

# Is data the key to unlocking unpredictability?



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Data and advanced analytics are often heralded as the answer to business risk management challenges and while the potential is certainly there, harvesting predictive analytics for risk management can still feel elusive for many.

## Uncertain risk

The QBE Unpredictability Index finds that the world has become more unpredictable over the last 30 years with economic and business factors the principal drivers of uncertainty over the last decade.



The cost to business of unlikely events happening is pronounced. Four in five businesses surveyed in our unique research programme have been significantly impacted in the last 10 years by one or more pillars of unpredictability, with economic events having the most severe impact.

Despite growing unpredictability, and pressure from stakeholders to weather periods of volatility, many companies are not well-prepared for unforeseen events. Less than a third of businesses (29%) have developed risk management plans for unexpected events and just 17% say they carry out stress tests.

**20%**  
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in 2019**

Overall, 20% of businesses in the QBE Unpredictability Index say they are not well prepared for unforeseen events in 2019.

## Data driven future

Information is likely to be central to managing rising unpredictability. An organisation's ability to capture and analyse data is already an important driver for business performance in some sectors, and it will increasingly become a critical tool to inform strategy, in decision making and using predictive analytics for risk management.

The digital age is generating huge volumes of data. Today, over half the world's population (4.4 billion people) use the internet. The range of data being collected is also broader, as autonomous vehicles, robots and consumer connected devices all generate more and more data. Gartner estimates there will be 25 billion Internet of Things (IoT) devices in use with consumers and

**\$9.3bn**

**venture capital funding  
for AI companies in the  
US in 2018**

business by 2021 (up from 14 billion capturing data on health, consumer behaviour, transport and logistics, and manufacturing.


Such data is meaningless if you can't make sense of it. However, our ability to analyse data and gain insights is also improving with artificial intelligence (AI) and machine learning, which is becoming more accessible to businesses. Huge investments are being made on the back of data and technology like AI; venture capital funding for AI companies in the US reached \$9.3 billion in 2018, 72% higher than the previous year, according to CB Insights.

### QBE Risk Solutions

Lowering premiums and improving claims experience through risk engineering.

[QBEurope.com/risk-solutions](https://qbeurope.com/risk-solutions)



The background of the slide features a complex overlay of financial market data. It includes multiple candlestick charts in green and red, several moving average lines in blue and red, and a prominent red dashed trend line that curves upwards from the bottom left towards the top right. The overall color palette is dominated by deep blues, with highlights of green and red from the chart elements. The text is centered within a semi-transparent dark blue rectangular area.

With today's technology, it is possible to get insights into risk, even in real time. Sensors, trackers and monitoring devices are now more accessible and more readily connected to the internet, making it easier to gather live data.

## Harnessing the power of data

The combination of increasingly rich data and analytics is shaping up to be a powerful tool for business, helping companies make sense of the risks beyond their control, and manage those that are.

Data and advanced predictive analytics for risk management can be used to create alerts or red flags, taking loss prevention steps far earlier than would have previously been possible.

There is little that companies can do to influence risks like political, societal or economic change. However, data driven risk management tools is an emerging market that shed light on such risks, for example predicting future climate or economic scenarios. Increasingly, technology will enable companies to map their own data – on their assets, supply chains and customers – against such

scenarios, giving a picture of how certain events or trends might impact the business.

Another trend is the rapid growth in predictive data and analytics technology that helps companies generate and analyse their own risk data. Technology is enabling data driven risk management opportunities; collecting data on risk, but also the ability to step in

early and take measures to prevent loss, whether it is high value critical machinery or an employee at risk of injury. Data and advanced predictive analytics for risk management can be used to create alerts or red flags, taking loss prevention steps far earlier than would have previously been possible.

According to Chris Gill, Head of Risk Solutions at QBE, “With

today’s technology, it is possible to get insights into risk, even in real time. Sensors, trackers and monitoring devices are now more accessible and more readily connected to the internet, making it easier to gather live data. Machine learning and AI allows huge amounts of this data to be analysed far quicker than by humans, identifying patterns, trends or anomalies.”

## Tech hub

Risk data and predictive analytics for risk management can now be more readily accessed through third parties, such as insurers, risk consultants and technology providers. Recent years have seen explosive growth in the insurtech sector, as a growing number of start-ups find new applications for technology to manage and understand risk.



QBE, and its technology venture capital arm QBE Ventures, has partnered with a number of insurtech companies in the past two years. For example, QBE is working with Cytora to use AI, open source data and our own underwriting data to predict the performance of individual accounts and portfolios. More recently, we partnered with Jupiter, which analyses and predicts climate risk from one hour to 50 years in the future.

Start-ups will make the business of risk modelling and prediction easier, helping companies by capturing data, creating data sets, scenarios and models. There are a growing number of third party providers targeting risk and insurance.

**Start-ups will make the business of risk modelling and prediction easier.**

ZASTI, an AI cloud-based technology platform, for example, uses predictive analytics to provide preventive intelligence on fire, supply chain events, weather or machinery breakdown. Another provider, Geospatial Insight, uses satellite and drone imagery with machine learning to provide risk analysis and asset monitoring to insurers and corporates.



## Bridging the experience gap

Turning analytics into commercial insights and actions can be difficult - particularly if analytics teams are isolated from the rest of the business and the realities of trading in that business. As the potential for advanced analytics grows rapidly, there is the risk of the humans in the equation not keeping pace. QBE co-sponsored the AIRMIC 2019 member research looking specifically at the subject of turning data into the information. AIRMIC members believe they have been most effective at using data and analytics to improve understanding of their risk profile but least effective at planning for unforeseen events. With incidents of unforeseen events rising, it would be prudent to look at how better to harness information to manage the unpredictable.





## Conclusions

According to the QBE Unpredictability Index, 37% of businesses are not comfortable with current levels of unpredictability, but 53% expect the reliability of forecasting to improve over the next five years.

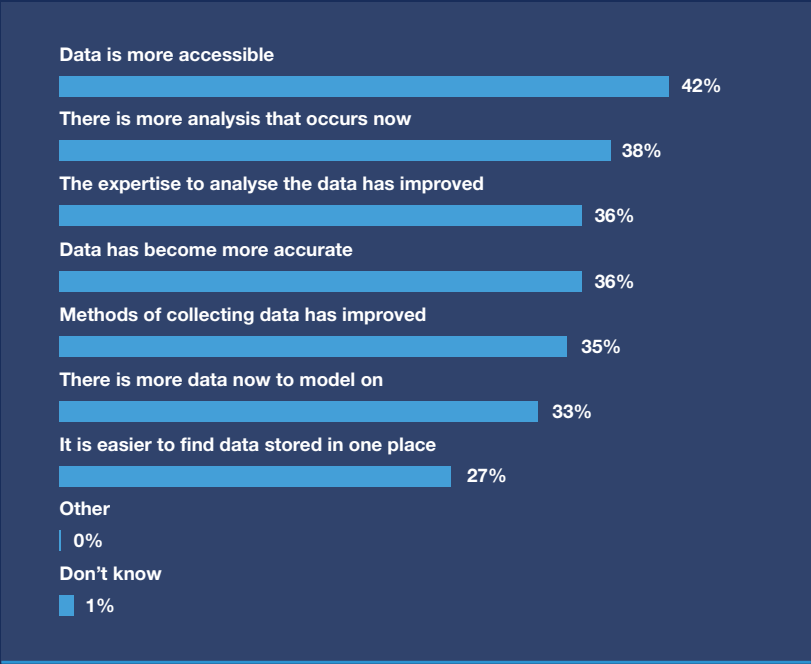
It is still early days for the application of data driven risk management, and many technologies have not been tested by real time events. However, data will clearly have an important role to play in helping organisations manage both the upside and downside of unpredictability for their business risk management.

Data needs to be robust if it is to inform strategy or decision making. Encouragingly, over half (51%) of companies surveyed for the Index say the quality of both internal and

external data has improved over the past five years. Some 42% felt the availability of data has increased, 36% say the data has become more accurate and a third say there is now more data to model on.\*

Getting the right cultural mind set is one of the biggest challenges to successfully embracing data analytics. Using data is second nature for technology companies, but sectors with established business models will have to learn fast.

**\*You mentioned you think the reliability of data has increased compared to 5 years ago. Why is that?**



Source: QBE Unpredictability Index

Organisations need to first identify where there is uncertainty and consider what they need to know, and whether better data and insights will make a meaningful difference on business strategy, performance and risk management. It pays to think where the business model can benefit from being better informed and target investment and effort accordingly.

When trying to anticipate unforeseen events, analysing the past has obvious shortcomings, in this regard scenario planning and 'what if' scenarios should be used to cover the shortfall.

Any one participant in the insurance value chain has a subset of data (on assets, customers, claims) – the real power of data is bringing what customers, brokers and insurers hold together. This will help us to see the future more clearly and ultimately use predictive analytics for risk management and make better decisions.



## Keep in touch

If you haven't already signed-up to receive the Unpredictability Series you can do so at

**[www.QBEurope.com/unpredictability](http://www.QBEurope.com/unpredictability)**

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