

The Search for Safety in a Changing World

A large map of Australia is formed by a collection of various personal items and objects. The items include clothing like jackets, trousers, and shoes; electronics like a camera and a laptop; sports equipment like a tennis racket and a bicycle; and other personal belongings like a suitcase, a hat, and a bag. The items are arranged to fill the outline of the continent, with a higher density of items in the eastern and southern parts, suggesting a more developed or populated area. The background is a plain, light-colored surface. The text 'See the life, not the land' is written in a large, bold, sans-serif font at the bottom right of the image.

See the life,
not just the policy.

Insurance at Risk

The Search for Safety in a Changing World

Why insurers must move to a more proactive, customer-centric operating model to protect their policyholders – and their own businesses – in a post-COVID-19 reality.

"Existing operating models are drifting out of alignment with customer needs."

"How can insurers harness AI and advanced analytics to evolve rapidly to a more proactive and resilient operating model?"

Executive Summary

The insurance industry is entering a new era. The combination of an ever-growing global population and ever-advancing technological change is causing sudden shifts in the social fabric. Climate change, cybercrime and new diseases pose new threats to homes, businesses and healthcare systems, while new technologies such as self-driving cars are set to change the traditional risk we face.

Insurance firms are waking up to deficiencies in their existing risk and operating models, which are drifting out of alignment with customer needs. In this paper, we set out a vision for how insurers can evolve rapidly.

In particular, we look at how insurers can harness artificial intelligence (AI) and advanced analytics to be more proactive in helping customers reduce their exposure to risks, pre-empt and prevent losses, and reduce the need for claims. We also describe how these advances would change the profile of insurers to a more resilient operating model.

While COVID-19 has shown that unprecedented risks can completely disrupt operational realities for all industries, businesses and workforces, integrating customer insight and artificial intelligence can benefit insurance providers and their customers through improved and insightful interaction.

COVID-19: A Wake-Up Call

At the time of writing, most countries around the world are in lockdown due to the COVID-19 crisis. Governments are scrambling to put measures in place to restrict the exponential spread of the disease: non-essential food and retail outlets are closed, transport—especially air travel—is restricted, and almost all businesses are expected to close their offices and enable employees to work from home.

This unprecedented global disruption is already taking its toll on UK society and its economy. Having barely recovered from the damage of storms Dennis and Ciara, many businesses are now facing an open-ended period where their operations must be limited or entirely put on hold. Even in sectors not directly affected by emergency legislation, the need to shift to a remote working model and deal with unprecedented levels of illness in the workforce is putting severe pressure on business continuity plans.

In normal conditions, these types of disruption might affect a few individual businesses or even a whole sector. For example, the impact of the 2001 foot-and-mouth crisis on the UK's agriculture and tourism industries. The difference with COVID-19 is that it affects almost all businesses across every sector and only a tiny minority have the relevant insurance cover.

As a result, insurers are not playing their usual role as a safety-net for the rest of society – in fact, in most cases they are just as affected as everyone else. The volume of claims is increasing significantly as businesses try to mitigate epidemic-related losses, while most insurers' ability to handle those claims is being undermined by the disruption of moving to a remote call centre model and dealing with increasing levels of sickness among skilled customer service staff.



The crisis has also had unexpected repercussions for lines of business whose claims volumes have fallen. For example, UK insurers are now under pressure to follow the behaviour of major insurers in the US and refund car insurance premiums because the lockdown has caused most drivers to stay at home, which has significantly reduced the number of car accidents and insurance claims.

Is the Halo Slipping?

If the role of the insurance sector is to act as society's guardian angel, its halo appears to be slipping. To continue to protect society in the future, insurers need to start thinking about how to handle global-scale events like COVID-19. After all, with an ever-more overcrowded planet, this probably won't be the last time we'll see a large-scale virus outbreak – the SARS and MERS epidemics of 2002 and 2015 can now be recognised as harbingers of the pandemic we're now experiencing.

But here's a sobering thought: how could today's insurance industry possibly cover an event like COVID-19? Under the current model of insurance, the main role of the insurer is to compensate policyholders for losses once they have occurred – but it would be impossible for any insurer to cover the colossal losses sustained during a global pandemic without setting premiums to a level that would be unaffordable for most clients.

If these events become a semi-regular occurrence in the future, the insurance sector needs to redefine its role: the reactive approach of "wait for it to break, then pay for it" will no longer be fit for purpose. Instead, insurers will need to take a much more proactive approach.

The Evolution of Risk

While COVID-19 is the most dramatic and immediate example of how the insurance industry's reactive approach is slipping out of alignment with 21st century reality, pandemic disease is far from being the only type of risk that doesn't fit the current operating model.

In fact, rapid advancements in technology and the shifting ecology of the planet pose an even greater threat of disruption and will soon begin pushing insurers to rethink the way they operate.

For example, companies like Tesla are leading the charge to develop autonomous vehicles and we can expect to see an ever larger proportion of self-driving cars on our roads in the coming years. While it will probably take a decade or more for these new vehicles to completely replace human drivers, the transition will force the car insurance sector to reinvent its operating model completely.

As the number of accidents falls, so will the number of claims and the profitability of traditional motor insurance revenue streams. More importantly, once the roads are entirely dominated by self-driving vehicles, it will no longer make sense to hold individual drivers to account for accidents – so the whole structure of responsibility and liability will need to change completely.

Climate change is another example. As sea-levels continue to rise and extreme weather events become more common, large numbers of homes in low-lying areas will become uninsurable and large-scale losses from winter storms will become a much more regular occurrence. To keep property-related revenue streams intact and protect customers when their homes and businesses are threatened, insurers will need to find ways to help customers mitigate the risk of losses, not just pay for the damage after the fact.

"Insurers need to take a much more proactive approach."



"Insurers need to help customers mitigate risk, not just pay for damage."



"The time has come for the journey to begin."

One more example: as businesses continue to shift their operations away from tangible physical assets and into the virtual world, the valuation of risk is becoming much more difficult than it was in the past. In the information economy, different things matter. Instead of insuring bricks and mortar, machinery and infrastructure, companies increasingly want to protect new types of assets: their reputation, their intellectual property, and their customer data.

In a typically astute analysis of the problem, Anthony Hilton, Financial Editor of the Evening Standard, writes:

"Company executives say in the old days they used to be able to cover 90% of their risk because it was tangible. Now it is 30% tangible. The 30% still gets covered, but insurers have had difficulty with the rest."

The difficulty is twofold. First, how could an insurer reasonably assess the value of, for example, Apple's intellectual property, Facebook's reputation, or Google's customer data? Second, how could they possibly cover the losses of a large-scale cybercriminal incident? Under the General Data Protection Regulation (GDPR) for example, the maximum penalty for infringements is 4% of worldwide annual revenue. To cover that risk for Alphabet, Google's parent company, which earned revenues of over \$161 billion in 2019, an insurer would be liable to pay out more than \$6 billion.

Hilton concludes that the industry has not yet come to terms with the degree of change that will be required to meet these challenges:

"Devising policies which meet client needs has required a fundamental rethink. Unfortunately, the insurance industry has responded by pushing off-the-shelf solutions for complex risks that do not really reflect the subtlety of what business wants."

The time has come for the journey to begin. As risks evolve, insurers must evolve too. There needs to be a shift towards a more proactive approach, with a focus on risk prevention and limiting losses, rather than picking up the pieces after the damage has been done.

While this overall journey will be a long-term, large-scale transformation, it begins with steps that insurers can take today by starting to adjust their operational models to today's immediate needs. In the context of COVID-19, for example, this means considering whether current operations can overcome the impact of the disease on their own workforce to sustain much-needed front-line services for policyholders.

The Customer-Centric Insurer

If the objective is to move to a more proactive stance and focus on risk prevention, how can insurers accomplish this? The key is that they must find ways to push or incentivise policyholders to reduce their exposure and limit the impact of losses—in short, they must be able to inform and influence customer behaviour.

To do this effectively, they must not only be able to monitor and analyse their customers' current behaviour, but also to gain a deeper understanding of the relationships between specific behaviours and the risks that they are insuring against. Overall, they need to become more knowledgeable about their customers, and retune their operations to place the customer at the centre of everything they do.

Technology has a key part to play in this move towards customer-centricity. As individuals, businesses and communities become more connected through mobile and wearable technologies and the Internet of Things (IoT), there is scope to gain more data and more insight into the risks they are exposed to, and the impact of their behaviour on those risks. If insurers can open up new digital channels to collect this data from their customers,

analyse it in real time, and respond by communicating incentives to reward risk-reducing behaviour, then they can create a positive feedback loop to actively reduce exposure and minimise losses.

A few years ago, this might have sounded impossibly futuristic, but today there are already working examples of customer-centric insurers taking this exact approach. Car insurance has led the way with the use of in-car telematics to monitor customers' driving style, typically using machine learning techniques to identify events such as speeding or hard braking and score each policyholder on how safely they drive. This feeds back into the calculation of premiums, with better pricing offered to safer drivers.

Vitality has approached this by offering health insurance policies that specifically incentivise customers to take a more active role in managing their own health and fitness—offering discounts and rewards to customers who agree to let the company track their daily physical activity through a smartphone or wearable device. In the present situation, this data could provide a rich source of insight into policyholder behaviour during lockdown—potentially helping the company prepare more effectively for future pandemics.

It's not difficult to envision similar solutions for other categories of insurance: actively checking the condition of flood defences using IoT sensors to ensure that they are in a fit state to protect homes against winter storms; parametric products for homes in areas at risk of flooding; monitoring a company's cybersecurity infrastructure to reduce the risk of a data breach; or even using GPS tracking to check whether employees are obeying curfews and staying home during an epidemic.

The common factor in all these potential solutions is that they depend on the ability to capture, analyse and act on data. To embrace a fully customer-centric approach and truly understand the complex relationships between risk, behaviour and incentives, insurers will need to become more proficient in the use of advanced analytics, artificial intelligence and machine learning (AI / ML).

Roadmap to Customer-Centricity

Becoming truly customer-centric—in the full sense that we've explored above — is not a transformation that insurers can achieve overnight. Fortunately, it doesn't need to be. Climate change is accelerating, but it's an incremental process; pandemics don't happen every day; and it will be some years before the majority of the cars on the road are self-driving. Insurers will find solutions to these challenges over time, and as risks evolve, so will insurance offerings.

However, this is a journey that insurers need to start today. To put themselves in a position to adapt to changing realities, they must lay the foundations for a customer-centric approach and build processes and platforms that will enable them to be more proactive as opportunities arise.

In particular, it's important to acknowledge that we don't know what we don't know. The road ahead is full of uncertainties, and there is always potential for a sudden event — like COVID-19 — to change everyone's perception of what is possible.

The best strategy is to build that uncertainty into your approach by making it possible to react immediately when unforeseen events arise. In practical terms, this means adopting an agile approach to digital product development and customer experience that enables you to experiment with new ideas, fail fast when something isn't working, and iterate rapidly when you find a solution that can meet customers' needs. COVID-19 has brought home the need to respond quickly to changing circumstances: processes that typically take months need to happen in weeks, if not days.



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As discussed above, data and analytics should be at the heart of any customer-centric strategy, and this agile approach is especially applicable to analytics-focused projects. Choosing the right combination of techniques to solve a problem can involve considerable trial and error. In particular, developing AI / ML solutions is inherently an experimental discipline, which requires many iterations to find and train the best model for a particular problem.

The best first step, then, is to establish an analytics platform that can surface analytically driven insight into digital decision-making at the speed the changing landscape demands. Moreover, to provide the versatility needed to solve whatever problems the business encounters, this platform should support a comprehensive range of analytics techniques, from classical statistical modelling to AI / ML, forecasting and scenario planning to mathematical optimisation. The whole platform should be engineered to enable insurers to move quickly and bring agility and speed to their analytics processes.

Once this platform is in place, insurers will be in a position to start their transformation and maintain momentum in delivering the complex changes that lie ahead. The first practical step will then be to start with some of the lower-hanging fruit, embedding analytics into existing business processes to enable a more intelligent approach to decision-making in the short term.

For example, COVID-19 has highlighted an immediate need for insurers to improve their front-line digital customer service channels in times of emergency, when contact centres face unexpected peaks in demand. Currently, many companies are taking an "all hands on deck" approach, pulling even senior staff into the front line to help handle incoming inquiries – which means that other activities are on indefinite hold until the end of the crisis.

By adopting a combination of analytics-driven approaches, it should be possible to mitigate the impact of high call centre volumes while improving the speed and quality of customer service. For example:

- Natural language processing (NLP) and text analytics can help to triage incoming inquiries by identifying topics in customer emails or chatbot messages, prioritising the most urgent queries, and routing them to the most appropriate customer service operatives.
- Decision automation models can analyse the history of customer interactions and suggest next-best-actions for operatives, enabling them to give better advice to customers and handle more calls faster.
- Workforce optimization models can analyse contact centre activity patterns and predict the number of staff needed to handle queries and claims over the coming days, enabling smarter, more dynamic workforce planning.

Beyond the immediate needs of the current situation, a centralised analytics platform can also be used to harmonise and enhance existing model-based processes – for example, using new AI / ML techniques to enable smarter stress testing and 'what if?' analysis to optimise the management of regulatory capital reserves.

On the longer term, data science teams can use the platform to begin tackling the bigger, longer-term problems around remodelling the business. For example, companies that already have a mature data strategy will be able to use the insight they have captured since COVID-19 arrived in the UK, creating an asset that can help them model future scenarios. This could provide a much-needed competitive advantage over those companies whose data silos and fragmented channels have robbed them of the ability to predict and react.

Primarily, as discussed in this paper, adopting AI and other advanced analytics techniques will enable insurers to take a more proactive approach to predicting and managing risk but it's important to consider the impact of AI on the way the insurance industry operates. Many jobs that currently require human input will be soon candidates for automation, which means employees will need to move into new roles and find other ways of generating business value. While digital transformation isn't the answer to every challenge, we have clearly seen that insurers with more developed digital capabilities have provided a more consistent customer service.

Ultimately, insurers will need to combine AI and human expertise to establish a new operating model based around the personalized, client-by-client assessment of risks, and the implementation of powerful incentives towards risk-reducing behaviours.

These behaviours and incentives will be different for each area of the business, and for each type of risk: for example, for commercial insurance in a pandemic scenario, how much of the business can be conducted remotely? How well-set-up is the business to enable staff to work from home? What are the other factors that the business can control that would mitigate the risk, and can we incentivise them through lower premiums to adopt these measures?

But although the details are specific to each use case, the approach to managing the risks is the same: harnessing powerful analytical models to understand, monitor and influence customer behaviour to keep risky activity to a minimum and prevent losses before they occur. Once this positive feedback loop has been established, the true value of customer-centric insurance will be achieved.

Conclusion

In this paper, we have explored the concept of the customer-centric insurer, not only in the traditional narrow sense of analysing customer data to improve customer service, but also in the broader context of the far-reaching changes that the industry is set to undergo over the coming years and decades.

Our conclusion is that the evolving nature and increasing scale of risks such as pandemic disease and climate change, combined with the transformative nature of AI-powered technologies such as self-driving vehicles, will force a fundamental rethink of today's insurance model. In many cases, the risks are so large and the potential losses so extensive that no insurer will be able to cover them – preventing the industry from playing its vital role as society's guardian angel.

Instead, insurers must shift to a new operating model that emphasises prevention instead of compensation. Early examples, such as using vehicle telematics to encourage safer driving or wearable technology to motivate healthier lifestyles, are forerunners of the approach that all insurers must adopt: using technology and advanced analytics to monitor customer activity, identify opportunities to reduce risk, and influence customer behaviour accordingly.

SAS can help insurers lay the foundations for this transformative approach and realise the true meaning of customer-centricity, while delivering quick wins in the short term through practical adoption of analytics for intelligent decisioning in the contact centre. To learn more, please visit:

sas.com/customercentricinsurer

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