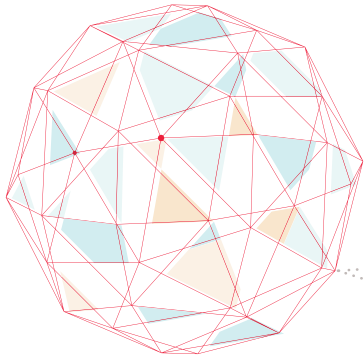


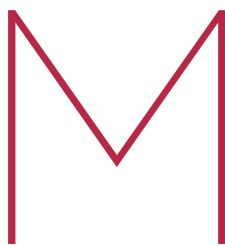


HARNESSING THE TRANSFORMATIVE POWER OF BIG DATA



The digital age will have big implications for insurers' business models, governance, skills and culture, but what are the key challenges and where do the main opportunities lie?

By Stuart Collins



More and more industries are waking up to the possibilities of data and analytics; to gain new insights, increase revenues or drive efficiencies. But few businesses are yet to really unlock the full potential.

Take insurance as an example. The insurance industry has a long history of using data to make decisions around risk, and was one of the first to use complex models and predictive analytics. But scratch beneath the surface, and so-called Big Data has barely made its mark on the industry.

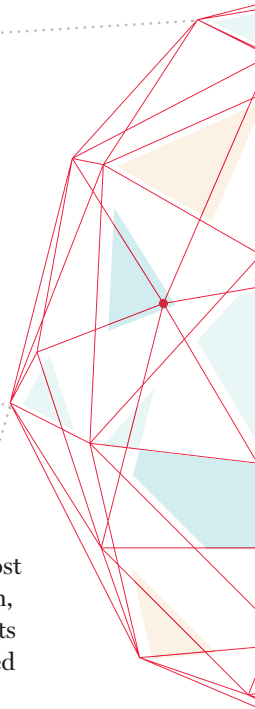
"The insurance industry is embracing data and analytics, but too often we see companies hire mathematicians and data scientists without thinking through how it will change their business models," according to Neil Cantle, principal and consulting actuary at Milliman in London. "While data and analytics can enhance a company's existing business, insurers should also think about what they can do that is new or creative," he says.

Limitless usages

The potential uses for data and analytics are almost boundless, from analysing a company's reputation, its investments and workforce to understanding its customers, developing products and more targeted marketing and distribution. Big Data will have a role in underwriting, claims management, product development and in-force persistency, explains Daniel Ryan, head of Digital Analytics Catalysts at Swiss Re. It can also be used to help identify trends that impact insurers above the policy holder level, including investments, risk aggregation, as well as emerging trends like diseases or pandemics, he says.

Swiss Re is one of a growing number of insurers and reinsurers embracing a broad range of data and analytics—from building a model to forecast motor accident frequencies and severity in China to contract and text analytics to screen engineering reports in real time.

Insurers are already beginning to see that data and analytics can help with more targeted customer engagement and with providing an all-round experience.



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Neil Cantle, principal and consulting actuary, Milliman

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“Big Data can help companies better understand customer behaviour, which is crucial to risks associated with consumers. But it can also assist with sales, marketing and distribution. If you understand the customer you will have a better product and be able to price it better,” says Cantle.

Volume game

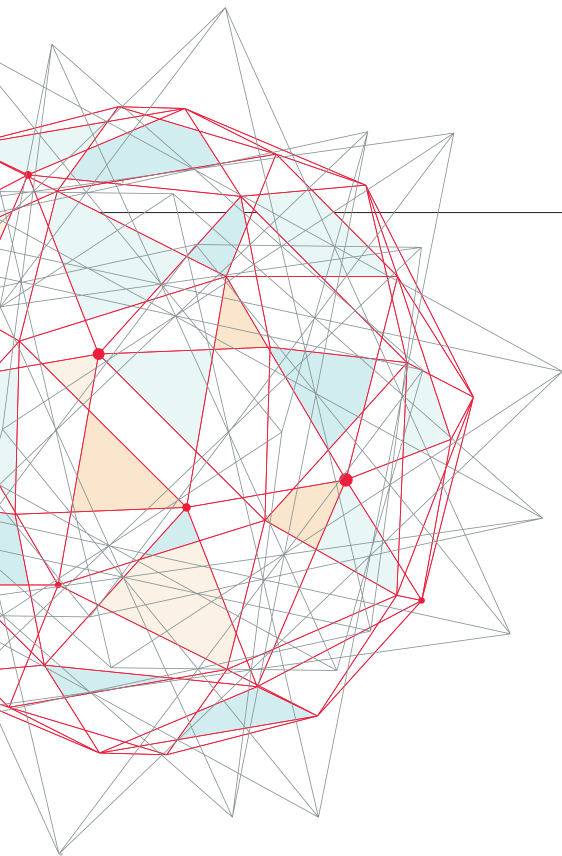
As more and more data on risk becomes available, insurers will face a number of challenges, not least from the sheer volume of data they may have to handle.

Developments in machine learning, increased computing power, greater connectivity and growing ranks of sensors and devices will all mean far greater access to data and analytics going forward, believes Cantle.

Access to more data will present a practical challenge for companies, according to David Excell, co-Founder and chief technology officer of Featurespace, a provider of adaptive behavioural analytics.

“Organisations need to think about how they can use information as technology makes it available, whether it is to make the business more efficient or products more tailored. They need to ask themselves, what are the questions that I cannot currently get an answer to?” he says.





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Companies will also need to think about what can be added to their data to make it more useful, believes James Dodge, a senior consultant at Milliman.

“We see much more data available, such as with telematics, but we are not seeing a great deal of data enrichment. For example, it is possible to overlay information on an individual’s driving with road conditions, weather or claims severity data,” he says.

Data governance

Governance will also be challenging in the digital world. With more decisions based on analytics, companies will need to be able to trace back data and unpick algorithms.

“Data and analytics will need to be transparent. If you use data you will need to know where it comes from and any underpinning assumptions used in the analytics. You won’t be able to price based on data you don’t understand,” says Derek Newton, principal and consulting actuary at Milliman in London.

As business models come to rely on data, companies may expose themselves to increased business interruption and systemic risks, adds Cantle. For example, an insurer may not be able to price a product

that relies on medical or driving data, if that data source is disrupted for significant periods of time. Algorithms or data sets may contain a flaw or be corrupted, while the assumptions of data scientists could be ill-founded.

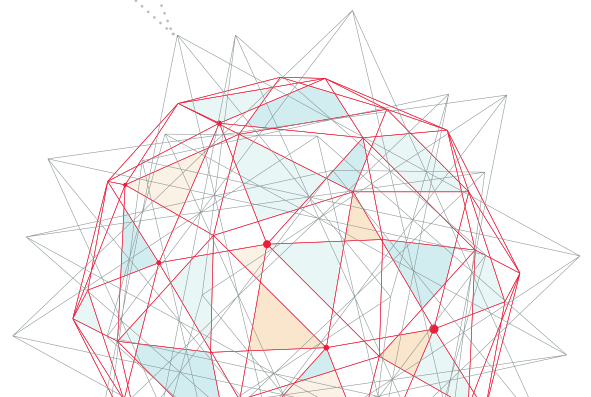
“Make sure you don’t stop thinking and challenging data. For a business that relies on data, there will be major risks of data loss, while systemic exposures will come from industry data and systems,” warns Cantle.

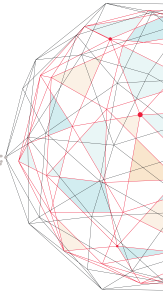
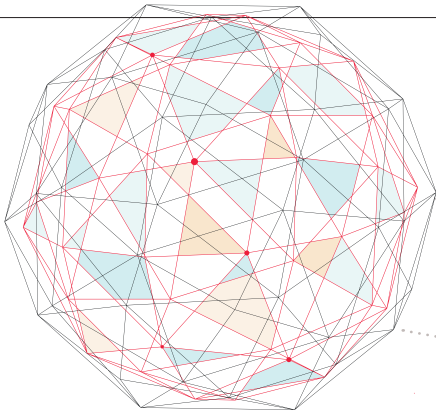
Skills change

As data and analytics become more central to insurers’ business models and proposition, companies will find they need different skills and potentially a change in culture.

According to David Nichols, UKGI Chief Operating Officer at Zurich Insurance, “Insurers will increasingly need people with an alternative mindset, with the ability to think differently and who are not weighed down by the past. They will require people with technical skills, but they will also need people who are much more customer focused,” he says.

Data and analytics are not only about technology. “The intelligent use of analytics relies on people.





It is the human that gains the insights and makes the decisions,” Cantle adds.

While insurers are beginning to realise they need data scientists, there is likely to be a skills gap in how data and analytics are applied in the business, from senior management down to underwriting and claims.

“The future role of the underwriter will be to review all the information sources and make an assessment. The interpretation of data and how it is translated into products is where insurers will compete, and is more of an art than a science,” says Cantle.

Sourcing data

As insurers wake up to the possibilities of data and analytics, there will be questions over who is best placed to collect and analyse data.

Insurers could create their own devices, or work with technology companies to do so. They will also need to persuade customers to share their personal data and may well have to source data from third parties.

“We may see a world where insurers do not individually collect data but focus on what can be done with the data and how they can add value,” says Richard Clark, head of business development at Xuber, the insurance software business of Xchanging, a CSC Company.

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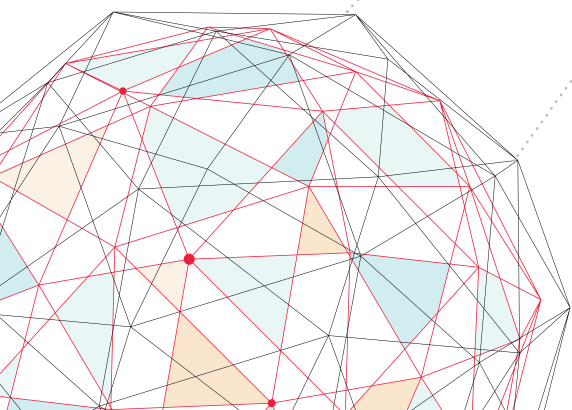
Richard Clark, head of business development, Xuber

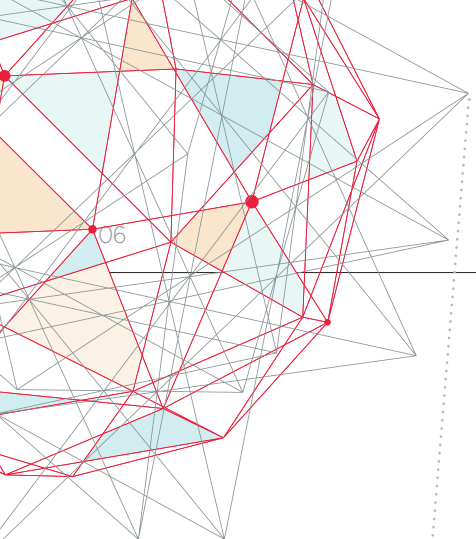
A particular challenge will be to convince customers of the value of sharing their data. To do this, insurers will need to build platforms that enable them to share data with their customers in a meaningful way and to demonstrate how it is being used to their benefit, explains Swiss Re’s Daniel Ryan.

“Insurers use of an individual’s data will need to be ethical, appropriate, transparent and linked to the organisation’s brand,” he says.

Sharing data

The sharing of market data is likely to be another key area of development in years to come. The insurance industry shares data in a number of areas—most notably in fighting fraud and for tracking catastrophe claims—but generally





insurers and brokers see their data as an asset to be guarded.

The sharing of data is still resisted and feared by the commercial and wholesale insurance markets. “We have tried to leverage claims data in the London market but initiatives get stuck on the general nervousness towards sharing data,” Clark says. “There is so much that could be done if insurers were prepared to share data. The market needs to get over its fear and reluctance.”

At present, most Big Data developments are with the larger insurers and brokers, but there might be benefits from a market initiative, says Clark. For example, a market-wide think tank could carry out collective research into potential data sources and how it could be translated into insurance products.

Large insurers have the resources to invest in data and analytics but could benefit from a pooling of resources, while smaller players would benefit from collaboration. “The industry could collaborate on Big Data, such as identifying sources of data and how it can be structured and made available,” Clark says.

There could also be a role for industry bodies and third parties in collating and sharing anonymised data from insurers. “We will see the creation of data

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warehouses to compile, analyse and distribute data,” predicts Clark.

The consumer goods industry is one of the few sectors to have successfully pooled anonymised data, and this is something the insurance industry could start to explore, says Milliman’s James Dodge.

“There is potential for the insurance industry to pool market data using a data aggregator, and there may be opportunities to enhance that data and make it better,” he adds.

Find out more

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