INSURANCE INNOVATORS

The Future of General Insurance Report 2017

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Forewords

Change is a constant for those working in general insurance as new technology, regulation, legislation, market conditions and shifting customer expectations continually impact the way insurers and brokers operate and deliver their services. And as a consequence, the skill sets needed by insurance professionals also continue to evolve - embracing both technical, technological and soft-skills – in order to meet the needs of an increasingly on-demand world.

Insurance has always just about managed to keep up with changes in society – but there is now a real need to adopt a faster gear in the face of accelerating change. Be it via disruptors, accelerators or incubators, to name a few, the new wave of investment in the insurance market – embracing everything from AI through to connected devices and the sharing economy - is helping drive the insurance market forwards to adopt more efficient, customer-friendly insurance products and cover for new and emerging risks – which is all good news for personal and commercial customers and the profession itself.

This report provides a snap shot of the major issues facing the insurance market and real food for thought for all those working within and around the insurance profession, from those starting out on their careers through to those in leadership roles. It is for this reason I am delighted to once again support this report and would encourage all those with an interest in the insurance profession to read, digest and act upon its findings. Only by embracing change can the insurance market ensure it continues to underpin the very fabric of society – from enabling businesses to operate and develop through to protecting and supporting individuals at times of distress.

Ant Gould
Director of Faculties, Chartered Insurance Institute

For four years, Marketforce has tracked the technologies and regulatory changes that are shaping the future of the insurance industry. In 2017, once again, our flagship report finds an industry under pressure to innovate as fierce competition, abetted by regulatory reform and disruptive technology, begins to reshape customer behaviour and unpick existing business models.

Yet we are encouraged to find an industry with a reputation for small c conservatism and prudence is increasingly willing to innovate to stay relevant in a fast-changing world. From the sharing economy to extreme personalisation, insurers are waking up to the opportunities of an always-on, one-click datasphere.

Challenges, of course, lie ahead: many insurers continue to move too slowly, leaving them adrift of agile competitors and app-happy customers, while new risks, from ongoing regulatory scrutiny to relentless levels of fraud, continue to emerge.

For insurers, this means constant vigilance to ensure regulatory compliance and financial resilience while fostering an appetite for innovation and disruption to match the best of InsurTech. It's a difficult balancing act, but one which must be mastered to stay in the ring.

Juliet Knight
Director, Marketforce

Contents

Introduction

The insurance industry is ripe for disruption. Astute companies will welcome the challenge, recognising that the rise of competition and game-changing technologies presents an opportunity to get closer to customers and find new revenue streams to offset falling premiums in a changing world.

New customers want a new type of insurance – and the regulatory mood is in their corner. Insurers need to understand what this means for their business and act quickly or find themselves increasingly irrelevant in a world that is being shaped by Millennials, for Millennials.

Our research finds insurers are keen to innovate to keep pace with these disruptive trends. But the pace is still too slow, leaving space for nimble data-smart competitors to open up a service and proposition gap that could prove hard to close.

Uber-scale disruption is coming. Our message? Act now.

Chapter 1:

Innovation and Disruption

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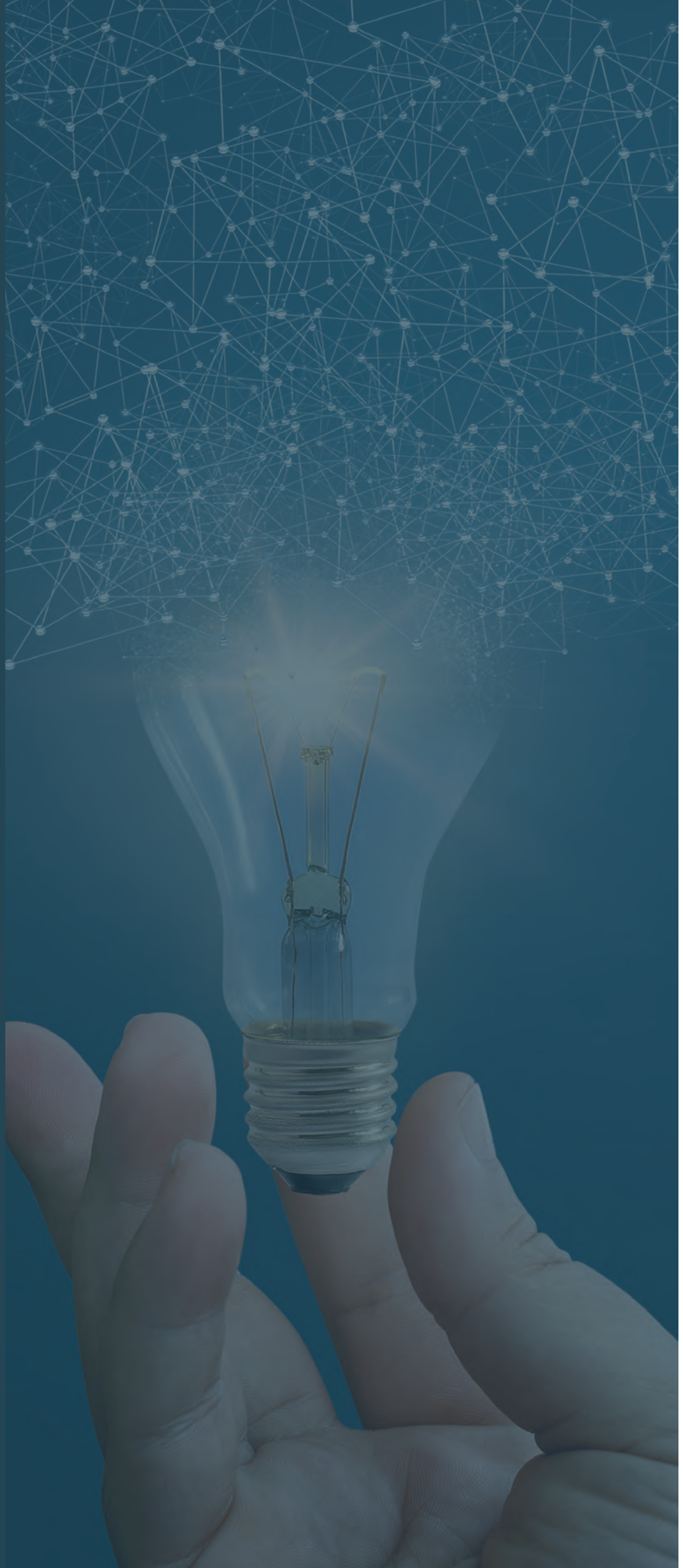


Innovation and Disruption

The insurance industry has weathered countless waves of disruption. From the emergence of direct insurance in the 1990s to the margin-squeezing rise of the aggregator sites, the resilience of its business model has been tested time and again. The next ten years, however, may well see the greatest upheaval yet, as the rise of digital technologies and data transform how risk is identified, managed and priced.

Insurance as we know it will be changed forever. Established incumbents, with their multi-billion-dollar valuations and pedigrees that stretch back to the 17th century, will be challenged by new entrants that have the digital smarts to meet the needs of a one-click society that prizes convenience and transparency above all. Insurers that can rise to this innovation challenge will snatch market share from less agile competitors but there is also the prospect a small handful of disruption champions – the would-be Ubers and Amazons of the insurance world - will dominate the new landscape. Consumers will be the real winners as digital technology turbo-charges innovation and drives down costs.

The industry is clearly braced for this transformation. Last year we reported that 73 per cent of insurers expect the industry to experience "an Uber moment" in the next 5 years[1]. Other surveys suggest many in the industry feel disruption is long overdue or are frustrated by the industry's inability to launch innovative products to market quickly enough[2].

New competition

There are growing numbers of companies now vying to be the industry's Uber. Many incumbents fear the looming threat posed by existing tech titans Google, Apple, Facebook and Amazon, with their resources and access to rich data. Meanwhile, tech-savvy start-ups are also jockeying to disrupt this multi-trillion-dollar industry. Surging investment looks set to carry InsurTech start-ups over the sizeable regulatory and capital/balance sheet requirements that act as gatekeepers to this highly-regulated industry. Funding for InsurTech is now at record levels, with £218 million ploughed into UK InsurTech in the first half of 2017, up from £7.3 million the year before, and the number of deals has jumped by 75 per cent[3].

9/10 of our respondents think competition in the insurance market will increase in the next 2 years

[1]*The Future of General Insurance, Marketforce, 2016*
[2]*The Four Ds of Insurance, Target Group, 2016*
[3]*Accenture analysis of figures from CB Insights*

Our respondents clearly believe InsurTech is swiftly maturing from hype to credible threat: more than nine out of ten of our respondents believe the insurance market in Western Europe will be more competitive in the next two years, and six out of ten believe those operating in personal lines should brace for significantly more competition by 2019 as InsurTech investors target this market segment[4].

Our respondents don't expect this disruption to land a knock-out blow on incumbents but rather an erosion of margins as long-established business models unravel: almost nine out of ten (89 per cent) believe that there is a risk that traditional insurers will find themselves driven lower down the value chain as InsurTech-enabled intermediaries win control of customer relationships. Nearly half (49 per cent) see this risk as significant.

InsurTech is ripping up the rule book with the kind of customer-obsessed focus that proved so successful for Amazon and Uber. This is made possible through the use of data analytics, AI and automation, which allow new entrants to understand customers better than ever before, generate "wow" customer experiences and transform the cost base (witness InsurTech break-out Lemonade and its offer of "killer prices").

Simple, smart and fair: the InsurTech revolution

InsurTech is changing the landscape by embracing three key concepts in all their dealings with customers: simple, smart and fair.

Lemonade encapsulates all three principles: it makes insurance easy (get insured via your smartphone in 90 seconds); it charges a flat fee (a transparent 20 per cent of the premium to run everything); it pays claims incredibly fast (typically in three minutes, although its AI-powered claims bot set a record in January 2016 for paying a claim in just three seconds[5]) while giving back what's left to good causes (thereby enjoying Public Benefit Corporation certification and reducing claims fraud). Our respondents clearly think this is a winning model: 97 per cent believe Lemonade will be successful and 56 per cent think the start-up will take significant market share. More than half expect the peer-to-peer model adopted by Lemonade to be a growth area in the next five years.

97% believe Lemonade will be successful and 56% think the start-up will take significant market share

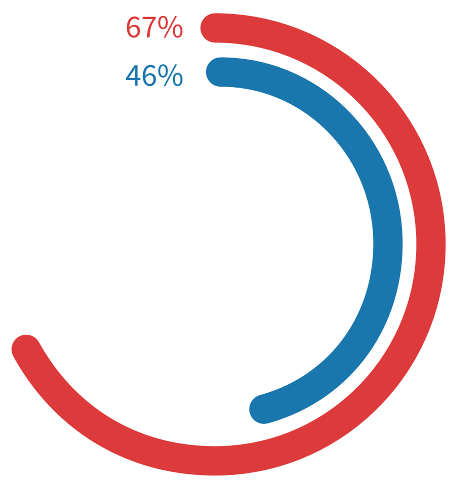
More than half expect the peer-to-peer model adopted by Lemonade to be a growth area in the next five years.

[4]*Accenture analysis of more than 450 InsurTech deals between 2014 and 2016 found a strong bias towards personal lines rather than life or commercial lines. The Rise of InsurTech, Accenture, March 2017*

[5]*Lemonade press release, January 2016 http://www.prnewswire.com/news-releases/lemonade-sets-new-world-record-300386198.html*

Mobile-first broker Knip uses smart tech to make the complicated simple. Knip is an intermediary service that helps customers navigate an increasingly fragmented market, integrating all the insured's policies on one interface and providing personalised recommendations to improve insurance arrangements. More than nine out of ten of our respondents predict Knip will be successful, with nearly half (46 per cent) expecting the start-up to take significant market share.

Trov also makes life simple and fair for the connected customer. The San Francisco-headquartered start-up provides on-demand, single-item insurance, which the insured can turn on and off via mobile as required. After all, why should customers pay for more than they need under an all-risks contents policy? Two-thirds (67 per cent) of our respondents believe Trov will have significant market share in five years' time.



46% think that Knip will take significant market share

67% think that Trov will have significant market share in five years' time

How can incumbent insurers compete with this paradigm shift: insurance not as a necessary evil but a social good, no longer a grudge purchase with opaque premium calculations and a climate of distrust but a solution that is transparent, low cost and resolved at the swipe of a smartphone?

The answer, according to our research, is to mirror the disruptors, by keeping it simple, treating customers fairly and by investing in technologies that can power next-generation user experiences:

more than nine out of ten
of the insurance organisations we surveyed agree that if insurers are to compete successfully in the long term with transparent new entrants like Lemonade, they must stop offering worse prices at renewal than they do to new customers

79%
of our respondents think that traditional insurers' use of mobile as a distribution and service channel will need to become significantly more sophisticated if they are to successfully protect themselves from the threat of new entrants

81%
think insurers will need to become significantly more sophisticated in their use of data analytics

six out of ten
view transparency that the insurer's profits are not excessive as important

69%
think that social purpose/ responsibility is important

77%
think that on-demand insurance will be a growth area in the course of the next five years

Innovation: time to get real

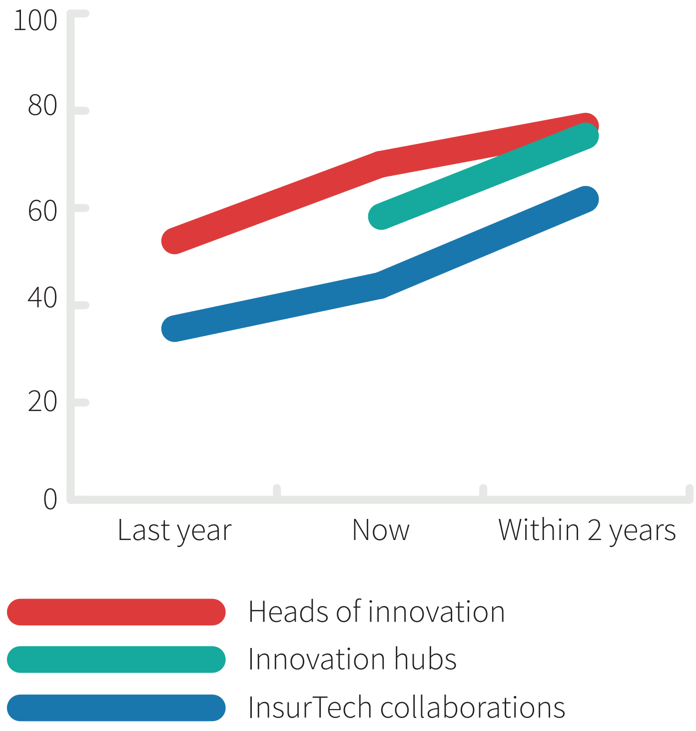
To keep pace with digital frontrunners, traditional insurers need to innovate – and fast. If incumbents are to succeed they will need to implement some of these strategies themselves, by keeping it simple, treating customers fairly and investing in technologies that can power next-generation user experiences – data, advanced analytics and AI will be key. For an industry famed for its prudence and slow adoption rates, it's reassuring to see that incumbent insurers are waking up to the innovation agenda. Last year just over half our respondents had a Head of Innovation; 12 months on, we find that seven out of ten now have one, and that is expected to rise to three quarters within two years. Moreover, nearly six out of ten large insurers now boast an innovation hub, and a further 17 per cent plan to have one within two years.

Importantly, insurers are also seeking to tap the best of InsurTech, both through collaboration and direct investment. Last year only 35 per cent of our respondents had partnered with an InsurTech innovator to create a new insurance-related offering; now we find 44 per cent have paired with an InsurTech and another 18 per cent plan to cement a relationship in the next two years. More than one in four (28 per cent) has established an InsurTech venture fund, and another 11 per cent plan to do so within two years.

These investments are encouraging but there needs to be more urgency and greater momentum. The thinking is still hidebound by legacy mindsets and the pace of change is too slow to match the rapid innovation cycles of agile start-ups or the game-changing ingenuity of GAFA. One survey found that while almost all insurers develop new products and services, just one in five consistently bring them to market quickly enough to keep pace with market change[6]. Insurance Innovators' own research has found little confidence that disruption will come from within the industry's own ranks, with respondents instead backing new entrants as the most like candidates for an Uber-style innovation[7].

With the countdown to that Uber moment already underway[8], there is no time to lose. Only 37 per cent of customers fully trust their own insurer, while 42 per cent of customers think their insurer can be counted on to provide good service[9]. If insurers are to compete, they will need to invest in data in order to reinvent their customer offering – and fast.

Growth in the use of Heads of innovation, Innovation hubs and Insuretech collaborations



[6]*The Four Ds of Insurance, Target Group, 2016*
[7]*According to research in 2016, just 33% expect an existing major player to disrupt the market with a new product or service. The Future of General Insurance 2016, Marketforce, 2016*
[8]*Target Group found that those working in marketing roles in insurance, believe a wave of innovation in products and services is already overdue. The Four Ds of Insurance, Target Group, 2016*
[9]*Capturing hearts, minds and market share, IBM*

IBM Viewpoint

IBM Viewpoint, by Praveen Velichety, Digital & IoT Consulting Leader | IBM Insurance

The world of business has never been so volatile. Ten years ago, the first iPhone had just launched, there was no such thing as the "gig economy" and the far-reaching impact of the financial crisis had yet to be understood. Insurers hadn't yet recognised the threat posed by digital behemoths and the concept of AI-powered chatbots and connected personal things was the stuff of science fiction.

In this brave new world, insurers must innovate and change in order to stay relevant. And to be relevant, they must own a customer problem – or, more specifically, own the solution to that problem. And there are many problems that insurers are well-placed to solve: be it delivering solutions that help customers lead safer, healthier lives, day in, day out, providing the financial backstop for the new brand of entrepreneurs in the fast-emerging gig economy or protecting a customer's digital lifestyle.

Embedding themselves in the fabric of a customer's daily life, adding the kind of value that makes their services indispensable, will be key to success in a hyper-connected world. Insurers should learn from the best, the Silicon Valley titans that developed highly successful platform business models to orchestrate not only various lines of business but also alliances across emerging ecosystems enabling them to rapidly extend into new markets and get ever closer to customers. Cognitive computing, the Internet of Things, blockchain and open APIs are enabling technologies that will allow insurers to design and deliver solutions that customers find they can't live without.

But none of this will be possible unless the insurance industry changes its culture. This will be a huge challenge for a prudent, risk adverse industry but it will be key to success. The organisations best equipped to thrive in this fast-paced volatile world will be those most able to generate, embrace and execute new ideas. Leaders need to foster a culture that puts Human Desirability ahead of Operational Feasibility and Business Viability, instead of the other way around. They will need to identify the customer problem they want to own, find the solution and then work out how to deliver it better than anyone else. They must be prepared to try early, learn fast, fail faster and scale quickly. They must be innovators and collaborators, building an ecosystem of partners to deliver solutions to customers. And this should be happening now because the vast and rapid changes of the last decade are set to be eclipsed by the accelerating disruption of the next.

To find out more how IBM can help insurers in their journey to innovation:

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Chapter 2:

The Changing Regulatory Landscape

The Changing Regulatory Landscape

Regulation is adding to the pressure on insurers to rethink their proposition to the customer. As part of a drive to improve fairness and foster competition, the Financial Conduct Authority has introduced new rules to increase transparency at the point of renewal to prevent long-time customers from being penalised for their loyalty by paying more than new clients for the same insurance product. Studies suggest a quarter of homeowners, and a similar proportion of drivers, automatically renew with their existing provider when their policy comes to renewal, missing out on better deals elsewhere. The cost of loyalty can be eye-watering: analysis suggests UK homeowners throw £37 million a year[10] into an auto-renewal black hole, while drivers spend up to £1.3 billion extra on car insurance[11] by not shopping around for a better deal, with older people, those on low incomes and those who don't have internet access most likely to be adversely affected[12]. This is the very opposite of the simple, smart and fair agenda that disruptors are using to win market share.

84% think the new FCA rules will reduce renewal rates among policy holders…
and a third expect this reduction to be significant

It is no surprise that a regulator with a high profile Treating Customers Fairly agenda has decided to take action. The rules, which came into force in April 2017, require insurers to disclose last year's premium at each renewal to allow easy comparison with the new quote and to include wording that encourages consumers to check their cover and shop around for the best deal. Insurers must also identify those consumers who have renewed for four years and provide a prescribed message that will again prompt consumers to shop around for a better price. The regulator believes consumers could save up to £100 million on their insurance renewals this year as a result of the rule changes. The industry, too, expects to see an impact: 84 per cent of our respondents think the FCA rules will reduce renewal rates among policyholders, and a third expect this reduction will be significant. To offset the churn among their existing customer base, insurers must seek out new ways to engage and retain customers, whether that's rethinking the revenue model to withstand lower premium income or engaging customers through value-adding products and services.

[10]UK Homeowners throw £37 million a year into auto-renewal black hole, Money Supermarket.com, July 2016
[11]Auto-renewing car insurance costs Brits £1.3bn a year, Money Supermarket.com, February 2015
[12]Research by Ipsos Mori

The new rules are widely seen as a starter measure ahead of further intervention. The FCA has said it will continue to monitor transparency and competition and has been true to its word: within weeks of the new rules, UK insurer Admiral was rapped on the knuckles for including inaccurate premium amounts in renewal documents. Our respondents certainly suspect the regulator has an appetite to go further: 85 per cent expect that in the next five years the FCA will require insurers to explain the reason for price increases at the point of renewal, and 45 per cent believe this will happen within the next 2 years. Insurers need to prepare now for a more transparent world.

85% believe that in the next five years the FCA will require insurers to explain the reason for price increases at the point of renewal

Innovation: time to get real

While our respondents are clear that further intervention will be made to promote competition in the insurance market, there's more ambivalence when it comes to the regulator's intentions around age equality. In 2012, following a ruling from the European Court of Justice, new rules came into effect precluding insurers from taking gender into account when calculating premiums. In the shocked aftermath of the ECJ ruling, the industry and its advisers professed anxiety that age would be next, with pundits warning any move to prohibit insurers from factoring age into premium calculations would have a much more profound impact on consumers and the industry. Five years on, and with no further legislation in this area, we find anxiety about a prohibition on age-based pricing has abated somewhat. Rather than being united in trepidation, the industry is now divided on the outlook, with only just over half (55 per cent) of our respondents expecting to see regulation that prohibits pricing based on age within the next ten years.

Ogden rate: time for another change?

It is not only competition and transparency that has excited policymakers of late. In February 2017, the industry was in uproar after the Government announced a surprise change to the Ogden rate, the adjustment made to compensation awards for life-changing injuries to account for the amount of interest the claimant could expect to earn by investing the lump sum. Until recently, the Ogden rate was set at 2.5 per cent: this means that for every £1,000 awarded in a claim, the insurer pays out £975, with the rest made up by the 2.5 per cent interest per year the claimant would be expected to earn by investing the sum.

But on 20th March, 2017 the Government slashed the rate to -0.75 per cent, meaning that for every £1,000 awarded in a claim, the insurer would have to pay an additional £32.50. The Association of British Insurers called the change "crazy"[13], warning that premiums for young drivers could rise by up to £1,000 a year while the NHS could face an extra £1 billion a year in compensation bills. Experts warned the overall cost of the change across all lines of business would amount to £3.5 billion[14]. Shares in insurance companies were hit as the markets priced in the impact on profits but recovered in early September when, following intensive lobbying by the industry, the Lord Chancellor announced proposed reforms to reset the rate to between 0 per cent and 1 per cent.

Our respondents, clearly rattled by the uncertainty, are against leaving the Ogden rate under the purview of politicians: more than seven out of ten believe the rate should be set by an independent panel of experts, while one in four (24 per cent) back a statutory formula to calculate the discount rate.

The Government's intervention was triggered by arguments that the current system was unfair to claimants because the rate is based on the return on index-linked government securities. As the return is currently negative, it would have been difficult for claimants to earn sufficient interest to fulfil their compensation award. It seems there's little consensus over what should replace this model: 27 per cent of our respondents believe the existing basis is appropriate, 48 per cent believe the basis should be the estimated return on a benchmark basket of low-risk assets across the lifespan of the claimant and 25 per cent believe it should be based on the current annual return on a benchmark basket of low-risk assets.

72% believe the Ogden rate should be set by an independent panel of experts

There is also debate as to how often the Odgen rate should be reviewed, with the largest proportion (31 per cent) backing three-yearly intervals while 20 per cent think it should be whenever a specified benchmark rate of return changes by more than a certain margin.

In recent years there has been a trend for increasing numbers of claimants to eschew lump sum payments in favour of periodic payment orders, which guarantee regular payments and require the insurer, rather than the victim, to shoulder the investment risk. With a negative discount rate making lump sum settlements so much larger (for example, £8 million under the old rate would jump to £30 million), 90 per cent of our respondents expected this trend to reverse. Nevertheless, nine out of ten also think periodic payment orders are in fact a much fairer way of protecting claimants from longevity risk.

[13] *Huw Evans, Director General of the Association of British Insurers, ABI press release, February 2017*

[14] *EY's annual UK motor insurance results seminar, June 2017*

Brexit: time for a regulatory reset?

The weight of regulation clearly weighs on an industry that is struggling to innovate. Regulators are coming at insurance companies from all directions, with compliance teams facing new rules across multiple functions, including: EU data protection (the General Data Protection Regulation); Treasury (International Capital Standard under discussion) and accounting standards (IFRS 17, launched by the International Accounting Standards Board and set to hit in 2021).

Little wonder insurance CEOs are more worried about the impact of over-regulation on their growth prospects than leaders in any other industry, including banking, power & utilities and healthcare[15]. It's not just the sheer scale of regulation that worries executives, it is also the relevance of incoming directives to a new and dynamic digital world: one survey found six out of ten insurers believe the regulatory environment is outdated[16].

47% now back UK reform of the Solvency II regime

Perhaps this is why we are seeing a shift in the industry's approach to Brexit. As we reported last year, the industry was implacable in its opposition to Brexit ahead of the June 2016 referendum, with many industry insiders fearing an exodus of investment and jobs should Vote Leave win. Our research, conducted in the wake of the vote, found 86 per cent believed exiting the EU would lead to little or no difference between the UK's regulatory regime and that of its European neighbours in the three years following an EU exit, now fixed for March 2019.

One year on, however, and we find an appetite among a sizable minority to use Brexit as an opportunity to rethink incoming EU regulation. Almost half, 47 per cent, for example, now believe UK reform of the Solvency II regime is desirable.

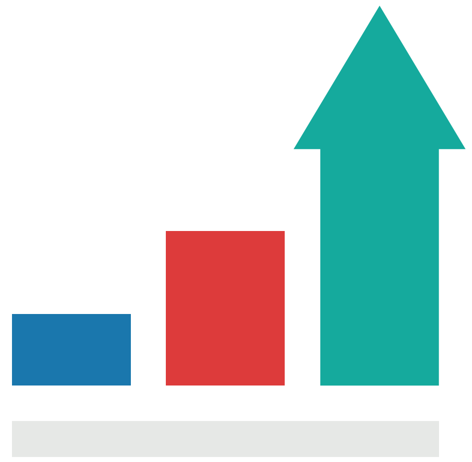
And what of the impact of Brexit on the industry itself? Prior to the vote there were dire warnings of mass job losses across the City but one year on and there has been no scramble for the exit. A small number of companies are starting to hedge their bets: of the 63 per cent of our UK-based respondents that didn't have a regulated entity in the EU prior to the vote, nine per cent have now established one, with the favoured location being Luxembourg, followed by Ireland. Interestingly, this is not the vanguard of a wider stampede to ensure a presence in the EU, with just three per cent of our respondents planning to follow suit. Whether this tally will rise as the negotiations progress and more is known about the realities of a post-Brexit relationship with the EU, particularly with respect to passporting rights, remains to be seen.

[15] PwC 20th CEO Survey 2017 found 67% of insurance CEOS are "extremely concerned" about the impact of regulation on growth
[16] Accenture's Technology Vision for Insurance, 2017

Data protection: challenges and opportunities

The European General Data Protection Regulation (GDPR) comes into force in May 2018, and the Government has indicated that its provisions will be binding in the UK irrespective of Brexit. Organisations will have to have secured explicit and purpose-specific permission from customers in order to process their personal data. Worryingly, over a third of our respondents have made no or only minimal progress in preparing for the GDPR. These GDPR laggards will need to act fast or risk large fines for non-compliance and possibly terminal reputational damage.

The good news is that the GDPR, if handled right, can be an opportunity, forcing insurers to get their data house in order so they can really push the pace of digital reinvention. There is in fact an emerging new business opportunity: the GDPR places personal liability for non-compliance on senior management, potentially opening up a new market for cover. Almost four out of five of our surveyed insurers expect Directors and Officers insurance to become a major growth market in the next five years as a consequence of the GDPR – with more than one in five (22 per cent) expecting massive growth in this area. Every cloud has a silver lining…for the prepared.



4/5 predict Directors and Officers insurance to become a major growth market in the next five years as a consequence of the GDPR…

Chapter 3:

The Future of Underwriting and Pricing

The Future of Underwriting and Pricing

Big data has been eclipsed. The future is all about embedded data, and it's not just big, it's everywhere. Data creation is expected to balloon to 163 zettabytes by 2025, a ten-fold increase over 2016 (and, for reference, if a cup of coffee equals one gigabyte – a typical monthly mobile allowance - then, according to Cisco, a zettabyte would be equal in volume to the Great Wall of China).

By 2025, connected users are expected to number 75 per cent of the world's population, including previously unconnected groups like young children, the elderly, and people in emerging markets. And while the average person is predicted to interact with connected devices nearly 4,800 times per day – that's once every 18 seconds – it is enterprises that will generate the bulk – 60 per cent – of the world's data as embedded sensors and machine-to-machine communication start to dominate data flows. All this data would be meaningless, however, without the ability to make sense of it. Importantly, advances in machine learning and cognitive systems means the amount of the global datasphere subject to data analysis will grow by a factor of 50 to 5.2 ZB in 2025[17].

This is good news for insurers. After all, data is the life blood of the industry and more bountiful and accurate data should mean improved identification, assessment and pricing of risk to transform underwriting performance. Even the babble of social media can be mined for meaningful insight using advanced algorithms and machine learning. Technology start-up Lenddo, for example, uses social network patterns to establish creditworthiness and help make real-time underwriting decisions. Another start-up, Lapetus Solutions, has developed machine learning algorithms that can analyse a selfie to pick up clues on how quickly a person is ageing, their body mass and whether they smoke. Combine this visual analysis with wider demographic information and the machine can make a far more accurate prediction of life expectancy than traditional methods – all within a matter of minutes. Mobile phone GPS, connected cars and smart homes are obvious candidates for insurers seeking to improve risk visibility, but it doesn't take much of a stretch of the imagination to enhance these data streams with inputs from drones, medical implants and even customer DNA.

It sounds like science fiction but the technology already exists, with experts expecting early adopters to quickly pull ahead of the pack. According to one report, insurers that successfully harness the power of analytics to more precisely measure risk in underwriting, anticipate and prevent losses through real-time monitoring and increase sales through highly calibrated distribution strategies will increase profitability by between 16 and 21 combined ratio points[18].

Some early adopters – around one-in-ten - are already tapping into the data streams of their connected customers, making extensive use of mobile phone GPS tracking, social media and browsing history to improve underwriting. This tally is set to rise roughly three-fold over the next two years and by 2027 eight out of ten of our respondents expect to be extensively using mobile tracking data to improve underwriting, 72 per cent will use social media data, and 63 per cent browsing history.

[17] *Statistics from Data Age 2025, An IDC/Seagate Whitepaper, April 2017*
[18] *Harnessing The Data Exhaust Stream, Accenture, 2016*

OK Google…

Smart home technology could transform home insurance. Remotely-controlled lighting and security systems promise to reduce the risk of theft, while smart thermostats and home appliances can prevent flood or fire damage. As yet, however, consumer adoption in the UK remains low: one survey found ownership of smart lights and smart appliances at just two per cent and use of connected surveillance systems at only three per cent[19], as perceived high prices and unconvincing use cases deter uptake.

The market may be at a tipping point, however. 2017 saw the release of smart speakers from Google and Amazon that, as with so many innovations from GAFA, offer a compellingly-priced entry point and an intuitive, friction-free user experience. Whereas previous home gizmos had their own native apps, Amazon Echo and Google Home connect with other smart devices to create a bespoke, connected, voice-activated ecosphere. Sales numbers are hard to pin down[20] but it's a market that's expected to show astonishing growth: analysts predict that by 2021, end-user spending on virtual personal assistant wireless speakers will hit US$3.52 billion, up from US$0.7 billion in 2016[21]. The stellar success of Amazon Echo and other VPA-enabled speakers is likely to power growth in connected home kit – and insurers should be ready for this.

By 2022, more than half expect to use data from smart meters, smart home monitoring systems and smart appliances

While only a handful of insurers are currently making extensive use of data from smart meters, home monitoring systems and connected domestic appliances, our respondents expect this to change in the next five years. By 2022, more than half our respondents expect their organisation to be using data from smart meters (54 per cent), smart home monitoring systems (57 per cent) and smart appliances (50 per cent) as part of the underwriting process.

Out and about

Cars are also set to become a rich source of customer data. Connected car production is growing rapidly in both mature and emerging automotive markets, with the number of new cars equipped with data connectivity, either through a built-in communications module or by a tether to a mobile device, forecast to top 61 million in 2020.

Increasingly, auto-makers are looking to link with leading VPA-enabled devices: summer 2017 saw Seat announce it will be the first car brand in Europe to integrate Amazon's Alexa voice service into its vehicles. This will not only allow drivers to safely personalize their driving experience and effectively manage their time when in the vehicle but will also create a data bonanza for car makers and insurers, unleashing real-time insights on driving behaviours, car maintenance and road conditions. Insurers are keen to tap into this: according to our survey, while eight per cent are using data from connected cars extensively, this is expected to jump to 30 per cent in the next two years, 55 per cent within five years and 77 per cent within 10 years.

Drones, which insurers are already using to inspect claims sites, are also finding a role in underwriting, with 7 per cent of insurers already using drone data for that purpose, 24 per cent expecting to do so within two years and 47 per cent within 5 years.

[19]P *Switch on to the connected home: Deloitte Consumer Review, July 2016*
[20]*Amazon and Google don't release hadware unit sales as part of their earnings. However, analysis of multiple analysts reports led Voicebot to estimate that 16.1 million Amazon Echo and 5.9 million Google Home were sold through the end of May 2017*
[21]*Gartner Inc press release, Aug 2017*

Up close and personal

The surge in popularity of wearable devices, such as smart watches and fit bands, create opportunities for insurers to understand every aspect of a customer's daily life, from their calorie burn to how much sleep they get. This information is not only useful for life insurance but could feed into other lines: motor carriers, for example, have an interest in sleep patterns, alcohol intake or texting behaviours. A handful of insurers already have products that make use of these data streams: US insurer John Hancock, for example, allows policyholders to earn discounts of up to 15 per cent on their life insurance if they agree to share data from connected Fitbit devices. Just over half our organisations expect their organisation to be using wearables devices for underwriting within five years and 27 per cent within two years.

Wearables are just the beginning, however. In the future, insurers will be able to use data from sensors inside the body: nearly a quarter of our respondents (24 per cent) expect to do this in the next five years. Twenty-seven per cent will even use the results of genetic testing to fine-tune underwriting within the next five years.

A new pricing model

Data doesn't just help insurers better understand and manage their risk exposure. It can also be used to help deliver transparent and competitive pricing that reflects a customer's changing risk profile in real time. By revealing the by-the-minute cost of risky behaviours, dynamic pricing has the potential to contribute to a safer, healthier world.

This type of dynamic insurance, based on real-time data from connected devices, is not new: four out of ten of our surveyed organisations already help drivers take control of rising insurance costs by offering dynamic pricing on certain types of policy. This is soon expected to be mainstream practice: eight out of ten respondents expect the majority of motor insurance products to be dynamically priced within the next five years and almost all (97 per cent) expect dynamic pricing to dominate the motor insurance market within ten years.

Eight out of ten expect the majority of motor insurance products to be dynamically priced in the next five years

88% believe the majority of products in buildings insurance will be dynamically priced using data from connected devices by 2027

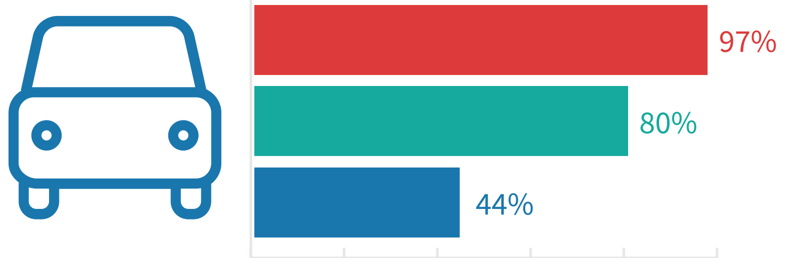
These same principles are expected to influence policy offers in other lines over the next ten years. Smart white goods and thermostats that optimise the running of households and self-diagnose faults, sensors that detect over-heating equipment or track inventory in real-time and fit bands that check our heart rates and blood sugar level will make it possible for insurers to assess when policy holders are ramping up risks – be it leaving properties empty, cutting maintenance schedules or piling on the pounds – and adjust pricing accordingly. Eighty-eight per cent of our respondents believe the majority of products in buildings insurance will be dynamically priced using data from connected devices by 2027. The same result for health/life insurance is 89 per cent.

Dynamic pricing not only helps insurers better manage their risk profile but also, by putting a monetary price policyholders' behaviour, can help nudge them to mitigate those risks. Indeed, our research last year showed that 96 per cent of insurers believe dynamic pricing will reduce risky behaviour and 85 per cent believe it will greatly improve customer loyalty by creating more frequent and meaningful touchpoints throughout the policy life cycle.

Pay as you go

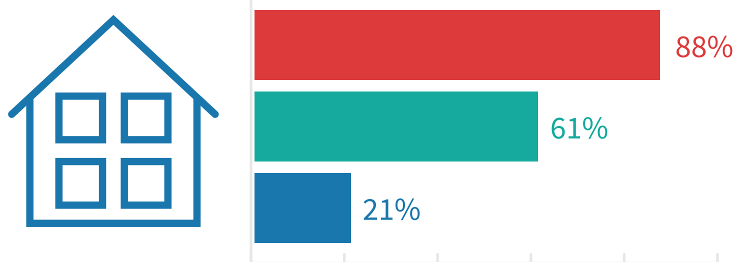
Insurance has long been a price-driven purchase – and the calculations that underpin that price have often been accused of being opaque and unfair. This is particularly the case for Generation Rent, stuck in high price rentals with large student loans and soaring motor insurance costs. InsurTech, often founded and staffed by Millennials, has sought to deliver solutions that offer competitive and transparent pricing to appeal to these budget-minded customers. Nine out of ten of our respondents believe usage-based insurance will be effective in boosting an insurer's popularity among Millennials, and 75 per cent believe it will be a growth market over the course of the next five years.

The proportion of insurers who expect the majority of motor insurance products that the industry offers to be dynamically priced using data from connected devices



42% of our respondents' organisations currently offer motor insurance priced dynamically according to data from connected or telematics devices, and 26% plan to do so in the next two years.

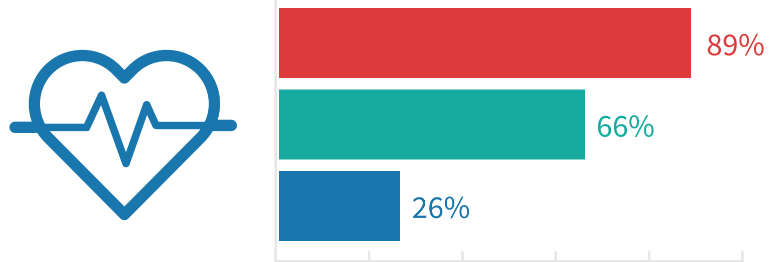
The proportion of insurers who expect the majority of buildings insurance products that the industry offers to be dynamically priced using data from connected devices



Nearly half (46%) of our respondents' organisations currently offer buildings insurance priced dynamically according to data from connected or telematics devices and 28% plan to do so within the next two years.

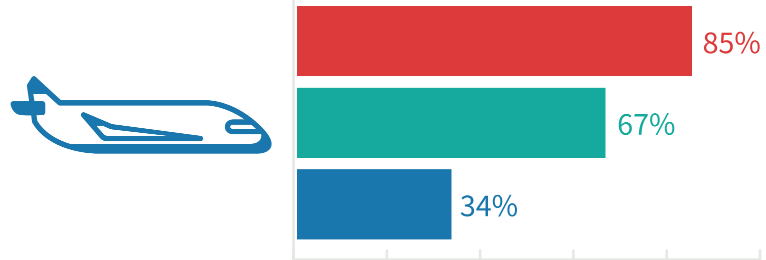
within 10 years | within 5 years | within 2 years

The proportion of insurers who expect the majority of health/ life insurance products that the industry offers to be dynamically priced using data from connected devices



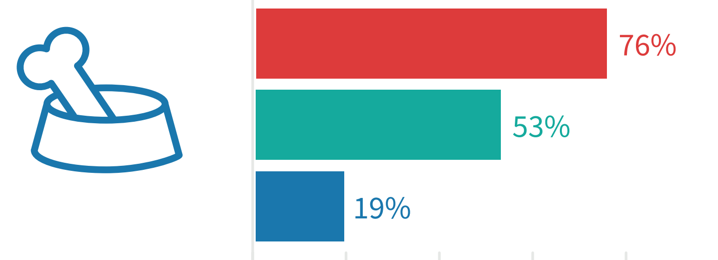
27% of our respondents' organisations currently offer health/ life insurance priced dynamically according to data from connected or telematics devices and 35% plan to do so within the next 2 years.

The proportion of insurers who expect the majority of travel insurance products that the industry offers to be dynamically priced using data from connected devices



22% of our respondents' organisations currently offer travel insurance priced dynamically according to data from connected or telematics devices, while 31% plan to do within the next 2 years.

The proportion of insurers who expect the majority of pet insurance products that the industry offers to be dynamically priced using data from connected device



11% of our respondents' organisations currently offer pet insurance priced dynamically according to data from connected or telematics devices, while 37% plan to do within the next 2 years.

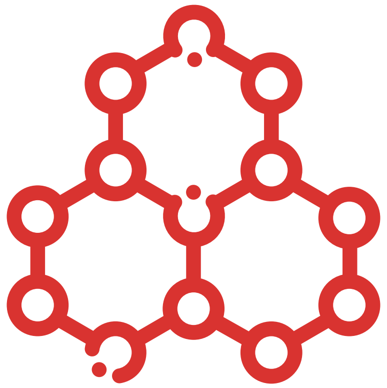
within 10 years | within 5 years | within 2 years

Insurance of the future

Moreover, pricing will not just be dynamic and transparent: it will also be frictionless and secure as machine-to-machine communication takes care of our insurance needs, from finding the best cover to paying for premiums.

This frictionless future is not as far away as it might seem: 85 per cent of our respondents think that within the next 10 years it will be common practice for smart contracts held on blockchain and linked to sensors (in cars, electronic devices or home appliances) to trigger payments for dynamically-priced insurance. Four out of ten expect this to happen in as little as five years.

Our respondents even expect a new type of insurance entity to emerge within the next decade, as the Internet of Things, artificial intelligence and blockchain converge to create smart, real-time insurance solutions. Almost seven out of ten (69 per cent) believe insurance will be re-broked algorithmically at frequent intervals by a new style of insurance aggregator and 91 per cent expect this to happen within a 15-year timeframe. This disruption is seen as most likely to be the work of InsurTechs, followed by GAFA. Yet again, we find incumbents lack confidence in their ability to champion disruption within their own industry.



85% forecast that in the next 10 years it will be common practice for smart contracts held on blockchain and linked to sensors to trigger payments for dynamically-priced insurance

Chapter 4:

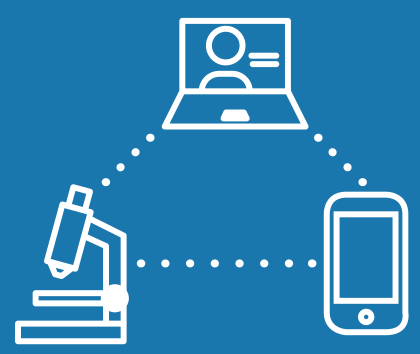
Value-added Services

Value-added Services

From transport hiccups to faulty appliances, life's petty inconveniences will increasingly be eliminated as predictive analytics iron out problems before we even know they exist. The fact is this technology is already here: popular transport app CityMapper links Uber pickups and the public transit network to make sure your Uber ride arrives in time to catch your train, while Whirlpool's Smart Dishwasher identifies when it needs more detergent and if the customer's mobile app is synced with an Amazon account, supplies can be automatically re-ordered.

As customer adoption of these technologies accelerates, our lives will be increasingly friction-free: little wonder one survey of senior executives in customer-facing industries found 89 per cent believe the combination of artificial intelligence (AI) and the Internet of Things (IoT) will have significantly changed the typical consumer experience by 2025 and 96 per cent expect predictive analytics to revolutionise the convenience of day-to-day life[22].

These same technologies will also make us safer. From driverless cars to robo-doctors, smart machines will be able to manage our health and safety with a degree of attention and accuracy no human could match.



86% agree the growth of IoT combined with advanced analytics and alerts to consumer devices will reduce insurable risk in the next 10 years

73% believe self-driving cars will reduce insurable risk in motor in the long term

But what role will insurance play in this safe new world? How will consumers be persuaded to buy "just-in-case" protection when chance and risk are eliminated by the predictive capabilities of smart machines? Our respondents agree that the industry is facing an existential threat, with nearly nine out of ten (86 per cent) agreeing that the growth of the Internet of Things, combined with advanced analytics and alerts to consumer devices, will reduce insurable risk in the next 10 years.

Motor is set to take the brunt of this profound shift in risk exposure. Driver-assist tools, such as blind-spot detection, parking assistance and cruise control, are not only increasingly popular with customers, who are willing to pay a premium for features that improve safety[23], but have the backing of regulators: both the EU and the US mandate that all vehicles be equipped with autonomous emergency-braking systems and forward-collision warning systems by 2020. The result will be safer roads. Swiss Re estimates that these new tools will reduce accidents on motorways by 16 per cent by 2020, while next-generation driving systems could see motorway accidents reduced by 45 per cent. As a result of these trends, Autonomous Research expects UK premiums to fall by 63 per cent by 2060, and motor insurance industry profits to slump by 81 per cent[24].

The technology for self-driving cars already exists but a regulatory lag and ingrained consumer reticence mean it could be decades before humans relinquish the steering wheel. Once mainstream, however, driverless cars will have a major impact on motor insurance market. Research by KPMG suggests that within 25 years, the personal auto insurance sector could shrink to 40 per cent of current size[25]. Our respondents clearly agree with this prognosis: nearly three quarters of our respondents (73 per cent) believe that self-driving cars will reduce insurable risk in motor in the long term.

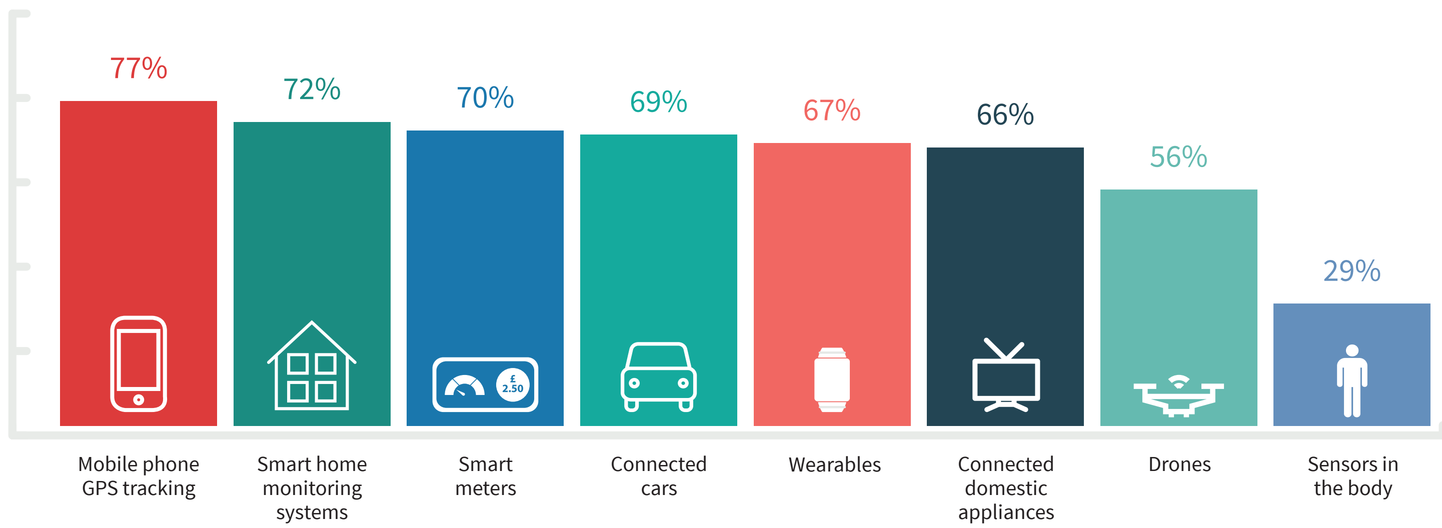
Adding value…

To protect income in this safer world, insurers will need to reposition themselves from a provider of compensation when the worst happens to a trusted partner that can help customers optimise their safety and well-being in this data-rich world. The good news is the technologies disrupting the current model can be used to create a revolutionary new model, with insurers providing risk warnings and risk management advisory services that add meaningful value to customers as they go about their daily lives.

Many insurers already provide customers with information on how to safeguard their home against floods or car maintenance tips for safe winter driving. In a data-rich world, however, it will be possible to personalise these messages, benchmark customers against peers and provide meaningful insights that can add real value to customers – value they will be happy to pay for. This will be key to offsetting the contraction in premium income, with nine out of ten of our respondents agreeing that as insurable risk shrinks, it will become business critical for insurers to monetise the risk solutions they currently call "value-added services".

Within five years, large numbers of insurers anticipate their organisation will offer numerous types of advisory services using advanced analytics to draw conclusions from data from a wide variety of devices.

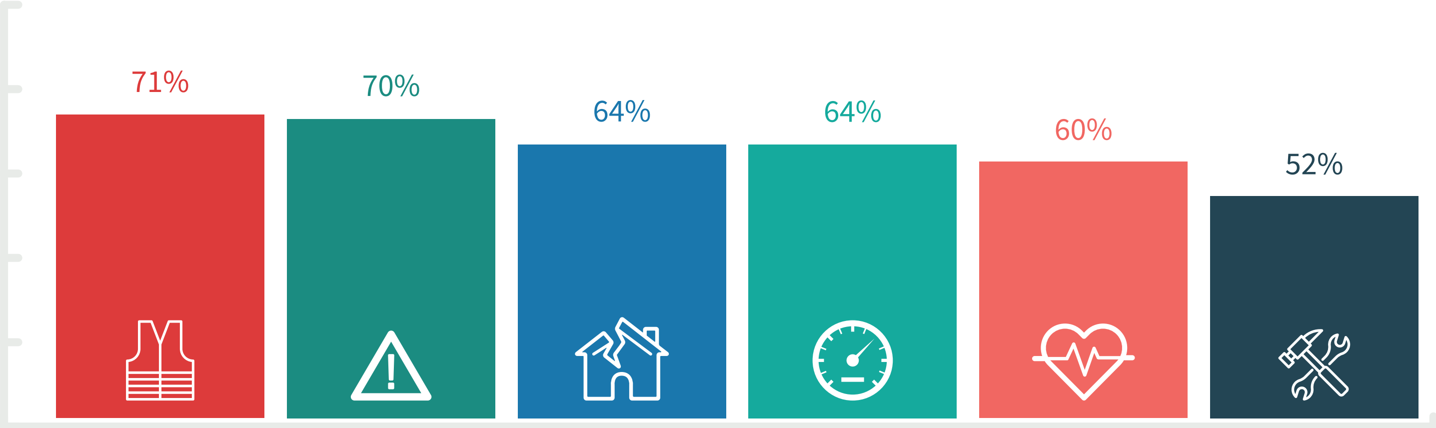
The proportion of insurers who expect to offer risk warnings based on the following devices within 5 years



[22] *A World Shaped By Predictive Analytics, A Sopra Steria/Marketforce report, 2017*
[23] *Consumer Intelligence: Automotive Technology, PwC, November 2016*

[24] *https://www.ft.com/content/8718f37a-21d9-11e6-9d4d-c11776a5124d?mhq5j=e5*
[25] *Marketplace of Change: Automobile Insurance in the era of autonomous vehicles, KPMG, 2015*

The proportion of insurers who expect to use connected devices and advanced analytics to provide the following services



...finding solutions...

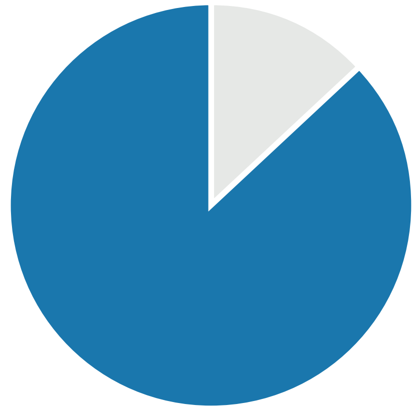
And it's not just warning customers about risks: eight out of ten expect to combine risk warnings and suggested solutions within five years. Indeed, 95 per cent agree that to successfully monetise risk pre-emption services, insurers will have to provide both risk warnings and solutions to address those risks. This is a radical shift in how insurance companies currently operate, yet almost eight of ten (77 per cent) expect their organisation to be actually delivering solutions to identified risks within the next five years, either in-house or, more likely, through a partnership with a third-party. Seven out of ten expect their company will enter into a partnership for the delivery of risk pre-emption services within five years and 40 per cent within two years.

Energy companies and appliance manufacturers already exploit smart technology to add convenience and value to customers. Boiler IQ from British Gas, for example, monitors the boiler and sends diagnostic information over the internet, typically identifying faults 19-24 hours before the customer. Repairs are fast-tracked because engineers use the diagnostics to order parts before the customer even realises there's a problem. Whirlpool's Smart Dishwasher identifies when it needs more detergent and if the customer's mobile app is synced with an Amazon account, supplies can be automatically re-ordered. Insurers need to act now to insert themselves into this value chain.

...and clearing data hurdles

Delivering the kind of meaningful and engaging risk advisory and solution services that customers will be happy to pay for will not happen by accident. Insurers must first secure access to data. Even with existing customers, this is not a given: the new General Data Protection Regulation allows customers to not only deny access to their data but to also easily transport that data to third parties, eroding any data headstart for incumbent players. Two-thirds (66 per cent) of our respondents believe insurers will need to become significantly more sophisticated in ensuring customers are willing to allow them access to their personal data in order to stave off the threat of new entrants.

Insurers should also be wary of changes afoot in the banking industry. The EU's Payment Services Directive II, which hits next year, is designed to level the playing field for new entrants by mandating existing banks to open access to their customers' accounts to third parties via open APIs (application program interfaces) and is part of a wider drive towards open banking. Were open APIs to be mandated in insurance it would be possible for third parties, with a customer's permission, simply to extract all the data on that customer from an insurer's system, thereby eroding their data advantage. This would be a game-changer and more than eight out of ten of our respondents expect compulsory open APIs will become part of insurance regulation in the next five years as part of a drive towards open insurance.



87% believe value-added services will become the core proposition in the next ten years

To compete effectively in this environment, it will be essential to offer risk pre-emption services that customers cannot live without. Indeed, according to our research, 82 per cent believe that in the next ten years the quality of risk pre-emption services will be critical to secure access to personal data and will be the biggest factor after price in most consumers' choice of insurance provider. In fact, these trends will fundamentally change what it is to be an insurance company: nearly nine out of ten (87 per cent) believe "value-added services" will become the core of their proposition in the next five to ten years.

Chapter 5:

Reaching the Millennial Generation

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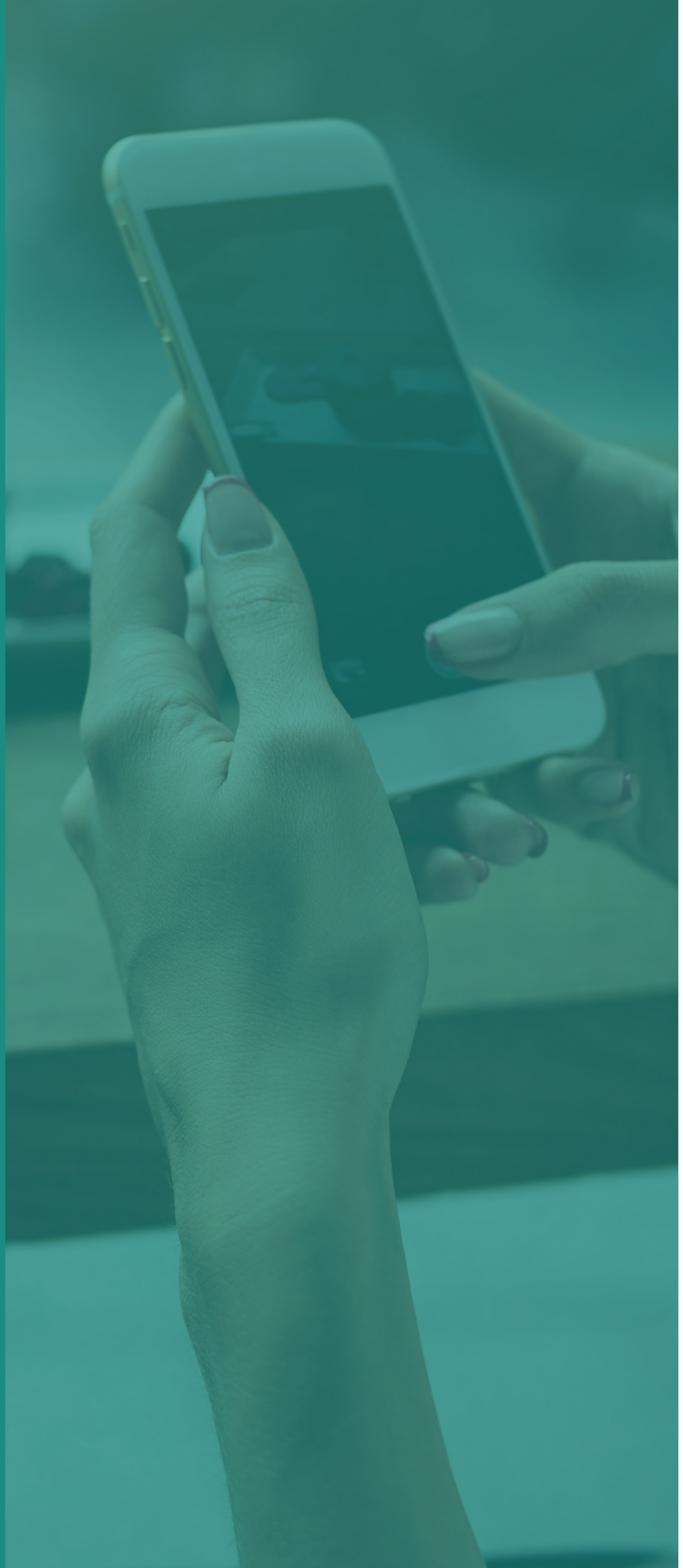


Reaching the Millennial Generation

At 12.5 million people, Millennials now represent the largest consumer group in the UK[26]. Born between 1982 and 2000, this is a generation who have grown up with computers, low cost international flights and, for younger Millennials, smartphones, social media and an always-on digital world. It's a much-disparaged generation, maligned for their entitlement, a sometimes naïve world view and a propensity to rely on the Bank of Mum and Dad. Yet it's also a generation facing escalating debt, soaring housing costs and a shrinking jobs market: almost three-quarters believe life is more uncertain for them than for previous generations[27].

It's not all bad news: this is also the generation expected to benefit from what has been termed one of "the largest intergenerational wealth transfers in history"[28]. The sums are unprecedented: Baby Boomers are expected to pass down around US$30 trillion between now and 2050 in North America alone[29], while in the UK soaring house prices mean that one in every 76 Brits is now a millionaire, assets that will eventually pass down to the next generation.

Little wonder that the financial services industry is keen to understand and engage this generation. There is a multitude of surveys seeking to understand Millennials, yet it's important for organisations not to assume this is an homogenous social group: after all, someone in their 30s, with kids and a flourishing career, will have very different experiences and attitudes to someone just starting university and facing unprecedented levels of student debt. Despite their differences, however, Millennials do tend to share some common expectations when it comes to dealing with financial services organisations and managing their finances:

The "now" generation

This is the on-demand, one-click generation. When they want something, they want it now. Used to having the world at their fingertips, they expect the organisations they engage with to be similarly responsive, 24/7: research shows nearly one in four Millennials expects a response within ten minutes of reach out to a brand via social media[30]. Ambiguous or lengthy delivery times grate on Millennials: they are nearly twice as likely as Baby Boomers to shop instore to avoid online wait times[31]. Also, they are more likely than other shoppers to abandon an online transaction if the checkout is cumbersome, tedious or they have concerns about online security[32].

This impatience also extends to their financial dealings: one study found 93 per cent of Millennials had abandoned a mobile banking transaction—applying for a credit card, opening a new account or simply accessing an existing account—on at least one occasion, with forgotten passwords the biggest barrier[33]. Our respondents understand this: 97 per cent view speed of service and onboarding as important if they are to attract the Millennial generation and 93 per cent believe 24/7 service availability is important.

[26] *http Office of National Statistics 2016*
[27] *YouGov survey*
[28] *Millennials: The global guardians of capital, UBS White Paper, June 2017*
[29] *The Greater Wealth Transfer, Accenture 2012*
[30] *Research by Desk.com, June 2015*
[31] *The truth about online consumers, KPMG, 2017*
[32] *Research by Visa Inc, August 2017 found four in five Millennials had abandoned online purchases; the figure for all shoppers was 72%*
[33] *Millennials Speak Out on Mobile Banking, Jumio, September 2016*

Seamless experiences

When Millennials want something, they reach for their smartphone. Indeed, one study found they interact with their smartphone more than anything or anyone else, and report feeling anxious or bored when they don't have access[34]. One study found consumers would forego a salary increase or give up family and friends or even go to prison rather than lose their smartphones[35]. And the smartphone is the Millennial's gateway to their finances, with research showing they use their devices for mobile banking more than any other service, even shopping[36].

46%
believe a seamless journey between channels is critical to retain the Millennial customer…but

48%
have yet to integrate any channels

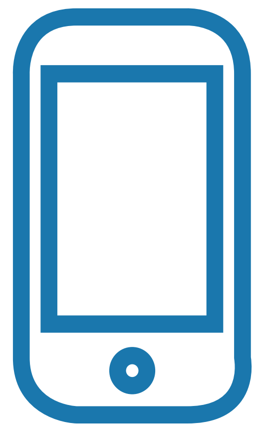
Little wonder so many insurance-challengers are taking a mobile-first approach to woo the App Generation. Yet mobile-first shouldn't mean mobile-only. Research repeatedly shows that customers, including Millennials, still seek out the human touch, especially when making important decisions: Morgan Stanley reports that 82 per cent of Millennials who work with a financial adviser want more time with that adviser, not less. What customers really want is to hop from channel to channel without having the user experience ruined by cumbersome identity checks, inconsistent information or failed hand-offs.

Alarmingly, while nine out of ten insurers recognise that a seamless journey between channels is important to attract and retain Millennials – indeed, almost half (46 per cent) believe it is critical – our research finds the industry is woefully unprepared to meet the omnichannel expectations of this crucial generation. Not only have nine out of ten yet to achieve full omni-channel integration but almost half (48 per cent) have yet to integrate any channels. Given that Millennial customers are unforgiving of poor customer experience, this failure to deliver the omnichannel experience could prove costly.

[34] *Trends in Consumer Mobility Report 2016, Bank of America, 2016*
[35] *Smartphones and customer IoT Trends, B2X, August 2017*
[36] *Jumio press release, October 2016*

Get Appy

Head down, mute and thumbs a-blur, it may seem that the typical Millennial is a socially-isolated phone addict. Yet the truth is that the ever-present phone is a communications hub and those thumbs are reaching out to people, pinging messages to friends via chat apps and texts, sending emails and posting messages across multiple social media platforms. Phone calls may be on the decline but phone usage statistics show that young people are in constant contact, even checking and responding to messages in the middle of the night. This obsession accounts for the 90 hours per month spent on smartphone apps alone and explains why, of usage growth across all platforms, it is mobiles that dominate, representing 65 per cent of the growth, followed by 12 per cent for tablets[37].



Just 23% offer a mobile app

Our respondents recognise that channel choice will be increasingly important if they are to engage Millennials (93 per cent agree that availability of channel of choice is important, of whom 43 per cent see it as critical). Yet worryingly, just 23 per cent of our surveyed organisations currently offer a mobile app. This is in sharp contrast to banking, where last year UK customers used mobile banking apps more than 7,610 times a minute, or 4 billion times a year, as part of a consumer-led personal finance revolution[38].

Some pioneers have developed insurance apps, designed to make onboarding or filing a claim simple and intuitive. Insurance giant Ageas, for example, designed and developed its Back Me Up app in partnership with its targeted Millennial customer base, allowing users to customise their policies to cover the items they value most by simply uploading a photo and choosing the description of the item. The industry is keen to follow this lead: 69 per cent of our respondents plan to launch a mobile app in the next two years.

Going social

Millennials remain social animals. Research shows that more than two out of five don't go more than five hours without checking their social media feeds[39]. Facebook continues to dominate reaching 90 per cent of this demographic, more than 30 percentage points higher than second placed Instagram, and keeping its audience more engaged than other platforms: on average Millennials spent 795 minutes per month on Facebook sites, more than double the time on Snapchat[40]. Furthermore, with Facebook adding payment capabilities and chatbot features via Messenger, this is a social media platform that financial services organisations can plug into to make life easier for their already logged-in customers. Banks, payment services providers and FinTech are already launching AI-powered chatbots over Facebook Messenger. Among insurers, InsurTech has been ahead of the curve

[37] *Comscore.com*
[38] *The way we bank now, BBA, 2016*

[39] *Research by Qualtrics and Accel, 2017*
[40] *Comscore.com Insight, September 2016*

in spotting the potential: 2017 saw start-up Next Insurance launch an insurance chatbot to enable small businesses to select and buy insurance via Facebook Messenger, while French giant AXA's Switch brand is the first of the big insurers to partner with Facebook Messenger to allow for easy connection with prospects and customers.

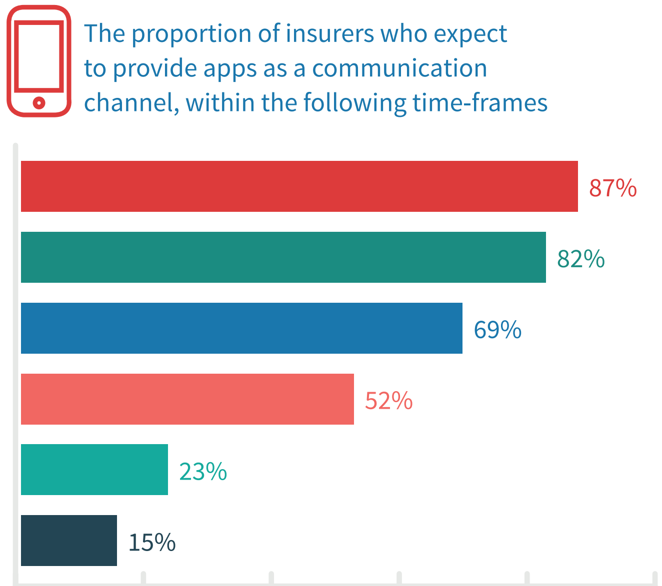
Many insurers have a Facebook presence, of course, but too often this is more of a customer service and brand identity checkbox rather than a fully-fledged channel. Our respondents are keen to capitalise on the reach of Facebook: one in four (24 per cent) already say they provide a Facebook channel and this is set to surge to 67 per cent within two years.

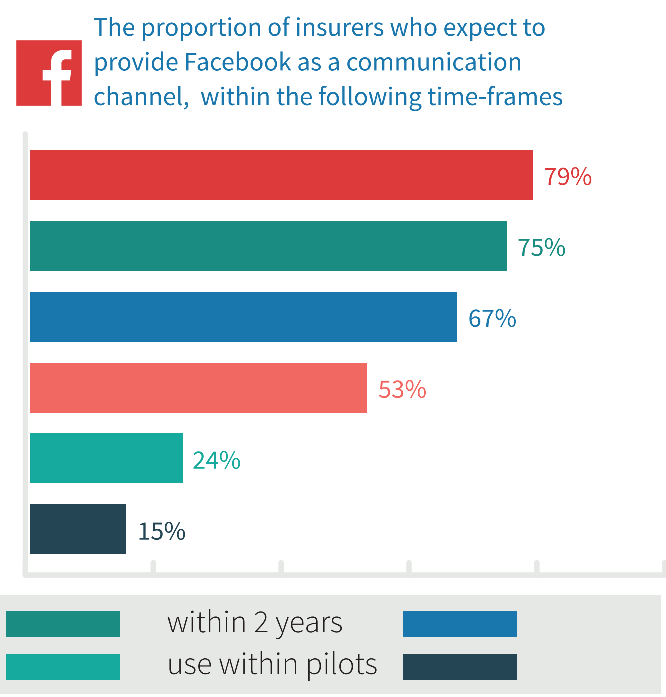
It's good to instant chat

Instant messenging apps, such as WhatsApp or Snapchat, also remain relatively untapped. One survey of global insurers found none of its surveyed insurers were making use of WhatsApp as a contact channel, despite studies showing it hugely increases customer satisfaction[41]. Of our surveyed insurers, only 15 per cent currently use instant messenging as a distribution channel but there is now a scramble to catch up, with 70 per cent expecting to offer this in the next two years.

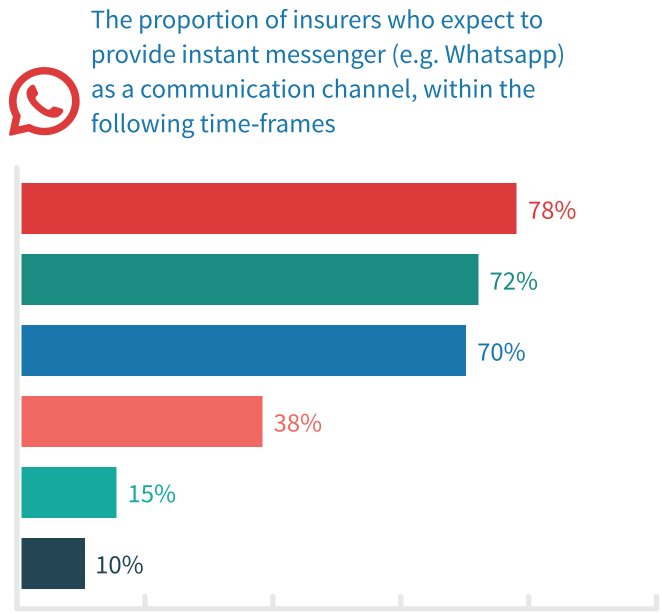
Lifestyle portals – the next frontier?

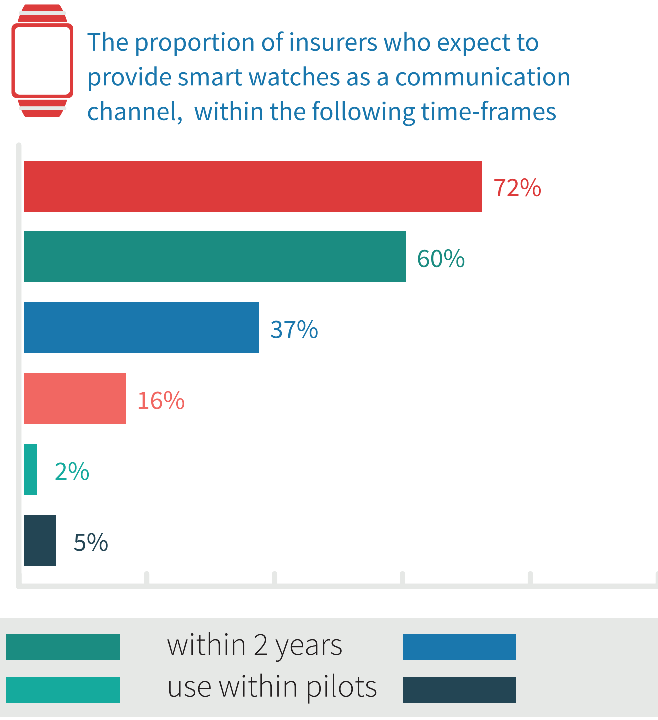
Millennials have grown up with a world that is increasingly friction-free: entertainment on-demand, curated playlists, an Uber on every corner. In the future, they will expect the same convenience from their financial services providers. Their search for convenience, and the plug and play portability of digital services, backed by pro-competition regulations such as PSD2 and GDPR, will shortly give rise to concierge services that will pull all their data together and create a one-stop-shop portal for all their banking, insurance, telecoms and retail affairs. Indeed, three-quarters of our respondents believe it will be commonplace for Millennials to manage all their affairs through a single portal linked to their personal data store in the next five years. This rises to 98 per cent within ten years.





[41]*Social Media Insurance Monitor, ITDS, 2016*





76% think it will be common for digital natives within 5 years to manage all their affairs across everything, from banking and insurance to telecoms and retail, through a single portal linked to their personal data store, (**rising to 98%** in a 10 year time frame). The equivalent figures for digital immigrants are lower but still significant at **36%** in 5 years, and **79%** in 10 years.

The personalisation imperative

With lifestyle portals likely to provide customers with an easy means to manage their personal data for all consuming-facing organisations, earning access to that data will become the name of the game. In this respect, effective personalisation will become key particularly among millennial customers. One survey of insurance executives found 82 per cent believe personalised experiences will be important to retain market share among this highly prized demographic[42]. This is backed by our latest research, with 83 per cent of our respondents agreeing that providing useful information and suggestions tailored to the individual's preferences, lifestyle and behaviour will be effective in boosting an insurer's popularity among Millennial customers.

The good news is that the data revolution makes it possible to deliver truly personal service, based not just on crude gender, age and postcode segmentations but rather finely calibrated advice, offers and benchmarking based on real-time data flows from the Internet of Things and AI-powered predictive analytics. As yet, only seven per cent of our respondents claim to be able to personalise based on an individual's precise circumstances and behaviours in real time but 43 per cent expect to get there within two years and 72 per cent within five.

[42]*Customer-centric differentiation in Insurance: Meeting the Data Challenge, A Marketforce/Visionware report, 2015*

Be relevant, be flexible – the appeal of on demand insurance

Millennials' craving for the personal touch should also inform product design. Millennials are suspicious of off-the-shelf insurance policies, perceiving them to be poor value and irrelevant to their needs of Generation Rent. Instead, they want to take control of what they insure and for how long, building bespoke cover that is flexible, transparent and cost-effective: 93 per cent of our respondents agree that customisable, flexible products will be important to attract Millennials.

93% agree that customisable, flexible products will be important to attract Millennials

The surge in on-demand insurance over the next five years will come at the expense of traditional "all risks" contents insurance: almost eight out of ten (79 per cent) expect that over the next decade "all risks" policies will cease to be the most common way of insuring possessions among Millennials.

This is a big shift in how the industry operates – and it's coming fast. Yet just one in ten of our surveyed insurers has an on-demand offer in the marketplace, while only three out of ten are in the planning and design stages. This means almost three out of five insurers have yet to make any moves to provide on-demand insurance, exposing them to loss of business and relevance in this key demographic.

Sharing is the new owning

Another significant trend among millennials, is their participation in the sharing economy. A recent study found that over half (53 per cent) of millennials used a sharing economy business last year[43]. A generation graduating to debt, recession and soaring housing costs has collided with the emergence of technology that allows the matching of under-utilised capacity with end users for close to zero transaction costs, spawning multi-billion-dollar global enterprises like eBay, Uber and Airbnb. Peer-to-peer (P2P) transactions generated by the UK's five most prominent sharing economy sectors - collaborative finance, P2P accommodation, transportation, on-demand household services and on-demand professional services - are forecast to grow by 60 per cent or £8 billion in 2017 alone and could reach £140 billion by 2025[44].

Unsurprisingly, last year two-thirds of insurers agreed that providing specific insurance for the sharing economy would be one of the largest growth markets for insurers in the next five years.

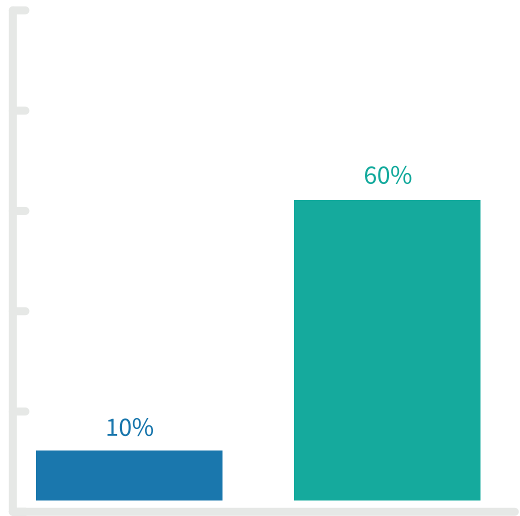
Despite this, we find progress towards delivering sharing economy policies has flatlined: we find just 10 per cent of surveyed insurers currently have a sharing economy offer on the market – the same figure as in 2016. Encouragingly, however, we find one third are either working towards the launch or developing an offer as the industry scrambles to catch up with InsurTech-led solutions.

Sharing economy partnerships: stronger together

As we reported last year, it's widely expected that insurers will need to partner with a sharing economy platform to accurately price risk and won't make these products available through traditional channels. Certainly incumbents' early forays into the sharing economy have been through partnerships: Zurich has partnered with Airbnb as part of its Host Protection Scheme, AXA has developed partnerships with P2P carsharing company SocialCar, home exchange community MyTwinPlace and pioneer P2P insurer Friendsurance in Germany while in the UK Admiral supports car-sharing through a partnership with easyCarClub.

That said, this year we find our respondents expecting that increasingly sharing economy cover will become a standard feature: six out of ten think sharing economy use will be a standard option in home & contents and motor policies within five years and 85 per cent expect this to be standard within ten years. Some frontrunners are already there: in June 2016 Admiral launched host insurance as an option on all of its home insurance policies, becoming the first major UK insurer to do so. Customers with Admiral Host Insurance can rent out their property for up to 90 days during the policy term, providing cover for up to two adult guests per bedroom during each rental period. It remains to be seen how quickly the rest of the market responds to the development of this fast-growing market.

Millennials are an important generation. Their behaviours and attitudes will shape our world, creating new opportunities for those with the empathy, agility and ingenuity to respond. Insurers unable to rise to this challenge will increasingly find themselves irrelevant in the mobile, personal, always-on sharing society of the future.



Just 10% have a sharing economy offer on the market…

…yet 60% expect this to be a standard option in home & contents and motor policies within 5 years

[43]https://fashionunited.uk/news/retail/2017-the-rise-of-millennials-and-the-sharing-economy/2017010422996
[44]PwC forecast, 2016

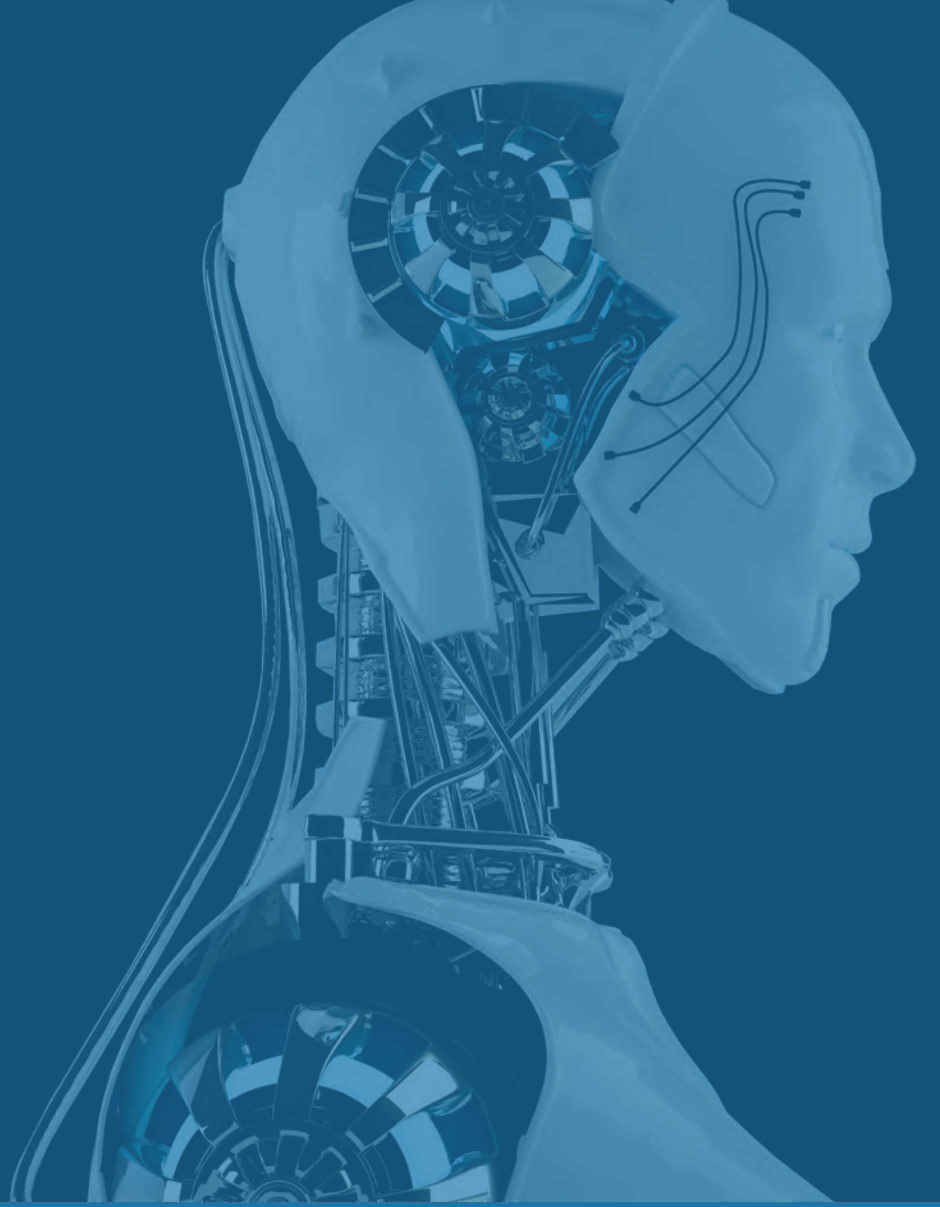
Smart Communications Viewpoint

To effectively communicate with millennials, you must take an overall customer-centric approach
By Simon Tindal, CTO Smart Communications

Millennials now account for the largest segment of the UK population. And a recent InfoTrends report from Keypoint Intelligence, investigating customer communications within enterprise companies, found that millennials accounted for a considerable share of respondents' customer base (33%) and an even larger share of revenue percentage (41%). It's not surprising that so much emphasis is placed on trying to understand how they make decisions, and what influences them. One thing we know for certain is they are very clear about how they want to receive communications from the companies with which they do business. They are happy to interact with multiple channels (both online and offline), but they expect a seamless experience and they want responses quickly.

While many millennials prefer digital channels such as web, email and mobile apps, companies cannot take a one-size-fits-all approach to interacting with them. If so, they risk overlooking personal preferences that make each customer feel valued as a unique individual. By making widespread assumptions about this customer segment, organizations undermine the core feedback millennials have offered – a desire to be uniquely in control of the conversation they have with the companies they select.

To deliver the most meaningful conversations, financial services companies should develop communications strategies that consider both the purpose of the message and the recipients' preferences. Ideally, each communication will be relevant, personalised, timely and tailored specifically for the delivery channel—and, better yet, for the customer's channel of choice.
The best approach to effectively communicating with millennials is to improve your overall communications strategy. To do so, financial services companies are increasingly relying on Customer Communications Management systems to deliver the most personalised messages possible via the most appropriate channel. And with no time to waste, many are turning to cloud-based systems, which can be implemented quickly and easily, and updated frequently as new functionality is available.



Chapter 6:

Insurance in the Age of Machine Intelligence

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Insurance in the Age of Machine Intelligence

Insurers have long been masters of the data universe. But a combination of technology and regulation is democratising data, eroding the headstart enjoyed by incumbents. Today an insurance company doesn't need a legacy of proprietary customer relationship records, many of which could be inaccurate, incomplete or simply inaccessible because of siloed legacy systems. In a data-rich world, start-ups can, from a standing start, quickly gain a competitive edge by developing smart user-friendly solutions and deploying machine learning that shortcuts years of operational experience. Metromile, for example, entered the auto insurance market with no proprietary data but its disruptive new model – selling car insurance by the mile – proved compelling for certain customer groups. Its telematics device and linked app allowed it to quickly generate huge amounts of data of its own, which it can now leverage to target other markets.

This democratisation of data explains why most business leaders believe it is analytical capability rather than access to data that will become more critical to competitive advantage in the next five years[45]. This is where smart machines make the difference, capable of crunching through more data more quickly than ever thought possible, including unstructured data such as images and natural language, and then learning from those insights to make smarter decisions, predict and influence outcomes and initiate further improvements in how the business is run. Smart machines can quickly open up clear blue water between the AI-haves and have-nots. Machine analysis can not only cut through vast quantities of dynamically-changing data to deliver cutting-edge personalisation and compelling pricing strategies but can also take organisations to previously unimaginable places: in one study 93 per cent of senior executives forecast that machine learning will enable organisations to identify currently unimagined diversification and partnership opportunities[46]. Listen to the machines and the insurer of the future could look very different.

Sharing is the new owning

Apply machine learning to the outputs of the sensors embedded in the fabric of our hyper-connected world and the ability to predict, identify and mitigate risk will be transformed. Insurers, whilst typically slow in early adoption technology cycles, have been surprisingly quick to harness AI to better understand and manage risk: according to our survey, one in five is already doing this, and this is expected to surge to 58 per cent within two years and 79 per cent within five years.

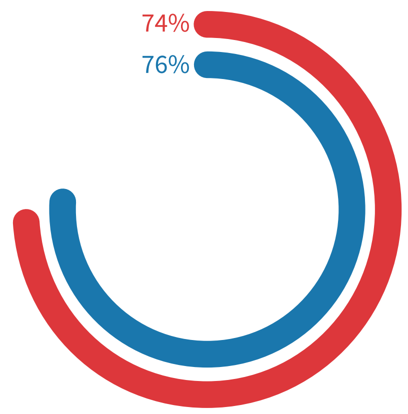
The same technology can also be used to look inhouse to manage operational risks. Indeed, four out of ten expect to be using AI for management of operational risk within a year, rising to 52 per cent within two years and 77 per cent within five years.

[45]*In a survey of senior executives in customer-facing industries, 92% agreed with this sentiment. The Future of Customer Analytics: the Path to Improved ROI, Sopra Steria/Marketforce, 2017*
[46]*The Future of Customer Analytics: the Path to Improved ROI, Sopra Steria/Marketforce, 2017*

Underwriting transformed

Underwriting performance is a key health indicator for insurance companies. Under-pricing can result in excessive losses, while, in a price-sensitive market, over-pricing quickly sees customers defect to rivals. It's a careful balancing act, often described as much as an art as a science. Until now. The era of artificial intelligence means that science will be the winner, with advanced algorithms and neural networks able to slice through massive data sets, identify previously unimagined risks and identify the optimal risk curve for premiums and loss ratios. The granularity of the new risk calculations will be unprecedented as smart machines spot risks with a speed and accuracy no human could match.

A number of technology companies have developed solutions with insurance applications: Cape Analytics, for example, has developed a service for property insurers that combines machine learning with computer vision and geospatial imagery to analyse roofs for material types, condition, building footprint and existence of solar panels, increasing quote speed and refining quote accuracy. Swiss Re, meanwhile, has been working with IBM's Watson cognitive computing platform since 2015 to help its underwriting team make better informed decisions and more accurately price risk in its Life & Health Reinsurance division. New York Life Insurance hired start-up Captricity, which has developed machine learning algorithms that can extract data from handwritten and typed forms with 99.9 per cent accuracy, to extract cause-of-death data from 10 years of paper death certificates, helping the insurer refine its life actuarial models and improve underwriting accuracy.



74% believe that over the next five years the use of intelligent machines in underwriting will supplement rather than replace human underwriters…

…but over the next ten years 76% predict that the underwriting of non-complex risks will be undertaken entirely by AI

Our cohort has already seen the potential: almost a quarter of our surveyed insurers use AI to price insurance and this is expected to rise to 61 per cent within two years and 79 per cent within five years. And the benefits are not confined to risk-pricing accuracy: AI-created models that predict the frequency and severity of losses can also be applied in product design and marketing to improve the overall lifetime profitability of customers. Indeed, while at the moment only 13 per cent of our respondents are using AI to design new products, this is expected to surge to 45 per cent within two years and 70 per cent within five years.

Despite this expected surge in spend in machine learning and cognitive systems, our cohort see no immediate threat to the underwriting profession: almost three-quarters of our respondents (74 per cent) believe the use of intelligent machines in underwriting and pricing will principally supplement rather than replace human underwriters in the next five years.

Longer term, however, human underwriters would be advised to diversify their skill set: 76 per cent think underwriting of non-complex risks will be undertaken entirely using artificial intelligence by 2027, and 87 per cent of our respondents agree that underwriters and actuaries must get to grips with unstructured data, machine learning and cloud computing or they risk being replaced by data scientists already skilled in those areas. Even data scientists can't be complacent, however: Gartner, for example, believes more than 40 per cent of data science tasks will be automated by 2020[47].

Smarter fraud detection

Smart machines are similarly expected to transform fraud detection by identifying previously unseen connections and anomalies. Importantly, the technology is also expected to reduce the number of false positive alerts, which delay the settlement of legitimate claims and frustrate honest customers. Given the scale of losses suffered by insurance companies, it's little surprise that our research finds enthusiasm for the technology: 27 per cent of insurance companies are currently using AI for fraud detection, and this is expected to quickly rise to 63 per cent within 2 years, and to 84 per cent within 5 years.

Insurance companies are turning to start-ups with AI expertise. US technology company Pindrop uses AI and proprietary voice pattern analysis to help identify fraudulent calls to contact centres, which, because customers rarely call their insurers, are often seen as a weak link in the industry's defences: indeed, the US-based start-up found one in every 4,700 insurance calls is fraudulent. French AI company Shift Technology has put its cognitive machine learning algorithms to work, churning through over 87 million claims to spot fraudulent activities, and says it has already reached a 75 per cent accuracy rate for detecting fraudulent claims.

Like many AI specialists, the company says the best outcomes arise when there's the right interplay between technology and people, with data scientists and maths experts working alongside specialist claims handlers to adapt and translate their insight into the right formula. Our respondents back this approach, with seven out of ten expecting these intelligent machines to supplement rather than replace existing staff.

Claims, turbo-charged

The impact of AI in claims handling will be just as transformational, accelerating claims assessment, identifying bottlenecks and streamlining workflows. Much of the process-intensive side of claims is suitable for automation: smart machines can analyse images and IoT data flows to categorise the severity of damage to buildings or vehicles, estimate repair costs and trigger remediation for swift resolution of the claim – within minutes.

Disruptors have seized on this technology, recognising that swift and simple settlements is a clear differentiator from the claim-quibbling incumbents. Last year, challenger brand Lemonade set a world record when it settled and paid a claim in just three seconds – no paperwork required. The customer entered the details of the lost item into the Lemonade app, then spoke into the camera and described what happened, at which point Lemonade's claims bot reviewed the claim, cross-referenced it against the policy, ran 18 anti-fraud algorithms on it, approved it, sent wiring

[47]*Gartner press release, January 2017*

instructions to the bank to transfer the payment and informed the customer of the outcome. This summer pay-as-you-go auto-insurer Metromile launched its AI claims assistant, which can accurately verify claims in seconds and quickly resolve them. The claims bot can use opt-in sensor data from the Metromile's telematics device, Pulse, to reconstruct the accident scene, expediting the approval process and, in some circumstances, allowing for instant approval of the claim.

Currently just one in five of our surveyed insurers are using AI in claims handling but this is expected to rise to 57 per cent within two years and 74 per cent within five years. Given the sensitivity of claims handling to customer satisfaction, this is an area where our respondents see little threat to experienced claims handlers, with 77 per cent expecting claims handling staff to remain safe in their positions within a five-year timeframe. This may be optimistic based on the experiences of Fukoku Mutual Life Insurance in Japan, which earlier this year laid off 34 claims handling staff after it deployed AI to read tens of thousands of medical certificates, medical histories and other relevant data. The company believes the system will increase productivity by 30 per cent and deliver a return on investment in less than two years.

Next generation CX – the power of bots

Claims handling is not the only area of customer experience that AI is set to transform. It will be hard for insurers to resist robo-powered customer service agents given their ability for indepth understanding and anticipation of customer needs, lightning-fast decision making and the ability to interact using natural language on a 24/7 basis. Futurists at Gartner forecast in 2001 that AI bots would power 85 per cent of all customer service interactions by the year 2020; last year they went further and suggested that the average person will have more conversations with bots than with their spouse by 2020[48].

It may sound like science fiction but the reality is many organisations, from online retailers to banks, are already putting AI-powered chatbots to work to provide assistance and iron-out service wrinkles. Indeed, some customers may not realise they're interacting with sophisticated software rather than a person, while many more just accept this as "how we do things now": after all, the smartphone generation has become accustomed to interacting with virtual assistants such as iPhone's Siri or Amazon's Alexa.

The only surprise is that just eight per cent of the insurers we surveyed are using AI-powered chatbots, although this is expected to rise to 33 per cent within 2 years and 47 per cent within 5 years.

Four out of five expect AI to support rather than replace frontline staff

[48]*Gartner, October 2016*

This take-up seems slow given how mobile-first InsurTechs have been quick to harness AI-powered chatbots to deliver smart and intuitive user experiences. InsurTech frontrunner Lemonade uses AI to craft what it calls the perfect insurance for its Millennial customers in just 90 seconds. Singapore's PolicyPal, which helps customers buy and manage their policies on one mobile portal, has paired with IBM's Watson to help customers though the insurer's database of more than 9,000 insurance policies, explaining complex insurance jargon in natural language and helping customers make better, data-driven decisions about their coverage. Meanwhile, Next Insurance, a startup offering insurance for small businesses, has launched an AI chatbot that allows personal trainers to buy cover through Facebook's Messenger app.

Many in the industry believe AI could be a game-changer in customer relationships: one global study found 79 per cent of insurance executives believe AI will revolutionise the way they gain information from and interact with customers[49].

That said, while AI-powered chatbots and avatars are the face of InsurTech, our incumbents clearly see an ongoing role for human customer service agents: four out of five of our respondents expect AI to support rather than replace existing frontline staff. This support is likely to come in the form of AI-based analytics to help guide agents in their dealings with customers and suggest best next steps: 77 per cent of our respondents believe this will make it easier for staff to move flexibly across insurance lines and departments and improve service levels. Rather than service becoming more robot-like, it will become more human: 88 per cent of our respondents believe that the most important skills of service staff will no longer be administrative efficiency but rather the ability to engage and emote with customers.

Customer service? Do it yourself

75% expect to use AI to provide automated guidance to help customers self-serve within five years

AI will also support self-service solutions, allowing customers to resolve queries and problems on their own. Studies suggest customers who can self-serve report higher levels of satisfaction: one survey found almost two thirds of customers feel good about themselves and the company they are doing business with when they resolve a problem without talking to customer service[50]. As the DIY approach is made easier by well-timed interventions from behind-the-scenes smart machines, there is likely to be increased uptake from customers of all generations: 75 per cent of our surveyed insurers expect to use AI to help customers self-serve within five years.

[49] *Accenture Technology Vision for Insurance 2017*

[50] *Survey by Aspect Software, quoted in The Future of Retail Financial Services, a report by Pegasystems/Cognizant/Marketforce, 2017*

Productivity, powered up

The impact on jobs is likely to be profound. Our surveyed insurers may claim that intelligent machines will support rather than replace staff, but it will be increasingly hard for companies to sustain current staffing levels when intelligent machines can do the job far more efficiently.

Machine learning algorithms look, without bias or sentiment, at how to optimise operations. Smart machines can streamline operations by reconfiguring existing processes, allocating work to optimise productivity and automating repetitive administrative tasks. One senior insurance executive recently claimed that algorithms are typically 15 times more productive than humans when it comes to repetitive administration[51].

Our respondents are already using AI to improve productivity, and plan to ramp up its use over the next five years. We find that 22 per cent are already using AI to allocate work to the most appropriate staff member and 19 per cent to measure workforce productivity but these numbers are set to jump to 80 per cent and 77 per cent respectively within the next five years. As companies find they can do more with less, headcounts will inevitably reduce. The insurer of the future will be smarter, bolder and more profitable. It will also be less human.

[51] *Andrew Brem, Aviva's chief digital officer, quoted in The Financial Times, May 2017*

SAS Viewpoint

SAS Viewpoint, By Iain Brown, Lead Data Scientist

AI-powered underwriters, claims handlers and customer service agents: it sounds like the future but in fact it's already reality right now in 2017. Every day SAS works with leading insurers to deploy AI capabilities that are transforming the customer experience, improving underwriting accuracy and cutting claims assessment decisions from weeks to mere seconds. Indeed, the AI advantage is so powerful that there's a very real risk that these early adopters will open up a head-start that followers will be unable to close. Little wonder the question we get asked the most is "How far are we behind the curve, and how do we catch up?"

We can offer some reassurance. Yes, some insurance companies are reaping the rewards of early AI adoption but, for now, they are the exception. For the majority, AI is still at the hype stage – a lot of discussion, encouraging amounts of experimentation but very limited operational execution.

Quite simply, many organisations are not yet able to deploy AI. The advanced algorithms that typically empower AI only astound when fed the right data – and too many insurers are struggling to collect and store the right data or their data is held in vertical product siloes, blinding them to a single customer view. With the deadline for the General Data Protection Regulation now looming, there's more incentive than ever for insurers to get their data housekeeping in order - this will then create a solid foundation on which to build an AI-enabled enterprise.

A word of caution from SAS: AI is a powerful tool for enterprise-wide transformation, arming human staff, be they underwriters or frontline service agents, with the data and tools to delight customers, optimise operations and capitalise on new opportunities. But AI, particularly deep learning black box solutions, needs governance and oversight to ensure the outputs are consistent with the company's values, ethics and regulatory obligations. We are reassured to see companies now hiring Chief Data Scientists to make sure these issues are debated at the highest level. Any company readying for an AI future should make sure transparency, compliance and ethics are addressed now and not bolted on as an afterthought when it may already be too late.

sas THE POWER TO KNOW.

For 40 years, SAS has believed that advanced analytics can change the world for the better. With innovation at the heart of everything we do, we use our expertise to help insurers exploit the value of data to solve their biggest problems, make better decisions faster and fuel innovation.

For further information please visit: www.sas.com/uk/insurance

Chapter 7:

Fraud in a Connected World

Fraud in a Connected World

The insurance industry is the financial backstop of society, providing compensation to households and businesses when misfortune strikes. But this financial resource has attracted a host of opportunists and criminals seeking to take unfair advantage. From organised crime to over-egged claims, the value of detected fraud in the UK is estimated to be more than £1 billion annually, with undetected fraud adding in excess of £2 billion[52]. It is reckoned fraud adds, on average, an extra £50 to the annual insurance bill for every UK policyholder[53].

Insurance companies are fighting back, investing more than £200 million every year, collaborating with the police, funding the establishment of new anti-fraud agencies and backing new legislation to clamp down on spurious personal injury claims.

These measures are starting to unpick criminal networks and expose dishonest behaviours. Figures released in July 2017 show that last year organised insurance fraud fell by around 30 per cent compared to 2015 levels, with 15,000 frauds valued at £174 million detected, a tribute to the work of the Insurance Fraud Bureau (IFB) and the Insurance Fraud Enforcement Department (IFED), a specialist police investigation unit. Overall, insurers detected 125,000 dishonest insurance claims valued at £1.3 billion – across organised and opportunistic fraud - staggering numbers that reveal the relentless and pernicious scale of fraud in the UK, but which were nevertheless down five per cent on 2015 levels, with the value of the attempted frauds down three per cent[54].

These declines are welcome but are in no way any cause for celebration or complacency. Anti-fraud experts believe fraudsters are moving into new areas, such as bogus liability claims, with an epidemic in false food poisoning claims made against some overseas hotels and tour operators, often encouraged by disreputable claims management firms. The ABI figures also show a small rise in opportunistic motor insurance frauds in 2016, up five per cent at 57,000. This category of fraud usually involves otherwise law-abiding citizens encouraged by disreputable claims management companies to pursue spurious personal injury claims.

Just 8% reported a decrease in fraud over the last year

Opportunistic fraud remains at stubbornly high levels, with many otherwise honest customers feeling an over-egged claim is somehow an unofficial perk of being a policyholder. Public information campaigns attempt to counter the view that this is a victimless crime; after all, fraud piles costs onto honest policyholders and the NHS. However, these have failed to reset public opinion: almost four out of ten (39 per cent) of our respondents report an increase in opportunistic claims fraud and 35 per cent an increase in opportunistic application fraud. As we reported last year, the industry is losing patience with this sustained erosion of margins, with four out of five backing tougher penalties for convicted opportunistic fraudsters in order to act as a deterrent[55]. InsurTech challengers, however, have a fresh take on opportunistic fraud by drawing on behavioural science to rethink the entire business model. Lemonade, for example, donates unclaimed premiums to good causes in the hope that would-be fraudsters will think twice when the loser is not a faceless corporation but a local school or hospice.

[52]*AInsurance Fraud Taskforce: final report, January 2016*
[53]*ABI*
[54]*ABI, July 2017*
[55]*The Future of General Insurance 2016, Marketforce*

Aiders and abetters

Some opportunistic frauds are abetted by disreputable claims management firms, particularly in personal lines, which has helped earn the UK the dubious reputation as the “whiplash capital of Europe”. The industry is keen to see legislative action to help discourage fraudulent whiplash claims: almost seven out of ten (69 per cent) back a tariff-based system of compensation and a ban on pre-medical offers.

Professionally-enabled fraud, in which rogue medical professionals, solicitors and vehicle repairers collude to defraud insurers, has emerged as a growing threat in recent years. Last year, seven out of ten of our surveyed insurers said the industry did not have adequate strategies to protect itself from this type of fraud, a finding that resonates this year, with more than a third of our 2017 cohort reporting a rise in professionally-enabled fraud.

Cyber crime

Indeed, experts say cybercrime is a very real and aggressive threat to the UK economy and often underlies insurance fraud in the form of identity theft. The National Crime Agency (NCA) estimates the cost runs into the billions of pounds per year. One study found nearly seven in ten large businesses identified a cyber breach or attack on their systems in the last 12 months, with an average cost to large businesses of £20,000 but in some cases reaching millions of pounds[56]. The study also found that businesses holding electronic personal data on customers were much more likely to suffer cyber breaches than those that do not. The NCA believes a successful attack could pose an “existential threat” to one or more major companies in the UK as a result of lost revenues, damaged reputation and litigation and regulatory penalties. It’s not just companies that are at risk: individuals are also often victims of cybercrime, either as a result of stolen personal data, identity theft or emptied bank accounts.

For the insurance industry, while cybercrime presents a challenge both to the organisation and its facilitation of insurance fraud, it also represents an opportunity. Indeed, 94 per cent of our respondents believe cyber insurance will be a major growth area over the next five years; half expect this growth to be massive. 65 per cent believe personal cyber insurance for individuals keen to protect themselves from this type of crime will see healthy growth in the coming years.

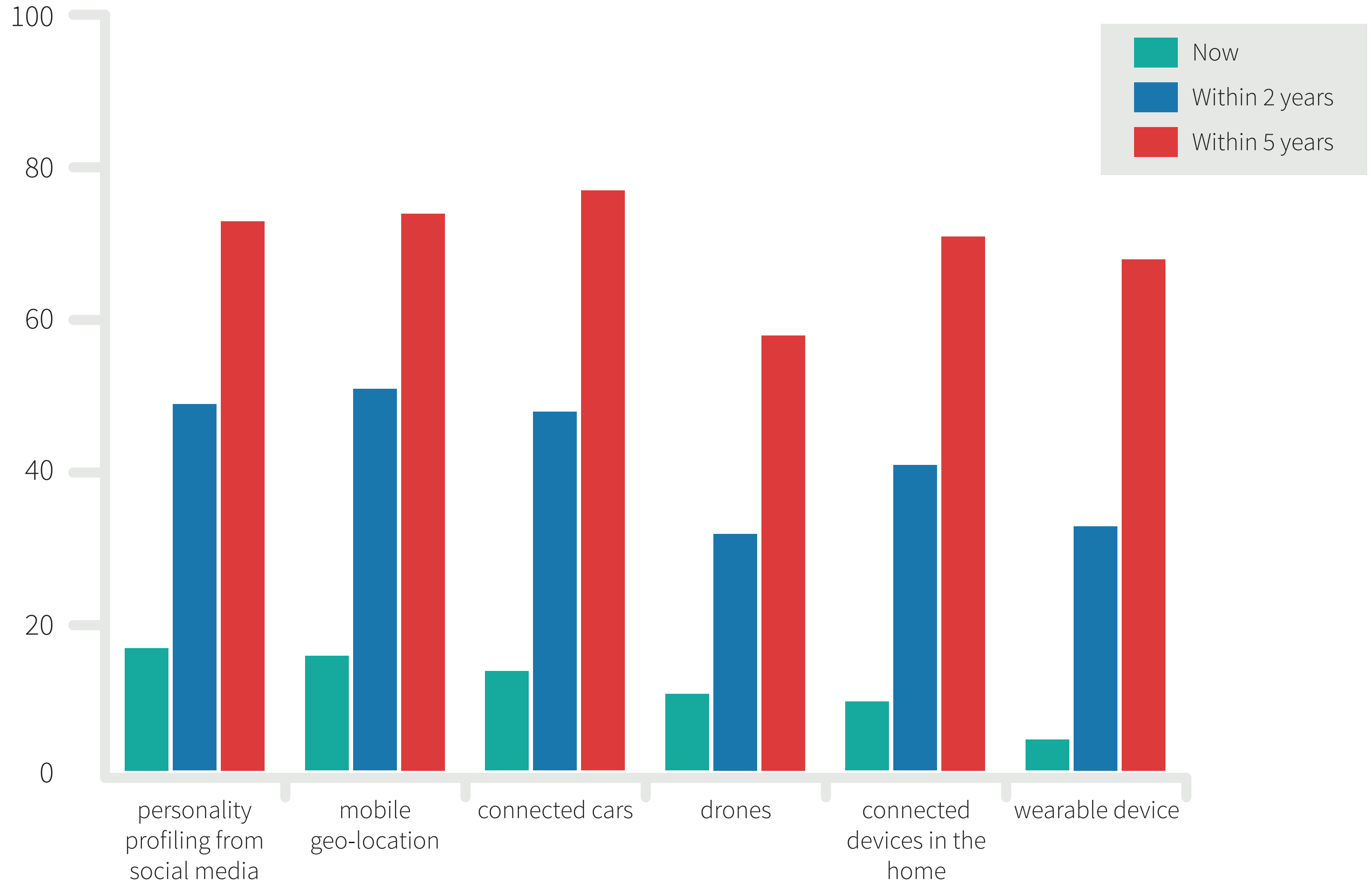
Despite the potential of this fast-emerging new market, just 36 per cent currently have a business cyber insurance offer on the market, with a further 31 per cent having products at the design and planning stage, and only one in ten have an offer for personal lines, although 32 per cent are at the design and planning stage. This still leaves a large proportion with no current plans to participate in one of the most promising growth markets.

[56]*Cyber Security Breaches Survey 2017*

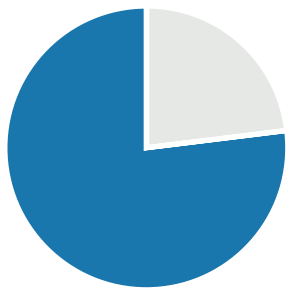
New weapons

Those charged with combating fraud have more weapons than ever at their disposal. In a hyperconnected world, where our daily life is tracked by embedded sensors, GPS trackers and data-hungry apps, it will become ever easier for insurers to verify honest policyholders and harder for fraudsters to hide. At the moment, just a handful of insurers are tapping new data sources, from social media profiles to drone footage, in order to fight fraud – but our survey shows within five years the majority will be pulling data from the web, the roads and even the skies, in order to trap the fraudsters:

The time-frame insurers expect to make extensive use of the following data sources in the fight against fraud



The big breakthrough, however, will be the application of machine learning, which almost seven out of ten intend to deploy in the next five years. Indeed, 77 per cent expect that AI-based analytics will become the primary means through which insurance fraud is detected in the next five years and by 2027 this is expected to be standard practice with more than nine out of ten insurers using smart machines to spot fraud.



77% believe AI-based analytics will become the primary means through which insurance fraud is detected in the next five years

New risks

If connected devices offer new opportunities to detect and prevent insurance fraud, it is also increasingly clear they are creating new vulnerabilities. Already there have been lurid headlines about hackers taking control of connected cars, smart TVs and other intelligent devices for nefarious purposes. Attacks can be huge, with malware scouring the web for IoT connections and then enlisting hundreds of thousands of otherwise benign devices to launch distributed-denial-of-service attacks on targeted websites.

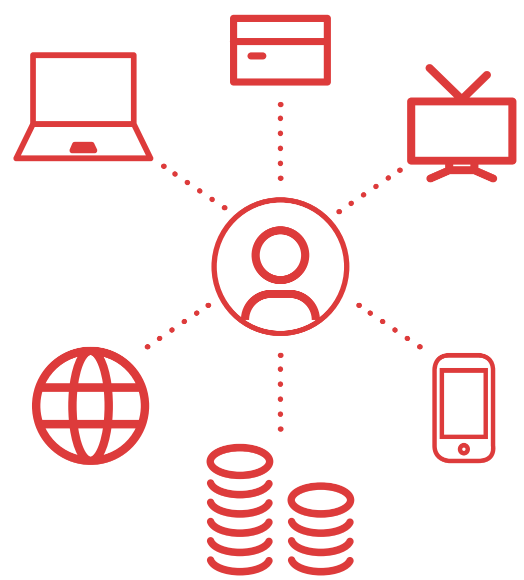
Criminals could also target connected devices to commit new types of insurance fraud, and 95 per cent of our respondents agree this is a significant vulnerability, against which the industry is not yet ready to defend.

Connected devices provide new means of fraud detection as 24/7 monitoring by embedded sensors reduces the scope for fraudulent behaviour, be it connected cars recording “crash for cash” scams or GPS tracking in mobile phones preventing identity-related frauds. They also create new vulnerabilities and, on balance, 87 per cent of our respondents expect the growth of connected devices to increase overall levels of insurance fraud in the next five years – over half (56 per cent) think that it will spark a significant increase.

The good news is that new technologies are emerging to shore up defences. Blockchain is a hackproof distributed ledger that promises to transform back-office operations, as well as provide an immutable record of ownership of assets and personal data. Last year, 75 per cent of our respondents expected blockchain technology to be routinely used to record claims against specific objects and events in order to detect fraud. This year we find the industry is still backing blockchain: 84 per cent think it will help reduce insurance fraud vulnerabilities in the next five years.

Meanwhile, biometric identification, such as iris checks, fingerprint scans and voice recognition, is already moving mainstream: the latest iPhone, for example, uses facial recognition to unlock the device. These emerging technologies are no silver bullet but are expected to contribute to the fight against the fraudsters: 85 per cent of our respondents expect to see a reduction in crime as a result of their deployment.

Overall, our respondents are optimistic about the future: more than nine in ten expect detection rates of both opportunistic and organised fraud to improve in the next five years, and more than half (54 per cent) expect these rate gains to be significant as new technologies increasingly leave the fraudsters with less space to manoeuvre. In a world where smart machines are constantly scouring the datasphere for anomalies that indicate illicit behaviour, the con, it seems, is increasingly not on.

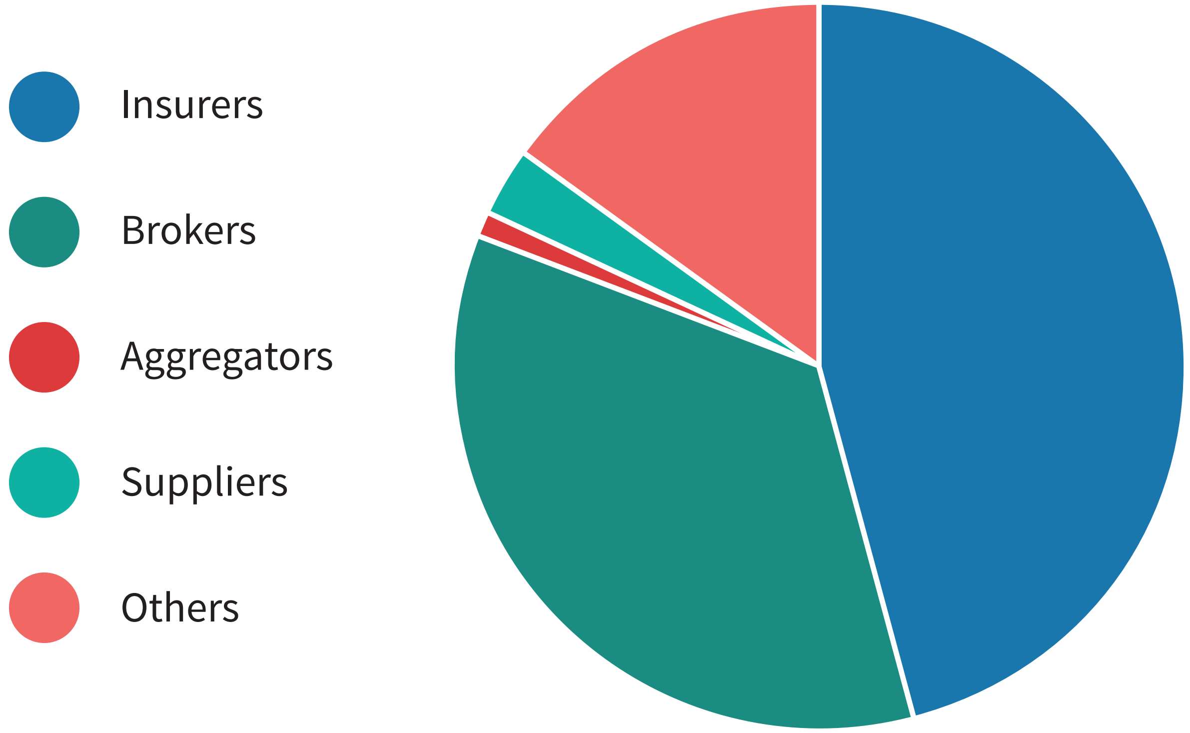


87% expected the growth of connected devices to increase overall levels of insurance fraud in the next five years…

and 95% agree the industry is not ready to protect itself from these new threats

Methodology

This report is based on research conducted by Marketforce Business Media and the CII in August and September 2017. We surveyed over 880 senior figures from across the UK insurance sector, including insurers, brokers and aggregators, from both personal and commercial lines.



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