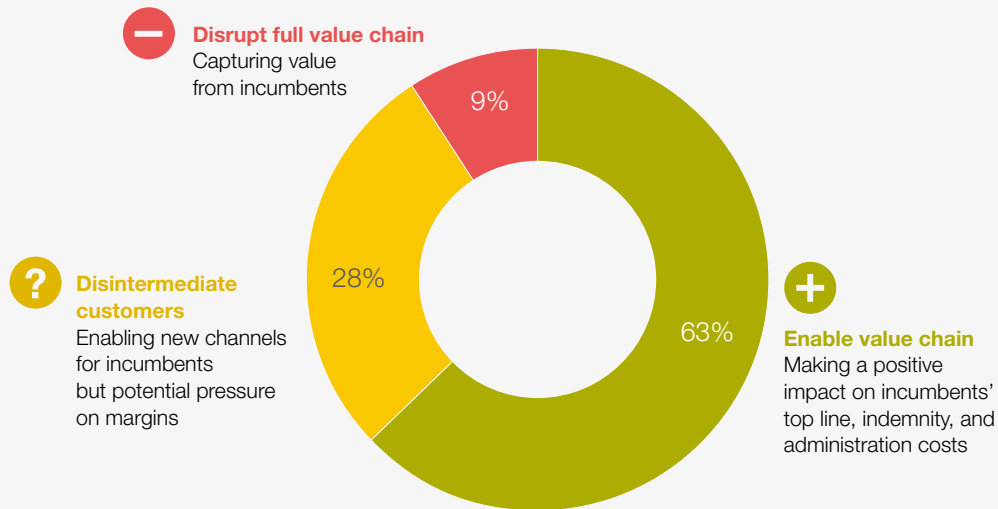
Insurtech focus by customer segment, %
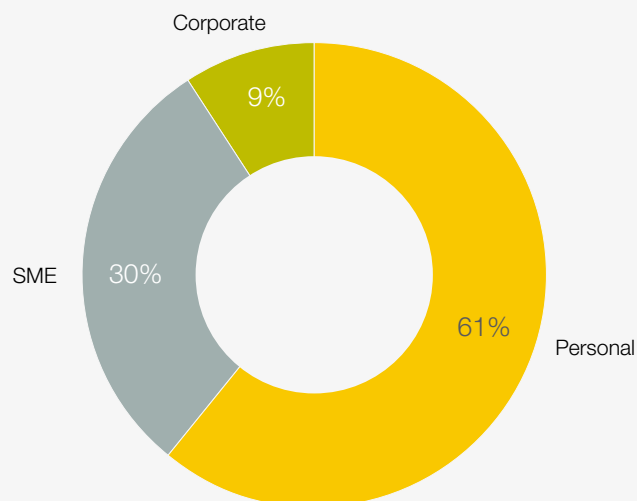
Source: McKinsey Panorama Insurtech database

Exhibit 2   **Insurtechs are both friends and foes, raising strategic questions on competition and collaboration.**

Insurtech role, %

Disrupt full value chain
Capturing value
from incumbents

9%

Disintermediate customers
Enabling new channels
for incumbents
but potential pressure
on margins

28%

63%

Enable value chain
Making a positive
impact on incumbents'
top line, indemnity, and
administration costs

Source: McKinsey Panorama Insurtech database

Commercial insurtechs are currently focused primarily on two areas: digital interaction and core insurance capabilities (Exhibit 3).

Digital interaction models. Inspired by the success of digital brokers and advisers of insurtechs in personal lines, a number of commercial insurtechs, such as Finanzchef24, Insureon, and Zensurance, are providing new and seamless digital customer experiences. Others are inspired by the digital peer-to-peer (P2P) models seen in the retail segment, such as Gather. The new digital interaction models also lower the cost to serve customers and increase transparency in pricing and coverages. Furthermore, some of the digital brokers interact directly with reinsurers and other capital providers while outsourcing insurance processes such as claims handling. These practices might ultimately reduce the role of the traditional insurers. Notably, the digital interaction models used by commercial insurtechs will most likely have the greatest value in the SME segment.
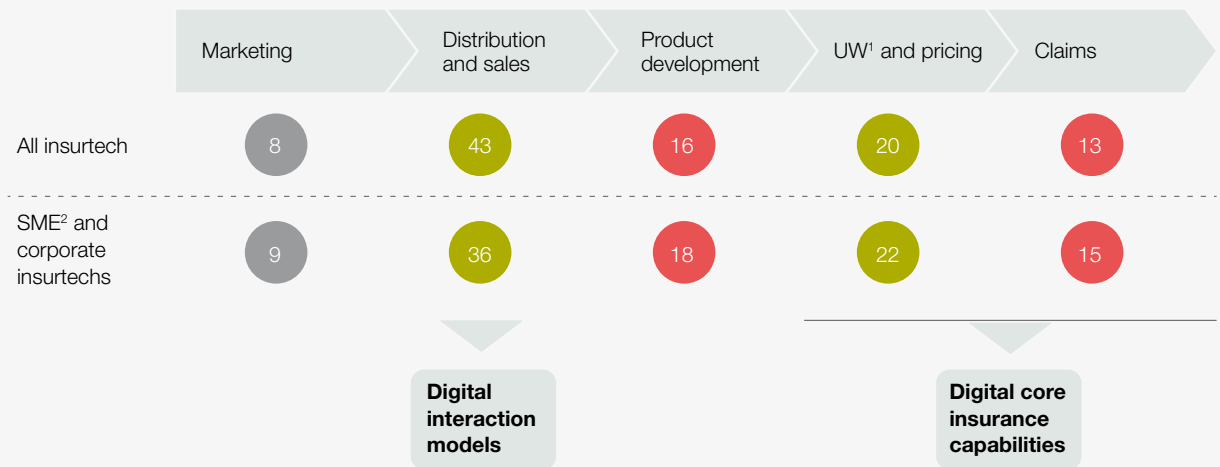
As the customer decision journey for the lower end of commercial lines starts to resemble personal lines, North American traditional companies and insurtechs are actively pursuing commercial SMEs using digital solutions. Key trends include more automated or streamlined underwriting, a shift from brick-and-mortar to digital service and delivery, the replacement of intermediated with "direct" customer engagement, and the development of aggregator solutions.

Exhibit 3

Commercial lines insurtechs focus on digital distribution and core insurance capabilities.

Share of insurtechs in database

● <10%　● 10–20%　● >20%

Number of insurtechs as percent of total in the database

	Marketing	Distribution and sales	Product development	UW[1] and pricing	Claims
All insurtech	8	43	16	20	13
SME[2] and corporate insurtechs	9	36	18	22	15

Digital interaction models

Digital core insurance capabilities

[1] Underwriting.
[2] Small and medium-size enterprises.

Source: McKinsey Panorama Insurtech database

Digital core insurance capabilities. By adopting new technologies, insurtechs in commercial lines are at the forefront of reducing human involvement and enhancing human judgment in key insurance processes, such as certain areas of underwriting and claims. The increased dependence on technology lowers costs and allows insurers to adjust their approach from "art" to "science" in key disciplines, including underwriting, risk selection, and claims leakage prevention.

Furthermore, insurtechs are using approaches with the potential to provide new services to their customers, better enabling them to monitor, prevent, and mitigate their own risk at an affordable cost. For example, the following use cases are relevant to both SMEs and more complex commercial lines segments:

- *Virtual reality and drone technology* to improve underwriting and claims inspection data and decisions. Insurtechs such as Aerobotics and Airware have built enhanced inspection capabilities in property and agriculture.

- *Blockchain technology* to assess the provenance of items and thereby avoid claims leakage. Examples include Everledger for diamonds and BlockVerify for electronics and pharmaceuticals, among others.

- *New data sources for underwriting and claims prevention.* Meteo Protect, for example, uses weather data, Augury Insurance captures status data from Internet of Things (IoT) machinery, and Windward for marine data and analytics.

- *Advanced analytics.* Adapt Ready, for instance, deploys machine learning to reduce business interruption by improving risk selection.

It is still too early to tell exactly where digital models will have the greatest impact on commercial lines. However, recent McKinsey analysis found that administrative costs for greenfield insurers are, on average, half those of incumbents—sometimes even less.[1] Their cost leadership is partially due to a monoline focus and the absence of legacy IT systems, processes, products, and mind-set, as well as digital-by-design products. While these results are primarily related to personal lines, the impact on commercial lines, starting within the SME segment, will over time become as significant.

Developing a plan of action

When the fintech movement started in financial services, the banks that adapted quickly to meet the challenge formulated a strategy in three phases—understand, engage, and act. Commercial insurers would do well to follow a similar approach to determine the best way to partner with insurtechs (Exhibit 4).

A. Understand. While some of the larger insurers and reinsurers have made progress across all three stages of engagement, many insurers are currently in this phase. Commercial executives

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Exhibit 4 **Insurance incumbents have started following three phases of digitization.**

	A. Understand	B. Engage	C. Act
Goal	Understand what is going on and gain awareness of the value at stake	Engage with insurtech community to seek inspiration and investigate partnerships	Acquire or invest into insurtech and adopt an "insurtech style" of working
	Internal focus ← → External focus		
Actions	• Participate in insurtech accelerator programs • Launch insurtech hackathons	• Partner with insurtech to develop PoC • Launch an insurtech incubator	• Wait and see • Direct investments • Partnerships • Establish a VC fund • Adopt an insurtech way of working • Become an ecosystem orchestrator

Source: McKinsey analysis

Commercial executives must become more familiar with the evolution of the insurtech ecosystem as well as gain an understanding of the research in insurtech databases or publications and participating in insurtech accelerator programs, which are run by a third party.

must become more familiar with the evolution of the insurtech ecosystem as well as gain an understanding of the research in insurtech databases or publications and participating in insurtech accelerator programs, which are run by a third party. Other insurers have launched hackathons with insurtechs. Zurich, for example, held a two-day event called "Insurhack" that focused on software innovation. It offered €75,000 in cash prizes to participants in challenges focused on areas such as open data and everyday insurance.[2]

B. Engage. This phase involves interacting with players in the insurtech ecosystem to seek out partnerships or inspiration. Commercial insurers can conduct more formal scouting, partner with insurtechs to develop proof-of-concept solutions, or launch incubator programs. Incumbents have launched incubator programs in an effort to provide a springboard to promising insurtechs. Most global insurers have established similar incubator programs.

C. Act. Commercial executives can use their firsthand knowledge of the opportunities to partner with insurtechs to determine whether to invest, collaborate, adopt an insurtech approach, or wait and see. A few large multinational primary insurers and reinsurers are also actively investing and seeding opportunities in the insurtech space using a multitude of interaction models, ranging from investments to partnerships and reinsurance cover.

Many insurers have launched venture capital funds in the insurtech space. AXA Venture Partners, for instance, has $450 million in funding and invests in enterprise software and technologies, AI, and cybersecurity.[3] Munich Re has made investments in excess of $68 millon in insurtech, especially focused on getting access to the IOT ecosystems. Its leaders view the investments as long-terms partnerships where they bring not just money to the insurtech but also domain expertise, clients, and brand.[4]

Since the insurtech space is changing rapidly, approaching the "understand" and "engage" phases as ongoing efforts rather than one-off activities can ensure that executives stay up to date on the latest developments.

Identifying insurtech partners

Finding the right insurtechs to engage with requires a structured approach. Executives should consider several parameters when evaluating an insurtech for a more formal arrangement (Exhibit 5):

Placement along the insurance value chain. Insurtechs have emerged at each step of the value chain, from marketing and sales to administration and claims.
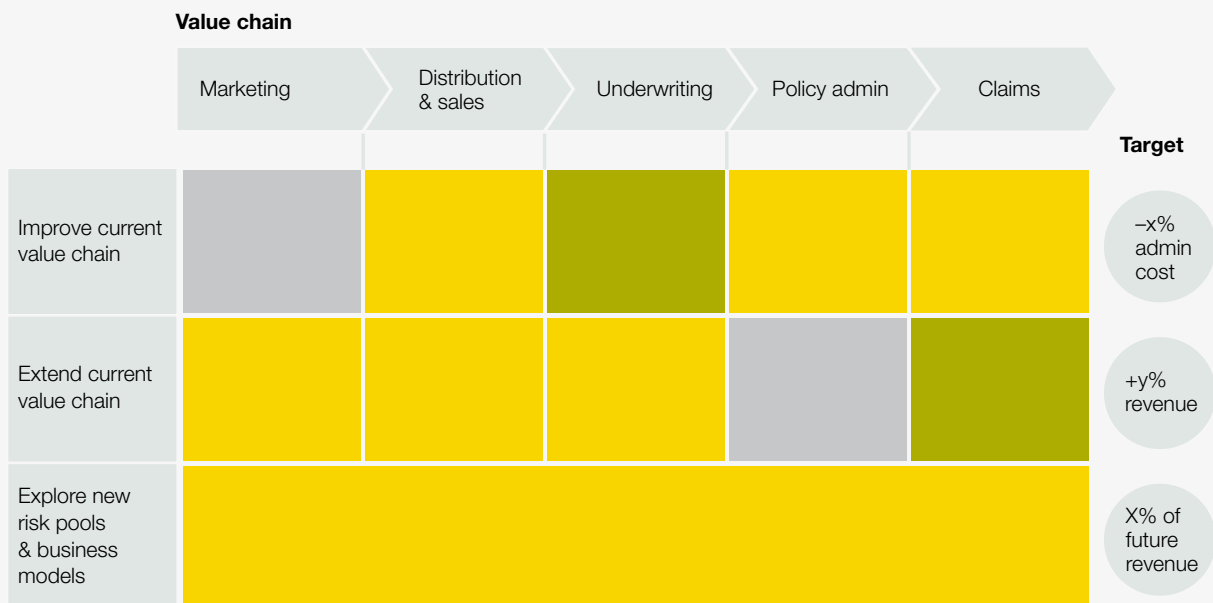
Degree of innovation. The analysis should include activities from improving the current value chain (for example, through the introduction of advanced analytics or artificial triaging of quotes), extending the current value chain (by providing adjacent services for risk prevention and mitigation), and exploring completely new risk pools and business models (for example, through ecosystems).[5]

Strategic relevance and value for the company. This measure seeks to determine the importance of the innovation across the insurance value chain. Relevance and value can vary by function and client segment. For example, insurers seeking to extend the value chain may focus on claims, which allows broadening capabilities and enhancing service levels to insureds. Other insurers may seek to rebuild the end-to-end value chain with new, digital-based business models—for instance, Blackboard in the United States.

■ ■ ■

Exhibit 5 **Prioritizing insurtech engagement based on value chain, degree of innovation, and strategic fit.**

● Low relevance   ● Medium relevance   ● High relevance

Value chain

	Marketing	Distribution & sales	Underwriting	Policy admin	Claims	Target
Improve current value chain	Low	Medium	High	Medium	Medium	−x% admin cost
Extend current value chain	Medium	Medium	Medium	Low	High	+y% revenue
Explore new risk pools & business models	Medium	Medium	Medium	Medium	Medium	X% of future revenue

Insurtechs are entering the commercial lines space: many of these start-ups will fail, and a few will succeed. The most important impact of commercial lines insurtechs is that they provide a source of inspiration for the incumbent commercial lines insurers and reinsurers and a way to leapfrog into digital.

Commercial insurers that are able to find the right insurtechs to engage with could improve margins, expand their client base, and extend their services. Forging such partnerships may allow them to break free from constant cost pressures and eroding margins once new technologies mature. To reap these benefits, commercial players must manage their partnerships effectively and expand IT capabilities to implement the solutions provided by insurtechs. These moves will require investment into understanding and engaging with insurtechs, defining the right business models, and integrating insurtech solutions into IT architecture and core systems. The payoff could include not only increased digitization and new ways of generating value but also a stronger competitive position in the coming years, as disruptive models become mainstream. ∎

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[1] Tonia Freysoldt, Sylvain Johansson, Christine Korwin-Szymanowska, Björn Münstermann, and Ulrike Vogelgesang, "Evolving insurance cost structures," April 2018, McKinsey.com.
[2] Held in Germany, Insurhack is a two-day "hackathon" challenge for coders.
[3] "AXA Strategic Ventures rebrands as AXA Venture Partners," AXA Venture Partners, April 10, 2018, axavp.com.
[4] "Driving digital transformation," Munich Re Investor Day, November 21, 2017, munichre.com.
[5] Tanguy Catlin, Johannes-Tobias Lorenz, Jahnavi Nandan, Shirish Sharma, and Andreas Waschto, "Insurance beyond digital: The rise of ecosystems and platforms," January 2018, McKinsey.com.

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The five trends driving insurtech, live from DIA 2018

Traditional insurers can draw inspiration from insurtechs, which are not shy about innovation nor constrained by an inflexible corporate structure. The insurtechs can learn a lot from incumbents, which are already established in the market and have a wealth of data and expertise.

Simon Kaesler and Felix Schollmeier

There are new digital players in the insurance sector. These so-called "insurtechs," technology-led companies that enter the insurance sector, are taking advantage of new technologies to provide coverage to a more digitally savvy customer base. At the Digital Insurance Agenda (DIA) in Amsterdam, one of the largest insurtech events in Europe, we found five key emerging trends:

1. Ecosystems and platforms

Customers are not seeking services; they are looking for solutions. The Japanese e-commerce and Internet company Rakuten presented its expansive ecosystem model, which integrates several services on a shared platform to best address the needs of customers. While insurers have traditionally played a more passive role in their customers' lives, this is changing as companies establish their own platforms and integrate their services into established ones. The Chinese digital insurer ZhongAn, for example, has partnered with several of China's biggest Internet groups to create a vast insurance ecosystem that allows users to buy insurance products directly through retail sites. ZhongAn launched in 2013 and today has 450 million customers.

Participating in ecosystems allows insurance players to add value through network effects—for instance, by leveraging allies' already-established platforms—and to integrate insurance services into other products. An example of the latter is the cooperation between building insurers and home insurers, together with GROHE Sense, a smart-home solution with water-leakage sensors that mitigates risk. Many insurtechs that presented at DIA, such as Imburse and Amodo, offer standardized application programming interfaces (APIs) for seamless integration across different systems.

Another aspect of this trend is the emergence of third-party insurance platforms that allow insurers and even noninsurers inside the ecosystem to build insurance products and services conveniently. Players such as Element, Outsystems, and Socotra demonstrated onstage how a new insurance product or service could be built in minutes.

2. Artificial intelligence

Artificial intelligence (AI) tools are emerging at many points in the customer journey and will reshape claims, distribution, underwriting, and pricing. Particularly innovative in the insurtech space are tools based on computer vision and natural-language processing. The insurtech Pixoneye, a data analytics SaaS company, provides computer-vision technology that can analyze a customer's public online photo galleries to create a personal risk profile. The insurtech Enterprise Bot builds chatbots based on natural-language processing and machine-learning algorithms that can understand and act on customer queries without labor-intensive and expensive human intervention. It can further measure the sentiment of a query and directly connect a customer to a human agent if it senses the customer is not satisfied.

3. Item insurance

New players are emerging that aim to provide customers with transparent coverage and the flexibility to decide what to insure—and also, often, when. This idea of "insurance as a service," allowing people to insure items only when they are in use, reflects how policies are increasingly being tailored to the customer. Insurtechs such as buzzvault and Valoo offer an easy way to make an inventory of possessions via video or photo to give users an accurate picture of what they own. To determine the value of these items, Valoo uses an algorithm that draws data from the biggest marketplaces and considers an item's condition. buzzvault provides customers with an overview of their possessions and gives them the full flexibility of adding or removing items from the insurance policy at any time. Similarly, Slice allows owners renting out their homes to pay for coverage only for the time they are renting them—not a minute or a penny more.

4. Engagement innovation

In the insurance industry today, customer trust can be low and the technologies dated. But customers want a digital experience tailored to their needs. Insurtechs offer new value propositions that generate customer engagement. Gamification can be a way for insurers to do that; by providing chatbots or mobile tools to set up a policy or file a claim, they can make traditionally cumbersome processes more engaging and integrated into their customers' lives. Wrisk, for example, has an app that helps the "connected generation" interact with their insurer with the same ease and speed they expect in other commercial relationships. Wrisk's approach is based on the principle of macroinsurance," where all of a customer's policies are visible on one individually determined platform. Another insurtech, Bought By Many, demonstrated highly personalized experiences in pet insurance, including gifts on pets' birthdays and personalized letters in response to claims.

5. Automated claims processing

Customers are increasingly ready to leave manual claims processes behind and move to a purely digital self-service model. To capture the full value of digital, insurers should think about the entire customer-claims journey—from a digital first notification of loss (FNOL) via live video or images from the scene of an accident to an automated settlement. By fully automating back-office

processes and decisions traditionally made by claims handlers, claims can be settled more quickly and effectively. Insurtech Carpe Data presented solutions for insurers to identify fraudulent claims and fast-track payments for legitimate ones.

Customers could benefit significantly from services such as an automated verification of car repair estimates and invoices as well as automatic reimbursements as soon as the repair invoice has been verified. Digital tools can also support and assist the decisions of claims handlers, leading to better outcomes. Insurtech Xtract provides a claims tool that aggregates and visualizes crash data for the auto-insurance industry, captures generic crash data at the FNOL, and delivers actionable insights to claims handlers so they can make liability decisions swiftly, deflect fraud, and triage vehicle damage.

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DIA has brought together insurtechs with leading insurers and other players in the insurance world, and it's clear that the start-ups are no longer just disruptors; they can be service providers and partners, too. Traditional insurers can draw inspiration from insurtechs, which are not shy about innovation nor constrained by an inflexible corporate structure. The insurtechs can learn a lot from incumbents, which are already established in the market and have a wealth of data and expertise. At DIA, many insurtechs presented solutions onstage jointly with insurance companies. Insurtechs and incumbents share the common goal of providing the best services to their customers, and as this conference has shown, both can profit by working together to do so. ■

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Burning questions from InsureTech Connect 2018: 48 hours at the world's largest insurtech gathering

Every fall, thousands of insurance executives, tech entrepreneurs, and investors gather at InsureTech Connect (ITC) to better understand the digital transformation of the insurance industry. Seven questions were on everyone's mind this year.

Doug McElhaney, Meghan Lodolo, and Shannon Varney

Every fall, thousands of insurance executives, tech entrepreneurs, and investors gather at InsureTech Connect (ITC) to better understand the digital transformation of the insurance industry. Here's our perspective on seven questions that were on everyone's mind this year:

Has insurance shed its reputation as the industry of status quo? Not yet, but it is making headway. Across the more than 6,000 attendees representing hundreds of start-ups and dozens of incumbent players, we heard from bold upstarts attempting to disrupt the industry from the outside and 100-plus-year-old incumbents aiming to reinvent their businesses from within. Regardless of the path they are taking, ITC 2018 attendees of all maturities demonstrated a commitment to shedding insurance's reputation as an old, stodgy industry stuck in the past and to embrace rising customer expectations driven by other industries, such as e-commerce. The scale at which capital and human resources are being deployed to pursue new ideas is amazing, with $1.7 billion in funding in the first six months of 2018 versus $2 billion in all of 2017.

Are we witnessing a revolution or an evolution? Despite bold ambition and commitment to innovation and disruption, it was unclear what (if any) examples were on display that demonstrate a massive leap forward for the industry. More common were examples of promising potential but only incremental improvement.

Are insurance-carrier IT departments growing more adept at insurtech integration? There has been a significant shift in posture by carrier IT and executive leadership. Previously, insurtech was seen as disruptive to a carrier's IT roadmap and strategy. Now, carrier IT and executive leadership see insurtech as part of the IT strategy.

Will start-up proliferation put pressure on insurtech economics? Over 150 insurtechs attended ITC. A few are pursuing truly novel ideas with distinctive approaches and capabilities and are looking to quickly achieve scale. Yet many mature insurtechs are competing to win with a similar value proposition in the same market. If early-stage companies are looking to vie for

attention from legacy carriers and brokers, price competition could intensify and may result in a significant thinning of the herd.

Will artificial intelligence (AI) and machine learning be competitive differentiators for the long term? Start-ups and incumbents alike are deploying proprietary AI solutions in insurance today, but there is uncertainty if this can be sustained for the long run, given the increasing availability of off-the-shelf AI technologies from large technology providers. As Dan Glaser of Marsh & McLennan reminded everyone, "It was not too long ago that every firm had its own solution for CRM and data centers." Some suggest that insurance companies could ultimately become consumers of AI and machine learning "packages" from a small set of big companies offering these capabilities.

Is the agent here to stay? Despite advancements in technology and increasing digitization, we heard strong assertions that agents will continue to play a role in the purchase journey, though it is likely their role will narrow to focus on supporting the end of the journey versus the entire journey. The delivery methods for agent support will certainly evolve from what they are today. Agents will need to embrace new digital solutions and learn how to participate in emerging technology-driven ecosystems.

Should distributors be worried? Many of this year's exhibiting insurtechs have set the core distribution function in their sights. Distribution is a low-risk target, and we may be rapidly approaching a tipping point. Once one insurtech reaches sufficient scale, it is likely to become the go-to for carriers, and it will gobble up or crowd out competitors.

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We are in a phase of incremental innovation. The big ideas—such as image-based underwriting, IoT to reduce claims, and AI-based technologies to improve core carrier processes—are out there, and we are seeing many insurtechs competing for attention from the large and midsize carriers. Which insurtechs will distance themselves from the rest of the pack remains to be seen. But we're excited to see how insurtech's favor with investors may translate into more innovation from disruptive tech entrepreneurs and incumbent carriers alike. ■

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