



RESILIENCE FIRST

SURVIVE & THRIVE



TRANSITIONING FROM RISK TO RESILIENCE

A WHITEPAPER IN PARTNERSHIP WITH



Edited by

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FOREWORD

‘There are risks and costs to action.
But they are far less than the long-range
risks of comfortable inaction.’

J F Kennedy

What makes risk interesting is that it is concerned with future uncertainty while risk management is about trying to change the future for the better. So, it is not surprising that many aspects of risk management are problematic while others evoke disquiet or even disapproval. In particular, when one uses quantitative measures like probability based on past trends to represent a volatile and unpredictable world then it is perhaps unsurprising that calculations go awry. Yet, risk management has tried to present itself as an accepted engineering technique complete with standards (e.g. ISO 31000, Risk Management) and other indicators of an established practice.

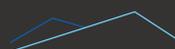
Covid-19 has shown that there are systemic risks that do not readily lend themselves to quantitative risk analysis. While a pandemic has been recorded on most professional risk registers for a while, the challenges posed by the likes of the Coronavirus were not fully acknowledged and have shown risk (and some scientific) assessments to be wanting in helping shape our responses.

This whitepaper tries to look afresh at what is needed in a revised risk-management framework. It starts with the premise that consequences or impacts are more important than causes or probabilities. If one accepts this assertion, it is possible to recommend a framework that has more qualitative components which focus on the softer skills. These may have an element of imprecision but they are the ones that will have most influence on outcomes – and confer resilience.

Soft skills embrace notions of leadership, culture, trust, adaptiveness and agility. Imbued with these qualities, risk management becomes more a managerial facilitator rather than an engineering tool. In fact, it becomes a facilitator for resilience management over and above risk management. That is important if you endorse President Kennedy’s saying and are looking for long-term, positive change.

Lord Toby Harris

Chairman of the National Preparedness Commission,
and a Member of Advisory Board of Resilience First



INTRODUCTION

‘Management models based on planning and predicting instead of resilient adaptation to changing circumstances are no longer suited to today’s challenges.’

Foreword to ‘Team of Teams: New Rules of Engagement for a Complex World’, 2015

This quotation predates the election of President Trump, the referendum on Brexit and, of course, the spread of the Coronavirus (SARS-CoV-2). All these events have been, in Rumsfeldian language, ‘known, unknowns’. They were on many radars and risk registers but the consequences were unpredictable and, as it turns out, unprecedented. No crystal ball could have foretold the immense impact these events have had on the local, national and global scenes. They have shown the complexity and interconnectedness of our world. We can expect more unprecedented challenges – climate change being perhaps the greatest – and without 20/20 vision then the best we can do is plan for the worst and hope for the best.

Risk and resilience are opposite sides of the same coin. The former is an interpretation of a vulnerability to, and the likelihood of, a specific danger that focuses on preservation and restoration – to avoid, retain, transfer, or mitigate the risk that may follow. Resilience, on the other hand, is more a behavioural and structural response to, or consequence of, a changed set of circumstances that assumes recovery of the status quo ante will not be possible – adaptation to the change follows.

As the quotation above indicates, the traditional approach to risk management has been shown wanting in the face of the challenges: we have been caught short in preparing for those challenges. The linear approach no longer meets the demands of systemic or significant dangers which can be both volatile and



ambiguous. This whitepaper proposes a shift to a more dynamic, virtuous cycle of enterprise resilience management (EReM) rather than the usual enterprise risk management (ERiM).

The first part of the paper begins with an examination of the impetus for change (Section 1) and the reasons for searching for new approaches (Section 2). The second part looks at nine different but important elements that need to be incorporated into any new model. It begins with the concept of horizon scanning (Section 3) which to some may seem futile in the light of uncertainty and turbulence. Yet, by looking as far out as one can it is possible to mix insight with foresight and thereby generate the sort of preparations that meet all eventualities, whether known or unknown. Better preparedness is the second solution discussed (Section 4).

Effective collaboration and good communication (Section 5) mixed with a robust culture (Section 6) and sound leadership (Section 7) are key ingredients of resilience and hence take up the greatest number of pages in this whitepaper. These attributes cannot be overstated and, while commonly recognized, they are frequently deficient.

Technological advances (Section 8) can do a lot to improve resilience and the 4th Industrial Revolution will help to accelerate the management of our working environment – where would we be without the internet during the pandemic? Yet, our (over)dependence on technology can in itself reduce our resilience if we do not invest in backups, alternatives and concepts such as digital twinning.

Improved safety (Section 9) looks at how to build ‘muscle strength’ and ‘corporate memory’ as elements of active resilience. These features recognize that there will be failures in a system but that lessons learnt will enhance robustness for the future. As a final solution (Section 10), the notions of agility and adaptation are offered as they encapsulate many of the previous themes while highlighting the essential characteristics of being resilient.

The future of risk and resilience (Section 11) is left to our partner in the compilation of this whitepaper, namely Fusion Risk Management Inc.

We hope you find the report both interesting and valuable and the five practical steps to each section provide some tangible touch points.

Robert Hall

Executive Director, Resilience First



PART A

CHALLENGES



1.

WHAT'S THE IMPETUS FOR CHANGE?

The Covid-19 pandemic has changed our perception of, and response to, risk. Mega-events such as that caused by a microscopic coronavirus have made us realize that there are massive risks out there that can have a cascading effect for which we are ill-prepared and ill-equipped. They may be defined as high-impact, low-probability events, and placed on the extreme edges of a few risk registers, but using traditional risk-management techniques meant they were disregarded – unwisely – by many as being too remote to be worthy of time and resources.

Besides 'black-swan' events, of which Covid-19 is not one, there are other systemic risks which are barreling towards us for which we are aware but also unprepared. They cannot be expected to come in our direction sequentially but may well be concurrent and hence magnify the overall pernicious effects. Some may be slow-burn issues like climate change, demographic imbalances, pollution or mass migration while others may be spontaneous like a solar flare or a super volcanic eruption. They could all reveal the severe disruption to our hyperconnected, globalised world just as Covid-19 has done, and at an even greater economic price.



Box 1:

Consequences over Causes

The Begg Report on the disruption over the severe weather in 2010 found that Heathrow airport was ill prepared for snow and recommended that the airport 'should adopt an improved resilience target that [it] never closes as a result of circumstances under its control, except for immediate safety or other emergency threats'. Heathrow's crisis response planning appeared to be focused on a number of risk scenarios (not including snow) whereas the planning of Gatwick airport was based around the core functions needed to respond to a broad range of difficult circumstances; as a result, it managed to keep operating.



UPSIDES AND DOWNSIDES

Covid-19 has awakened our senses to uncertainty and the imperative of managing systemic risk. The journey ahead will surely be a long and winding road – a ‘game changer’ if game is an appropriate term – and will result in a very different world, both economically and societally. The pace of change has been accelerated by technology which has allowed an unprecedented number of people to continue working at a distance, for instance. As a result, people have shown remarkable resilience and continued productivity. However, there is a downside to relying on technology too much: a solar flare with an electromagnetic pulse (EMP), for instance, could readily disable global telecommunications and power supplies which would deny us the internet and much more.

Unlike an actual war, the pandemic has targeted people over infrastructure. The virus has left buildings and structures intact while destroying lives and livelihoods – another disease or even an EMP could do the same thing. This has shifted the focus away from resilience through infrastructures to resilience of communities and organizations. It has similarly placed an emphasis on governance and how leaders lead and manage – or not – their populations. The inability of our international, national and regional systems to cope with a threat like a global pandemic has highlighted, as never before, the inadequacies of established structures and systems.

What has also been highlighted is the failure of our approach to assessing and managing dynamic risk in general. Our traditional methodologies have not been applied rigorously enough either to reveal the hyper-connections of our complex world – hence, the cascading effect when major problems arise – or adaptable enough to allow a focus on consequences (impacts on critical functions) rather than causes (real or possible scenarios). While risk scenarios can be useful in exercising crisis-response plans, they may not be good for building resilience into a system and responding to complex, emerging situations. Too much focus on planning for particular scenarios can make it harder to cope when the unexpected happens. (See Box 1) Ultimately, resilience should be independent of scenarios.

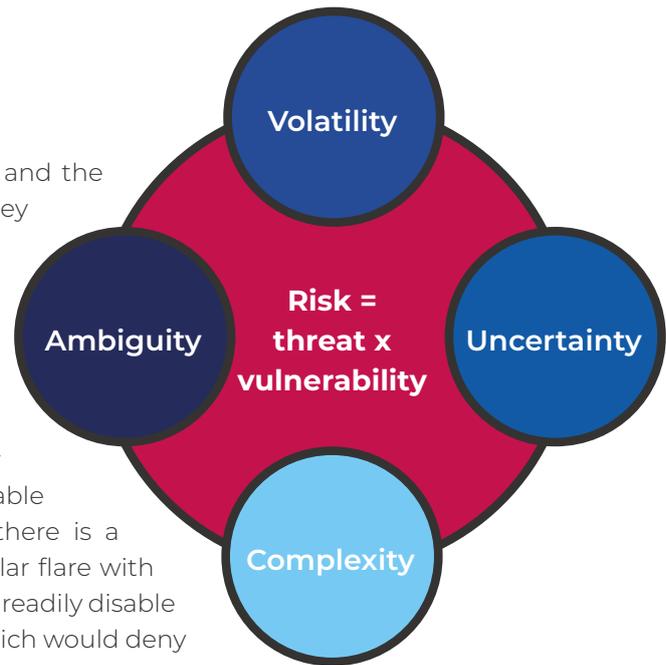


Figure 1:

A VUCA world

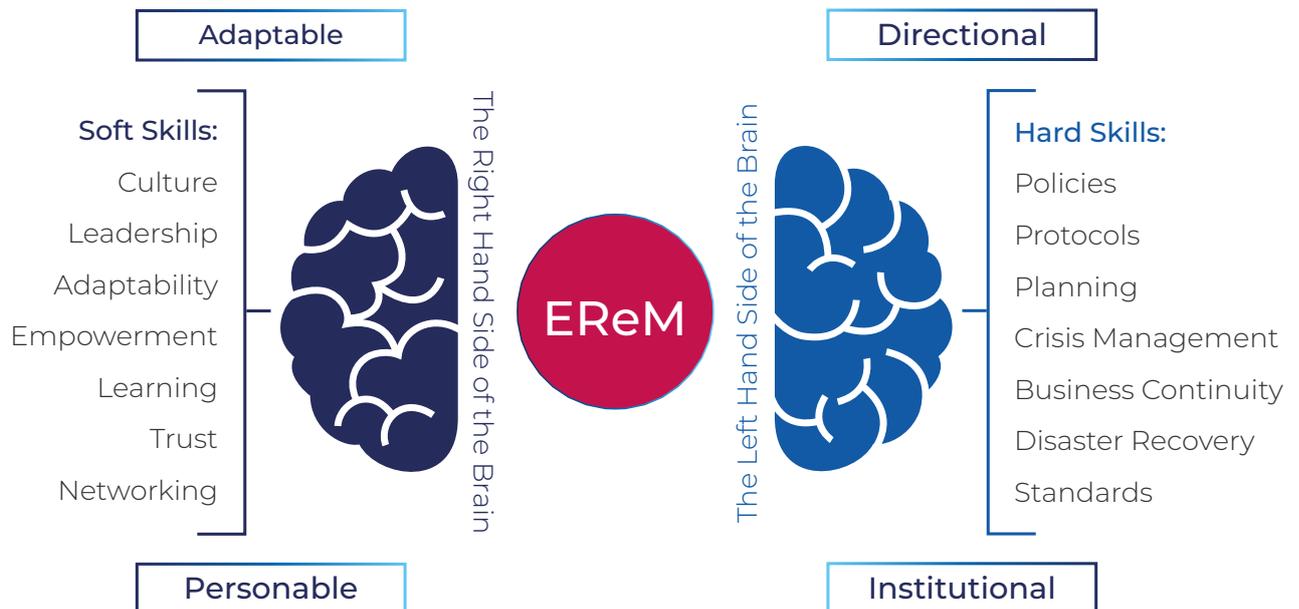
VUCA is an acronym – first used in 1987 by the US military – to describe the more volatile, uncertain, complex and ambiguous world resulting from the end of the Cold War.

Today, the elements of VUCA can help shape an organization’s capacity to manage risk by:

- ▶ Anticipating the issues that may arise;
- ▶ Understanding the consequences of issues and actions;
- ▶ Appreciating the interdependence of variables;
- ▶ Preparing for alternative realities and challenges;
- ▶ Interpreting and addressing relevant opportunities.

Coping successfully with a VUCA world can make an organisation better overall to deal with future challenges (antifragile).

TRANSITIONING FROM RISK TO RESILIENCE



With a plethora of risks, whether known and unknown, it is simply not possible to detail every permutation on a red-amber-green scale. What appears to be the case is that events in the future are unlikely to be based on traditional frequency models. The reliance on old probability ratings based on historical events – around which much of traditional insurance industry is based – no longer holds true and we need new approaches which reflect volatility, uncertainty, ambiguity and complexity (VUCA). To cope, we have to be agile and adaptive – the essence of resilience. (See Figure 1).

A NEW APPROACH

This means that our traditional procedures such as business continuity management, crisis management and enterprise risk management (ERM) need to be reconfigured and move away from being mechanistic, quantitative, siloed and structured, as reflected by the emergence of standards like ISO 22301: Business Continuity Management. Covid-19 has shone a harsh light on the siloed approaches that exist in many organizations and the disconnect between strategic risk and operational resilience. Our new practices should be more aligned to an organization's strategic direction or mission, with consequences for disruption (of any form) at the centre.

Figure 2:

Soft and Hard Skills

The left hemisphere of the human brain performs tasks that have to do with logic, such as in science and mathematics. The right hemisphere co-ordinates the left side of the body, and performs tasks that have to do with creativity and the arts.

In the same way, the soft skills associated with enterprise resilience management (EReM) deal with the behavioural aspects of leadership and trust, while hard skills deal with the mechanics of EReM in practical ways.



Risk professionals should focus their efforts on cultivating various types of flexibility, agility and robustness to cope with increasingly turbulent business conditions. Qualitative issues around people, so called soft skills such as health, mental wellbeing, trust, leadership and reputation should assume equal if not greater importance to the hard skills of policies, procedures, standards and infrastructure. There is a need to have both soft and hard skills in the ERM equation. (See Figure 2)

This shift can best be encapsulated by a retitling of the acronym ERM to represent enterprise resilience management (EReM) rather than enterprise risk management (ERiM). This change reflects a new emphasis on making people, processes and property more able to respond holistically and adapt to shocks and stresses, whatever the threat. It will allow a focus on consequences and how we can prepare for all eventualities. Regulatory approaches, especially in the financial sector, have led this change by introducing operational resilience in the markets. Other sectors need to follow.

A new approach based around resilience rather than risk will allow a focus on four key activities, namely to: **prepare** (whatever the risk), **respond** (whatever the impact), **recover** (what is critical) and **adapt** (to thrive in the new environment). This is a virtuous cycle of activity and learning. (See Figure 3)

EReM should balance the soft and hard elements in the equation so that people take precedence over the applications or systems and hard assets that support processes. This will demonstrate how adaptive people can really be. Ultimately, resilience requires people on the ground and in communities to fulfil their tasks to be able to survive and thrive.

Figure 3:

An EReM Framework

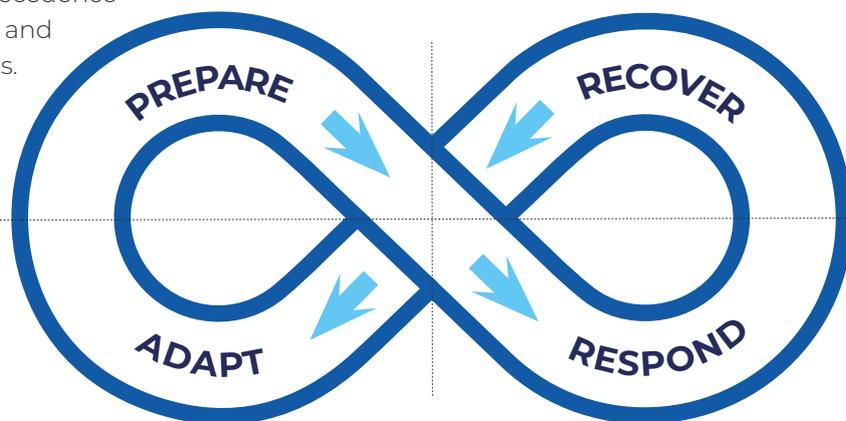
The OODA (Observe, Orient, Decide, Act) loop was a tool developed by military strategist John Boyd to explain how individuals and organizations can win in uncertain and chaotic environments. In an extension to the OODA loop, the EReM framework (a Mobius strip) consists of four steps that relate to resilience.

Step 1 is **preparation**. This should examine potential shocks and stresses through likely impacts (on people, process and place) across silos.

Step 2 is the **response** to the appearance of the risk and activating ways of absorbing or mitigating the worst effects.

Step 3 is the **recovery** or bouncing back by stabilising the situation and restarting operations.

Step 4 is **adapting** to the new situation and reviewing opportunities to bounce forward so as to seize the competitive advantage. This will, in turn, help further preparation.



Robert Hall is Executive Director of Resilience First.



2.

WHAT ARE THE CONCERNS WITH CURRENT APPROACHES?

Risk management has been practised since mankind has existed. Our earliest ancestors had to make risk-based decisions to survive. Over the ages, we have developed an aversion to risk and implemented measures to limit the threats to our existence. With modern society, risk further evolved to avoid the loss of valuable possessions but as the world became more complex and the risks became seemingly endless, we sought guidance on how to be diligent in managing risk. Regulations were born and we adopted a belief that compliance with those regulations meant we were undertaking proper diligence in managing risk. Along this evolutionary journey, we lost the essence of risk management, namely understanding the full consequence of a risk and making the best decision to survive and thrive.

Today, risk must be considered in every operational, tactical, and strategic decision we make. Risk management is a core responsibility of every C-level executive but the generally accepted risk-management practices we employ are not enabling those who must make risk-based decisions.

First and foremost, risk management is providing limited value to organizations. The risk-management practices employed at most organizations may be effective at limiting financial loss, and keeping highly regulated organizations compliant but they provide limited value in making strategic and tactical decisions where some level of risk is acceptable.

Much of the time spent on risk management is compliance-driven rather than focusing on the viability and sustainability of the organization. Far too much emphasis is placed upon compliance and loss avoidance, and many executives think of risk management as a purely defensive concept rather than a fundamental component for ensuring they can deliver on their promises.



TRANSITIONING FROM RISK TO RESILIENCE

For organizations to thrive they must grow while at the same time avoid unnecessary losses that can create operating inefficiencies which detract from the value of the organization. To support the strategic initiatives of the organization, risk management must enable leaders to accept the appropriate level of risk and ensure an appropriate balance of growth and operating efficiency so disruptive events do not unacceptably infringe on the organization's ability to fulfil its mission. (See Figure 4)

Another concern that results from a compliance-oriented, risk-management practices employed today is that the assessment of likelihood is far too dependent on the historical probabilities of the threats that create risks. While this can effectively address the known risks, focusing on known causes leaves the organization unprepared to address the unknown risks. Unknown risks can only be addressed by focusing on the potential consequences of disruptive events. Therefore, impacts and velocity must be given more weight than likelihood for more essential processes or assets. The criticality of any particular element of the organization, as measured by the importance of the elements that depend on it, must be used when identifying priorities for mitigating risks.

Many organizations are also limited in their current risk-management practices by the information foundation used for making decisions and taking action. Managing risks effectively is completely dependent upon current information being available when needed and in a way that is understandable within the context of the organization. The ability to correlate information is essential to understanding and addressing risks, mitigating impacts and identifying potential areas where the organization is likely to break under various scenarios.

Data gathered during most risk assessments are used primarily to define controls to limit impacts, without consideration for understanding outage tolerances and acceptable levels of risk. The information gathered during risk assessments should be used to prioritize investments by identifying the most critical risks, not just the most likely or the most impactful risks. Risk assessments should also help prioritize risk-assessment cycles, ensuring data are kept current and accurate. Assessing risks and controls on a regular cycle without factoring in organizational dynamics that alter risk levels renders the risk-assessment data useless when deciding on a course of action during a disruptive event.



Figure 4:

The Motor Racing Analogy

F1 engineers constantly try to make racing cars lighter by shaving off any excess weight from the car's frame. The hope is that it will go faster and hence be more likely to win the race with the right driver.

However, there is a balance between removing that extra weight and ensuring that it does not compromise a critical part of the car and result in race failure or injury to the driver in a crash.

Judging between efficiency (speed), risk (safety), and growth (winning) is a fine one in motor racing.

In many other occupations, resilience trumps efficiency. In other words, the principle of 'just in case' is better than 'just in time' in the face of unknown challenges.



TRANSITIONING FROM RISK TO RESILIENCE

Many risk-management programmes struggle to engage the first line of defence in a meaningful way. The ability to engage this first line in the organization is critical to driving better outcomes. A centralized information foundation should become a key resource to the first line of defence and inform how the organization works. The data captured can span not only the organization but also the entire ecosystem including key vendors and strategic partners. A solid information foundation that creates new abilities to analyse risk and drive action is imperative to becoming a more resilient organization.

The ineffectiveness of most risk assessments is further compounded by our inability to measure risk in context. Risks are often assessed, and impacts measured, against the enterprise as a whole or against a single element of the enterprise. But no process or facility or IT system is entirely self-contained and the failure of any element within an organization or the ecosystem may have significant impacts downstream. These downstream impacts must also be considered when prioritizing investments and risk-management activities for critical processes, critical products and critical services. Given that the risks and threats are endless and the resources to address them or not, then organizations cannot make the appropriate investments in risk management and resilience without a thorough understanding of the most essential elements and the most impactful elements based upon interdependencies.

The pandemic exposed many of the problems with the current risk-management practices. It has also accelerated the need to transform our risk-management practices that enable decisions on enterprise resilience, outage tolerances, risk appetites and the appropriate levels of investment in prevention and preparedness.

*Robert Sibik is Senior Vice-President
of Fusion Risk Management, Inc.*



PART B

SOLUTIONS



3.

CLEARER HORIZON SCANNING

We are no more or less than the sum total of our life experience to date. As we look to the future, it is inevitable – predictable even – that our interpretation of events is informed by our experience of events in the past. To foresee the future, however, we need to do more than simply look back.

In 2004, the National Commission on Terrorist Attacks Upon the United States published its official report into the events leading up to the tragic attacks of 9/11. The report highlighted key failures of imagination, policy, capability, and management. The failures remain pertinent in 2020. Yet, despite the most advanced technology and decades of investment in preparing for and responding to catastrophic events, we expect annualised, disaster-associated, socio-economic losses to continue to increase. There is no debate over the availability of data points anymore, so where does the problem lie?

This line of enquiry leads to one of three possible scenarios: (i) we are not horizon scanning; (ii) we are horizon scanning but we are not very good at it; or (iii) we are horizon scanning, we are very good at it, but we are neither able nor willing to act. The last of these options is the most plausible explanation. What is driving this? In short, we live in a world in which companies and cities, even national governments, are compelled to sacrifice long-term viability for short-term competitive advantage.

We will not be able to address a problem that we have not properly framed. Risk management, in its purest form, is an inherently logical process – a finessed version of inputs, calculations and outputs. Like most things in life, the point at which the human element gets involved is invariably where things start to go awry. More specifically, it is not the process that is failing us but the parameters we are feeding it.



NEEDING TO LOOK AND ACT

With respect to horizon scanning, the first step is to have an honest discussion about our planning thresholds. Fifteen years ago, climate-related risks occupied the ‘weird’, long-tail section of most corporate risk registers. With far less evidence of the catastrophic impacts of a changing climate than we have now, it was easy for these esoteric events to get punted into the future – ‘something the next administration can deal with’.

Today, with businesses and supply chains stretched across the globe, and disasters increasing in both frequency and severity, the likelihood that an organization could be affected by a catastrophic event is sufficiently high that it really does need to be pulled back into that section of the register that compels action today. For many leaders the question of disaster risk is no longer if but when: in an ‘always-on’ world, the degree of forgiveness that customers and shareholders alike may offer for not acting is reducing every day.

For a business that has been around for decades and plans to be around for many more, focusing only on those things that may happen in the next five years simply does not make sense. Horizon scanning is, though, about more than deciding when to look. One also needs to know what you are looking for and where to look for it.

‘Organizations are often quick to recognise the benefits of change yet rarely are willing to spend time after the fact looking for any new gaps that may have been created.’

Many large organizations have and continue to evolve at an alarming rate. Growing through merger and acquisition, pushing into new markets, embracing new digital models of business, these organizations are opening themselves up to all manner of new risk vectors – and perhaps closing some old ones – and it is vital their planning infrastructure keeps up. As we strive for efficiency, just-in-time logistics and profitability, we often fail to stop for a moment and think about what these changes mean in terms of risk. Organizations are often quick to recognise the benefits of change yet rarely are willing to spend time after the fact looking for any new gaps that may have been created.

A TEAM EFFORT

We need to look further afield than the usual suspects for the dynamic, new, perhaps unexpected, risks. As mentioned earlier, the tendency is to leverage past for solutions to solve for today’s and tomorrow’s problems. In practice, the likelihood that any one person within a risk organization will be aware of the latest process and technology developments in hazard detection and early warning is actually pretty small. This means we aren’t optimizing the tools at our disposal to identify and quantify new risks.



TRANSITIONING FROM RISK TO RESILIENCE

Recent years have seen exponential advances in the potential applications for technology in the field of risk identification and management, accelerated further by the adoption of new virtual ways of working driven by Covid-19. Risk leaders could and should task their teams with exploring the new 'art of the possible' in terms of real-time hazard identification and mitigation, deployment of artificial intelligence to complete and integrate previously unavailable data sets, and new methods of delivering early-warning systems direct to end users to name but a few.

In many businesses, the eyes and ears of hazard identification are poorly connected to the mind and limbs that may react to prepare for and respond to disruptive events. One sits in a 'cost centre' and the other in a 'profit centre' and any meaningful communication between the two requires information to take an elevator up five levels of management, walk down the hall and come five levels back down on the other side to be greeted by someone who probably was not expecting a visit. This portrayal oversimplifies, of course, although it probably resonates.

If we want these things to work in concert with each other we need to create systems in which barriers to co-operation are removed, decision making is decentralized, and agility across the business is increased to match the pace at which information can be found and analysed.

'Even today, in a world in which tragic natural disasters are becoming daily news, risk reduction is often disincentivised in contrast with risk response.'

LISTENING MODE

Which brings us to the last but most important point when it comes to horizon scanning: why is it when we stand atop the highest hill sending flawlessly crafted smoke signals do the people on the other side of the valley fail to act? What is the point of having a lookout if we are not going to listen?

This is the biggest challenge facing those who might seek to improve our ability to horizon scan. The system into which the results of our activities are fed is not one within which we are always incentivised to act. Even today, in a world in which tragic natural disasters are becoming daily news, risk reduction is often disincentivised in contrast with risk response.

Nobody will complain about spending money to save people who have just been caught up in a catastrophic event. Yet, for many leaders, the reality of trying to spend a million pounds/dollars mitigating a 1-in-20-year risk – even though we can prove without a doubt this is by far the most cost-effective way of doing so over that time period – is one in which they will face immense pressure from other factions within the organization who want to see that capital deployed towards a more short-term gain.



Where does this leave the conversation? We are making progress but not enough yet. Ultimately, the biggest challenge with horizon scanning is neither defining the horizon nor deploying the scan, both of which are fields in which we have seen huge advances of late. It is, as is so often the case, having people be minded to listen when the results come in. Over to you, leaders.

‘Ultimately, the biggest challenge with horizon scanning is neither defining the horizon nor deploying the scan, both of which are fields in which we have seen huge advances of late.’

John White is CEO of Equilonomy.



Box 2:

Five practical steps to improve horizon scanning

1. Look at old and new trends, plus gaps that may have been created by events.
2. Act on the pointers.
3. Make it a team effort.
4. Use technology to help deliver maximum effect.
5. Be willing to listen when analysing the results.



4.

BETTER PREPAREDNESS

Plans are least effective when they are deficient in self-analysis, and reflection is missing or incomplete. Organizations may deceive themselves about their preparedness for, and response to, incipient crises for reasons which may seem valid but may also bring a risk of negative impact. The deception may well be inadvertent: within the organization itself, there may be truth spoken. However, the very dynamics of the organization may not allow for recognition and communication of gaps, problems and constraints.

Whether struggling with the downside effects of 'groupthink', or concerned about blame culture, plans that ease the mind and soothe the organizational ego rather than solve the problem can be deceptive and problematic. Preparedness should be built on solid foundations rather than easy assumptions. The upheavals of the past four years, and particularly 2020, have shown that it is all too easy to talk about a problem without resolving it rather than preparing for its impacts.

FAULT LINES

When preparing for unwanted events, it is simply human to assume in all forms of risk management that the horizon-scanning, forward-looking, Black-Swan identifying actions have been planned – hence, we are prepared. We may deceive ourselves with models and frameworks and a subsequent belief that our excellent foresight and forecasting will see us through.

Recently, this planning myth has revealed fault lines and probably much more widely than we would like to admit. Covid-19 has shown that plans don't work as we would like because, as human beings, we allow our conceits to overcome our knowledge. Predicting the future, and its nuances, is a panacea but an impossibility. When we cannot position our organization and its understanding

¹Janis, Irving L. (1972). *Victims of groupthink; a psychological study of foreign-policy decisions and fiascos*. Boston: Houghton, Mifflin. ISBN 0-395-14002-1.

²PwC Crisis Preparedness as the next competitive advantage: Learning from 4,500 crises. <https://www.pwc.com/ee/et/publications/pub/pwc-global-crisis-survey-2019.pdf>

³Keyes, R. (2006). The Quote Verifier. *The Antioch Review*, 64(2), 256-266. doi:10.2307/4614974.

⁴Rami, U., Gould, C. (2016). From a 'culture of blame' to an encouraged 'learning from failure culture'. *Business Perspectives and Research*, 4(2), 161-168.

⁵Senge, P. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization*, London: Century Business.



of risk effectively, we are in no position to face the risks with any degree of effectiveness or capability.

If we accept, as PwC stated in their Global Crisis Survey (2019)², that crisis preparedness brings competitive advantage then preparedness should be a reality now rather than an intangible concept written into an unworkable plan. PwC states that: 'It's not if. It's when: No one is immune.' At a time when 'immunity' is something that is much more in our consciousness, we need to understand – as with a virus – that we can take steps to prepare. We most certainly should not watch and wait.

THE NEW PARAMETERS

Effective preparedness, with a clear head and understanding that we cannot manage out every nuance of every eventuality, is key to success. As we enter the new understanding of resilience that Covid-19 has catalyzed, we can see quite clearly that while everything has a cost – the most damaging long-term cost can be a lack of preparedness.

For the resilient organization, clear assessment based upon judgment, history, experience, models, learning and foresight is part of preparedness but not all. A longer-term planning assumption is that the organization will be able to orientate itself to mitigate impacts and to anticipate where the opportunities for growth on the other side of the problem may lie. Growth in a time of confusion and change is not a non sequitur, and in the commercial context only those organizations that know themselves, their operating context, and are prepared to learn and engage with change, will survive and thrive. (See Figure 5)

The preparedness that we do build needs to be resilient in itself. There are many variations on the sentiment first attributed to Helmuth Von Moltke, such as '...no plan of operations extends with any certainty beyond the first contact with the main hostile force'.³ But we need plans nonetheless, and as General George Patton stated: 'A good plan violently executed now is better than a perfect plan executed next week.' Both ideas are predicated on the fact that something is better than nothing. That 'something' needs to be based on knowledge and understanding which, in turn, gives the preparedness necessary to engage with the problem.

It is doubtful that, despite their qualified statements regarding planning, either general would have been comfortable in pressing on without maximal preparedness in place. Thinking too hard about what may initiate the problem

Figure 5:

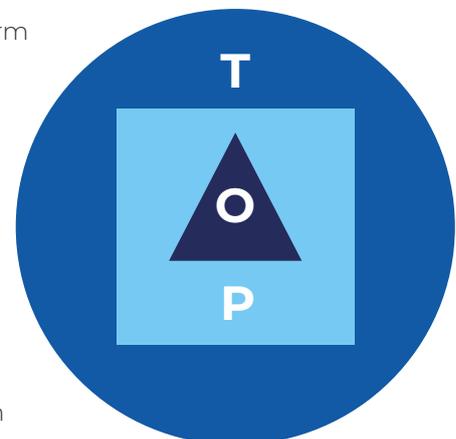
The Prepared Organization

If we aim to place the organization (O) to be protected within a preparedness framework (P), it is important to ensure that P remains intact.

P can only remain intact and coherent if the organization recognises its limitations in planning and preparedness, and is properly self-aware.

Where organizations do not understand that planning will be imperfect, that we cannot predict all threats and risks effectively, and they fail to learn, then the integrity of P will be threatened or compromised.

External threats and risks (T) will remain prevalent whether P is in place or not. However, if gaps do appear then the vulnerability of O is clear.



is less of an issue than understanding that there are vulnerabilities and targets, that someone or something is exploiting or bypassing those vulnerabilities, and may well get through. If the target is reached then the thought and effort expended on deterrence are wasted when we could and should be thinking about impact. Preparedness is more about dealing with that target penetration than cutting off the problem at source.

LEARNING IS KEY

Organizations would do well to think now about their preparedness. Primarily, the ability to think innovatively without fear of ridicule or constraint is critical for the development of preparedness thinking. We should be wary of ruling out ideas while ruling in what has served us in the past. The 'constructive error culture' discusses the advantages of blame-free thought and is a useful component of preparedness thinking. This thinking also should focus on what is 'learned' rather than what we think we know already.

Covid-19 has taught us many lessons – the need to learn among them. The idea of organizations as 'learning entities' rather than reactive, defensive groups of separate, somehow linked subgroupings, sometimes working at odds, should be attractive to those looking for new resilience capability. If we treat an organization as a system, we are considering not only a single-dimensional idea of an organization as one that conducts a particular business orientated activity but also the organization as something that has a complex set of hierarchies and interactions across multiple functions and driving that organization towards improved capability and, of course, better resilience.

Professor Phil Wood is the Head of School, Aviation and Security at Buckinghamshire New University.



Box 3:

Five practical steps to improve preparedness

1. Avoid groupthink and a blame culture.
2. Focus preparedness on bringing competitive advantage.
3. Base an assessment on judgment, history, experience, models, learning and foresight.
4. Orientate to mitigate impacts and anticipate the opportunities for growth.
5. Consider the best ways to learn from past mistakes.



5.

UPGRADED COLLABORATION AND COMMUNICATION

‘Collaboration’ is a term that is widely used today but is frequently misunderstood. To some, it is a panacea; to others, it is a contrary to the way we have been encouraged to work and a significant risk since it introduces interdependency. In some respects, risk itself is often misunderstood and viewed negatively whereas it can be both an opportunity and a threat depending on how it is managed.

THE SHORTFALLS

Over decades, industry has tried to enhance its position by working with an array of external organizations to the extent that many have become hybrid corporations. The resilience of these often-critical arrangements has rested solely on a traditional hierarchical and contractual relationship. This has tended to focus on two factors: what might be considered contracting for failure, and the transfer of maximum risk to external parties. Neither of these factors creates an environment for success. There have been many examples both within industry and government where the failure of an external party returns that risk.

The advocates of partnering in the 1980s and 90s promised significant benefits but most evidence suggests that less than a fifth of these arrangements delivered on the promise. This was, in part, because many had no real business reasons but followed the crowd. Those that did make commercial sense were managed under traditional command and control thinking.

The Covid-19 pandemic has shown a myriad of examples as to what can be achieved when organizations collaborate. Even competitors see a need where they can jointly harness their capabilities and resources. Indeed, in many cases, those who had invested in strategic relationships found themselves receiving unexpected support.

© ISO 44001-17
Collaborative business
management systems
framework.



At the same time, the current unparalleled events have also revealed flaws in the business processes and relationships which had been assumed to be both robust and stable, whether these were multi-national, regional or local. The cracks stem from a long history of structuring relationships in organizations, looking at the arrangements from the inside out. A counter view assessing them from the outside in would produce a very different perspective.

The same thinking accounts for a flawed approach to risk. Whilst most would recognise the importance of strong relationships, these are frequently left to personal connections and, in terms of risk management, not considered to be worthy of even including in a risk assessment. Indeed, it is true that a more integrated, working relationship can introduce risk by association and interdependence.

THE BENEFITS

Another view is that joint risk management can share the load, remove risk-on-risk assessments, address perceptions of risk, target mitigation, increase the opportunity to absorb risk and thereby improve competitive edge. Perhaps, equally beneficial, is the opportunity to remove insecurities, whether organizational or individual, thus enhancing levels of trust and resulting in more productive behaviours. Alongside these benefits, the better the level of engagement, communication and openness between organizations then the greater the ability to be flexible and agile when responding to events outside our control.

The case for considering collaboration, whether as a business driver or risk mitigation, is strong. When we recognise its application in the current climate, we should be learning to harness it for the future in order to enhance capability and resilience wherever we are dependent on others, which is generally the case.

As we move more towards new enterprise models, alliances and networks, there needs to be greater focus on using collaborative approaches to address some of the complexities and risks which these ventures can create. (See Figure 6)

Before considering a collaborative model, organizations need to consider the context within which they operate.

Figure 6:

Collaboration

Being collaborative without setting expectations is just wishful thinking; collaborative behaviour without definition provides no measure of reality and collaborative working without rules of engagement is chaos. Thus, if we want to harness the power of collaboration, we need to consider a more systemic approach. It should not simply rely on personal relationships but look at how to embed collaborative thinking. This should be not only in risk management but also throughout the organization since, in many cases where we depend on others, a lack of internal recognition can create threats from within.



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This should include a validation of not only the business case but also the stakeholder communities which may be impacted by the activities. Failure to consider, for example, societal considerations may introduce levels of risk in performance and potential to achieve desired outcomes.

Perhaps even more critical is the need to understand the dynamics of collaborative leadership. The traditional command-and-control models must be tempered with a more holistic approach which looks beyond the race to the bottom and consider the economic, governance and social implications of the activities. They will also have to foster an environment where trust can be created and sustained both internally and externally.

The operational policies, processes and systems of organizations need to be re-examined to establish appropriate methods to harness the full potential of collaboration. In addition to the development of the skills and expertise to exploit fully the opportunities whilst encouraging collective ownership of risk management by those best suited to the challenge. The publication of an international standard for collaborative business relationships is a framework for such a development.⁶

There is little doubt that the issues of today, whether the volatility of the pandemic, environmental change, global political upheaval or Brexit, will create a wide range of challenges, risks and opportunities. We should, therefore, be learning from these experiences and recognise that as we must consider a more robust and structured approach to relationships and the inherent risk profiles that support more effective communication and levels of trust if we are to build greater resilience.

David Hawkins is Chief Operating Officer of the Institute for Collaborative Working



Box 4:

Five practical steps to improve collaboration

1. Make better collaboration, even with competitors, an objective.
2. Introduce joint risk management to improve the competitive edge.
3. Improve the level of engagement, communication and openness between organizations to achieve greater flexibility and agility.
4. Consider societal factors around performance and potential to achieve desired outcomes.
5. Adopt a more holistic approach and consider the economic, governance and social implications.



6.

IMPROVED CULTURE

The word ‘culture’⁷ has no commonly agreed definition but it is as important for organizations as national identity is for nations. It establishes the values, attitudes and behaviours around which a diverse collection of peoples and communities can coalesce and belong. In fact, culture emerges from complex human interactions which in turn drive behaviours. Like many behaviours, culture is often slow to establish itself, sometimes taking years for companies, even centuries for nations. It is forged and promulgated at all levels but can be cultivated and subverted from the top. ‘Corporate culture’⁸ also has a near mythical power to stimulate creativity and innovation, achieve the ‘greening of industry’⁹ and has diverse uses in systems development.¹⁰

Culture sets risk appetite and tolerance, and hence forms the basis of risk and resilience management. Wide-scale acceptance of the ‘Clunk Click Every Trip’ seat-belt campaign in 1970 was centred around a desire for better road safety. The fact that it took 14 years to be codified into law demonstrates that even an obvious risk i.e. death on the road can be slow to be formalised. Language, a key element of culture in terms of both nationalities and communities, can also play a significant role in cementing attitudes and interpreting risk.

A CORPORATE PANACEA?

‘Culture eats strategy for breakfast’ is a quotation attributed to the management guru Peter Drucker.¹¹ It is one of those phrases which over emphasises the fact that a strategic aim is seldom achieved by a team that does not share a common culture. But, in being memorable, it omits to note that even the best culture lacks direction without a strategic intent; it is a bit like arguing that the heart is

⁷ Jahoda, G. (2012). Critical reflections on some recent definitions of “culture”, *Culture & Psychology*, 18(3), 289-303. doi: 10.1177/1354067X12446229.

⁸ Martins, E.C., Terblanche, F. (2003). Building organizational culture that stimulates creativity and innovation, *European Journal of Innovation Management*, Vol. 6 No. 1, 64-74. <https://doi.org/10.1108/14601060310456337>

⁹ <https://onlinelibrary.wiley.com/doi/abs/10.1002/bse.3280020402>

¹⁰ Doherty, N.F., King, M. (1998). The importance of organizational issues in systems development, *Information Technology & People*, Vol. 11 No. 2, 104-123. <https://doi.org/10.1108/09593849810218300>

¹¹ <https://www.forbes.com/sites/shephyken/2015/12/05/drucker-said-culture-eats-strategy-for-breakfast-and-enterprise-rent-a-car-proves-it/#59d5ce252749>



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more important than the lungs. Here it is assumed that there is a symbiotic relationship between strategy and culture, and that neither on its own is a corporate panacea.

Sadly, however, many corporate cultures when under the pressure of a crisis actually present additional risks. This is illustrated by some anonymised statements of companies during crises:

- ▶ 'We don't temperature test staff as we have a strict culture of not coming to work if they are ill for any reason at all.' (Pharmaceutical)
- ▶ 'We've got all the data we need at the centre but once it goes to the departments, they are too siloed to share responses.' (Petrochemicals)
- ▶ 'Our ExCo has approved that plan but it needs to go to the central ExCo for final approval.' (Construction)

It is evident that, for better or worse, in a crisis companies can be constrained or enabled by their cultures and, furthermore, the highly vaunted corporate culture can in fact be the latent source of a risk which is potentially far greater than incident itself.

Whether it be a charity in Africa, a hedge fund in London or a Sao Paulo street gang, the part of their respective cultures that we can witness are their behaviours but this is merely the tip of the cultural iceberg. Organizations do not actually dictate a culture, rather they provide the foundations and conditions for it to evolve. The foundations and conditions of a culture are shown in *Figure 7*.

THE HURDLES

Despite the evident transformative power of a culture, much endorsement of its value in 'High Reliability Organizations' with excellent safety cultures^{2,13}, and even with 48 million Google references and 1.2 million scholarly references to 'corporate culture', it is simply difficult to get right.

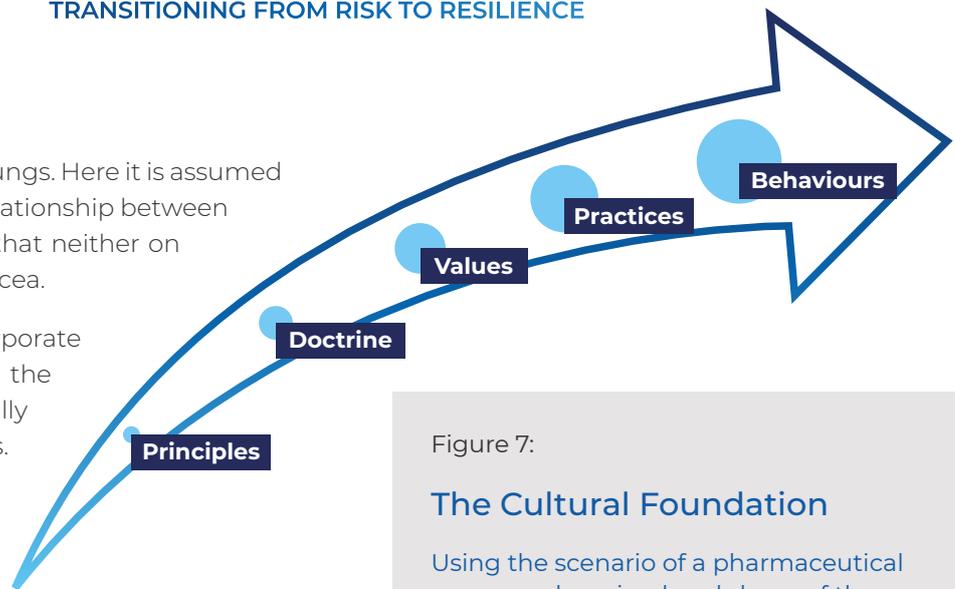


Figure 7:

The Cultural Foundation

Using the scenario of a pharmaceutical company, here is a breakdown of the key elements of culture in a corporate context of resilience:

- ▶ A **principle** might be that: *'The protection/safety of the consumer is the paramount consideration in our operations.'*
- ▶ The resultant **doctrine** might be: *'We will maintain a rigorous method of communicating to the public.'*
- ▶ A **value** derived from this could be: *'Honesty in dealing with the public.'*
- ▶ The **practice** would be an: *'Open and transparent communications policy.'*
- ▶ The whole process, the culture, is then witnessed in the **behaviours** should the company have to conduct a drug withdrawal.

The challenges are not only the traditional ones of investment, time, resources and revisions to procedures. One is trying to drive a mental paradigm shift to identify and adopt a 'good' corporate culture. To do this takes a lack of ego and reflection that is not common in many organizations. It also requires strong and sound leadership at all levels. It is leadership that sets and steers the principles, doctrine, values and practices of the organization and determines the resilient behaviours.

This emphasis explains why the military pays considerable attention to the nature of doctrine in shaping its culture. Doctrine has its foundation in history and derives its authority from being a distillation of much hard-won experience. Therefore, it is enduring but is not unchanging. It is not a hard-and-fast set of rules which can be applied without thought – avoiding group thinking – but a framework to guide, explain and educate. This means that learning, diversity and openness are essential components in keeping doctrine, and thereby culture, alive and relevant. (Research suggests that 'greater board diversity leads to lower volatility and better performance'.¹⁴)

What has changed since 2019 with the arrival of the coronavirus is the vision, will and leadership to wrestle an organization into a constructively self-critical position. In addition, the task is to identify where within corporate culture the generation of risk is potentially taking place.

Dr Chris Needham-Bennett is Managing Director of Needhams 1834 Ltd.

¹² <https://www.hse.gov.uk/research/rrpdf/rr899.pdf>.

¹³ Provera, B., Montefusco, A., Canato, A. (2008). A 'no blame' approach to organizational learning. *British Journal of Management*, doi: 10.1111/j.1467-8551.2008.00599.x.

¹⁴ Bernile, G., Bhagwat, V., Yonker, S. Board diversity, firm risk, and corporate policies. (2016). 1-96. Research Collection Lee Kong Chian School of Business, Singapore.

¹⁵ Syed, M. (2016). *Black Box Thinking*. John Murray (Publishers): London.

¹⁶ Festinger, L. (1957). *A Theory of Cognitive Dissonance*. California: Stanford University Press.

¹⁷ Janis, I. L. (1971). Groupthink (PDF). *Psychology Today*, 5 (6): 43-46, 74-76.



Box 5:

Five practical steps to improve culture

1. Encourage openness and learning from failures.¹⁵
2. Develop diversity in terms of gender, race, etc, and in canvassing a broader opinion of risk.
3. Beware of 'cognitive dissonance'¹⁶ where people under pressure can tend to make information fit their pre-existing beliefs.
4. Address the issue of 'groupthink'¹⁷ by challenging conformist decisions.
5. Consider risk and resilience from not just the obvious stakeholders but also the broader community who are affected by your activities; this is the start of building that elusive social capital.



7.

ENHANCED LEADERSHIP

Dealing with risk is somewhat like waiting for a bus. For long periods, nothing appears then, all of a sudden, several appear at the same time. First, there is the Brexit bus of uncertainty slowly trundling down the road. Out of nowhere appears the swerving Coronavirus bus of health and economic disruption. Following is the Climate megabus of environmental change. All these buses present corporate leaders with dangers but also new opportunities. Each requires from the driver someone who can choose the right route and steer the vehicle down the road while avoiding the ditch. Over-attention to the rear-view mirror will not guarantee safe arrival at any destination.

FACING THE UNKNOWN

Driving or leading today's companies, whether large or small, is about making decisions when often less than 70% of the key facts are known, when employees are dispersed and alarmed, when inequalities beyond one's normal authority are reaching fever pitch, and the world boils in its excesses. Platitudes and policies are no longer sufficient – doing nothing or avoiding harm is no longer good enough.

Leaders, both political and corporate, need to show that they can rise to the multiple and concurrent challenges by providing a hopeful vision that unites. It means positively acting and being counted in the pursuit of principles and ethics. Above all, leaders need to display and promote resilience to the risks materialising. This can begin with a well-crafted and enacted Enterprise Resilience Management (EReM) framework. This should remove the all-too frequent disconnect between strategic risk and operational resilience.

A new EReM framework that has leadership at its core should include three key enablers that leaders should adopt and embed in their organizations. (See Figure 8)



INGREDIENTS OF SOUND LEADERSHIP

In a survey of 132 risk professionals in mid-2020, one risk association looked at how risk professionals and their organizations did during the pandemic and what competencies they require to be future-fit.¹⁸ Effective leadership was regarded as the most important resilience principle that organizations prioritise – 70% of respondents to the survey said it was what their organization would classify as being among their top three priorities.

Besides ensuring the three enablers are present, a leader adopting an EReM framework should pursue at least three key attributes.

The first is a unifying ‘north star’ around which all in the company can coalesce. (See also Section 10) When anxious employees may be dispersed and working in isolation then it is important that staff understand the common purpose and ethos of the company, what the military call ‘mission-oriented command’. This means that when normal communication or direction is disrupted, people know instinctively what to do without waiting for detailed instructions and authorisation. They can interpret their task in ways that ensure continued success. But beware of group think i.e. the inclination to follow the pack and conform to the majority view, even when one suspects the majority view is wrong. This can increase the risk of uniting around the wrong course of action and failing to consider better options.

The second flows from the first, namely empowerment. If people are expected to react without waiting for instructions and authorisation then they should be empowered with the necessary responsibility and capacity to be able to use their initiative and deal with the situation under the ‘north star’. Empowering employees can provide both motivation and satisfaction while reducing staff turnover. People will be more innovative and flexible in their routine tasks, hence more productive, and will be more prepared to act should the routine be disrupted because of a crisis.

The third is making trust a vital component. It means being dependable for customers, providing confidence to employees, maintaining critical supply-chain and third-party relationships, and keeping shareholders on board. Moreover, those national leaders who have the trust of their populations appear to have weathered the Covid-19 storm better than those without such endorsements. Yet, trust takes time to establish – it can also be broken in

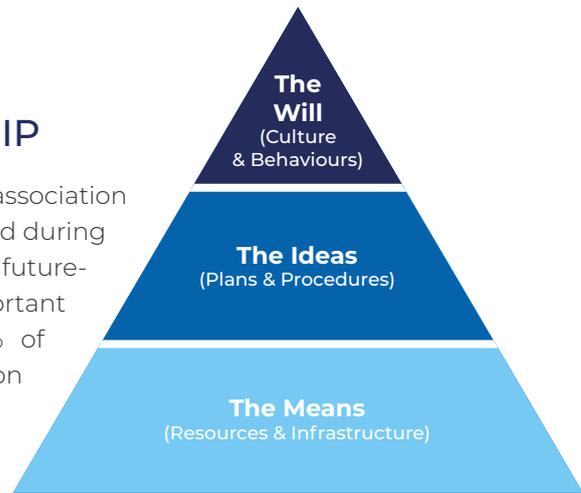


Figure 8:

The Enablers of Leadership

In 1954 Maslow developed a hierarchy of needs which introduced his theory about how people satisfy various personal needs in the context of their work. In a variation of Maslow’s theory, this hierarchy reflects the key elements of leadership that should be satisfied if a leader is to have success within an organization.

- ▶ The **means** or physical enablers to survive and recover i.e. the resource component.
- ▶ The **ideas** or procedural enablers around which to operationalize a plan i.e. the intellectual component.
- ▶ The **will** or social enablers to create cohesion and motivation among the workforce i.e. the moral component.

¹⁸ Airmic Guide 2020. New challenges, new lessons Covid-19 pandemic and the future of crisis management. In association with Control Risks. <https://www.airmic.com/sites/default/files/technical-documents/Airmic-guide-the-covid-19-pandemic-crisis-management.pdf>

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an instant. The rapid shift by many organizations to new operating models shows that people can rise to unusual challenges and generate a degree of self-motivation but that still needs constant nurturing by leaders who are respected, trusted and accessible.

Cementing together all three elements – in effect, the fourth element – is communication. Effective crisis leaders in all walks of life are invariably excellent communicators. They convey a clear and succinct core message (i.e. mission orientated), one that is reassuring, collegiate and transparent (i.e. inspiring) while also receptive (i.e. a top-down and bottom-up appreciation). With furloughing or home working, for example, regular communications through virtual town-hall meetings can help strengthen bonds, gauge sentiments and improve motivation. Only in this way will confidence be strengthened so as to convince others that the battle – and winning – is a collective effort: we are all in this together.

An organization is better able to weather a storm if it has trusted leaders, a motivated workforce, loyal partners, and talented managers who understand how people behave in stressful situations. A well-run organization will nurture its people during a crisis, knowing that their ingenuity and persistence will be crucial. However, the steps necessary to achieve this begin well before a crisis with regular education (imparting knowledge) and training (imparting skills): frequent exercising can strengthen these elements and the all-important team bonds.

Technology, as a physical enabler, can help exploit as well as link all the elements behind a framework and the leadership of it. The pandemic has shown how dependent we are on technology to maintain distance working, a feature that will grow as automation and the IoT continue to grow apace.

Robert Hall is Executive Director of Resilience First.



Box 6:

Five practical steps to enhance leadership

1. Even with unknowns, it is better to do something rather than prevaricate – doing nothing or avoiding harm is no longer good enough.
2. Provide a hopeful, common purpose and vision that unites (without false expectations) and can build trust.
3. Generate motivation through empowerment and delegation.
4. Nurture an emotional resilience around all the people in the organization.
5. Communicate a clear and succinct core message that is reassuring, collegiate and transparent.



8.

ADVANCES IN TECHNOLOGY

Organizations have had to reconfigure their businesses quickly in response to Covid-19. A key change was the growth in remote or home working. Pre-pandemic, around 5% of UK workers were home based but this leapt to 27% by July 2020.¹⁹ The rise in virtual meetings was staggering, with the peak daily number of Zoom meeting participants growing from 10 million in December 2019 to 300 million worldwide in April 2020.²⁰ The jury is out on how this will settle post-pandemic.

The telecommunications and computing (or mobility) revolutions which began in the 1990s have matured with the development of cloud services to enable remote workers to access enterprise apps and rich communication media. Yet, an upsurge in demand for laptop computers illustrated that this was still a significant change for many organizations or functions and they had to move quickly to get their IT infrastructure fit and ready. Consumer behaviour also forced businesses to be agile as online grocery shopping rose by 17% and erratic demand patterns challenged supply chains and logistics.

A REVOLUTION ACCELERATES

The 4th Industrial Revolution is underway and is defined as the era of fusion between physical, virtual and biological worlds. Billions of objects ranging from cameras to traffic lights to drones to wearables are connecting to the Internet of Things (IoT) and creating massive amounts of data. The 5G roll out is delivering high-bandwidth, low-latency connectivity and transforming network capability. Artificial intelligence provides opportunities for organizations to augment operations and processes across the enterprise. Smart machines, 3D printing, virtual reality and cognitive systems which can interpret and predict human needs are here. Forward-thinking organizations are figuring out how to harness these capabilities to increase adaptiveness and agility in

¹⁹ FCSA analysis of ONS data, 31 July 2020. <https://www.fcsa.org.uk/27-of-uk-workers-are-still-working-exclusively-from-home-many-of-them-contractors/>

²⁰ Zoom earnings call webinar for quarter ending 30 April 2020.



their businesses so that they can protect their assets, people, operations, customers and partners in the face of the unexpected, and how to become a force for good in ensuring resilience beyond corporate boundaries.

Operationally, digital technology and automation elevate business resilience. There are many examples across industries. Smart machines can automate the production process, co-ordinate the supply of materials, information and goods, and even facilitate the ability to respond to individual customer requests. 3D printing can transform supply-chain logistics and enable unprecedented flexibility in manufacturing networks. By connecting networks and assets, utilities companies can achieve high operational efficiency, reduce wastage and create opportunities to innovate in managing customer demand. Deployment of integrated traffic-management systems enables transport companies to optimise asset utilisation, reduce congestion and improve customer service. Such capabilities increase the availability of resources to engage in strategic work – work that needs to be managed by humans. Only humans can be creative and strategic, lead and influence people as they adapt to change and disruption.

Advanced business intelligence and analytical capabilities create exciting new ways to communicate and collaborate across organizational functions and leadership structures. Big data systems are able to access massive amounts of information and return results in under a second in response to queries which would once have been run as overnight batch jobs. By applying Natural Language Generation (NLG) to structured data, report generation can be real time and automated hence enabling humans to focus on decision making. Cognitive user interfaces enable voice recognition, multi-lingual services and collaborative tools for remote and distributed work patterns. Faced with serious incidents in a connected environment, immersive technologies such as virtual reality could enable leaders and experts to 'experience' the situation in real time

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and lead or contribute as if they were on the ground. Modelling and simulation could be employed to practice 'what if' scenarios under various conditions.

Of paramount importance is to keep people safe and digital technology can play a key role. Robots undertake tasks where it is unsafe for people to work and wearable technology can protect human posture and avoid over-exposure to hazardous conditions. Virtual reality can provide remote immersive training to ensure that employees are well-equipped and confident to undertake tasks. Drones with computer vision can carry out tasks and provide intelligence where access could be challenging.

BUILT IN RESILIENCE

How resilient is the technology? The decentralized nature of the internet means it is very unlikely to fail at the global level. Internet service providers have incorporated high levels of security, redundancy and back-up support to ensure that failures are managed quickly and effectively. Some of the biggest corporations in the world are fully web based and are fixated on business continuity.

Organizations should implement adequate and robust levels of redundancy and back up to ensure that mission-critical processes are fully protected and web services can scale and grow. As business models based on the IoT flourish so do the number of attack surfaces, and cyber security protection must be designed-in to connected devices and across networks. Business contingency planning and drills should include scenarios related to technology failure so that back-up processes and operational knowledge are well-maintained and well-understood.

Ian Jones is a former Director of Enterprise Business Development at Intel Corporation.



Box 7:

Five practical steps to integrate technology

1. Ensure IT infrastructure is fit and flexible to support communication and collaboration across functions and management structure in challenging situations.
2. Take advantage of interconnectedness and data to increase agility across the business.
3. Create leading-edge business intelligence and data-analytic capabilities which harness automation, visualisation and cognitive technology.
4. Use simulations and modelling which can play out 'what if' scenarios and quickly test out ideas.
5. Collaborate on resilience best practice with suppliers, customers and third parties.



9.

IMPROVED SAFETY

Few organizations will escape unscathed by a high-impact event and therefore having robust frameworks for risk and resilience management should be a given. Yet, whilst we know this, our approach has seemingly been lacking in many aspects because outputs have largely been compliance focused and silo oriented.

The practices of safety and security are frequently used simultaneously. While presenting different meanings that can be contradictory, they share the same outcomes in that the practices used in both are meant to provide protection from harm whether through accidental avoidance or deliberate intention. In themselves, they are meant to provide protection to the organization and assurance that the appropriate measures are in place to mitigate the consequences of a consequential event should one arise.

In this context, organizations should enhance their focus on safety and security to better prepare for and respond to unpredictable events and the potential for crises. As an example, a shift to homeworking and an increased online dependency for many organizations during the Covid-19 pandemic have brought about an increase in cyber-related crime: one report has suggested that there has been a 'significant target shift from individuals and small businesses to major corporations, governments and critical infrastructure'.²¹

Whilst some areas of crime have been reported a drop – a likely result of social distancing and lockdown measures – increases in fraud and counterfeiting have also been reported. Here, criminals seek to exploit security exposures created when organizations are having to move quickly, and not necessarily diligently, to the new dynamics. This exposes not only the organization to harm but also their employees who are themselves having to adapt quickly to the situation and to learn the new safety and security procedures. These reactive and constant changes will undoubtedly unbalance people and practices. Therefore, organizations with an existing robust and adaptable safety and security risk-management programme that is regularly tested are likely to fair

²¹ <https://www.interpol.int/en/News-and-Events/News/2020/INTERPOL-report-shows-alarming-rate-of-cyberattacks-during-COVID-19>



much better from external and internal risks than those without.

ADAPTING TO A NEW DYNAMIC

The methods used to assess health and safety risks differ from those for security, environmental and financial or market risks often because the perspectives on the causes of harm differ, as do the effects and impacts. Where the same risk-assessment methods are used to assess all risks, the results can be miscalculated if the variables across each functional area have not been correctly considered.

This encourages those very siloed practices that may not easily be understood by those outside those practice areas. A separation of approaches will seldom enable an organization to anticipate appropriately, prepare for and respond to crisis, let alone allow it to foresee its broader emerging and disruptive risks.

While compliance must remain a principal area of focus to any risk- and resilience-management programme, particularly where governed by law, a reliance on accredited processes that have not proven to be adaptable to events will only restrict an organization's ability to respond.

Accordingly, the varied practices must become simpler and more understandable for all groups in order to become an essential and integral part of strategic and business decision making. Computer-based platforms continue to evolve and offer more systematic solutions for those in-between. However, tools alone will not create resilience. This is where Enterprise Resilience Management (EReM) could play a pivotal role.

INTEGRATION

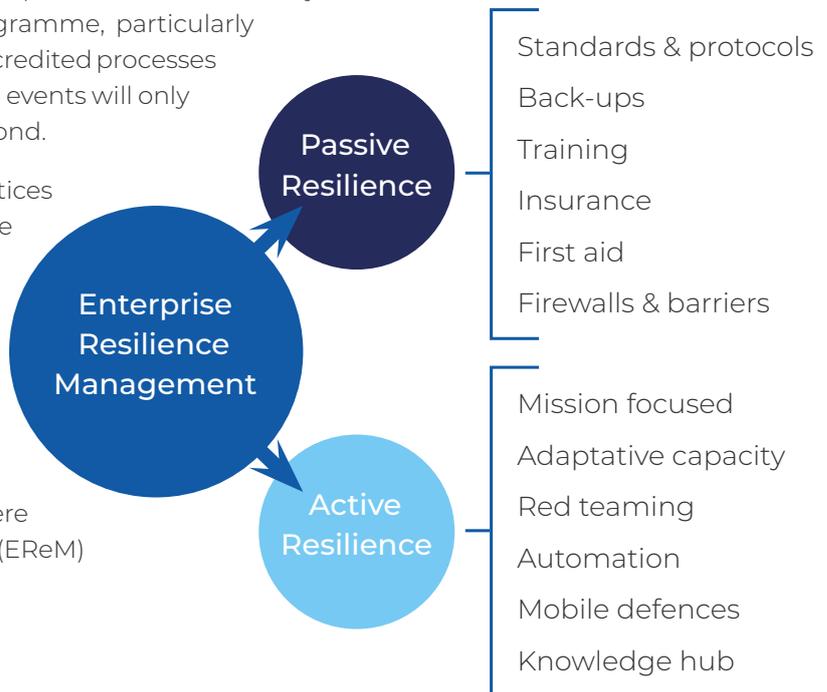
The extent to which EReM is practiced within organizations remains questionable. This could be attributed to the fact that there is unlikely to be a single or one-size fits all approach. Studies suggest that the subject has gained traction in many large organizations, has improved risk appreciation, and has become a top priority. However, the extent to which risk and resilience are understood throughout all levels of an organization results in many

Figure 9:

Passive and Active Resilience

Passive resilience is the ability to absorb disturbance, recover quickly from a setback and return to normality. It is about being robust and hardened.

Active resilience means growing progressively tougher by learning from adversity and becoming better able to avoid and manage future stresses. Actively resilient people continually learn from their experience and develop stronger defences, making them better able to resist the next time. They are less likely to experience a crisis and cope better if they do.



considerations not being fully integrated into an organization's strategic planning.

If an organization's front-line decision making and risk taking is not known at the top-level, this may result in misguided strategic decision making. With this in mind, the need for simplified risk- and resilience-management practices and faster methods to communicate risks and risk changes is evident in order to foresee the broader emerging and disruptive risks to the organization. This would suggest an adoption of computer-based processes as a given solution in today's working environment where digital systems are so readily available.

ACTIVE AND PASSIVE RESILIENCE

Beyond the strategy and systems for delivering safety and security, there is an important distinction to be made that allows a transition from the familiar understanding of risk in terms of reducing the severity or duration of harm – bouncing back – to one in which effort is directed at learning from bad experiences and developing stronger defences to resist future disruption – bouncing forward. The latter can be called 'active resilience' (i.e. change to new state) while the former is 'passive resilience' (i.e. recovery to old state). (See *Figure 9*)

Active resilience allows an organization to build its 'muscle strength' in safety and security so that it is better prepared for the next breach. It accepts that there will be failures in the system but that lessons learnt will allow improved hardening in the future. To do this effectively, it is necessary to build a corporate memory bank of lessons learnt and have a sound exercising regime so that lessons can be revisited and from which a legacy can be established for the benefit of successive teams. In this way, agility and adaptability can be strengthened.

Gavin Wilson is Director of Security Services at Toro Solutions, and former Head of Risk Advisory Services at Wilson James Ltd.



Box 9:

Five practical steps to improve safety

1. Simplify risk-management methods to encourage an understanding for all.
2. Focus on outcomes to enable event-focused responses.
3. Create responses and establish lessons that can be easily adapted to all levels of the organization.
4. Implement a system that communicates risk from the front-line to the top level.
5. Focus on the active elements of resilience.



10.

BETTER AGILITY AND ADAPTATION

The Covid-19 pandemic has demonstrated the need for all organizations to be able to weather major, unforeseen disruption. Organizations able to absorb and adapt to the challenges of the pandemic successfully are, by definition, resilient. Many also find themselves making decisions at a speed which would have been unthinkable in pre-Covid-19 times.

What characterizes these organizations? What creates this kind of resilience? And how can organizations apply the lessons learned from the pandemic so that in the 'next normal' they remain resilient, flat, and fast? The answer is agility. Five characteristics stand out across organizations in the face of the pandemic: each characteristic has not only helped navigate the Covid-19 crisis but also pointed the way toward a more agile operating model that can be more resilient in the next normal.

A COMMON PURPOSE

This helped engage and motivate employees, and prioritize competing demands. Organizations that have found a new focus during the Covid-19 crisis should consider if they can enhance and develop their common purpose to hold true in more normal times, giving employees the same clarity of decision making and ability to act as during the pandemic. Agile organizations often speak of a shared purpose and vision – the north star (see also Section 7) – which helps people feel personally and emotionally invested in the organization. This beacon allows employees to individually and proactively watch for changes in customer preferences and the external environment, and then, act upon them.

STRUCTURES TO AID DECISION MAKING

New structures allow organizations to cut the usual red tape and management layers that lead to slow and laborious decision making. Decisions that



previously required hard-won consensus or an onerous burden of proof could be accelerated if they could be overtly aligned to the organization's common purpose. Organizations should retain the rapid decision-making cycles they implemented during Covid-19 but in a way that is sustainable for the long term. Daily conference calls with the entire executive team may be unrealistic but continuing to embrace the mindset of making small decisions quickly – ensuring teams are guided by a clear purpose and have access to all the information needed to make those decisions – will lead to a greater ability to innovate and adapt to changing circumstances.

NETWORKS OF LOCAL TEAMS

Local business units became the focus for many organizations, with clear accountability for what they were responsible for versus the central team. The pandemic also led to several organizations reducing hierarchical barriers, bringing senior leadership in much more direct contact with operational leads. Agile organizations typically maintain a stable top-level structure but replace much of the traditional management hierarchy with a flexible, scalable network of teams. They go beyond just creating local teams to creating dense networks of teams. They implement clear, flat structures and ensure there is clarity of role accountability.

Agile organizations can implement networks of teams in different ways, depending on what makes sense for their specific circumstances. Flexible, scalable and flatter organizational structures proved effective during the pandemic. In these, the team is at the heart of the structure, and team-based working – a central tenet of agile thinking – has advantages over a hierarchical structure in terms of speed, precision, decision-making, and the satisfaction of employees. Organizations would do well to continue the team ethic and to extend the team-of-teams practice that has proved so effective in uncertain times.

A CULTURE TO EMPOWER

Organizations should consider how post-Covid-19 they can continue to empower their people. Frontline employees are closer to the customer and therefore usually have more relevant first-hand information and better ideas about customer needs. Organizations should ensure this sort of culture continues beyond the current crisis by investing in leadership that empowers and develops their people. In agile organizations, leaders act more as visionaries, architects, and coaches, and less as directors and controllers. They put in place processes that reinforce this and give their people clear accountability combined with the freedom to pursue opportunities. Many also proactively help employees build new capabilities through role-mobility programmes.

²² Brosseau, D., Ebrahim, S., Handscomb, C., Thaker, S. (2019). The journey to an agile organization. McKinsey.com.

²³ De Smet, A., Lurie M., St George, A. (2018). Leading agile transformation: The new capabilities leaders need to build 21st-century organizations. McKinsey.com



TECHNOLOGY AS NEEDED

To enable many employees to work from home during the pandemic, several organizations quickly secured access to remote-working technology such as laptops and webcams. By necessity, many organizations have had to move to a model where technology is key to every interaction, and a number of familiar tools have quickly become part of ordinary working life. Organizations are already considering which new technologies they want to embed in their ongoing ways of working. Agile organizations go beyond this consideration and think of technology not as a supporting capability but as being seamlessly integrated and core to every aspect of the organization. Organizations undergoing a full agile transformation would cut any technology that was outdated – including legacy architecture – to adopt new, more suitable platforms. All organizations now need to consider to what extent they want to do the same, bearing in mind their organization’s willingness to take on cost and security risk, which may enable or limit how far they go down this path.

Organizations that want to keep the benefits they have enjoyed during the Covid-19 crisis, such as faster decision making and clarity of purpose, need to make that choice now. To shift toward an agile operating model, organizations need to reflect on what they have learned during the crisis and be deliberate about which practices to keep. These practices need to be embedded in their culture and processes if they are going to persist. Further, if they want to undertake a full agile transformation, they will need to allocate appropriate time and effort for management as well as for the teams directly affected.^{22 23} But when the next crisis hits, they will have even greater resilience to absorb and adapt to the challenges they face.

Owain Williams is Associate Partner at McKinsey & Company.



Box 10:

Five practical steps to improve agility and adaptation

1. Establish a common purpose and clear communications.
2. Set up structures to enable rapid decision making, including the reallocation of resources against new priorities.
3. Create networks of local teams with clear, accountable roles.
4. Develop a culture which empowers people and gives them the opportunity to unleash their entrepreneurial drive.
5. Provide people with the technology needed.



11.

THE FUTURE OF RISK AND RESILIENCE

Over the past four decades we have witnessed the evolution and convergence of risk management, crisis and event management, incident response, disaster recovery and business continuity. There have been changes to how we create, manage and integrate data to produce information, and even artificial intelligence to inform us on how to more effectively prevent, prepare for, and respond to disruptive events. We have developed frameworks to organize data that enable better command and control of programmes designed to make us more adaptive and durable as an organization.

The systems that exist to help automate management processes for prevention and detection, planning and preparation, response and recovery, notification and orchestration, and broader engagement throughout the organization, are creating greater awareness, building a culture of resilience and significantly improving the first line of defence. Finally, we have experienced the first global event that has affected organizations in a multitude of ways, disrupting supply chains, displacing workers from the workplace, disabling the workforce and straining access to information systems.

During the next decade, the siloed disciplines that have served us in the past will no longer adequately address the needs of organizations to deliver on their commitments. These disciplines must be entirely integrated to become more efficient and effective, and to support the strategic initiatives of the organization. There will be competitive advantage for those organizations that are resilient. In a world where the threats are endless but the resources to prevent them are not, the most resilient organizations will thrive during uncertain times, as we have seen during the Covid-19 pandemic.



TRANSITIONING FROM RISK TO RESILIENCE

Resilience metrics and key-performance indicators will be necessary to measure and manage efficiency and effectiveness, and to ensure a return on the investment. Programme managers will be asked to show how they support the organization's mission, provide value, and empower employees to act decisively. It will be necessary to go beyond the basic process of risk metrics to show how single points of failure and process inefficiency affect key business outcomes. We can no longer think of measuring a risk only in terms of how it can cause financial harm to the organization. We must also consider how a risk that we are managing can cause harm to customers and the ecosystem in which the organization operates. Process-dependency mapping and process alignment to critical products and services will be necessary to bring focus and context to the risks that are most important to manage in this context.

We are being challenged to transform how reliably we operate and we must conceive new strategies based upon flexibility and agility. This will require new thinking about how we prevent, monitor, respond to, and recover from disruptive events, and how we continue operations that produce desired outcomes during disruptive events. The result will be dynamic and resilient organizations with more durable ecosystems – trusted organizations capable of delivering on their commitments, no matter what.

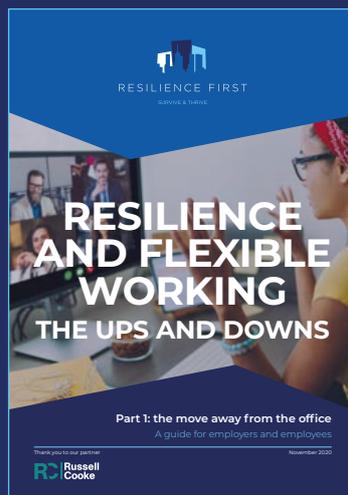
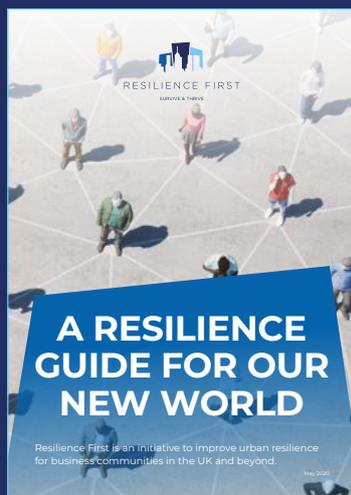
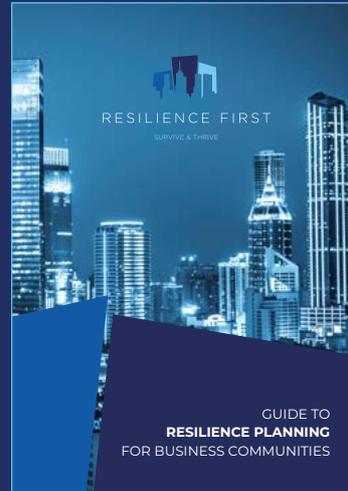
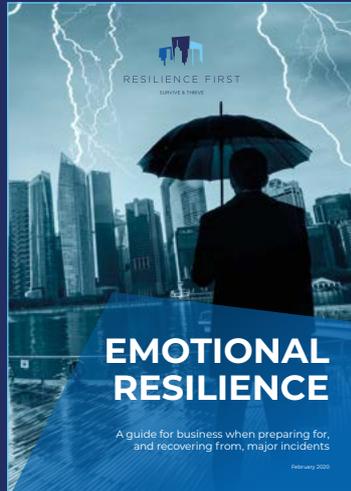
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