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GUIDE 2022

Driving the data dividend

Making use of analytics in risk management

IN ASSOCIATION WITH:

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Acknowledgements

About Ventiv Technology
Ventiv Technology is a leading global provider of innovative risk and insurance software solutions for a vast array of industries, serving some of the largest companies in the world. Committed to excellence in data analytics, technology and customer success, Ventiv transforms the way companies manage risk and insurance information to enable optimal outcomes.

With over 45 years' experience, Ventiv proudly partners with 485 organizations and 350,000 users in more than 40 countries.

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About Airmic
The leading UK association for everyone who has a responsibility for risk management and insurance in their organisation, Airmic has over 450 corporate members and more than 1,500 individual members. Individual members are from all sectors and include company secretaries, finance directors, and internal auditors, as well as risk and insurance professionals. Airmic supports members through learning and research; a diverse programme of events; developing and encouraging good practice; and lobbying on subjects that directly affect our members and their professions. Above all, we provide a platform for professionals to stay in touch, to communicate with each other, and to share ideas and information.

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01 Introduction

Among business and enterprise analytics professionals, 94% say data and analytics are critical to their organisation's digital transformation programmes.[1] Technological advances and the lowering cost of computing make data available to businesses like never before. Successful businesses are using this data to review business models and drive transformation.

However, risk professionals confirm that they aren't making the most of the information surge. Many use the same information sources and statistical techniques to assess risk and purchase insurance that they have adopted for several years. Just under 50% of risk professionals say they use data analytics, even as they recognise that analytical literacy is a key competency for the modern risk professional.[2]

Data is vital for effective risk management. After navigating an unprecedented level of uncertainty in business during the Covid-19 pandemic, new sources of intelligence must be adopted to understand and manage evolving risks. Ventiv Technology reports that advanced analytics and predictive modelling can provide new insights that drive optimal outcomes. Indeed, 65% of global enterprises increased their analytics spending in 2020.[3]

SO WHY THE LACK OF USE?

Data seems to be placed in the 'too big to handle' box. Risk professionals cite a number of challenges from poor quality to a lack of integration. This guide will address each of the challenges and propose a model for data-driven decision making for enterprise risk management purposes.

02 Data and analytics – an overview

BIG DATA - WHAT IS IT?

- Large in volume
- Multiple sources – including internally and externally collected data
- Large in variety – including structured (organised and categorised) and unstructured (unorganised) data
- Gathered at greater speed than traditional data sets
- Has the potential to add great value

The challenge

Businesses cannot immediately start using 'big data' to identify relationships and trends. Time and resources must be invested into linking the multiple sets of data collected for different purposes across separate areas of the business.

DATA SCIENCE - WHAT IS IT?

Data scientists study the data held by a business to provide new insights. Activities include:

- Collecting data
- Cleaning, categorising and organising data
- Modelling and mining data to spot patterns and relationships
- Building algorithms which allow large amounts of data to be interrogated by computer

The challenge

Data scientists struggle to integrate their skills and value into the business strategy.

Risk professionals should act as 'translators' that make the value of data and analytics consumable to the organisation.

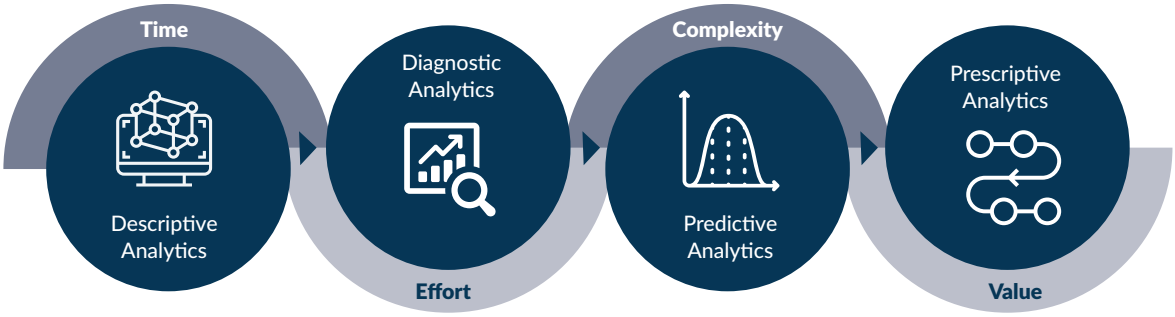
03 Data analytics – a maturing discipline

The four stages of analytical maturity describe where the business is in terms of harnessing data.

Most risk professionals will be used to reporting on claims and business trends. However, mature risk professionals will use the available data and apply analytics to it to gain a deeper understanding of their risks, predict when those risks will manifest and make data-driven proposals on how they can be managed.

Timely, well-analysed data can make a persuasive argument for business model and process change.

There is no question that a mature approach to analytics takes time and resources. Businesses will need to initially focus on getting their existing data and infrastructure in line before they can move up the maturity model.



THE WHAT
Reporting the loss across the business

THE WHY
Understanding why rates of loss differ across the business

THE FUTURE
Identifying where future losses will occur and when. Spotting 'red flags' which can indiciate where losses will turn into major claims

THE ACTION
Agreeing processes or changes to avoid or reduce the impact of predicted losses

Figure 1: Analytical capability maturity

04 Risk data and the business

Risk information can be used at all levels of the business as described to the right. Where data is used for business planning at the senior level, it must be visual, simple and tied to clear organisational priorities.

Data shared at the business unit level can link to KPIs to support management in reaching their operational objectives and increasing efficiency.

Data analytics can foster proactive empowerment of risk decisions to settle claims more promptly and cost effectively. Risk professionals can gain insights to reduce loss payments, total incurred and overall claim costs.

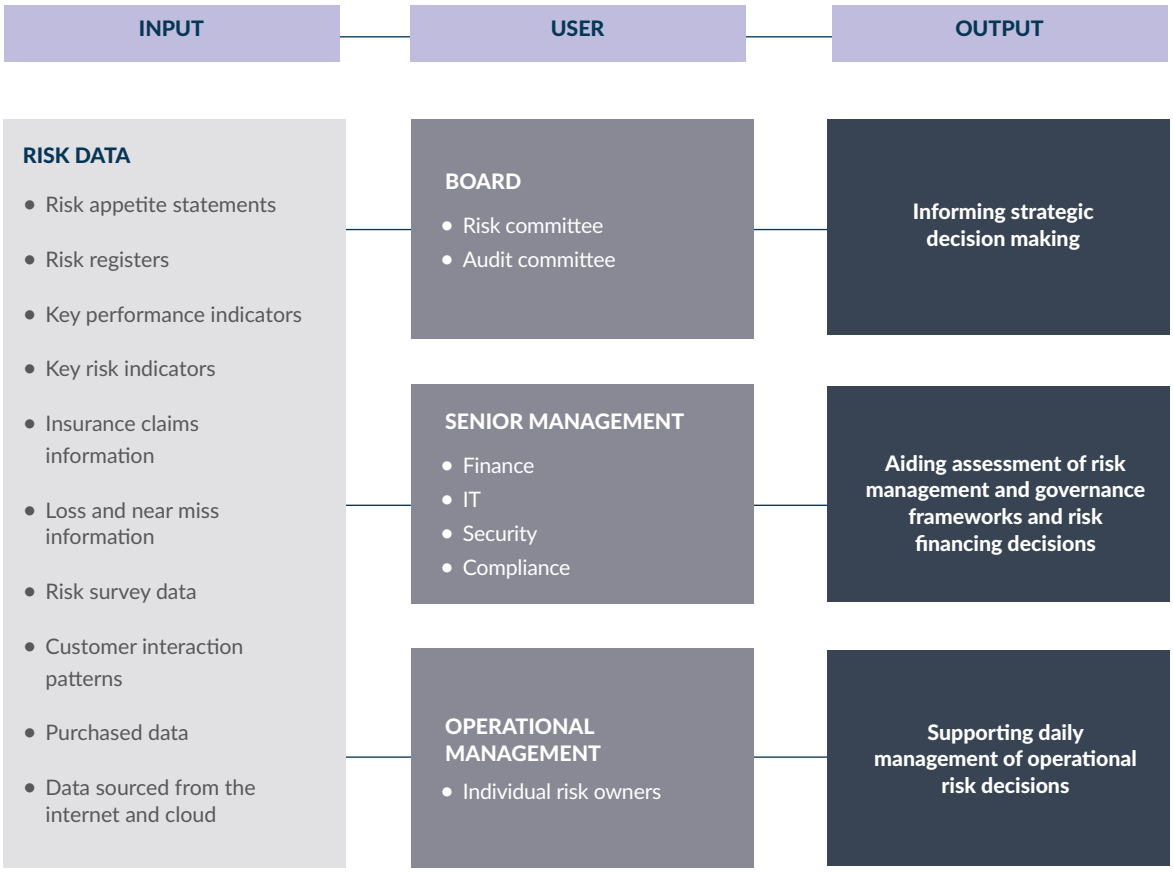


Figure 2: Risk data and the business

05 The barriers to data use

Despite the excitement for using data analytics, Airmic members cite a number of barriers that must be overcome before the opportunities can be realised each of which are considered below.[4]

Most critically, organisations must move away from a short-term approach where specific data is used for discreet, one-off purposes.

LACK OF BUDGET

Over a third of Airmic members lack the budget to enhance their approach to analytics. However, this can be a symptom of the 'too big to handle' view of data.

Risk professionals are encouraged to start small. By considering a specific question and collecting the relevant data to investigate it, time and budget will be spent more effectively than simply collecting vast amounts of information and hoping something interesting crops up.

Additionally, analytics can quickly generate a strong return on investment, particularly for claim settlement. Risk professionals can spend less time gathering data and focus more on improving claim outcomes.

DEFINING THE QUESTION

When assessing variations in operational resilience across a manufacturing firm, Inoni focused on improving data collection by building on the organisation's established 'resilience standard'.

This was used to develop a 70-question survey, where questions were based and weighted against the 12 risk indicators routinely measured by the business.

The 400 operating sites were benchmarked against the standard by the risk function and local operating managers completing the survey every six months.

Survey data was overlaid onto standard performance measures, allowing the business to spot risk management shortfalls and target improvement budgets.

HARNESSING THE WEB

How can an organisation consolidate information from separate databases and applications onto one platform?

It can move from the 'tins and wires' of traditional databases to online cloud-based servers.
Data can be made more accessible to customers, employees and key stakeholders, especially if all information is already held on the same infrastructure, ensuring common and consistent messaging across all parties.
A web-based platform can allow the use of online computation models and reduce costs, as storage capacity can be turned off and on to meet the peaks of data collection across the business.

INAPPROPRIATE INFRASTRUCTURE

Ventiv Technology conducted a poll of Airmic workshop attendees and estimated that only 10% of risk professionals are using fully integrated data management systems whilst roughly 60% use spreadsheets.

Reliance on static databases restricts the opportunities presented by data. Effective data management systems must be able to keep up with the 'four Vs' of big data – volume, variety, velocity and veracity.

"Spreadsheets reduce data validity and quality. They prevent proper version control, audit trails and efficient data sharing. To innovate businesses must move away from the norm by capturing and storing structured and unstructured data on a singular platform that allows you to pull the signal from the noise."

David Thomas
VP Sales, International, Ventiv Technology

DIFFICULTY ACCESSING DATA

The top reported reason for risk professionals not using analytics is inability to access the required data. Firstly, they may struggle against business units limiting the information they share with the risk function or sanitising it beyond use.

Even where data is accessible many businesses fall foul of collecting data for single-purpose or single-function use. Data becomes locked within silos where each set has its own classification and taxology rules.

Consolidating data from various sources is essential to achieving comprehensive analysis. A risk professional's first task will be bringing together the different pools and linking them by common themes and field names. This facilitates analysis and ensures that when the business is discussing its information, everyone is talking the same language.

05 The barriers to data use

ACHIEVING CONSISTENCY

Organisations can develop consistency in risk reporting across the business by taking a top-down and bottom-up approach.

Risk professionals can gain support from senior management by collaborating to theme or 'bucket' the key risks of the business against publicised strategic priorities. These risk data categories should resonate at all levels and across all functions.

Once the risk categories are defined, risk professionals can produce key risk indicators and scorecards to link the main activities of each unit to the established themes.

By linking risk data to the overall priorities and operational activities, consistent data collection will be built into all day-to-day processes.

POOR QUALITY DATA

A quarter of risk professionals think the data they hold is of limited quality. Data must be high quality at every stage, including production, generation and use.

High-quality data will be accurate, timely and appropriate in nature and volume to its purpose. Appropriate data verification and access checks will be key.

Risk professionals must establish who collected the data and why. Data is often gathered with a specific theory in mind, and there can be a tendency to make assumptions based on limited information. Risk professionals should assess the data in terms of its relevance to the question being asked and reflect on any confirmation bias that may have crept in.

AVOIDING ERRORS

Consider the example of a global FTSE 100 organisation that collates security information from multiple sources to monitor its geopolitical risk. Data is gathered from external sources, for instance, security firms and linked to internal data from human resources, finance, facilities. Ensuring this information remains accurate and timely is a major challenge.

The risk management team demonstrate the value of security risk data to the business through online visualisation tools and one-page summaries that support decision making.

This has ensured the necessary budget for data analysts who verify and test the reliability of information and ensure no data is being prioritised inappropriately.

A key task includes corroborating the qualitative information that may easily be dismissed but can be invaluable when adding reasoning to statistical data.

INSUFFICIENT SUPPORT

Risk mangers find their stakeholders do not sufficiently value analytics to provide the necessary resource to increase analytical maturity.

This may be a consequence of data governance and processing often being owned by the IT

function. Risk professionals can provide the link between the IT function and the business, so data is collected for tightly defined business needs and overlaid onto existing business processes that deliver practical insights.

Individuals are increasingly used to digital experiences on elegant systems and have the same expectations of workplace information. Data insights should be presented through clear visual methods that can be investigated intuitively rather than through spreadsheets and tables.

06 Data-driven decision making

Data-driven decision making involves a risk professional gathering relevant data and using analysis and evaluation to inform risk management, risk financing and business strategy.

Insurers and brokers are beginning to take the leap by exploring new sources of data such as machinery sensors and telematics and using automated decision making when quoting to improve accuracy. Risk professionals must follow these trends, e.g. by looking at the numerous sets of data available to them and discovering new relationships between sets if they want to keep up.

However, internal challenges can still arise. The figure to the right summarises the actions and key questions risk professionals should take to combat these obstacles.

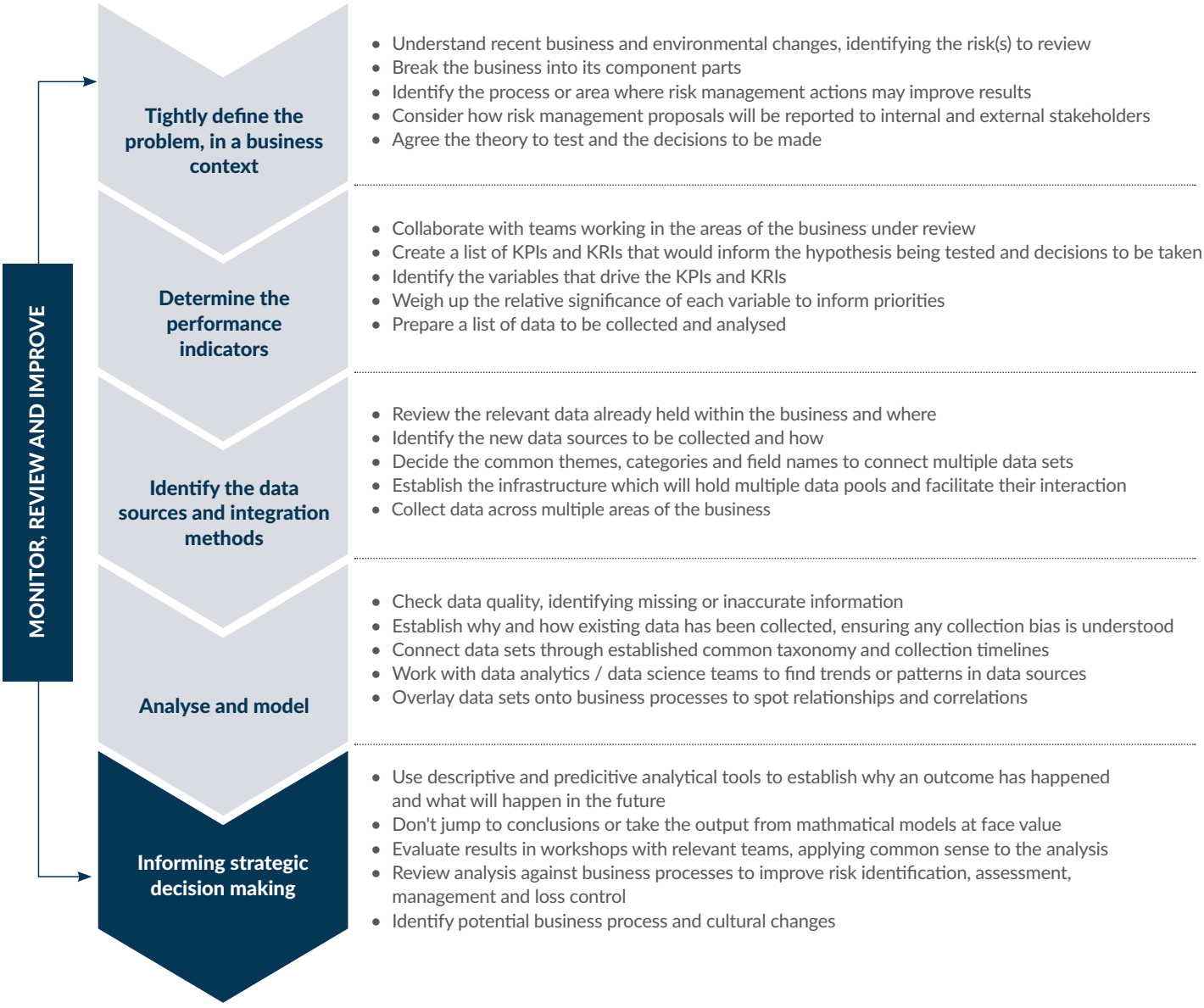


Figure 3: A data driven-driven decision-making model

07 The risks

Like all process changes, advancing data analytics does involve taking on risks. Risk professionals should consider the following:

The EU General Data Protection Regulation (GDPR)

Any data processing or analysis that involves personal data falls under the General Data Protection Regulations (GDPR). The law has established mandatory reporting of data breaches, heavy fines and a recommendation for organisations to appoint a Data Protection Officer. Risk professionals should address and control their organisation's response to this issue, considering the impact of any new data collection and analytics techniques. More information can be found in Airmic's 2021 white paper *GDPR and adapting to the Covid-19 world*.

The impact on cyber risk

Cyber risks continue to be quoted as top-of-mind concerns for risk professionals. As organisations use increasing data sources and integrate data analytics into their processes, the cyber risk will change. Risk professionals can provide the link between business strategy, data processing and IT infrastructure, assessing the cyber risk accordingly. More information can be found in the Airmic Guide on *Understanding your cyber risk and purchasing insurance*.[5]

The need for the human element

Computers and algorithms operate on logic, which cannot make sense of everything! All data analytics should include a step where business managers review and evaluate output, tempering the analytics with reality and common sense.

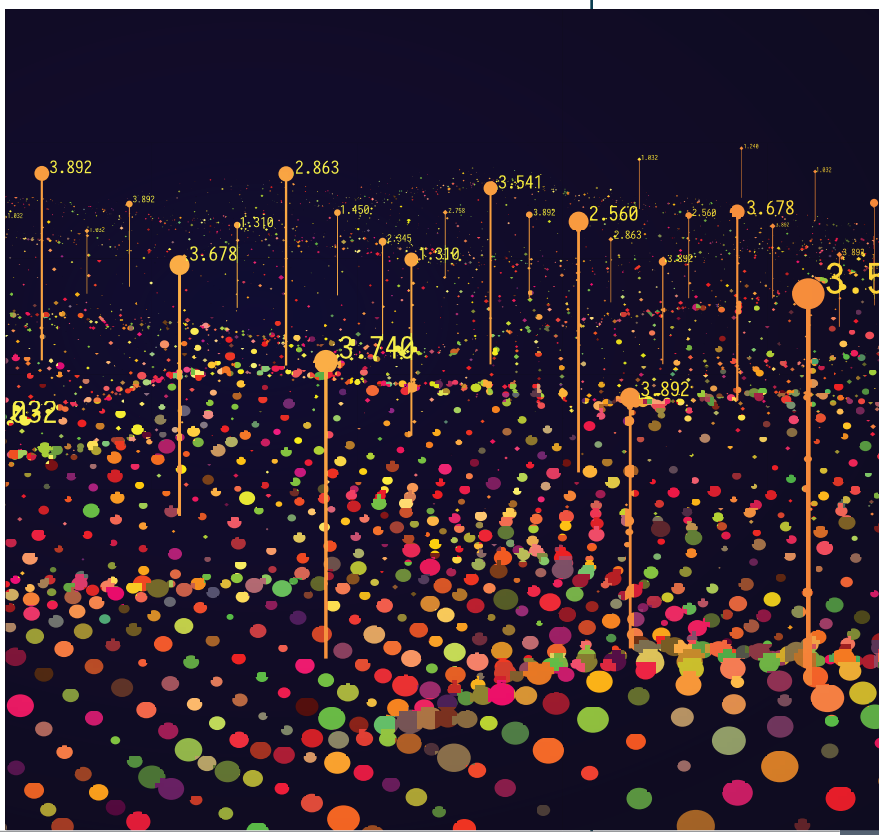
Risk management can be considered the perfect mix of art and science, and it's quite possible that advances in big data collection and analytics will begin to govern the science element.

Risk professionals will need to educate themselves not only on how to approach data-driven decision making but also the technological developments that will increasingly dictate where data comes from and how it is used.

Three particularly exciting technical trends for risk management include:

- **The internet of things**, where everyday objects including wearable technology and machinery fitted with computer-linked sensors provide streams of information at an unforeseen rate.
- **Artificial intelligence**, where computers process in a way that simulates human reasoning or knowledge, will increase businesses reliance on automated analytics.
- **Predictive modelling**, where risk professionals can move beyond reporting to predicting outcomes and taking proactive steps to minimise severity.

Risk professionals must fit into these new ways of working to remain relevant. The key will be using risk management to link data science with the business. Risk professionals should focus on using data to encourage good behaviours and processes, supporting the strategic direction of the organisation.



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