Enterprise Risk

Autumn 2022 / www.enterpriseriskmag.com

The official magazine of the Institute of Risk Management

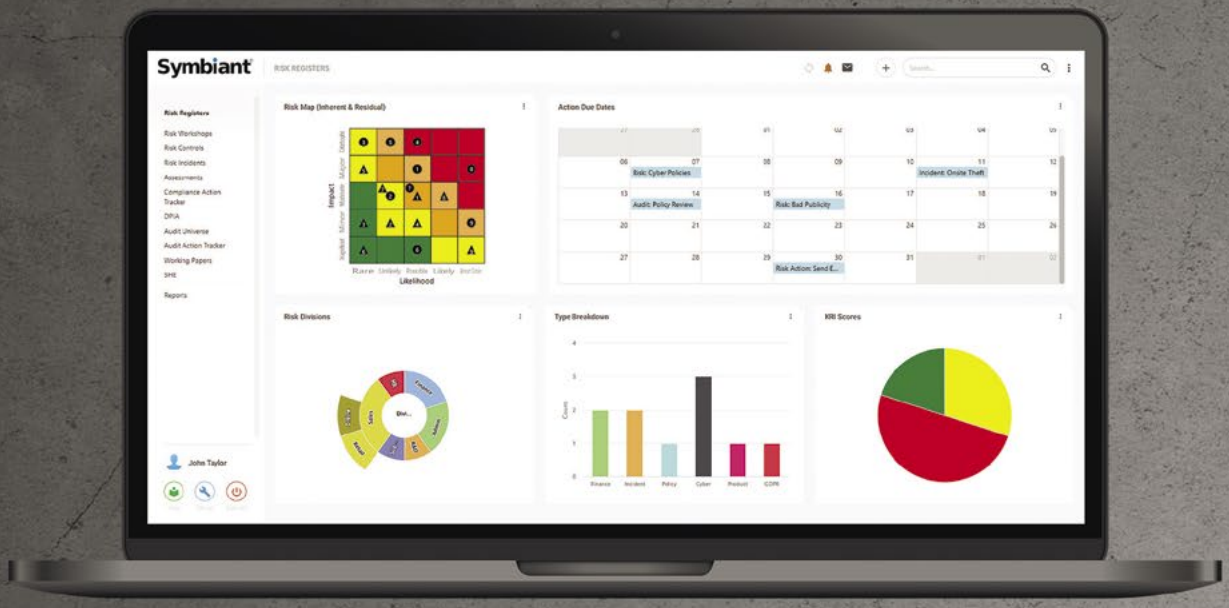
Complexity: getting to grips with hyper-connected, global threats demands a new approach to risk management

Harnessing complexity: the risk professional's role / **Eye of the beholder:** why each organisation has multiple reputations / **Navigating the storm:** charities in turbulent times / **On the front line:** COVID and risk in the NHS

22 Years in the making

Symbiant One

A modular solution for Risk, Audit & Compliance



Clean, Simple, Effective & Affordable

Watch our overview videos at
www.symbiant.one
and see for yourself why
Symbiant is clearly the better choice

WWW.SYMBIANT.ONE Symbiant®

Enterprise Risk

Autumn 2022

Editor
Arthur Piper

Produced by
Smith de Wint
Cobden Place, 5 Cobden Chambers
Pelham Street, Nottingham, NG1 2ED
Tel: +44 (0)115 958 2024
risk@sdw.co.uk
www.sdw.co.uk

Sponsorship and Advertising Sales Manager
Redactive Media
IRMsales@redactive.co.uk
Tel: +44(0)20 7324 2753

Enterprise Risk is the official publication of the Institute of Risk Management (IRM).

ISSN 2397-8848

About the IRM
The IRM is the leading professional body for Enterprise Risk Management (ERM). We drive excellence in managing risk to ensure organisations are ready for the opportunities and threats of the future. We do this by providing internationally recognised qualifications and training, publishing research and guidance, and setting professional standards.

For over 30 years our qualifications have been the global choice of qualification for risk professionals and their employers. We are a not-for-profit body, with members working in all industries, in all risk disciplines and in all sectors around the world.

Institute of Risk Management
2nd Floor, Sackville House, 143-149
Fenchurch Street, London, EC3M 6BN
Tel: +44 (0)20 7709 9808
Fax: +44 (0)20 7709 0716
enquiries@theirm.org
www.theirm.org

Editorial

Digital-first evolution

This month marks an important milestone in the evolution of *Enterprise risk magazine*.

First, I'm proud to announce the launch of our all-new *Enterprise risk website*. Following the redesign of the print magazine last year to reflect our increasing focus on a digital-first communication strategy, we have thoroughly refreshed the site to build on the work we started in 2021.

Not only does the site get a stylistic overhaul, but there is more content and better integration between the editorial we produce at the magazine and the excellent communication efforts of IRM's Special Interest Groups, thought leaders and marketing gurus. It should be now much easier for members to search and explore a wide range of risk management topics all in one place – rather than having to switch between the magazine and member websites. In addition, individual magazine issues and the features they contain are easier to find and read online.

> **We have worked hard over the past year to make the publication ready to take advantage of the range of benefits digital media can bring**

Anyone who has worked on website projects will understand that for those concerned they are akin to real-world megaprojects with complexities only slightly less enmeshed than those described in our cover story special focus for this issue. So, thanks to all concerned in that process – but especially to our design guru Mark Leatherland for creating such a stunning look from our less than coherent plans and ideas and to IRM's website engineer and widget wizard Barry Disley for making it all work.

Second, the Autumn 2022 issue of *Enterprise risk* will be the last to be printed physically. We will continue to produce the same quarterly publication and deliver it to you in a digital format. But having worked hard over the past year to make the publication ready to take advantage of the range of benefits digital media can bring – including the imperative to reduce our carbon footprint – the launch of the new site seems to be the right time to make that move.

Now that the new website is live, we will be exploring better ways to communicate with you about the pressing matters that risk managers face – and helping you link and communicate with like-minded risk professionals and the resources you need to help you grapple more successfully with those issues.

Arthur Piper
Editor

World@RISK

CLIMATE CHANGE & ESG FORUM

15 NOVEMBER 2022 | SAVOY PLACE | LONDON

HOSTED BY

irm | StrategicRISK

The **Climate Change and ESG Forum** is our first **World@RISK** event. The risks and opportunities linked to environmental, social, and corporate governance (ESG) requirements continues to grow for all industry sectors. New rules spell out minimum company responsibilities to both immediate stakeholders and their broader value chain. At a time when corporate reputations rest upon their ability to walk the talk where ESG and climate transition pathways are concerned, this important forum brings together some leading thinkers in risk management and compliance, from the business and management community.

Aimed at both risk professionals and senior decision-makers

FEATURED SPEAKERS

MIKE LUTOMSKI
ROCKET SCIENTIST AND RISK MANAGEMENT EXPERT

ROWAN DOUGLAS CBE
HEAD OF CLIMATE AND RESILIENCE HUB
WILLIS TOWERS WATSON

NIGEL BROOK
PARTNER
CLYDE&CO

BOOK YOUR PLACE

EARLY BIRD - SAVE GBP 50
REGISTER BEFORE 30 SEPTEMBER
CODE: ECT2250

TICKETS

IRM MEMBER ONLY	NON-MEMBER
GBP 475 + VAT	GBP 575 + VAT

www.eventsforce.net/world@risk22

Contents

Features

REGULARS

It's time for trust and transparency in ESG

By Heather Moore, Sustainability Technical Director at global assurance provider LRQA

The importance of Environmental, Social and Governance (ESG) performance can no longer be overlooked as pressure from shareholders and consumers puts it at the top of the agenda for many businesses. This means that stating intentions with no evidence of action is no longer enough and can pose reputational risks and accusations of greenwashing.

A collaborative supply chain approach is needed to evidence action throughout an organisation and its supply network, which will in turn deliver outcomes that can stand up to stakeholder scrutiny and ultimately help future-proof businesses against evolving regulation and social change.

Starting with standards

Recognised industry standards play a key role in establishing trust by providing a consistent reporting framework for businesses. Frameworks such as the Task Force on Climate-Related Financial Disclosures (TCFD) and the Sustainability Accounting Standards Board (SASB) give companies a common set of guidelines for reporting transparently.

Currently, the "E" in ESG is the most consistently reported, with carbon accounting standards like the World Business Council for Sustainable Development (WBSCD) and the World Resources Institute's (WRI's) Greenhouse Gas Protocol or ISO 14064-1 setting the basis for how companies categorise and calculate their greenhouse gas emissions.

The "S" in ESG can be more subjective, as these activities often deliver impact that is less tangible and harder to quantify, for example the positive effects of a responsible sourcing policy or efforts to support employee health and wellbeing. These types of activities go beyond delivering financial value to champion commitment to ESG, establish brand purpose and positively engage employees, customers and partners to drive business growth.

In both cases, companies face the challenge of accurately collecting and aggregating the necessary data to support their ESG targets and claims and demonstrate progress. Accurate data is underpinned by robust management systems.

Improving insight to identify risks

For taking positive steps now, businesses can act by implementing a robust management system and auditing solution. A management system will help any size of company set internal processes to ensure ESG targets are met and progress is real.

A management system will identify key variables specific to an organisation's industry and include tangible targets to build trust and transparency while demonstrating the company's values and commitment to ESG. Activities and progress can then be tracked against a set baseline, which in turn can provide insight into key areas of improvement as well as progress of the broader industry.

Through robust assurance frameworks, insight can extend into the supply chain to gain better visibility of the impact of suppliers and subcontractors. This can highlight any potential risks hidden within the supply chain but also enable businesses to demonstrate the impact of their broader networks. This enhanced visibility can foster better methods of quality and control, and ultimately help build stronger relationships throughout the supply chain.

Act now to demonstrate commitment

Businesses that want to achieve the greatest return on their ESG investments, while continuing to build trust and transparency with stakeholders, partners, clients and employees, need to establish robust methods of measurement and assurance now.

For an ESG strategy to have the desired and greatest impact, measurement and assurance need be introduced across businesses and their supplier network. By acting now, businesses can get ahead of their competition and be better positioned for new legislation.

The cost of energy inaction

Risk management thinking could have blunted the impact of this winter's energy crisis by building resilience across Europe. Such action will be essential if the world is ever to take a proactive stance to impending disasters

There has been a lack of foresight and understanding of the risks facing energy supply for some time. Centralised planning of energy markets is deemed necessary, but the current crisis raises doubts over the efficacy of the methods and approaches governments have used to assess and understand the relevant risks.

A belated decision by the UK government to fire up coal plants is commendable as a relative quick-fix to a pressing problem – even if the costs of recommissioning defunct plants will be inflationary and fall on the shoulders of struggling taxpayers. But polite requests for consumers to use less energy is unsustainable and does nothing to build resilience into the energy sector.

Too green too quickly?

In our view, a single-minded rush towards creating a low carbon, net zero energy system is a miscalculation. While commendable in principle, in practice it has limited our ability to respond to the current crisis because it has narrowed the options for response. At present, renewable energy sources are too few and too unreliable.

Moving to renewables will take time. Today, mitigating against the risk of failing to deliver secure and affordable energy could mean using a mix of energy sources – including fossil fuels and nuclear energy – in the context of building a low carbon economy in future. But any strategy must take account of the weather – the single most important factor impacting demand for electricity and gas. That is why factoring anticipated changes to the climate into our forward planning and scenarios needs to form part of critical systems planning. That would help provide a wider range of potential outcomes, and with that, development of effective responses.

Risk management and the attainment of resilience is a forward-looking, strategic process, but history can teach useful lessons. In this current debate and looming crisis, successive governments have failed to grasp the nettle in the effective regulation of the energy market because of short-term, over-optimistic thinking.

Reaction mode

And why was the likelihood of a Russian invasion into Ukraine not more closely monitored and acted on much earlier? By ignoring the warning signs offered by the annexation of the Crimea in 2014, yet again we find ourselves in reaction mode, rather than mitigating and managing the likelihood by taking well-informed, strategic steps to bolster resilience.

What this current situation has highlighted for many is lack of joined-up thinking when it comes to the strategies, initiatives, policies, planning and geopolitics. Failures in constructively challenging embedded thinking, a willingness to accept optimist timelines for environmental targets and a gaping lack of accountability when it comes to planning and understanding risk, opportunities and reward have all combined to create a crisis which, ordinarily, could and should have been avoided.

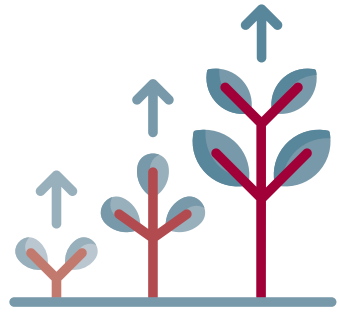
Building resilience in the energy sector and future-proofing critical industries is a long-term project. It requires better strategic risk management so that the country and the global community can avoid defaulting to reaction mode every time a major crisis hits.

Grant Griffiths, an IRM affiliate, Dylan Campbell, a technical specialist, and Alexander Larsen, CFIRM, are members of IRM's Energy and Renewables Special Interest Group.

Trending

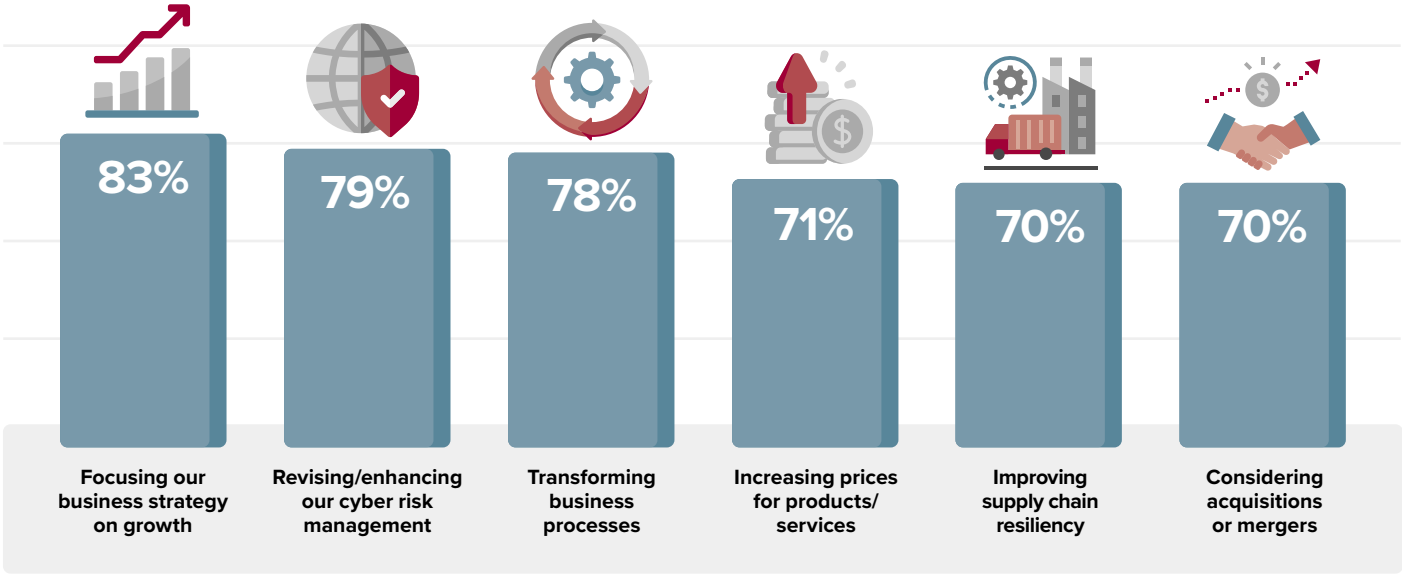
DATA

The latest stories and news affecting the wider business environment as interpreted by our infographics team



Executives focus on growth

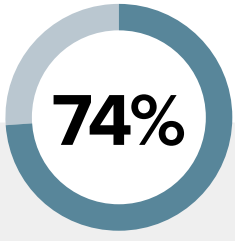
While cyberrisk and talent acquisition and retention top business worry list, most focus on growth



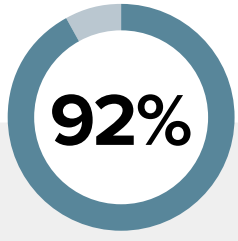
Source: *PWC pulse survey, August 2022*

Employees demand flexibility in tight labour market

Of survey respondents are either actively seeking a new job or passively looking



Say their organisation has experienced a greater number of resignations in the past 6 months



Want more control over when and where they work

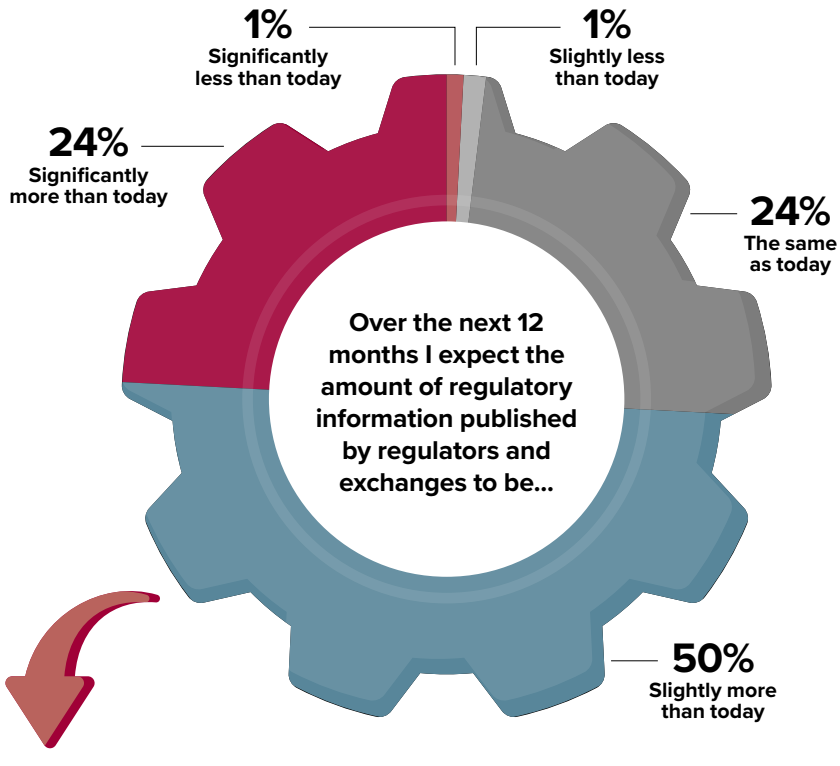
80%

Say if their company starts requiring them to work on-site a majority of the time they will look at other employers

Source: 2022 talent retention report, 24 Seven

Regulation increases for banking sector

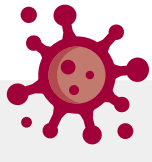
Firms respond by demonstrating sound compliance culture



Over the next 12 months I expect more compliance involvement in:

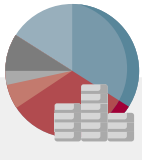
55%
Assessing cyber resilience

47%
Implementation of a demonstrably compliant culture



42%
Post-pandemic review/planning

42%
Assessing effectiveness of corporate governance arrangements



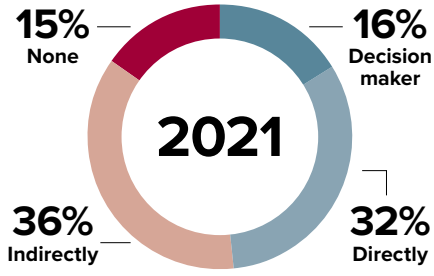
42%
Setting of compliance budget and other risk management resourcing

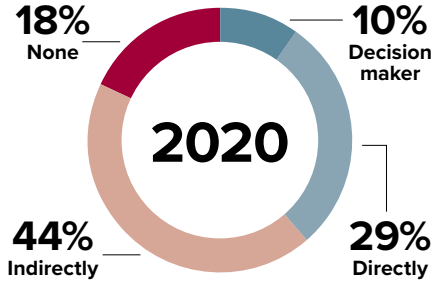
40%
Setting of risk appetite

Source: *Regulatory intelligence: cost of compliance 2022, Thomson Reuters*

Supply chain environmental impact gains visibility

What best describes your engagement:





But proper risk management assessments still low:

44% We have a general sense of potential future climate risks based on events from the last three years

27% We have conducted a climate change risk assessment and identified our most critical supply chain risks

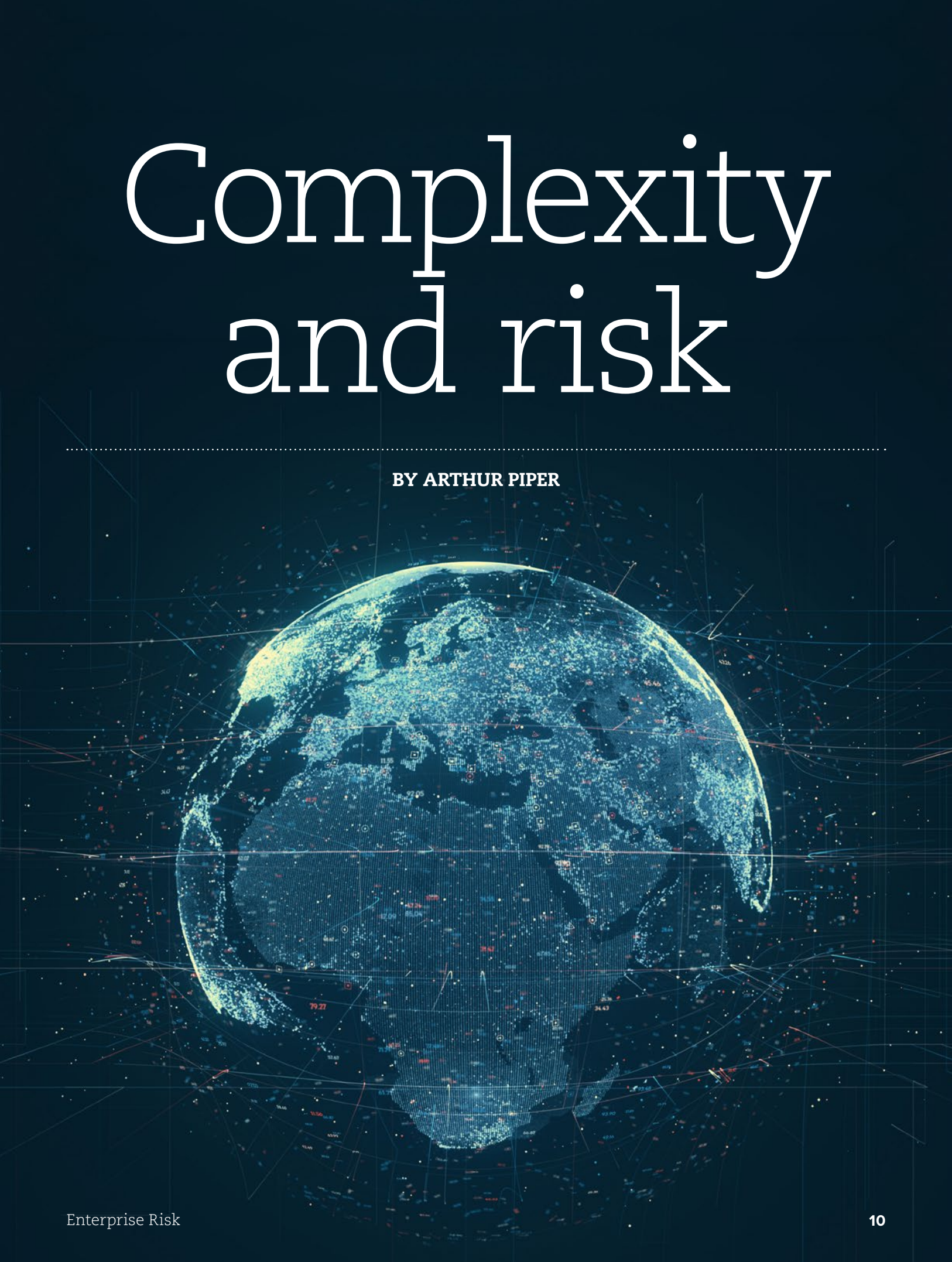
18% We have conducted climate change risk assessments and scenario planning for our supply chain

11% We do not consider climate change as a future risk

Sources: *State of supply chain sustainability report 2022, MIT Center for Transportation and Logistics | Gartner supply chain practice, July 2022*

Complexity and risk

BY ARTHUR PIPER



Traditional risk management grew up in the industrial age. In the first part of our complexity special focus, Warren Black says today's hyper-connected world requires a new approach underpinned by complexity theory

Almost a decade ago, Warren Black left Deloitte in Brisbane, Australia, to work on a nearby infrastructure mega-project with British Gas. The company's QCLNG programme was a $27.5 billion initiative aimed at propelling the business into the drilling and extraction side of the energy industry. Up until then, British Gas was primarily a shipping and transportation business, so it had little direct experience of delivering such a venture – or of running that size of mega-project.

Warren was about ten years into a risk management career, so he accepted the challenge. He agreed to develop an integrated performance and risk reporting framework over numerous project control areas, oversee the project performance and risk metrics and ensure that British Gas's project risk and assurance standards were applied consistently across the programme's control framework.

A few months into the project and Black and his team realised that British Gas's standards were not designed with highly agile, complex environments in mind. "There was nothing wrong with the standards, but they had come out of a conventional-style engineering environment and did not fit a lot of the contextual complexity we were seeing in the project," he says.

At that time, Black started collaborating with Queensland University of Technology (QUT), which was in the process of setting up an executive programme

Warren Black

management school. Not only was there a lot of money flowing into research because of a big oil and gas boom in the region, but complex projects had moved centre stage. Warren started working with the school to develop some concepts around the complexity he was experiencing on the QCLNG project. Six months later, British Gas started experiencing financial constraints on its QCLNG programme and began to restructure its priorities. Black had a handful of half-formed ideas and a practical conundrum that he felt needed an urgent answer – how does complexity influence risk in modern working environments?

"I realised that there wasn't enough experience in the industry to manage complexity in these projects because people neither had a valid understanding of complexity nor were they looking at the problem through the right lens," he said.

Guiding theories

The QUT Faculty of Engineering then encouraged Black to turn his rough hypothesis into a PhD by research, and seven years of part-time study later, he has submitted the document for final examination – a process that is likely to be over within the next few weeks. While the hard core of the field is defined by mind-numbing mathematics, Black has distilled that learning into some pragmatic definitions that should be of practical use to risk managers. In fact, Black's research into complexity in large-scale engineering projects initially pulled together two overlapping fields of research – complexity theory and systems theory.

As one might expect in a fast-moving academic field, there is no accepted definition of the term complexity. But it derives from the Latin word complexus: something made up of many parts. So, for Black, complexity describes a situation in which there are many contributing components with multiple interfacing relationships – but it is also a situation that is dynamic, so its components and relationships are continually evolving and changing.

David Snowden, a pioneer in the field and someone who Black refers to in his own work, has made the distinction between complicated and complex

systems. Black says an example of a naturally complicated body would be an airliner. It has many parts, but each of those parts works in linear, predictable ways. Once you have manufactured one airliner, you can simply repeat the process as many times and in as many locations as you wish.

But complex systems such as weather patterns, immune systems, the human brain and economic markets are essentially unique. They may have similar components and overlapping patterns, but because of their dynamic nature they are continually shifting, evolving and transforming in unpredictable ways. Complexity theory seeks to recognise, understand and control this advanced number of transforming relationships in any one system.

Systems theory intersects with complexity theory because it seeks to recognise, understand and control how the relationships between the components in a complex system work. "Both theories essentially look at how to control outcomes for such phenomena as the weather or the economy," Black says. For engineers that means looking at how to understand the connections between humans, technologies and mechanical operations – and how to control those relationships for efficiency and for less hazard and risk.

"The goal is to try to control the system – understand what it is, how it behaves and, most importantly, what drives those behaviours," Black says. "If we understand what drives the behaviours, we can control the behaviours, which means we can control the whole system."

Why now?

As with many Western theories, Black found that ancient Greek philosophers such as Archimedes identified complexity in natural systems as a problem many centuries ago. That made him question why the field had begun to gain more traction in academic and related subjects during the last 20 to 30 years. The rise of computerisation during the 1970s and 1980s – as well as our progression into the so-called Fourth Industrial Revolution today – has made complex systems more relevant to our everyday life. In turn, complex systems theory has become a mainstream management philosophy, rather than a niche science.

In the early 20th century, large industrial behemoths dominated the world: Ford, General Motors, U.S. Steel, DuPont and others. But while they were big, they were only complicated. Their factories followed linear processes that were dependable and repeatable. By contrast, the operations of Apple, Facebook and Google are not as linear or obvious as the previous generation of industrial giants. Each organisation's customer service offerings are underpinned by complex, information-sharing systems, which makes them far more systemically connected and driven.

"Complicated systems are easier to fix because once you find the part that is not working you can mend or reconnect it and your production or operations start again," Black says. "Now, today's systems have unique characteristics. There is only one eBay or Amazon – they are global phenomena: one system with multiple connections and interfaces."

And that brings us to the crux of the modern problem: "We are now having to think about systems, and the challenge we have is that too much of our thinking comes from industrial-era methods in a systems-driven world. Those management ideas and control standards developed during the industrial manufacturing age are no longer fit for purpose for the age of complex systems."

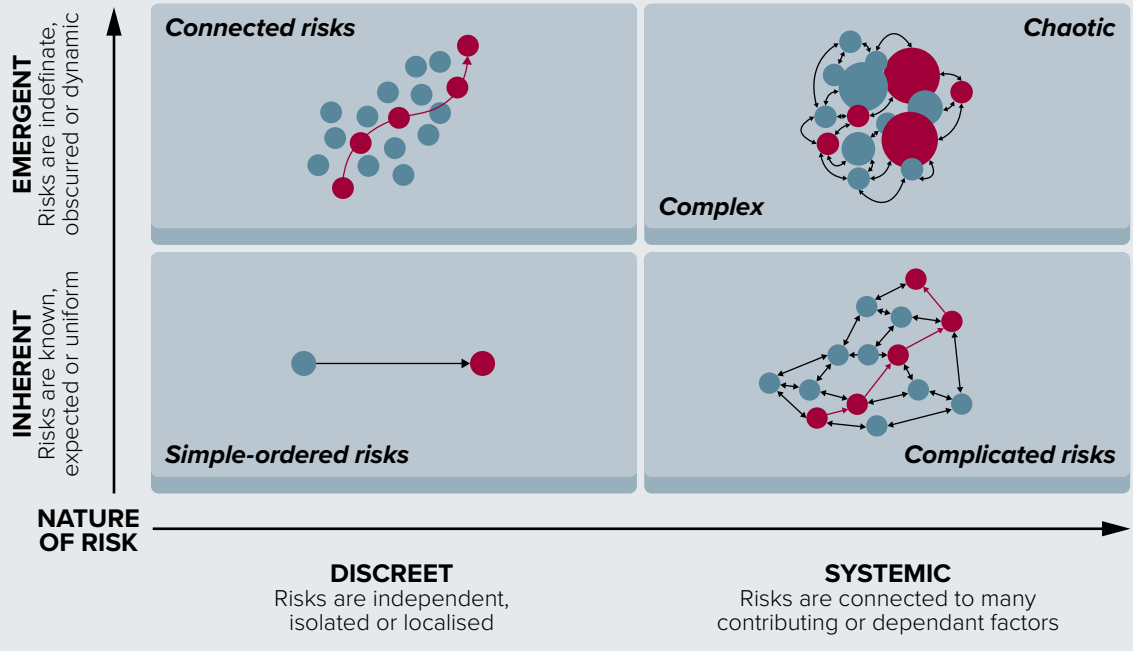
Natural resilience

While Black had found a way of describing the control of complex systems, he realised that the kind of resilience that came from the linear thinking that often dominates traditional risk management practices may not effective. "If you talk about engineering resilience, it generally refers to a building or infrastructure being able to weather a destructive shock and retain its existing form – or return to it: bouncing back or staying where you are," he says. But it is the nature of complex systems to be in a state of flux – so normal can only be defined in relation to the most current state of the system. It describes a contextual state rather than some ideal form that a disrupted system could snap back into after a crisis.

"One of the challenges that we have right now is that the conventional view of resilience, particularly in risk management, almost seems to come down to business continuity planning (BCP) and disaster recovery planning (DRP)," Black says. He says that this approach means that organisations must first experience a crisis or disruption before resilience can be demonstrated. In most cases, those plans strive to get organisations back to business as usual. But most organisations

Complexity theory seeks to recognise, understand and control this advanced number of transforming relationships in any one system

CONVENTIONAL RISK MANAGEMENT DOES NOT ACKNOWLEDGE THE RULES AND SCALES OF COMPLEXITY



> **If we understand what drives the behaviours, we can control the behaviours, which means we can control the whole system**

experience a crisis because they are vulnerable to change – the disruption happens because of a pre-existing weakness. "Why would your BCP want to take you back to business as usual, when you had a pre-existing vulnerability?" he asks. "You have to bounce forward to a new state in which you have addressed your vulnerability."

Black believes that the most resilient systems in the world are billions of years old and exist all around us in nature. Natural systems resilience studies those areas – for example, biological systems, ecological systems such as the Amazon rainforest, and the relationships between the air, water and the earth. "Consider how many macro-disruptive forces biological systems, for example, must have experienced," he says. "From asteroid strikes, volcanoes and climate change, to floods, droughts and famine. Over and over again, biological systems have been able to beat those threats, and the systems are still here."

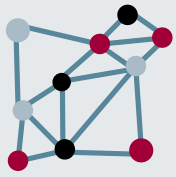
Black not only wanted to know what made such systems so resilient, but whether organisations and people could emulate nature to build resilience into the fabric of their existence.

Continual change

After researching the topic, brainstorming concepts and empirically testing their relevance, he came up with four key characteristics that such systems share: awareness, readiness, reactivity and adaptation (see The four primary characteristics of natural systems resilience). The first two of these describe how organisations need to be prepared for change – by recognising danger signals in the environment and making plans to minimise their impact and maximise the opportunities they offer. The second two – reactivity and adaptation – describe the response: putting into action readiness plans and, crucially, adapting to any large changes in the environment by altering behaviours permanently.

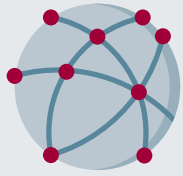
Looked at as a disruptive phenomenon, the COVID pandemic not only showed how badly prepared the world was, but points to an alternative reality in which governments got things right. Black says that from the 1980s onwards, starting with HIV/AIDs, multiple epidemics pointed to the very real possibility that a pandemic was coming. Mad cow disease, swine flu, avian flu, SARS, H1N1 and ebola provided 40 years of signals that such

THE FOUR FOUNDATION PRINCIPLES OF COMPLEX SYSTEMS THINKING



Acknowledge the advanced systemic state
Complexity exists when there is an advanced degree of system driven interactions, changes and variability.

Complex systems thinking acknowledges that such advanced states require equally advanced thinking & methods.

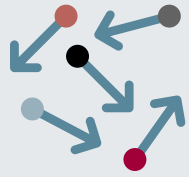


Focus more on the connected *whole* than the individual parts
The behavioral outcomes of a complex system are determined by how the system is allowed to collaborate as a "whole" (aka harmonise).

Complex systems thinking focuses more on influencing the whole rather than each of the individual constituent parts.

System behaviours are influenced by signals and feedback
Complex systems are driven by the signals and feedback generated by their internal components interacting with both each other, and the surrounding environment.

Complex systems thinking aims to improve the manner and quality of signals and feedback because high quality signals and feedback = high quality behavioral outcomes (and vise versa).



Allow for shifting states and differing orders
A complex system will shift between various higher and lower orders – at each differing level, specific behaviours and phenomena will emerge.

Complex systems thinking requires management control solutions to offer high agility, scalability and responsiveness.

> **When we are dealing with risks in a complex environment, we should be looking at managing the whole system**

a macro-global threat would eventually crystalise. Because most governments ignored those signals, they failed to put into place readiness plans by, for example, stockpiling facemasks and sanitisers, and being ready to build makeshift hospital facilities. By March 2020, governments that had followed a natural resilience route could have been in a better place to proactively manage the threat since plans and supplies would have been ready. Finally, adaptation would have followed as the world learnt to live with a new reality.

Traditional resilience management techniques failed badly because they were not prepared to either sense or act on the signals in the environment (see *Conventional risk management does not acknowledge the rules and scales of complexity*). Learning from hindsight becomes the only option if resilience systems are reactive in this way. With highly complex systems that are in constant flux, organisations need to be more responsive and proactive – and crucially need to let go of the idea that there is a normal state to which they should try to hold on to or which they could return to when the dust settles. "With highly complex systems, that is nonsense, because the system is changing all the time, so there is just 'what works now'," says Black. "Your best efforts to stay resilient must be to understand the system enough to control those elements that you can control to stay in business and adapt to circumstance."

Managing complex risk

Fortunately, risk managers do not have to be mathematicians to benefit from complexity thinking. Black has formulated four principles that can help risk professionals apply some systems thinking to their own environments (see *The four foundational principles of complex systems thinking*).

First and most importantly, management needs to accept that the system in question is advanced and complex. Black says this is often the biggest barrier because once managers acknowledge this reality, they are also accepting that conventional approaches to project and risk management will not work as well, so new approaches need to be thought through and developed. "Formally acknowledging that existing methods are contextually impaired and therefore new, advanced levels of thought and practice are required is often the hardest step to addressing complex problems," he says.

The second principle is to

> **Risk managers need to be asking how they can help their organisations build up natural resilience so that they do not need to predict crises, because they have the right systems in place to deal with any events as they arise**

focus more on the connected whole of the system rather than its individual components. In risk management, individual components are often put on a heat map and assigned separate controls that are prioritised in relation to impact and likelihood. "As soon as a whole series of contributing components are connected into a common goal – in other words the organisation – it is a system of co-dependent risks," Black says. "When we are dealing with risks in a complex environment, we should be looking at managing the whole system not merely the individual contributors."

He sees this as a critical learning for macro-global threats such as growing economic vulnerability, increasing COVID disruption, geopolitical tensions and climate change. They cannot sit as individual items on a risk register because they cut across many parts of the organisation in often unpredictable ways. "They are all connected and need managing as a co-dependent connected system because they all drive and influence each other," he says.

Principle three recognises that because complex system behaviours are influenced by signals and feedback, they react to changes in the environment and to the behaviour of the other elements in the system. Take a flock of birds, which is influenced not only by the behaviour of the predominant half a dozen members of the flock but also by the changing environment and by feedback from each other. Fortunately, control agent theory comes to the rescue. It says that no matter how complex the system is, its entire behaviour is normally determined by only a handful of leading contributing agents.

"Risk managers need to pick out what the leading contributing agents are – and if you can influence, say, those three to five agents, the signals and feedback that they will generate will be in the direction of what you want," Black says. "It may never be total control so that it does exactly what you want it to do, but if you influence them positively, you will more often than not get positive risk outcomes."

The fourth principle is to recognise that all genuinely complex systems will shift through differing states and orders as they naturally evolve and transition. With each new state or order, new phenomena and behaviours specific to that order will emerge. For this reason, standardised, "one size fits all" approaches to management control are extremely limited when engaging complex problems.

Multiple scales

Black says that in order to address this multiple shifting order challenge, Snowden developed a framework, as early as the 1980s, that is still relevant today. It demonstrates how complex states shift between differing levels of organisation. A phenomenon can jump from complicated to chaotic very quickly, or from complex to obvious. Black's preferred example is the conflict in Palestine: one day it is complex, the next chaotic – but rarely is it simple or ordered. In essence, every complex environment has multiple scales, and for every scale or order, new phenomena and, more importantly, new rules emerge. "This is something that risk management has not got right yet," Black says, "because each of the four different scales of the same phenomenon need four different risk strategies." The closer to complexity and chaos the system gets, the more natural systems resilience and complex systems thinking becomes relevant.

In addition, the controls and processes that work in one environment are not guaranteed to work in another, so organisations may need to build a whole new risk strategy for each complex system. "Risk managers need to be asking how they can help their organisations build up natural resilience so that they do not need to specifically predict crises, because they have the right systems in place to deal with any events as and when they arise," he says.

Black is optimistic for the profession. In engineering and many other management courses, systems thinking and complexity theory are becoming mainstream. Recently, for example, IRM launched its own special interest group on the issue. The social environment of the Fourth Industrial Revolution and the businesses that dominate the economic landscape are in tune with networked reality – people are increasingly experiencing complexity in their everyday lives. He urges those beginning careers in risk management to get involved and take some courses on complexity management. "If you are brave or bored, do a master's or PhD in applied complexity or systems thinking to a particular problem," he says. "But at the very least, read the books on complexity and contribute in your own unique way."

Harnessing complexity

BY GRAEME MILLER AND MICHAEL BARTLETT

Risk managers are ideally placed to help organisations both identify complexity and harness its power through innovation and value creation. IRM's Risk and Complexity Special Interest Group enables practitioners to better understand and collaborate in this area

Back in the 17th century, Isaac Newton's mechanistic interpretation of the world allowed for reliable predictions to be made with a degree of accuracy never seen before. This helped fuel the Industrial Revolution and with it, the accepted structure of organisations.

Companies were viewed as machines which could be tweaked and oiled to work faster and produce more. As the repetitive tasks undertaken by employees became increasingly specialised, internal departments had less understanding of what the others were doing. These were early examples of the siloed organisational structures that we still see impeding the flow of risk information today.

Our organisations and the environments in which they operate have changed immeasurably since the mechanistic age, and the world is now understood to operate as a multitude of complex systems. Current and recent events including Brexit, COVID-19, the ongoing war in Ukraine and a looming recession have served to further demonstrate this.

With modern organisations now being the epitome of complex systems, we must adapt our risk management approach accordingly. To borrow from Newton, if we want to see further, we too must stand on the shoulders of giants and take risk management to the next stage of its evolution.

Complexity in a nutshell

Put simply, complexity risk is the type of risk which arises from, and is unique to, complex systems. However, before we can identify and manage complexity risk, we must first understand the characteristics of complex systems. To do this, it is useful to delineate the difference between complicated, complex and chaotic systems.

Complicated systems are rich in detail whereas complex systems are rich in structure. A good example of a complicated system is a car engine. It contains many parts all working together for a common purpose. Critically, however, the behaviour of the car engine can be designed, predicted and accurately controlled.

This is not the case with

“With modern organisations now being the epitome of complex systems, we must adapt our risk management approach accordingly

COMMON FEATURES OF COMPLEX SYSTEMS

- Self-organisation into patterns (as with flocks of birds or shoals of fish)
- Sensitivity to initial conditions (the famous butterfly effect)
- Perceived rare events happening more regularly than would seem likely using standard modelling techniques (think market crashes)
- Adaptive interactions (where agents in the system respond to changing conditions based on experience)
- Feedback loops, where a change in a variable results in either an amplification of that change (positive feedback) or a dampening of that change (negative feedback)
- Limited ability to consistently predict outcomes.

complex systems, such as forest ecosystems or the economies of countries, which grow, adapt and evolve according to external conditions and the behaviour of agents operating within them. While these examples of complex systems are ostensibly very different, they share common features which distinguish them from merely complicated systems (See *Common features of complex systems*).

As a result of the listed features of complex systems, behaviour which cannot be explained as the simple sum of the parts becomes apparent. This critical determinant of a complex system is known as emergent behaviour. A good example of emergent behaviour is the property of consciousness arising from the interaction of neurons in the brain. There is nothing in the individual neurons or the simple rules by which they are governed to suggest consciousness will emerge. Clearly, however, the science of analysing the behaviour of individual neurons is vastly different from analysing human consciousness and its resultant behaviour. This comparison can be taken further to demonstrate how the laws governing elemental components at a micro level constrain behaviour at a macro level.

When the sensitivity to initial conditions in a complex system becomes more pronounced, chaotic systems are produced in which we have even less capacity to forecast outcomes. This is illustrated by the famous analogy of the butterfly effect put forward by Edward Lorenz in 1963, where the flapping of a butterfly's wings might ultimately lead to a tornado. While the inputs and immediate outputs are not random in isolation, the number of variables and their sensitivity to initial conditions mean that they appear random when analyses are repeated. This makes chaotic systems extremely difficult to predict up to a certain point, beyond which it becomes impossible.

Nested systems

Complex systems themselves often have complex systems nested within them. Very much like Russian dolls, a global corporation might be made up of regional offices each containing departments and teams. Each of

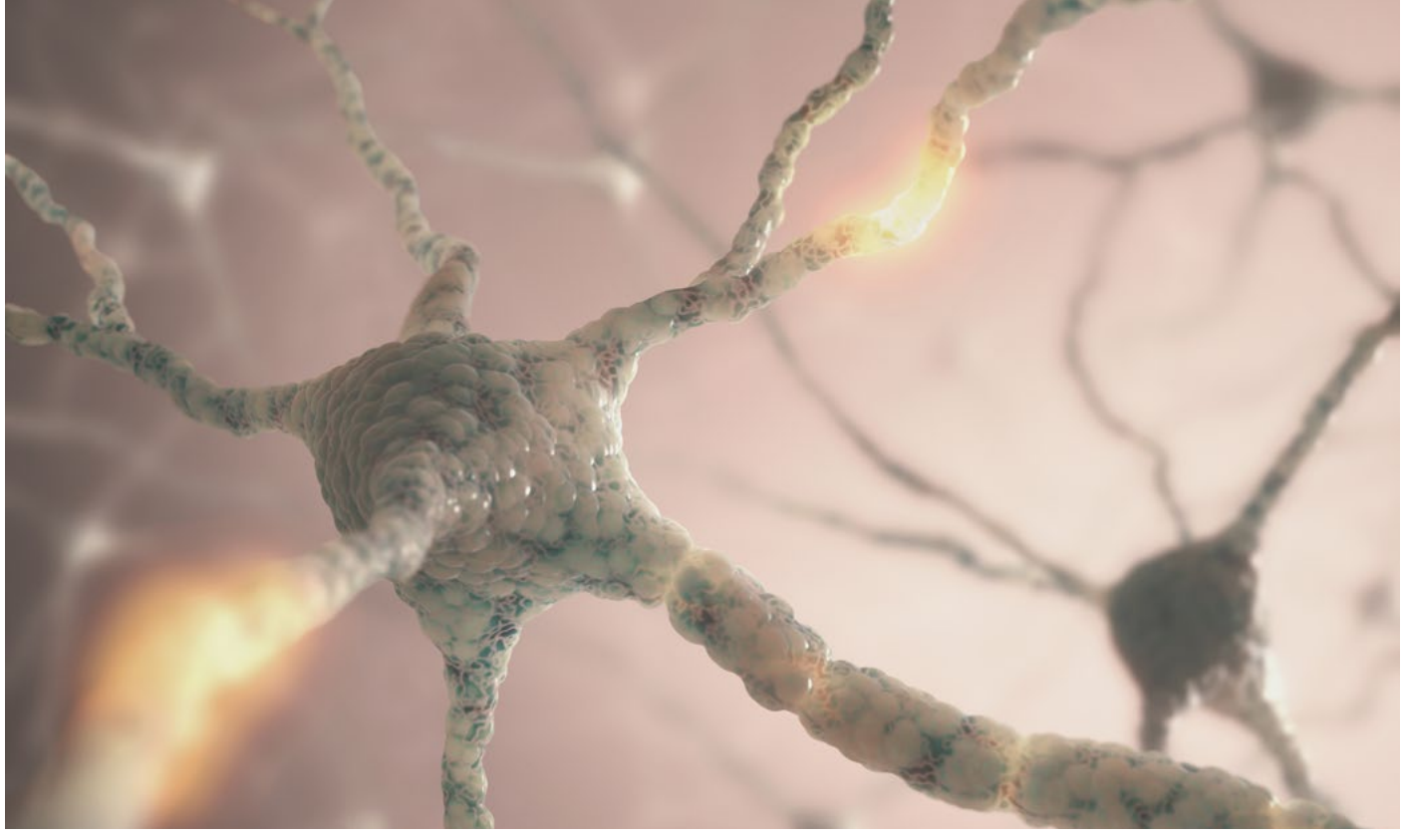
> **Complex systems themselves often have complex systems nested within them**

these self-organising components will exhibit the characteristics of a complex system. They are of course made up of people, each of which is a complex system of cells which function as independent agents and self-organise to form a multi-cellular being. Complex systems therefore do not operate in isolation but interact with others, both within and outside of the nested system. These can include interactions with external physical, technical, environmental, economic and socio-political complex systems.

Complexity risk comes with additional concerns and considerations. Due to the high degree of interdependence and emergent behaviour, root causes and subsequent impacts of risk events are far more difficult to ascertain. What appears to be an obvious antecedent or consequence of a risk event may turn out to be miles off the mark, leading to a loss of control.

If the system escalates from complex to chaotic, producing meaningful forecasts and formulating impactful mitigations will become less and less viable. This is compounded where bidirectional dependencies and interrelationships exist between internal departments and external bodies.

Complex systems exhibit distributed rather than centralised control where decisions and actions are taken without structured coordination. While efforts to exert top-down influence will yield some of the desired results, consideration must be given to the fact that control largely sits with agents in the system. But, if used correctly,



An example of emergent behaviour is the property of consciousness arising from the interaction of neurons in the brain

the distributed control feature of complex systems can promote the effective deployment of employee skills and expertise across contemporary organisations

Levels of complexity

Organisations often fail to appreciate the levels of complexity inherent in their structures and interactions with the outside world. With multi-tiered supply chains employing just-in-time methods, rigid hierarchical management structures, and increased public and regulatory pressure to consider social and environmental impacts in our operations, there have never been more factors to consider in risk management. These points have been examined in detail in several recent issues of *Enterprise Risk* (see *Chain reactions* from *Enterprise Risk*, Summer 2021; *Listening and learning* from *Enterprise Risk*, Autumn 2021; and *Changing the viewfinder* from *Enterprise Risk*, Spring 2022). This demonstrates some consensus on the need to move away from our traditional methods or, at the very least, enhance them to cope with our new hyper-connected world.

By adopting a narrow, siloed approach to risk management, organisations leave themselves in the dark. Breaking an organisation into bite-size chunks makes sense from a management perspective, but we must be mindful that this creates barriers to the efficient transfer of risk information. This does not just apply internally, but to the wider extended enterprise including suppliers, contracting partners, customers, shareholders, stakeholders and the wider public network.

Complex organisations produce vast amounts of invaluable data in their day-to-day activities. Often, however, this data is not collected and used in a meaningful way. Harnessing and analysing data is vital to the management of risk in highly unpredictable complex systems. By identifying recurrent themes in our data, lessons can be learnt from actual events. This is our best defence against uncertainty in complex systems and supports the development of mitigation measures that can be applied time and again – while continuing to learn from their successes and failures.

The influence of human factors such as biases and heuristics in the identification, assessment, management and communication of complexity risk is frequently underappreciated. The perception of an individual risk can vary greatly depending on the views and experiences of the person looking at it. Moreover, with people acting as agents in the complex system of an organisation, their

“ With people acting as agents in the complex system of an organisation, their interactions with each other will produce emergent behaviour and create additional risk

interactions with each other will produce emergent behaviour and create additional risk. Failing to recognise these factors leads to inaccuracies in our risk comprehension and potentially leaves us further exposed. On the other hand, capturing the success or failure of specific actions or inactions can help to overcome such biases.

Assessing complexity risk

The first step in managing complexity risk is acknowledging that it exists and that additional controls will be required to manage it. A shift in mentality is needed not just in risk managers and those directly involved with the risk process, but also at board level.

A comprehensive assessment of the organisation and its constituent parts is required to identify, assess and understand the nature of complexity within that specific organisation. At the outset, tried and tested qualitative techniques such as Political, Economic, Sociological, Technological, Legal and Environmental (PESTLE) and Volatility, Uncertainty, Complexity and Ambiguity VUCA) analyses can be valuable in framing the structure of the organisation and identifying key areas of complexity. Factors such as volume, uniqueness of components, uniqueness of environment, novelty of the products or services being offered, the organisation's capacity and capability to deliver them, and the network of stakeholders should be considered.

Once these components have been identified and assessed, the linkages between them should be mapped at a high level before delving into the detail. Particular attention should be applied to silos, which can represent complex systems in their own right. This includes different risk management functions such as supply chain risk, operational risk and project risk. The key is opening up lines of communication between all these disparate parts so as to capitalise on their combined effort.

It is important to note that complexity is not something that can or should be stamped out, but instead needs to be understood and embraced. As much as it presents challenges for those seeking to manage the associated threats, it creates opportunities for those who are open to them. Complex systems thrive on diversity. The more sources of information, perspective and novelty present in a complex system, the more scope for innovation both within an organisation and its wider industry sector. We just need to make sure we are learning lessons and passing on knowledge as we go.

Making a start

Risk practitioners are likely to face obstacles in the initial stages of preparing to manage complexity risk. Changing the mindset of the board to address complexity is no mean feat as it argues against the managerial efficiency-driven agenda prevalent in many long-standing organisations (see *Listening and learning* from *Enterprise Risk*, Autumn 2021). However, it is an essential first step in the process of cascading the message.

Moreover, it is not just board-level support we require. We are likely, initially at least, to require additional or redeployed resources to get things started. Understanding the corporate culture, its behaviours, current trends and the linkages between them using the techniques outlined above will take time and effort. Cascading the findings and resultant changes will also require resource, not least hard cash. This is also true if we are to procure software that is up to the job of capturing and modelling complexity risk by recognising it's all connected.

In *Listening and learning*, Stephen Sidebottom also highlights that risk professionals are required to have a suite of persuasive "performance skills" to drive successful risk management. These skills will be called upon to sell the benefits of complexity risk management to the board. However, this is not a hard sell. The insight and efficiencies produced by mapping and managing complexity risk will create savings across every facet of the organisation. While any initial outlay is likely to be eyed with scepticism, the returns on investment will speak for themselves. As part of a pitch for support, the more detailed our plans, the better. A demonstration of a step-by-step process to achieve our goals will help allay concerns.

Demonstrating where comparable exercises have been successfully undertaken elsewhere will help too. Doing anything of this nature alone is always more difficult. Nurturing relationships with and benefiting from the work of cross-industry networks including IRM, academic institutions and research bodies (the Santa Fe Institute is of particular note) will help keep the transformation on track supported by the latest body of knowledge.

> **The insight and efficiencies produced by mapping and managing complexity risk will create savings across every facet of the organisation**

Graeme Miller, CFIRM, is chair of IRM's Risk and Complexity Special Interest Group, and Michael Bartlett is managing director at the consultancy Trifolium. For more information: https://bit.ly/3pHrwEK

EYE OF THE BEHOLDER

BY ALBERTO LOPEZ VALENZUELA

Different stakeholders can have conflicting views on an organisation's image, which poses challenges for those trying to manage reputational risk

Reputational risk is unique. Not only is it influenced by a corporation's own actions, but it is also influenced by external events that can be beyond a company's control. But importantly, an organisation's reputation is primarily grounded in the perceptions of its stakeholders.

An accounting error could slash share prices, rogue employee misbehaviour may damage perceptions of corporate culture, a company may find itself out of step with prevailing societal attitudes on sensitive subjects. Simply put, reputational risk is the potential for any event, controllable or otherwise, to damage an organisation's reputation. It is the risk from stakeholder perceptions to profitability, brand value, authenticity or ability to perform your corporate function.

Impacts

Reputational risk does not only impact share price but can also create long-term operational issues for a company. For example, if employees feel undervalued, this can have a detrimental impact on the way a company is viewed as an employer and affect its ability to hire talent. This is a particularly acute issue in the current environment, where labour shortages are rife. Additionally, research by the Harvard Business Review found that a company with 10,000 employees and a bad reputation could be spending $7.6 million in additional wages to counter it.

A lack of transparency in declaring financial results and reporting can also determine how investors perceive an organisation. If investors view an organisation as financially unstable, it can determine whether they decide it will provide a return on their investment and affect the company's market value. The difference between book value and market value is often ascribed to reputation, which can account for anywhere between 10 per cent to 70 per cent of a company's market capitalisation.

No industry or sector is immune to the shifts in public perception, and the current political and economic environment makes companies more vulnerable to these changes. It is important for business leaders to recognise that companies often have multiple reputations, whereby their reputation differs depending on the stakeholder.

For example, investors and customers may view a particular company in completely opposing ways. This makes it difficult for companies to anticipate reputational risk as the picture is complex. Amazon is one classic example of this divergence in stakeholder opinion – investors tend to view Amazon quite positively, which can be in marked contrast to press reports saying that employees have rebelled against pay and working conditions.

Causes of risk

The growing threat to company reputations stems from the volatile economic and political environment of the modern world.

> **An organisation's reputation is primarily grounded in the perceptions of its stakeholders**

There are three specific trends that we can point to that contribute towards the increased threat to corporate reputation: hyper-transparency, interconnectivity and media anarchy.

Hyper-transparency represents the rising demand for accountability from stakeholders, a development that has forced companies to become more open, even if they have traditionally shied away from transparency. This has marked a shift in the power balance between companies and their stakeholders, with the power moving towards stakeholders.

Interconnectivity represents the fact that we live in an incredibly interconnected world – one in which stakeholders with shared interests and values

A Bad Reputation Costs a Company at Least 10% More Per Hire

https://bit.ly/3pVRKDC

> **It is important for business leaders to recognise that companies often have multiple reputations, whereby their reputation differs depending on the stakeholder**

are able to mobilise quickly on certain issues. There are 50 billion connected devices in the world right now, which makes it easier for individuals to stay up to date and react to issues they are passionate about.

Finally, media anarchy – the media plays a massive role in today's society, and with the rise of fake news and artificial intelligence technology, it can seamlessly spread fake content in real time. Such content can be hugely damaging to business reputations.

This context has created a chaotic environment for businesses to navigate and has resulted in stakeholder entropy. Stakeholders are demanding accountability, yet they do not have the means to decipher whether companies are being truthful and as a result feel like they don't have any control over the world they live in.

All in all, businesses are operating in an incredibly challenging environment in which stakeholder relationships need to be managed very carefully. Companies are no longer solely judged by their economic performance; they are also judged by their contribution to society, which makes it a tough balancing act when some stakeholders are more concerned about economic activity than societal contributions, and vice versa.

Measuring and managing

Typically, businesses conflate issues management and crisis management when it comes to reputation. But in reality, they should treat issues management as a day-to-day task. Ideally, issues management should prevent reputational issues from becoming a crisis.

Companies need to start by having a good understanding of their reputational risk, which can help them to effectively manage issues. Methods of measuring reputational risk include creating a reputational risk assessment, which can help draw a baseline for where a company sits within the perception of its stakeholders, and in comparison to direct competitors, comparable organisations and the sector as whole. Once this baseline is established, variations from the norm can be tracked.

By gathering data from social media, print news, online and broadcast channels, companies can listen to and analyse the thoughts and feelings of their different stakeholders. Using machine learning and connected intelligence tools, they will be able to mine this rich data stream to identify sentiments and topics that pose potential risk. This allows businesses to define their own specific reputational risk categories.

Once companies have an accurate measure of reputational risk, they can implement measures to protect against risk. One option is reputational risk insurance, an embryonic industry designed to cover the costs of past and future damage to organisations' reputations.

However, companies also need to be proactive and have a foolproof engagement plan for stakeholders. Companies need to address all of the areas of their business that can produce reputational risk, be it disgruntled employees, poor decision-making by the CEO, data breaches, negative social media posts or bad press.

An introduction to reputational risk insurance
https://bit.ly/3KGgGbW

Finally, companies need to be prepared to act quickly when an issue emerges, and having a rational contingency plan in place is always helpful. With the help of stakeholder intelligence, companies can anticipate emerging issues and act to mitigate the reputational damage. They must be prepared to communicate quickly and reach all their stakeholders.

Not communicating effectively, or allowing external parties to uncover the issue, results in more frequent and more damaging reporting of an issue, prolonging the impact of the attack. Similarly, organisations should be ready to acknowledge mistakes. They should demonstrate that they have identified and recognised the root causes of the crisis. This should be followed by making the necessary changes across the organisation to address these causes and rebuild credibility.

Climate crisis and banking

Let us consider an example to illustrate how the management or mismanagement of issues can affect reputational risk for businesses. Sustainability is arguably the most reputationally impactful issue that companies must deal with at the present time, and their response to that issue is heavily scrutinised by stakeholders. Stakeholders are looking for companies to drive change in reducing their carbon footprint, while making positive contributions to the environment.

During COP26, several organisations in the banking sector made bold pledges to reduce their carbon footprint and made commitments to make green investments. Under the banner of the Glasgow Financial

Glasgow Financial Alliance for Net Zero's COP26 Statement
https://bit.ly/3AvECKi

How has the climate crisis affected banks reputationally?
https://bit.ly/3AAWDXF

Alliance for Net Zero (GFANZ), 500 global financial service firms agreed to align £130 trillion of investments with the Paris Agreement climate goals. The alliance issued a statement that more than 40 per cent of the world's financial assets would be leveraged to achieve a net-zero economy and limit global warming to 1.5C above pre-industrial levels. Overall, our research shows that partnerships such as GFANZ elicit positive sentiment towards the banking sector.

In the months following COP26, stakeholders have been closely monitoring whether these organisations have stayed true to their commitments. Overall, individual companies have generated mixed stakeholder sentiment. For instance, Bank of America polled well following a keynote speech by its MD of ESG Advisory at a climate event hosted by the World Bank and Imperial College. In contrast, HSBC scored particularly badly after a senior executive was suspended for making cavalier comments about climate change, accusing central bankers of exaggerating the financial risks.

This demonstrates that

Imperial and The World Bank aim to unlock investment for just energy transition
https://bit.ly/3wEhx79

HSBC suspends banker over 'nut job' climate comments, say reports
https://bbc.in/3CF36Ua

stakeholders are no longer convinced by empty promises – companies need to ensure that their promises are backed by decisive and authentic action. In the context of climate change, companies need to understand and respond to the priorities of their different stakeholder groups with regard to this issue. They cannot afford the reputational damage linked to greenwashing or the financing of global warming activities.

Risk management's role

There is no denying that businesses are operating in an unpredictable economic and political environment, where one minor misstep can derail a company's reputation. However, there are three simple measures that risk managers can implement to better manage the reputations of their organisations.

Measuring and understanding your organisation's reputational risk is an important first step. You cannot successfully manage reputational threats if you do not know where the threat is coming from. With the right tools, data and stakeholder intelligence, you will have a greater understanding of the weaknesses in your company's reputation.

Second, it is equally important to use this data correctly and address the weak spots in your corporate reputation. For example, if your employees view you in a negative light, address this head on with employees directly. If investors are concerned about performance, address these issues at the next AGM. It is crucial to address any weaknesses early on with the specific group or groups concerned to minimise reputational damage and prevent issues from hitting the mainstream media.

Finally, in an ideal scenario, companies would manage reputational issues through prevention and engagement with stakeholders, without having to deal with a full-blown reputational crisis. But they should be prepared for the worst-case scenario, and implementing a crisis communications strategy will help them better manage crises.

Companies should learn to act quickly when a crisis emerges and reach all relevant stakeholders with a carefully constructed message. They should not shy away from acknowledging wrongdoing – in fact, they should openly acknowledge their mistakes. Finally, they should use the time following any crisis to make changes across the organisation to restore credibility.

> **Companies should use the time following any crisis to make changes across the organisation to restore credibility**

As we have already established, businesses are increasingly operating in an unpredictable corporate environment fuelled by the rise in hyper-transparency, interconnectivity and media anarchy. In this environment, they are often facing multiple risks and must carefully engage with stakeholders to protect their reputations. But like all other risks, reputational risk can be managed carefully and businesses may turn threats into reputational successes. ER

Alberto Lopez Valenzuela is CEO of alva, the stakeholder intelligence company.

Navigating the storm

BY SARAH PEARSON AND STEPH JACKSON

As the UK heads for choppy waters, how can positive and effective risk management help the charity sector steer a way through?

The UK is sailing toward the fabled perfect storm – a whirlwind of financial bad news, whipped up by COVID-19 and the Russia–Ukraine war, in an economy still struggling from the 2008 financial crisis.

Above all, it is inflation which is ringing alarm bells. As we write, the official Office for National Statistics Consumer Prices Index inflation rate stands at a 40-year high of 10.1 per cent (with consumer confidence at its lowest since records began). In August, the governor of the Bank of England, Andrew Bailey, forecast that rate would climb to 13 per cent, and raised interest rates to 1.75 per cent, a level not seen since December 2008, to try to tame it.

Even so, he said the economy would slip into recession and stay there until the end of 2023; earlier, apologising for sounding "apocalyptic", he had described rising food prices as a "major, major worry". When Bailey uses such words, it is worth listening.

Factor in the hazards which may be lurking unseen below these turbulent waters – who foresaw COVID-19, or the Ukraine crisis? – and this may be a time of greater risk than we've faced as a country since 1939.

But that means it is also a time when great risk management can come into its own.

Charity in tough times

Before we lay out some positive thoughts, allow us to consider what all of this means for the voluntary sector. While every part of the economy will suffer damage in the coming months, charities are likely to be hit harder than most.

This matters to the rest of the country, both because of the knock-on effects on the primary purpose of charity, to help others, and because they make an important contribution to Britain's GDP – usually estimated at around 1 per cent of the whole (though on some metrics the figure is much higher).

> **"While every part of the economy will suffer damage in the coming months, charities are likely to be hit harder than most**

The Charity Commission's 2021/2022 annual report notes that there are more than 169,000 charities on its register. Further, there are an estimated 20,000 additional voluntary organisations which are not included in that figure – such as churches and other religious organisations.

The National Council for Voluntary Organisations estimates that some 827,000 people work for UK charities; factor in all those voluntary bodies, and that figure is more than 950,000, or around 3 per cent of the UK's workforce.

Put another way, this is roughly the combined global workforces of Tesco (293,960), Sainsburys (111,900), BT (105,300), Vodafone (95,220), Barclays (80,800) and BP (72,500), with the entire British Army and a full Wembley Stadium thrown in.

Inflation and rising interest rates will suck money out of pockets, and charitable contributions have already been hit hard. Back in February, research by the Charities Aid Foundation (CAF) found that 58 per cent of people (69 per cent among 25-34-year-olds) were planning to cut back on discretionary spending; in January, only 25 per cent had donated to charity in the previous four weeks, which is significantly lower than the usual average for the month, of 29 per cent. This meant, said CAF, that "around two million fewer people [had] donated to charity than usual."

That in turn could lead to significant job losses, and, more importantly, a reduction in the good work charities do – at precisely the time when, paradoxically, it is most needed.

Identifying the challenges

It is important that we do not panic; we have lived through high inflation and much higher interest rates before. We also have recent experience of a huge shock – COVID – and the way

> **As understaffed organisations fight fires on various fronts, training may be rushed, opening up the possibility of human error**

we dealt with that has already made us leaner, fitter and more resilient. And, since virtually everyone is in the same boat, a "wartime" sense of us all pulling together may well develop.

But things still appear undeniably bleak; in that light, what does enterprise risk management have to offer?

First, it can help us to identify the specific threats heading our way. Charities face many of the same interconnected issues as commercial businesses. There are clear challenges in income generation; as we noted, giving by members of the public is under pressure, and the same will almost certainly be true of support from government and other sources of significant grant funding. Footfall – from charity shops to mass participation events – may well trend down as people have less disposable income.

The effects of this are already being felt on the delivery side, too. For instance, the community investment charity Neighbourly said in July that some food bank volunteers were stopping volunteering because of the cost of fuel for the cars in which they collect and deliver items.

Like companies, charities have staff, and those staff are likely to be working harder, for less (in real terms), which could lead to problems of sickness, retention and recruitment.

Again, this is happening now. For example, the Bluebell Wood Children's Hospice in Sheffield, which has provided specialist care and support to hundreds of children living with life-limiting illnesses, and their families, since 2008, announced in May that it was suspending its clinical services until appropriate staff levels could be assured – a terrible, real-world illustration of a wider problem.

Further, as understaffed organisations fight fires on various fronts, training may be rushed,

> **It is absolutely imperative that charities start to think about their digital strategy and ensure adequate investment in cyber protection and resilience**

opening up the possibility of human error. And again – as in the commercial realm – charities are wrestling with the impact of digitalisation, and the threats it poses – principally those of cyberattacks – alongside the undoubted opportunities.

Sketching out a way forward

Good enterprise risk management – defined by IRM as an integrated and joined-up approach to managing risk across an organisation and its extended networks – is more vital than ever.

Done well, it can support an organisation to achieve its stated objectives. Along the way, it will create better, more informed strategic decision-making, greater assurance and good governance, increased organisational resilience, and enhanced performance and service outcomes.

But it must be taken seriously, with leadership from board level down, allied to a positive risk culture so that the whole ethos permeates normal operations. And it needs time to do it justice – time which can feel in short supply during extended periods of increasing workloads and competing demands.

Of course, as with leading businesses, forward-thinking charities have already embedded enterprise risk management and thus have seen much of this coming; in respect of funding, many are already tightening their belts, managing and reducing their costs.

One response is to merge. In July, speaking at the Charity Finance Group's annual conference, Stevie Spring, chair of the mental health charity Mind, said that partnership was not a choice: "I genuinely predict that what we will see coming out of the current crisis is a series of mergers and federated partnerships that allow us all to maximise our backup house costs," she said.

Other responses are to review and diversify income streams, finesse grant applications and work on comms with existing and potential supporters; a "little and often" approach to running events might make sense, to spread the risk of major events being cancelled, or failing to meet expectations. Benefact Group is already offering advice on streamlining and improving fundraising: https://benefactgroup.com/fundraising-resources/

People are at the heart of every charity – both as the raison d' être and the tool for service delivery.

Good leadership

How, then, to maintain the morale and commitment of a skilled workforce? We cannot overstress the importance of good leadership: charities must operate an open and supportive culture, informing and involving staff as they undertake this difficult journey together. That means one-to-one sessions, socialising where possible, and trying to maintain a work–life balance.

A flexible approach that empowers staff to make decisions, as well as prioritising education, training and career development, will pay long-term benefits and reduce expensive and destabilising churn in the workforce.

When it comes to digitalisation, some elements of charitable activity must always be done hands on – there is no way to send food to a hungry family via fibreoptics, nor a program which can care remotely for a poorly child.

But it is absolutely imperative that charities start to think about their digital strategy and ensure adequate investment in cyber protection and resilience. A good starter for ten would be to undertake a thorough review of all processes which can be carried out online. Irrespective of future lockdowns, good IT can streamline back-office functions and offer quicker and more personalised methods of communicating with clients, supporters and the media, and of raising funds.

To sum up, when you're heading into the storm. an ongoing enterprise risk management approach enables you to identify and fully understand those key issues that could stop you in your tracks – and as you scan the horizon for emerging threats, you need to be aware of opportunities, too.

Supporting engagement and positive action at the top table will help you to meet the expectations of your service users – and keep those stakeholders informed on the latest risk picture and your plans. Above all, remember that we will get through this, and that there are sunnier days and calmer waters on the other side. ER

Sarah Pearson is head of enterprise risk management at Ecclesiastical Insurance and a member of the board of directors at IRM. Steph Jackson, CIRM, is an enterprise risk management consultant at Ecclesiastical Insurance and co-chair of the IRM Charities Special Interest Group. Ecclesiastical Insurance is part of the Benefact Group, which is owned by the charity Benefact Trust.

> **Work in embedding and developing proactive risk management was put on hold as we moved into the pandemic response**

On the front line

BY LETTIE PRINGLE

COVID put unprecedented pressure on the health professionals and risk managers working in the NHS. While there are still huge challenges, risk management has become part of the everyday working life at NHS Borders

NHS Borders introduced risk management as part of the Clinical Negligence and Other Risk Indemnity Scheme (CNORIS) in April 2000. CNORIS is a scheme that all Boards in Scotland buy into to cover clinical and nonclinical legislative costs that they may face by pooling risk together so it is allocated equally across a number of years. In layman's terms, it is similar to a traditional insurance package for NHS Boards in Scotland. CNORIS issued standards and regulations through the Scottish government which highlighted the need to establish core risk management processes and systems that were supplemented by organisational risk control standards.

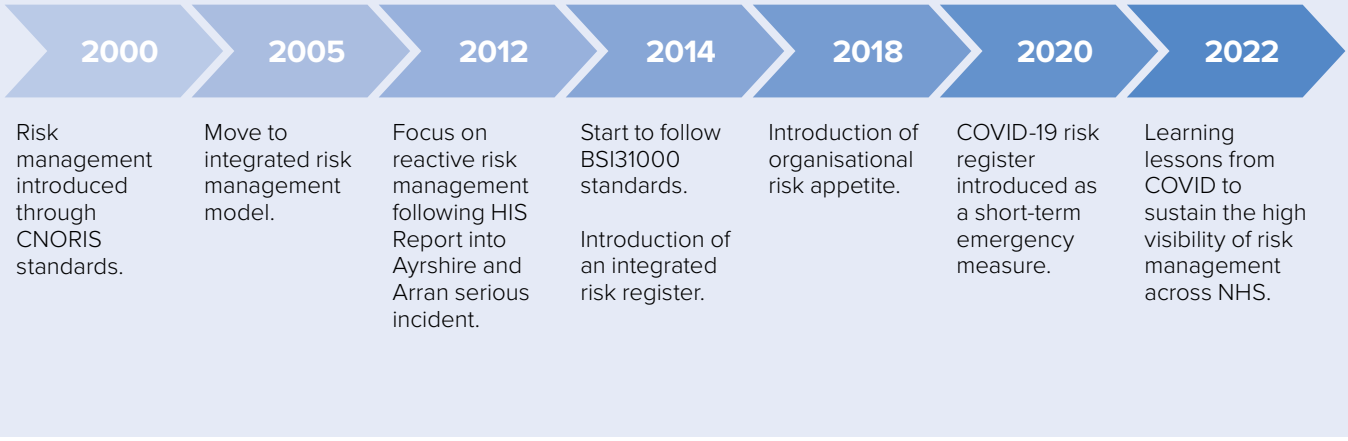
This took some time to implement into NHS Borders, but by 2005, NHS Borders had moved to an integrated risk management model, incorporating both clinical and nonclinical risks, although this was still using a centralised risk management approach (see *The evolution of risk management in NHS Borders*).

Changing approaches

In 2012, Healthcare Improvement Scotland undertook a review of adverse events. The learning from this review moved the focus from proactive risk management to the reactive side of risk management, ensuring that improvements were made to incident-reporting processes and systems with the expected outcome of improving the recording and sharing of serious incidents. From this arose the electronic risk management system, which gave NHS Borders real-time data to managers on incidents that had occurred within their areas. This move in systems streamlined the process of managing incidents but also allowed more robust monitoring for compliance, and thus increased the knowledge of senior leadership of what was happening on the frontline.

In April 2014, NHS Borders implemented BSI31000 Risk Management Standards and moved towards an enterprise risk management approach, with focus on the proactive side of risk management. To support the move to an enterprise risk management approach, the risk register, complaints and claims

THE EVOLUTION OF RISK MANAGEMENT IN NHS BORDERS



systems were all integrated into the electronic risk management system. This allowed, where necessary, following the risk management journey through from risk to claim. Using BSI31000 standards also gave us a framework to follow, specifically for risk management, and allowed us to build together a more robust and visual way of explaining to the organisation what risk management was and its benefits to NHS Borders. At this point, NHS Borders was at its infancy stages of risk maturity.

In 2018, the concept of organisational risk appetite was introduced, using a very straightforward iteration to ensure no one was left behind when implementing this and to plant a seed of this concept into the minds of our risk owners. In 2019, this was expanded to allow more flexibility and autonomy, allowing risk owners to decide if high or very high risks were out with risk appetite based on a group of risk statements.

Pandemic response

Then COVID hit. Work in embedding and developing proactive risk management was put on hold as we moved into the pandemic response and into a crisis risk management approach. Ensuring flexibility in our risk approach during this time was vital to ensure risks were captured. Risk management went from a support service to a vital service in providing information to the senior leadership team in what was happening on the front line to support in decision-making.

> **“ Risk management had all of a sudden become a service in demand, both operationally and strategically**

Risk management had all of a sudden become a service in demand, both operationally and strategically. To support this demand, a COVID-19 risk register was created consisting of the bare bones of a risk register, stating what the risk was, the level of risk and the actions being taken to mitigate or reduce the risk. It was a quick way to capture the risks to an organisation under increasing pressure and time constraints as risk owners were pulled into clinical roles to support the increasing demand on services. This register was created with the knowledge and agreement that it was a short-term register that would be amalgamated back into the operational risk register within the year. Flexing our risk management processes and systems to meet the needs of an organisation in crisis allowed risk not to be hidden behind clinical priorities and became a useful tool in making the quick decisions required during the height of the pandemic.

Now in 2022, NHS Borders is moving into the recovery phase. Maintaining the level of importance and visibility risk management was given during the initial crisis in supporting the recovery of clinical boards is a key part of our lessons learnt during this time, as well as during future planning.

The way in which NHS Borders delivers risk management has had to change from a stand-alone profession to a service whose aim is to support clinical boards and support services to undertake their risk management responsibilities, which has in turn improved engagement. This does not mean being subservient but requires the mindset of a specialist who trains and advises these areas on how to implement risk management effectively,

taking into account that our risk owners did not go into the risk profession but the care profession.

Key challenges

Risk management in NHS Borders has changed dramatically in the past two to three years, mainly due to the pandemic pushing risk from a slow-moving to a faster-moving subject to accommodate a number of significant risks facing the Health Board. The pandemic required Health Boards to step back core services to create capacity for the pandemic response. This response has extended over a prolonged period having a significant impact on timely access to routine and elective services. The requirement to expand services during the pandemic has placed a strain on the available workforce resource across the health and social care system further compounding risk velocity.

NHS Borders incorporates an enterprise risk management approach and, as such, all risks interlink in some way. There are many challenges that are emerging. Previous risks that were high impact with a low likelihood of happening are all coming to fruition simultaneously, causing what many refer to as "the perfect storm".

NHS BORDERS

NHS Scotland consists of 14 regional Health Boards, seven Special Boards and one Public Health body. NHS Borders is the smallest mainland Health Board in Scotland and provides a full range of services to a population of circa 115,000 covering the Scottish Borders local authority area.

The area is geographically large, covering 1,800 square miles, and is mostly rural with small burghs and very sparsely populated areas. Within NHS Borders, there are approximately 2,700 staff working over 50 different sites across the Scottish Borders.

NHS Borders is a very complex organisation dealing with clinical risks, occupational health and safety risks, corporate risks, financial risks and residual risks from projects.

> **"Previous risks that were high impact with a low likelihood of happening are all coming to fruition simultaneously**

Workforce

NHS Borders is currently faced with a number of workforce challenges, linked to whole-system pressures due to the continuing and increasing demand on healthcare services. There is a record high vacancy rate for staff across Scotland, impacting on the ability to recruit staff and resulting in long-term vacancies across the Health Board in all areas, from healthcare support workers and nurses to medics and allied health professionals.

Employees are NHS Borders' greatest asset, and through the pandemic they have shown resilience, commitment and compassion in the toughest of times. Staff well-being is a big focus in NHS Borders; making sure the staff that we have are supported and fit for work is imperative to delivering good patient care. The pandemic has left many healthcare staff exhausted, overwhelmed and stressed, with many national reports highlighting staff leaving the healthcare profession to seek alternative employment elsewhere. The gap between planned staffing and actual staffing is widening, and with the introduction of the Health and Care (Staffing) (Scotland) Act, the ability to attain the core statutory requirement is becoming more challenging. Retaining or replacing depletion of clinical skills and experience as staff reach retirement is also impacted by the staffing shortages.

This then means that NHS Borders has to turn to agency, locum and bank staff to fill these gaps where possible, which increases reliance on these services and impacts finite budgets within the Health Board. With delays in being seen, whether that be from delays in receiving treatment or holding off seeking medical intervention during the pandemic, the complexity of patient presentations has increased in many cases, which has amplified the challenges of managing patient care on lower numbers of staff. Political pledges to increase activity without implementing the infrastructure to deliver on these also impacts the workforce pressures. All of these risks relating to workforce have the potential to affect the delivery of sustainable services and quality of care given.

Whole-system pressure

The availability of staff in key workgroups is having a significant impact on patient flow across the whole health and social care system placing an increased reliance on in-patient beds across acute and community hospital settings. This is a complex risk which requires working in partnership

> **Risk management is being built into the normal running of NHS Borders through the strategic planning process, and operationally into complex decisions such as clinical prioritisation**

with external agencies. There is an opportunity going forward for joined-up working to improve the overall system and continue to provide safe, person-centred and effective care to all patients. The introduction of a Scottish government bill to create a National Care Service aims to alleviate some of these problems by 2026, and this will require co-design by multiple agencies to ensure its success.

As we emerge from the pandemic, the financial outlook remains challenging. NHS Borders has a significant risk of being unable to meet its statutory financial targets, including the delivery of a balanced financial position over a three-year planning cycle. Through the NHS Borders Financial Improvement Plan, the organisation aims to increase the level of opportunities identified and to drive progress towards development and implementation of delivery plans to reach the required targets.

Opportunities

The fact that these risks have been identified, assessed, recorded and are being actioned is testament to the proactive risk management approach the organisation is taking towards tackling very complex risks head on. Engagement of the Board Executive Team has been vital to ensure a top-down approach is followed and the right priorities are set to manage our most significant strategic risks. Ensuring the highest levels of the organisation understand risk management and how this supports their decision-making has allowed us to develop a risk-based approach to this. Risk management is being built into the normal running of NHS Borders through the strategic planning process, and operationally into complex decisions such as clinical prioritisation; this is where extremely hard decisions are made about which services to stand down in the most pressurised moments, be that from COVID waves impacting our services, or as part of our full-capacity protocol where the demand for our services has outstripped the supply available.

Risk management is becoming more integrated with the day-to-day workings of NHS Borders, and although this is just the start of new ways of working post-pandemic, where risk management is not seen as a separate entity but part of everyday working.

Lettie Pringle, IRMCert, is risk manager at NHS Borders.

Directory

Change tomorrow with industry leading GRC software

With powerful, agile and integrated solutions in governance, risk, compliance and strategy, Camms' business software will help you make the right decisions, manage risks and focus on what matters. Working with tens of thousands of users at organisations across five continents, and with over 25 years of experience, Camms thrive on watching their clients achieve results and stay a step ahead. Helping firms meet goals, influences business decisions and board strategy is in Camms' DNA. To learn more, visit www.cammsgroup.com.

Daniel Kandola
+44 (0) 161 711 0564
sales@cammsgroup.com
www.cammsgroup.com
Suite 4.3, Parsonage Chambers
3 The Parsonage
Manchester, M3 2HW
United Kingdom

Cost-effective technology for risk & compliance professionals

1RS provide cutting edge 1RS ERIC (Risk & Compliance), 1RS CASS and 1RS SMCR solutions, which have been designed and built by Risk and Compliance professionals with over 25 years of experience. Our solutions are supported by experts, and we continually update the products to reflect best practice and changes in regulatory expectations. We are trusted by banks, vehicle finance, wealth management, investment banking and management, brokers, and more throughout the United Kingdom and Europe. For more information, visit https://1rs.io

Andrew Firth
+44 (0) 20 7175 6177
hello@1rs.io
1rs.io
38 Borough High Street
London
SE1 2AL

Enterprise risk management and risk analysis software

riskHive are an established global provider of professional cloud, intranet and desktop solutions for the management and analysis of RAID (risks, issues, assumptions and dependencies). Being low maintenance, highly configurable and cloud based, the Enterprise Risk Manager application can get you online in under 24 hours, supporting your existing processes and terminology. Easily import existing risk information to quickly produce a consolidated risk portfolio. Relied on by customers ranging from New Zealand through the Middle East to Northern Europe riskHive deliver a truly global ERM solution with a truly enterprise 'all-in' licence.

Ian Baker or Doug Oldfield
+44 (0) 1275 545874
ian.baker@riskhive.com
doug.oldfield@riskhive.com
www.riskhive.com
riskHive Software Services Ltd.
Dilkush, Farlers End
Bristol, BS48 4PG

Risk, audit & compliance software

Symbiant is a market leading provider of Risk, Audit & Compliance software. They have a full range of modules that can be connected for a wholistic view. Customise your own layouts and reports or use the ready-made options. All modules are a fixed £100 per month. Contracts are only 30 day. Visit the website to watch the quick overview videos or to arrange a no obligation web demonstration.

Mark Long
+44 (0) 20 8895 6410
irm@symbiant.co.uk
www.symbiant.co.uk
20-22 Wenlock Road
London
N1 7GU

Risk management software

Since 2014, Origami Risk is the only company that has been consistently recognised for delivering client success, innovation, and stability, while bringing new ideas and advanced features to the RMIS market. Origami Risk's innovative software is designed with the latest technology and a focus on performance and ease-of-use, providing integrated solutions to the entire insurance value chain, serving Risk Managers, Brokers, TPAs and Carriers. It features powerful workflow, advanced reporting and analysis tools, and intuitive features to improve productivity and better manage total cost of risk—saving our clients time and money and enabling them to be more successful. Learn more at www.origamirisk.com

Neil Scotcher
+44 (0) 16179 17740
nscotcher@origamirisk.com
www.origamirisk.com
30 Moorgate
London
EC2R 6PJ

Risk management software

In today's rapidly evolving world, business models and organisations are facing increased change and unprecedented levels of scrutiny. With change comes complexity, challenging risk managers to redefine the way they lead an organisation's approach to and implementation of risk management. Protecht helps organisations through deep understanding, monitoring and management of risk. We provide the complete risk solution—comprised of world-class enterprise risk management, compliance, training and advisory services—to government organisations, key regulators and businesses of all sizes across the world. With 20+ years at the forefront of risk and compliance solutions, millions of incidents managed across thousands of individual risks, and over 25 thousand people attending our training courses to date, we're one of the most respected and influential voices in risk.

N/A
+44 (0) 20 3978 1360
info@protechtgroup.com
www.protechtgroup.com
77 New Cavendish Street
The Harley Building
London W1W 6XB
United Kingdom

Plasma bomb

Since organisations and societies depend on electricity for their digital operations and everyday existence, it is time to take solar flares seriously

Imagine this scenario. Nine key electrical transformers in the US blow out simultaneously. About 130 million people are without power for months. If more transformers crash, the whole country could be thrown into darkness and cold.

Events unfold like this: GPS signals fade, mobile phone reception zones shrink, satellites go off course and collide, tens of thousands of planes attempt forced landings. Homes and offices cannot be powered, water pressure drops sharply, tube and train services stop, traffic crawls around cities without traffic lights, supermarket shelves empty as the computers that run supply chains fail. Panic-buying and social unrest spread. Clean water dries up and sewage seeps into waterways because high-pressure plants have insufficient energy. Medicines cannot be cooled and perish, hospital machinery fails and, just possibly, nuclear plants begin to melt down.

Risk management failure

Without mitigating action now, the globe could face this prospect any day soon – and it would have about an hour's notice to prepare for the fallout. Matt Ribel's article in *Wired* magazine, from which much of this scenario is drawn, describes such an event in chilling detail. In its 2021-2022 report, the House of Lords Select Committee on Risk Assessment and Risk Planning described a

similar scenario, concluding: "Infrastructure failure and a breakdown of social cohesion could lead to impacts of an unpredictable direction and unknowable magnitude." The duration of such disruption? Permanent.

The House of Lords found that the UK's risk assessment processes were and are inadequate to protect the UK from such a large-scale event.

The warnings exist

And while scientists have yet to agree why solar flares happen, the warning signs that a big one will hit the earth are as clear as those that showed a pandemic was in the offing. Richard Carrington noted the first recorded solar flare in 1859 – it knocked out much of the US telegraph system, according to Ribel. In 1921, a smaller flare set fire to electrical systems in the US and Sweden. In 1989, Quebec's grid went out for nine hours. In 2012, two huge solar flares narrowly missed earth. If either of those flares had crashed into the planet, they would have made the 2021 collapse of the Texas power grid look like child's play. That event left hundreds dead, millions without power and cost about $200 billion damage.

National grid systems around the world are relatively unprepared for such an event. The weak points are electrical transformers that help convert high-voltage grid power into low-voltage power that can be used safely in homes and offices. The currents that a solar flare creates on the earth's surface course through these links of least resistance and fry the system. Most transformers are old and unable to cope with such a power surge.

Cheap fix

In 2020, the Foundation for Resilient Societies said strengthening the grid in the US would cost about £5 billion – much less in the UK. Given the potential consequences to our highly energy-dependent societies, this seems like a relatively cheap mitigation. Other measures would be needed. The pandemic has reinforced the truism that prevention is better than cure, so it would be nice to believe that this time we could get ahead of the curve. ER

House of Lords Select Committee report
https://bit.ly/3KC6jpx

Foundation for Resilient Societies
https://bit.ly/3B58DC4

Supercharge your career by improving your risk knowledge

International Certificate in Enterprise Risk Management

Risk is part of every business, from the pandemic to cyber threats to supply chain disruptions. Study with the IRM to improve your career and earning potential by gaining a solid foundation in the theory and practice of effective risk management.

www.theirm.org | Tel: +44 (0)20 7709 9808 | Email: enquiries@theirm.org

irm

Improve your chances of assessment success

Blended Learning

Signup and join our online interactive workshops to fully get to grips with the study materials and develop an effective study plan.

www.theirm.org | Tel: +44 (0)7469 353441 | Email: joanna.kraska@theirm.org

irm