



# Insurance technology: Progress on digital strategies

October 2018

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# Digital gets personal

(2018 Global CEO Outlook)

## CEOs are personally leading the digital charge

Our annual Global CEO Outlook that outlines findings from discussions with 1,300 CEOs of large companies around the world exposed key progress in how they are personally embracing the digital challenge.

**CEOs are now placing technology at the top of their agenda.** Seven in ten (73 percent) of insurance CEOs are taking greater personal ownership of driving digital transformation and trust, seeing protection of customer data as a personal responsibility. They are positive about their companies growth prospects, with 97 percent seeing disruption as more of an opportunity rather than threat.<sup>(a)</sup>



**Digital innovation is top of mind for today's business leaders, with 71 percent of global CEOs personally ready to take ownership of radical transformation.**

2018 Global CEO Outlook



Insurance CEOs are placing a direct focus on tackling the journey to digital and embracing emerging technologies by **establishing dedicated capability** through investments in acquisitions and alliances. They no longer merely see digital as a responsibility of a traditional technology function under the management of a traditional CIO.

For example, the CEO of AXA has set up a separate business unit dedicated to innovation that reports directly to him.<sup>(b)</sup> Generali have positioned their CIO as having the dual responsibility of Chief Digital Officer as an explicit part of his remit and Prudential have appointed a Global Chief Digital Officer.<sup>(c)</sup>

In addition, CEOs are starting to see major opportunities in a **connected eco-system** of strategic alliances, that vastly increases customer touch points and offers new distribution channels, broadening the reach of a traditional insurance model.

Insurers are beginning to characterise themselves as technology and data organisations that can turn disruption into opportunity by being more **agile and data driven**. "We are actually a technology company, our core business is data processing," says Oliver Bate, CEO of Allianz.

**Success is no longer solely assessed by traditional financial measures, but also by the ability to innovate**

Note: (a) 2018 Global CEO Outlook, Insurance data, KPMG International  
(b) [2017 AXA Annual Report](#)  
(c) [generali.com](#); [prudential.co.uk](#)

# Emerging technology radar

The emerging technology radar breaks down disruptive technologies and shows their expected time to impact and the size of impact.

Emerging technologies that are impacting industries today or will make a significant impact within five years are defined by radar as **'strategic'**. Companies are seeking to fully understand and proactively implement solutions in these areas.

Those that are expected to impact in 5-10 years are ready for **'market entry'** and need to be commercialised. Companies are looking to bring these to market and monetise them.

Those technologies that are beyond 10 years to impact are in the **'research'** category, indicating where organisations could consider investing in research and development.

Those emerging technologies that are not going to impact today's operating models, will impact tomorrow's business model with new products, new markets and new channels to address.<sup>(a)</sup>

We have highlighted in blue those technologies that will continue to significantly impact the insurance industry in the next five years – we will talk about them in detail later in this paper.



Immersive experience



Artificial intelligence



Digital platforms

## Impact



Transformational

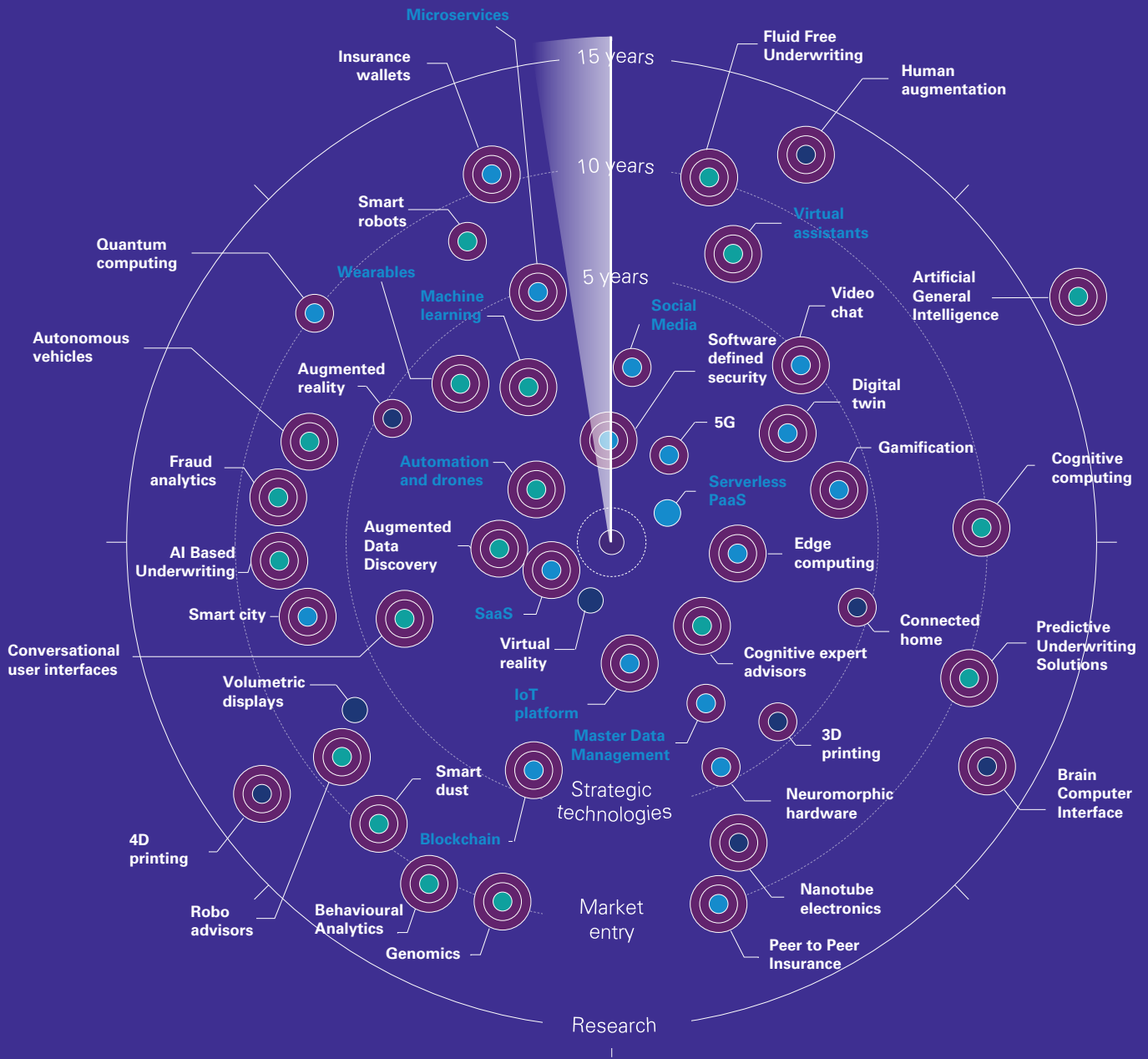


High



Moderate

Note: (a) Provided technology types (Immense Experience, Artificial Intelligence and Digital Platforms) are aligned to categorisation suggested by Gartner (2017, Hype Cycle for Emerging Technologies)



# Emerging technologies landscape



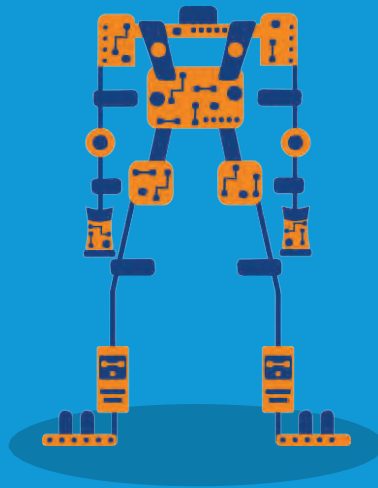
## Artificial Intelligence is:

An umbrella term covering a broad range of technologies that endow machines with intelligence. Intelligent Automation, is the application of these technologies to business processes and infrastructure.

## And, the impact?

Perhaps more than any other technology, AI will reshape the workplace of the future and will probably change every job category by at least 25% within 10 years. Despite appearing to have humanlike understanding, weak AI lacks common sense and extensive methods for self-maintenance or reproduction.

[Search for 'Rise of the humans 2' for KPMG's opinion on the impact of AI on the workforce of the future.](#)



Powered Exoskeleton



## Brain Computer Interface (BCI) is:

A type of user interface whereby the user's distinct brain patterns are interpreted by a computer. For example, Neural Lace is an ultra-thin mesh that can be implanted in the skull, forming a collection of electrodes capable of monitoring brain function. Data is either passively observed for research or used as commands to control an application or device.

## And, the impact?

In the near-term, BCI may be able to treat neurodegenerative disorders, such as Parkinson's disease. There are also military applications for performance enhancement of cells. It could be used by people with missing limbs to connect artificial body parts. Beyond the medical industry, the possibilities of mapping the brain activity, and even thoughts, could see the relationship between human and machine get a lot closer.

## Machine learning is:

A collection of three sub-disciplines:

1. Supervised learning, observations focus on labelled data
2. Unsupervised learning (labels are omitted)
3. Reinforcement learning (evaluations are given of how good or bad a situation is)

Machine learning sits behind all of the personal assistants (Alexa, Echo) available in the market.

## And, the impact?

Machine learning drives improvements and new solutions to business problems across a vast array of business and social scenarios: automotive, drug research, CRM, supply chain optimisation, predictive maintenance, operational effectiveness, workforce effectiveness, fraud detection, and resource optimisation.

## Human Augmentation (HA) is:

Creating cognitive and physical improvements as an integral part of the human body, to deliver performance that exceeds normal human limits.

## And, the impact?

As well as treating illness and disability, HA will allow civilian and military people to work in environments previously inaccessible or provide enhanced experiences of real-world situations.

*A question for the dinner party...*

“How will these technologies affect human evolution?”

## Quantum computing is:

Non-classical computing that moves beyond binary computing and uses the 'quantum state' of subatomic particles. If you imagine a globe, classical computing dictates that a 'bit' can only sit in either the north pole or south pole, but with quantum computing, the 'qubits' (quantum bits) can sit anywhere on the globe, thus opening up the ability for a qubit to store an incredible amount of information whilst using less energy to do so.

## And, the impact?

Quantum computing could have a huge effect, especially in optimisation, machine learning, cryptography, DNA and other forms of molecular modelling, large database access, encryption, stress analysis for mechanical systems, pattern matching, image analysis, and weather forecasting. Analytics is likely to be a primary driver as the technology becomes useful, but this is outside the planning horizon of most enterprises.



“The winners will be those who become the ‘guardians of the algorithms’ of our lives.”



Connected Home



**Augmented Reality (AR) is:**

AR bridges the digital and physical world. The real-time use of information in the form of text, graphics, audio, and other virtual enhancements integrated with real-world objects and presented using a head-mounted-display or latest mobile technologies.

**And, the impact?**

AR enhances training, maintenance, and collaboration efforts. It is applicable across many markets, including: gaming, industrial design, digital commerce, marketing, mining, engineering, construction, energy and utility, automotive, logistics, manufacturing, healthcare, education, customer support, and field service.

Search for [NVIDIA HOLODECK for information on collaborative design in VR.](#)



**BLOCKCHAIN**

**Blockchain is:**

The technology that sits behind both cryptocurrencies (e.g. Bitcoin) and smart contracts (e.g. Ethereum). It is a distributed database, a list of cryptographically signed, transactional records (blocks) shared by all participants in a network. With a blockchain, or public distributed ledger, each record contains a time stamp and links to previous transactions. With this information, anyone with access rights can trace back a transactional event, at any point in its history, belonging to any participant.

**And, the impact?**

We expect a complete reformation of whole industries and commercial activity as the programmable economy develops, and ledgers contribute to the monetisation of new ecosystems.



**Internet of Things (IoT) is:**

Connecting ‘things’ to the internet, thereby creating a giant network of connected people and devices. IoT platforms act as the intermediary between the ‘thing’ and the well-established IT world and business processes.

These platforms bring to bear near and far event stream analysis and decision making, integration of streams, context and enterprise systems, and other logic required in the end to end IoT solution – all delivered as a combination of a software platform and cloud hub platform.

**And, the impact?**

Billions of sensors are being deployed in our cities, factories, homes and cars. The connected home will create many new business models. We are currently working with insurance companies, white goods manufacturers, and telcos to reimagine the future of services delivered into the home by new ecosystems working together, connected by IoT, cloud and AI.



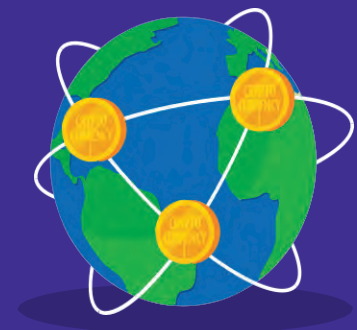
**5G is:**

A set of proposed next generation telecommunications standards governed by 3GPP. In October 2017, Qualcomm demonstrated their first working 5G data connection on a mobile device – connecting at 1Gbps, which is equivalent to 1,000Mbps. This speed enables you to download a one-hour HD TV programme in less than six seconds.

**And, the impact?**

Today’s 4G mobile networks currently make use of the sub-6GHz frequencies, but these are heavily crowded. Mobile operators are running out of capacity to carry the huge amounts of web traffic generated by consumers on billions of mobile devices, in addition to data being sent from internet-enabled sensors in smart devices. 5G will ensure our mobile networks can cope with future demands.

“Blockchain removes the middleman from transactions.”



# Emerging technologies in insurance

“

**Focusing on digital innovation is key for every player in the insurance market.**

”

**Bruce Hodges**

Group Chief Information and Digital Officer of Generali

Today CEOs see the implementation of disruptive technologies as a top strategic priority. Seventy-three percent of insurance CEOs say that rather than waiting to be disrupted by competitors, their organisations are taking a lead in embracing disruption and turning it into opportunities.

We have picked the top eight strategic technologies that we believe will continue to have the most significant impact on the insurance industry in the next five years.





## Blockchain

Blockchain is still nascent but has attracted interest from established insurance firms who are starting to explore the space, and joined the R3 consortium, now with over 200 financial institutions. A timestamped and immutable ledger will improve data access, transparency and trust for all parties, helping to reduce levels of insurance fraud. At present this represents a significant cost to insurers. The introduction of smart contracts built on the blockchain and written to self execute upon the trigger of a specific condition, could automate a variety of operational procedures, making them more efficient by reducing disputes, errors and fraud. Smart contracts could also provide a platform technology to enable the operation of peer-to-peer solutions.



## X as a Service, including Cloud

Cloud technology allows insurers to maintain an IT infrastructure which provides enhanced business agility and improved speed of IT deployments. This provides insurers with the platform to deliver innovative business solutions and expand their global footprint at speed, reducing their dependence on a specific market or product. Standardisation and the use of APIs facilitates the integration of 'Greenfield' operations, third party solutions and acquired capabilities into the wider IT platform. This allows the business to improve intermediary relationships and leverage all capabilities available to them. Cloud computing can also reduce the total cost of IT ownership and operation, allowing insurers to concentrate on innovative customer centric products.



## Artificial Intelligence and machine learning

If supplemented with real time Internet of Things (IoT) data, near instantaneous personalised decisions can be made, offering customers dynamic products that reflect their changing circumstances. Insurers will also be indirectly affected by the adoption of artificial intelligence in other industries including transport and healthcare. With the introduction of self driving cars, both partially and fully automated, insurers will need to think about the way coverage will function, who will be required to take out policies and how to adapt to an expected reduction in the need for motor insurance. In healthcare, through the analysis of large volumes of patient data cognitive computers are able to play both a diagnostic and preventative role, improving the health of patients, reducing the number of hospital visits and therefore reducing the number of claims.



## Microservices and APIs

In the digital era of increased connectivity seamless connections are becoming more important than ever before. Insurers can consider investing in platform economy to enable exposure of their data and services through APIs, integrating their products with their client's businesses. Open platforms have potential of enabling scalability and quicker accommodation of growing business and customer demands, helping insurers gain competitive advantage on their digital journey.



## Social Media

Social media represents a powerful customer servicing, profiling and marketing tool. When combined with big data analytics the insurer can augment detailed customer profiles from their activities on social media and undertake sentiment analysis. This information can then be used to provide personalised products and improve marketing efficiency. Social platforms could become part of a connected ecosystem of distributors whereby the insurer takes the role of a manufacturer of insurance products all supported by an in house API platform.



## Automation and robotics

The effects of automation can be felt across the whole business. Straight-through-processing eliminates rekeying of information in separate systems and reduces administrative costs in the back end. Chat bots and virtual assistants implementation can improve both customer experience and reduce call centre load, freeing up their time for sales activities in the front end. Automation generally reduces FTE but expect growth within products and business development as they demand skills in areas such as algorithm development, machine learning and advanced analytics.

**The true transformational impact of emerging technologies comes when they collide together to unlock collective value**



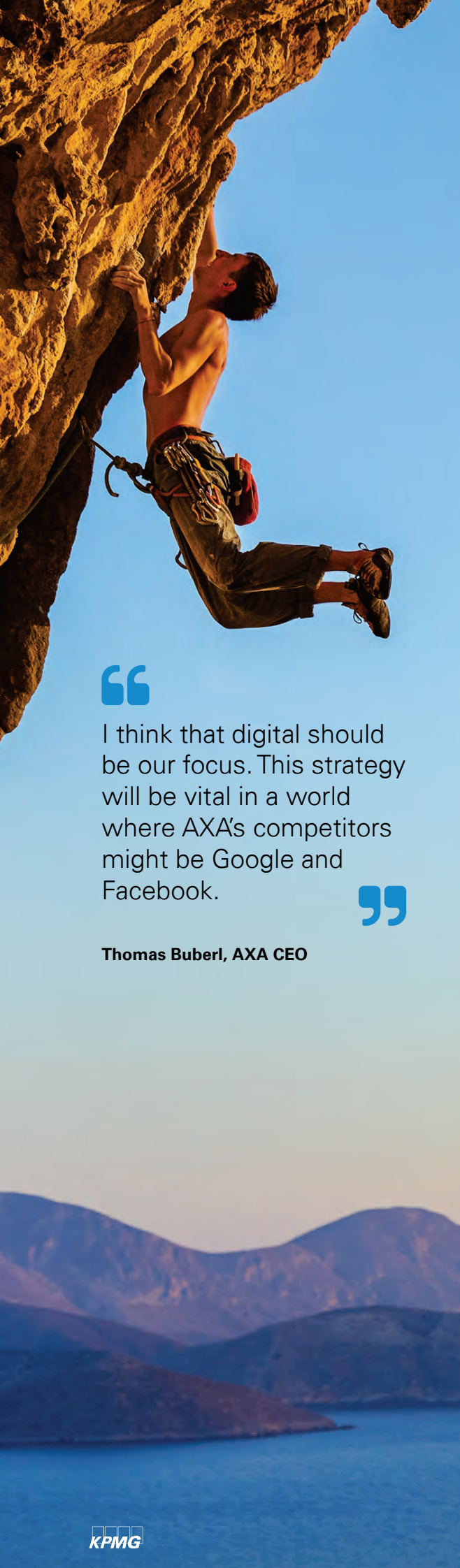
## Master Data Management

Master Data Management ensures that enterprise data is validated, documented and maintained in a single source of the truth, even when it is pulled from different systems. This allows the insurer to maintain regulatory compliance, lower risk and leverage the data for both internal and external business processes. It also provides a solid foundation for any Big Data and Advanced Analytics Strategy and enables customer centric business operations by combining disparate systems to build out customer profiles, allowing the business to customise services and identify up-sell and cross-sell opportunities more effectively.



## Internet of Things and wearables

The un-paralleled volume and quality of data collected through IoT will enable insurers to accurately model risk, underwrite policies and react in real time to trends. A notable example is within the motor insurance business. With integration of telematics into vehicles the driving habits of the driver can be determined and policies can be altered accordingly. Additionally they will allow automated First Notice of Loss (FNOL) after an accident, improving resolution times significantly. Another examples are connected home and wearables – all will create many new business models. Many of these are focused on preventative interventions, ultimately reducing claims indemnities.



# Challenges on the journey to digital

Technology has pervaded into every element of the insurance business. 'IT' can no longer be considered as a support function, managed as a central organisation by the traditional CIO. The next five years will see IT functions dissolve fully into a re-imagined business structure. Insurer's technology operating models are beginning to embrace this move from centralised 'traditional functions', to 'technology capability' oriented models and eventually on to truly 'federated' models where technology is a core part of each business function, governed as a corporate asset.

But how does a global insurer, with 50+ years of regional legacy technology and the associated technical debt, undertake this transformation journey, whilst also responding to planned and unplanned events – such as M&A, regulation and simply 'keeping the lights on'?

Our 2018 CIO Insurance survey suggests that technology leaders are increasingly trying to achieve step change towards becoming the insight driven digital insurer, with 70 percent of respondents agreeing that the role of the CIO will significantly change as technology becomes more strategic in their organisations.

Alongside this, 65 percent agree that skills shortage prevents them from keeping up with the pace of change and over 50 percent indicating skills shortage in big data, analytics, AI, enterprise and technical architecture and DevOps.

In short, global insurers are all wrestling with embracing emerging technologies, adopting new ways of working, being truly customer centric – whilst staying in business. The majority of them assessing their own capability as moderately or less effective in:

- Leveraging customer data to deliver personalised customer experiences
- Generating actionable insights from customer data
- Creating engaging customer experiences
- Having a single view of customer interactions across all service channels

The following are the key challenges we see insurers experiencing as part of executing their technology strategies. Whilst these challenges are consistent, insurers are facing them in different orders of priority and focus.

## Defining digital

What digital means for a global insurer is still a difficult question to answer. Insurers need to consider what the most important goals are when trying to embrace emerging technology to realise the digital vision. This vision has to resonate for customers, clients, colleagues and regulators.

Faced with a number of options and constraints around how to deploy transformation budgets, insurers need to balance the strategic priorities of value chain transformation versus embracing innovative programmes to truly digitise their businesses.



I think that digital should be our focus. This strategy will be vital in a world where AXA's competitors might be Google and Facebook.



**Thomas Buberl, AXA CEO**

## Addressing disruption from the market and customer

Insurers are constantly responding to the ongoing consolidation of the industry, where organic growth is challenging. Disruption, and the need to respond to it, is accelerating with customer demands increasingly moving to an omni-channel model capable of anticipating customer needs and delivering frictionless solutions.

## Harnessing the power of data

Insurance organisations are data rich. But harnessing the potential power of that data is incredibly challenging. Data and analytics technologies are advancing rapidly and can be leveraged, but it requires the right strategy, architecture and execution to make constructive progress towards being an insight-driven insurer.

## Empower legacy

50+ years of legacy technology and technical debt hampers the majority of global insurers. Insurers are increasingly looking to empower their legacy estate (rather than replace it) with moving to the Cloud, embracing micro-services and APIs and applying automation solutions – but this has to co-exist with constant pressures to reduce IT OPEX.

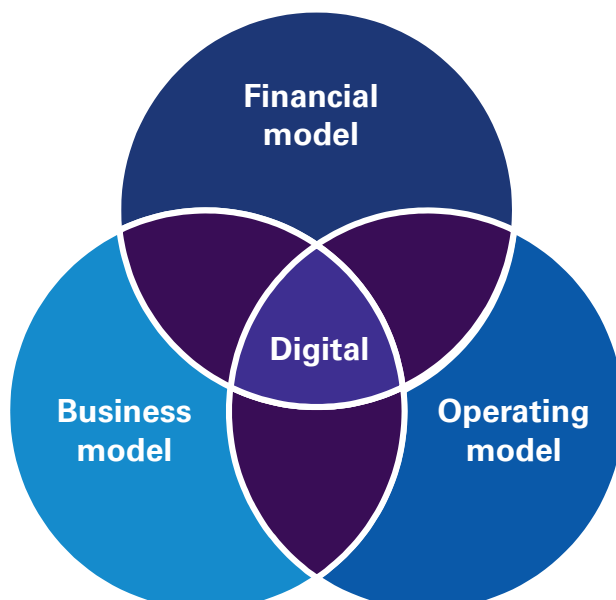
## Stay in business

Insurance technology functions have to keep the business running, managing the inherent complexity and increasing fallibility of the legacy estate, whilst also meeting demands for change from the business, along with regulatory and statutory requirements. This often leaves minimal time and funding to truly embrace emerging technology and make meaningful steps on the journey to digital.

## Organisation, people and culture

To truly embrace the journey to digital, insurers need to consider fundamental change to the way technology is incorporated into the business model. Many insurers are behind the curve in considering the skills, capabilities and ways of working required to support the journey to digital – and how this dovetails with evolving workforce mega-trends, such as the gig-economy and changing demographics.

**In addressing all of the challenges described above, insurers need to consider impact on their financial, business and operating models**



“

Almost eight in ten CIOs see their digital strategy as only moderately effective or worse.

”

2018 KPMG Global CIO Survey

“

65 percent of insurers agree skills shortage prevents their organisation from keeping with the pace of change, with 70 percent looking at acquiring small companies to bring in the right expertise and capabilities.

”

2018 KPMG Global CIO Survey

# How are the major insurers responding

We have looked at a sample of insurance case studies and the steps the major insurers have taken to address the challenges seen on their digital journey. We have illustrated their priorities and focus in addressing each of the challenges.<sup>(a)</sup>

	Comparator 1	Comparator 2	Comparator 3	Comparator 4	Comparator 5	Comparator 6	Comparator 7
Defining digital							
Addressing disruption from the market and customer							
Harnessing the power of data							
Empower legacy							
Stay in business							
Organisation, people and culture							

## Comparator 1

The current focus areas for the first comparator, a large multinational composite insurer, are around 'Staying in Business' and 'Empowering Legacy'. The organisation has a significant global enterprise wide cost reduction target, with IT needing to deliver its share. IT cost reduction activities are therefore paramount and the firm has been focusing on achieving this through technology estate simplification, applications rationalisation, automation, IT orchestration and driving greater commercial value from sourcing – having allocated a large simplification fund. Several transformation initiatives are running, but not all are truly aimed at digitisation of the business – many look at improving business and technology services (e.g. Win10, O365 and Service Now deployments).

The insurer has progressed in addressing market disruption by re-focusing its core business and exiting under performing and non-strategic units while building capabilities in select growth markets through targeted acquisitions and partnerships. As a part of that journey in 2017 the organisation acquired a leading global travel insurance provider based in Australia, that will retain its own brand and will operate as a discrete entity. This is one of the global trends we observe in the insurance market; insurers

are acquiring new disruptive capabilities, but not fully absorbing them into their businesses, rather seeking to retain their innovative culture. Whilst more traditional M&A is occurring, driven by the desire to secure inorganic growth and achieve cost synergies, an increasing number of acquisitions are being made by traditional insurers wanting to rapidly obtain disruptive capability.

Seeing digitisation as another strategic priority, the organisation has been investing in piloting emerging technologies, such as cognitive contact centre agents, and reinforcing the change towards a new digital model. In May 2018 it launched a mobile solutions unit to 'shape the future of insurance' and continue driving its innovation centralisation agenda.

Harnessing the power of data is definitely on the insurer's radar, but is receiving less focus and attention than the cost reduction and acquisition agenda.

## Comparator 2

The primary focus of this major global insurance group can be split into two themes – mainly playing to the 'stay in business' and 'empowering legacy' agenda. The organisation is embarking on an enterprise cost reduction programme, which seeks to explore and reduce costs from

Note: (a) Provided case studies are based on KPMG own insights and research

the bottom up – the first time this has truly been attempted enterprise wide. IT cost reduction is therefore front and centre of the technology agenda with a lot of focus being placed on driving in year savings. The insurer recognises that to truly realise the optimal IT OPEX level, it will have to tackle the legacy estate and look to consolidate and empower its legacy platforms, of which there are many across the globe. This has a slightly longer burn, so gets slightly less focus than the immediate cost reduction challenge – but it is definitely a priority over the next 24-36 months. The firm will, inevitably, face the dilemma of platform rationalisation and is already wrestling with the question of whether to expand a market-leading third party platform that is currently implemented for part of the business, or continue to invest in its in-house solution.

In addition, the organisation is also responding to the digital customer-centricity challenge, which is not currently a strong value of its brand – being primarily a commercial insurer. Addressing the firm's place in the personal lines business and improving its customer-centric offering was the rationale that underpinned the recent Joint Venture with a UK personal lines insurer. It combines the organisation's scale and the co-venturer's customer-centric brand to produce the third largest personal lines provider in the UK. The insurer will initially hold a 49 percent stake, which is due to increase to a majority shareholding in 2019 – but the current plan is to retain the co-venturer's brand.

The company's digital agenda is still in its infancy however it has recently appointed a Chief Business Transformation Officer, responsible for leading the digital transformation, who is also a member of the Board of Management. The move recognises the 'importance of developing future-ready business models' as well as establishing the firm's innovation hub.

### Comparator 3

Comparator 3, another global composite insurer, has a five year plan in place, focusing on two strategic priorities: transformation of its current business model and re-focusing its business on core capabilities, addressing improvement of customer engagement and centricity, operational efficiencies and tomorrow's growth. The organisation is looking to adapt its business model from payer to partner, accelerating business innovation to meet the evolving customer needs and develop further in areas such as prevention and care. Key constraints seen on the firm's journey are in line with what the other major insurers are experiencing and are related to the need to balance BAU delivery and change transformation.

The insurer has a strong digital ambition and is very active in incorporating technology content into its strategy and propositions.

It drives greenfield approach of growing in-house innovation capabilities as well as investments in M&As (20 percent of their budget) to broaden its eco-system and customer touch-points. In 2017 the insurer established a separate innovation business unit, reporting directly to the CEO, with a mission to deliver an open innovation platform and integrate its BUs and partners via API architecture and new data capabilities. In the previous years the organisation has also created a global technology venture capital firm to allow them to take stakes in innovative fintech and insurtech start-ups – so far 20 investments have been

made in the US, UK, Israel and Europe. Furthermore, the firm has created an internal incubator to build new companies in the insurance, protection and assistance space, with 140 collaborators in the network. It has also set up ventures that develop disruptive business models and enables the firm to develop innovative partnerships.

Whilst investing in digitisation, internally the insurer is addressing challenges of its technology platforms rationalisation. For instance, Guidewire is being rolled out in a number of countries as the firm's standard claims platform. It is also currently looking at other ways to improve the operational performance of its own internal technology capabilities.

### Comparator 4

Building their digital strategy and addressing market disruption, through a number of alliances and partnerships have been primary focus areas of this large insurer over the last few years. Their focus on innovation has been recognised in the market through a number of awards, including 'the best digital strategy world wide' and Digital Insurer's European Insurance Innovation Award. The firm is coming to the end of a considerable cost saving and the business has also announced that it has allocated a significant budget to deliver digital transformation.

Like other big market players, the insurer sees building eco-system and acquiring technology capabilities as one of the key priorities of its digital journey. Interestingly its strategy includes a number of investments in venture capital funds with exposure to the Fintech sector. The firm has entered into partnerships, leveraging emerging technology in a number of areas. One such example is their world's largest, scientifically proven wellness programme – where the insurer has encouraged the use of technology such as wearables to drive greater value in health premiums, as well as helping customers to address health and wellbeing. The insurer is also a leader in the Telematics space, where they are collaborating with a large auto insurance provider and have acquired full control of a leading driver profiling company. This has seen the insurer driving real innovation into the motor insurance market, including the ability to offer customer-personalised products utilising telematics data and analytics, as well as fraud detection. In addition, the firm is a member of B3i and R3 and is driving internal initiatives around AI in claims payment processing and fraud investigation as well as embracing RPA technologies. The data analytics agenda is also progressing, with a focus on fraud investigation (combined with the use of AI) and personalised product offering through customer analytics. In addition, distribution channels are also being digitised through the B2B2C Digital Agent platform which franchises the firm's brand to around 70,000 insurance agents across the globe.

The insurer has had a focus on managing and empowering legacy over the last few years, and could be considered further along the curve in getting its legacy estate under control, when compared to a number of their competitors. They have made significant investment in consolidating legacy over the last few years and this is starting to demonstrate benefits, releasing the shackles of legacy and allowing them to focus on the innovation agenda.

## Comparator 5

Comparator 5, a large UK insurance provider, has been on a strategic transformation journey for a number of years, with the flagship programme aiming to implement a green-field 'best of breed' platform for its personal lines business. In addition it has also released some digital apps, supporting mobile claims and its commercial insurance offering.

The programme has Guidewire Policycenter and Claimcenter at the core, with Salesforce, Teradata and Thunderhead integrated through a Mulesoft middleware layer. It will be largely cloud based. The programme has seen significant challenge over the last few years with a number of delays and re-scoping exercises.

The 2017 the firm results saw an impairment linked to the benefits of the programme, with the resulting scope reduction largely focused on data, analytics and CRM capabilities. At the same time, the results for the firm in 2017 were very encouraging – demonstrating a strong underlying business. The insurer achieved a COR of 92 percent, with growth in every brand and channel and still has an enviable brand portfolio in the UK personal lines market.

Originally, the target architecture defined a single new platform for all brands and lines of business, but as the programme has progressed a number of these have been dropped from scope and are now seeking or implementing alternate solutions. The remaining books on the programme's platform are Motor and Home. Pet and Travel are seeking alternate solutions and Commercial is adopting an SSP based platform.

From a data perspective, the programme will largely improve the firm's pricing capabilities, but will also set a platform for Big Data and advanced customer analytics.

## Comparator 6

Over the last few years, this large global composite insurer has invested significantly in Digital delivery capabilities across their Global business. A key strategic vision is to be a true customer composite, driven by customer centricity, experience and service. This requires a move from a product siloed structure to a customer centric architecture, which requires the transformation of their business model and underlying technology – driving agility and flexibility as well as addressing running costs. In parallel to the Digitisation of the business, adoption of Agile and a move to cloud, they have also invested in the simplification of their business and stabilisation of their legacy systems to support the pace demanded by Digital delivery. All of this has been recently addressed by a global IT Strategy that looks to balance the digital agenda with the perennial need to uphold legacy and deliver business and regulatory change.

Augmenting this, the insurer has also been active in creating partnerships and alliances in the market and has focused these alliances on looking at innovation in the motor market, new sources of data, emerging platforms and a partnership with a digital incubator to focus on jointly creating start-ups. There are a number of technology oriented propositions and that are currently in the pipeline to market.

Whilst there are still a number of legacy platforms and has also been significant investment in core platform replacement over the last 5-7 years, this insurer has also invested in emerging technologies such as IoT and Machine Learning, as well as leveraging technologies like RPA, Intelligent Automation and Virtual Assistant solutions. To help empower the legacy estate, the insurer is also investing in moving legacy workloads to the cloud and building an ecosystem of APIs and Microservices that enable fast integration.

Over the last few years, this insurer has adopted a segmented approach to innovation, with a number of the digital initiatives owned and managed in a separate business environment, using separate team of people and ways of working. The challenge now is to begin integrating the legacy and digital environments, balancing the opportunity to shift legacy into digital and, where necessary, integrate digital back into legacy.

## Comparator 7

Over the last five years this comparator has undertaken two major legacy transformation initiatives with two different outsource providers. Whilst these have had some success, there still remains a residual legacy estate for the firm to manage in addition to the two new platforms that have been implemented and associated overhead.

Subsequently the insurer is revisiting the scope of services from one of these major suppliers and have recently entered into a ten year partnership with an Indian-based IT services supplier to digitally transform the business to deliver an enhanced service to UK customers. With this initiative the firm is expecting to decommission their legacy estate and migrate all associated data over the next three years.

Whilst the insurer recognises the need to innovate and change, the majority of their effort has been placed on the above major transformation deals along with the obligatory focus on the recent regulatory change. This resulted in the organisation's digital agenda still being in discovery and incubation phase.

The focus areas of the firm's recently released digital roadmap is centred on data transformation supported by a data lake. Previously they have been also focusing on automation, where they have established a robotics lab.

The firm has also become the first UK insurer to streamline customer journeys with automation, having customer journeys and interactive customer experience on their radar.

**Europe and global regions are wrestling with similar issues of progressing along their digital journey whilst also running the business**



## Global trends

The Asian insurance market is seeing a high degree of technology based innovation, with some interesting alliances and new emerging business models. With the burden of legacy not quite as pronounced in many Asian insurers, several have been in a position to prioritise driving innovation and new business models. A Chinese holding conglomerate and one of the largest world insurers has recently won a tender in Hong Kong, against traditional technology and consulting players, to create a blockchain based solution with HKMA that will see seven banks in a consortium to commercialise a distributed ledger-based trade finance proof-of-concept, as well as having recently joined the R3 consortium – as the first Chinese member. With the recent success of China's largest online P&C insurer (in which other major insurers and big players, such as Alibaba, hold shares), the two organisations are looking to capitalise on an insurtech market with ambitious revenue targets by 2020. The P&C insurer raised a significant amount when it IPO'd in September 2017 – the first IPO of an internet-only insurer. Another major player – the largest public listed Asian life insurance group – has also been exploring blockchain technology to help meet the challenges of digitising the bancassurance channel, which is responsible for a significant portion of its revenue, as well as a wider digital agenda including AI-enabled chatbots to handle customer and agent queries, leveraging a partnership with IBM Watson. Watson is also being further used by a major Japanese life insurance provider, who has deployed the AI technology to replace a number of colleagues in calculating claims pay outs.

Alliances are also growing in the Australian market where a large multinational insurer has invested in a private technology firm that provides online and mobile marketplace – building on its expertise as a front runner in providing insurance products to the 'sharing economy', and giving it greater access to the Australian market – where the above-mentioned technology company has over 2 million users (the company is also now in the UK with 13,000 users since 12 March). This has leveraged the insurer's large venturing fund to explore innovation and the connected ecosystem. Another major Australian insurance player has also partnered with a tech start-up to drive a mobile app based solution to improve Home Contents insurance, by leveraging a personal asset register –

driven by integration to other mobile apps. Many other insurers in Australia are however facing more perennial issues, such as reducing IT OPEX and empowering legacy – one of Australia largest global general insurers having recently undertaken an IT Effectiveness review to do just that.

In the Americas, insurers face very similar pressures of legacy that we see in the UK, with a number of players focusing on cost efficiency and empowering the legacy estate. Several major composite insurers have been focusing on getting technology costs under control – each executing enterprise-wide cost reduction programmes that are targeting upwards of 20 percent OPEX reduction, which has cascaded down to the technology functions of each. They are also investing in data capabilities, with one of the largest US insurance providers citing themselves as a 'data company that sells insurance'. Perhaps the most interesting recent disruptive model in the US is the alliance between JP Morgan, Berkshire Hathaway and Amazon to provide technology-based 'not-for-profit' healthcare for its combined 1.1 million employees – which has sent stocks of several US health insurers down by approximately five percent.

In summary, other global regions are wrestling with similar issues of progressing along their digital journey whilst also running the business. The standout seems to be the Chinese market, where the funding being provided for innovation is large and the adoption of digital insurance is very rapid.



# Key takeaways

**Whilst global insurers put in place digital strategies, recognise the importance of emerging technologies and are acquiring innovative capabilities, they are still struggling to balance pressures of short term goals and event-driven transformation with investment in the true digitisation of their business.**



In summary, the technology agendas at global insurers typically address very similar visions, and many are experiencing the same difficulties in achieving that vision. The KPMG 2018 CIO survey concludes that 'last year more organisations than ever put in place a digital strategy. This year, we are seeing that growth falter. Making a success of digital is proving complex, almost eight in ten CIOs see their digital strategy as only moderately effective or worse'. Insurers are experiencing the same.

Insurers are constantly responding to the ongoing consolidation of the industry, where organic growth is challenging, and cost efficiency is as important as ever. Disruption, and the need to respond to it, is accelerating with customer demands increasingly moving to an omni-channel model capable of anticipating customer needs and delivering frictionless solutions.

## **The key trends that we see across this market are:**

- Insurers all recognise the importance of emerging technology and have all worked on creating their digital vision and strategy.
- Insurers recognise that they cannot become digital innovators, driven by analytics insight and underpinned by an agile culture without support – and that is driving alliances, JVs and acquisitions.
- However, there are immediate pressures being placed on technology functions to reduce cost and address technical debt – often these initiatives take greater priority than the digital agenda.
- Even where there is investment in transformation, insurers are still struggling to balance investment in 'value chain improvement' with true 'digitisation and new business models'.
- Thus whilst the technology strategy and its desire to embrace emerging technologies may be sound, progress towards achieving it is proving challenging.
- The Asian market seem to be making the fastest progress, as they are less encumbered by legacy and have greater investment and rapid customer uptake delivering returns of investment rapidly.

# How KPMG can help

KPMG recognises that today's insurance companies face increasingly complex challenges of driving digital strategies in a fast-changing, disruptive market and delivering innovation their businesses and customers require.

KPMG's insurance technology professionals can help technology leaders and business executives harness technology disruption and transform it into opportunities to drive the digital agenda, agile and enhanced business performance and improve the strategic value of their technology investments.

If your organisation is seeking ways to leverage technology as a source of innovation and competitive growth, KPMG member firms can help. For more information on our insurance technology services and capabilities, please visit [kpmg.com/uk/insurtechinsights](https://kpmg.com/uk/insurtechinsights)



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