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Whitepaper 2016:

A Practitioners view of Organisational Resilience

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Special Interest Group on Organisational Resilience

By Anthony Ventura, President, RMIA

We are noticing more and more that the subject of resilience is generating substantial interest, not only as a buzzword but as an actual tenet that is affecting the way we do business. We need to become more resilient both as individuals, as businesses and as communities in response to civil emergencies, natural catastrophes, terror events, significant commercial occurrences, the demands of effective business continuity chains and more.

The RMIA is proud to be instrumental in fostering the necessary thought, debate, insight and argument that are required to produce insightful, critical and supportive content around this important and emerging topic, and I am both extremely proud and very grateful to the contributors of this White Paper for all their work in producing it. I look forward to sharing these findings with my colleagues and to observing the debate and influence that is sure to be forthcoming! Well done to the team.

Anthony

Anthony Ventura

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The Special Interest Group on Organisational Resilience

By Jason Gotch, Chair

Well, it's been a big year for those of us working within the resilience industry, barley discussed as a topic just a few years ago, resilience now ranks amongst the likes of "agile", "disruption" and "innovation" as an official 'buzzword"! While there is no doubt that the increasing profile around resilience has assisted in furthering conversations, it could be argued that it hasn't clarified what resilience is or clearly outlined how it may be of benefit to organisations.

To assist both our growing industry and Australian practitioners, I approached the RMIA in late 2015 with the intention of setting up the Special Interest Group (SIG) on Organisational Resilience. While they were supportive of the concept, they were also cautious, not wanting to be seen to be jumping on the "resilience bandwagon" like several other associations had already done. While there was a growing acceptance within the RMIA that interest in resilience was high, any project supported would need to be of benefit to risk practitioners and not simply an agenda based promotion or rebranding exercise. I explained to them that I envisioned a three-year proposition, with each year consisting of a different group of SME's working together on a specific area of resilience. The overall goal to define, inform and ultimately accredit resilience practitioners, with real world qualifications, that reflected a practitioner's perspective, rather than an academic one.

With this lofty goal in mind, the SIG commenced in January 2016 with a group of resilience professionals meeting each month to discuss, debate and design a suitable project. While the group's members remained somewhat transient for a period, eventually those fully committed began to explore the various aspects of resilience with a fevered determination. Consensus was reached early as to the concept, with importance placed on producing a thought leadership piece, from a practitioner point of view as opposed to an academic journal.

The previous year had seen the release of several resilience whitepapers, as well as the more conventional survey and promotional documents from standards associations and various consultancies. While these reflected current and informative information, they were generally considered to be lacking in neutrality, often considered an extension of a marketing campaign. In closing, no doubt you are either holding a bound copy of this year's whitepaper or viewing it via a PDF, I hope that you find it informative, opinionated and perhaps a little controversial. For it reflects the thoughts of over a dozen practitioners, each with a different view of resilience and what it 'was', 'is' and 'will be'! Each of those who have contributed have done so to offer an opinion or to put forward a theory, confident that their own work will also be challenged, leading to mutual discovery and learning. My sincere thanks to all of those who have contributed to this year's whitepaper and to our fantastic review team, many thanks to Bob, Bryan, Kerry, Chris, Andrew and Lex!

Lex Drennan – Senior Specialist, Risk, Resilience & Recovery, CGU Insurance

Andrew Gissing – Director, Government Business and Enterprise Risk Management, Risk Frontiers

Bob Jensen – Senior Managing Director, STRAT3 Consulting

Kerry McGoldrick – Director, Advisory, EY

Chris Mitchell – Head of Resilience and Security, TAL

Bryan Whitfield – Director, Bryan Whitfield Consulting

It's been a pleasure, I look forward to the 2017 SIG!

Jason Gotch

Chapter One
Common Misunderstandings of Organisational Resilience

By Phillip Wood

In the increasingly challenging and dynamic operational and strategic environments in which organisations are required to function, there may be a quite natural temptation to fit the needs of organisational resilience (OR) to the organisation by incoherently using a blend of existing functions and based on variable understanding of those functions. It is preferable to fit organisational resilience to the needs of the organisation by being perfectly clear about the organisation and about our understanding of what organisational resilience means to us. This paper has tended to avoid falling into the trap of defining OR; not because clarity of understanding is difficult to achieve, but because just as every organisation differs, so its OR interpretations will differ also. Because of this, OR can seem to be a complicated proposition, when in effect it is very straightforward indeed.

For those who have expertise in risk management and associated disciplines, OR and its requirements are defined by our effective interpretation and response to our analysis, and to the effective development of an approach and capability to prepare for, respond to and recover from the issues that may face us. These issues or problems may be unannounced or slow-burning, short or long-term in potential effect and may be aimed directly at us or be collateral impacts from someone else's problems; or they may arise because of who we are – perhaps because we operate in a high-risk sector or because we are targeted directly. So, risk management, and everything that goes with it, is a cornerstone of effective OR. The other good news is that if you are effective in risk management, you have the skills, structure and attributes to deliver effective OR right now across the whole organisation. If you have, for example safety, business continuity, security, quality, emergency and crisis management capabilities in place, you are well on your way to OR. If you haven't, the fundamental need to put those capabilities in place in some form should be a priority for you; and having addressed all of those needs at least by planning for them, you are on the road to success.

However, if there is a lack of coherence, acceptance, understanding or commitment to bringing these sub disciplines together, then your road towards OR is blocked. Plans and structures will not bring organisational resilience without an understanding and commitment to make it happen effectively. OR is a psychology as much as a process; and movement away from regarding it as a process alone rather than an organisational attribute will be the key component in developing a successful capability. With the plans and

The next time you board a flight, whether it is for business or on vacation, short or long haul, look at what happens during the safety brief. How many pay attention to it? How many business people are asleep/reading something or doing anything but listening to what they think they know? How many leisure travellers are fussing over their children or reading the in-flight sales magazine? Quite a few and probably the majority.

These people are looking for anything positive to think about rather than thinking about what happens when the situation becomes negative. Their own attitudes, egos and fears, or search for some reward overrides what should be the overriding concern – the knowledge to survive an undesired event.

While many will have flown many times, they will not have flown in that aircraft, refuelled and maintained by that team working to that budget or deadline, on that route, in those weather conditions, sitting in that seat next to that old or physically challenged person, and with that distance to the nearest exit past those people who are equally unprepared for problems.

Their unwillingness to engage with these variables, to purposely ignore the risks and impacts when the plans, processes and functions exist to help them survive, illustrates a core human trait. We don't like to think too much about negatives.

The adaptable and perhaps resilient airlines have thought about this, with more frequent use of entertaining or humorous video presentations of safety briefings to get the message across. The reward for the passenger is threefold; they are entertained, the impact is softened and they may learn enough to get the main reward: they may live when things go wrong.

processes written and distributed, we have the components that can work together much like the parts of an engine; but like an engine, effective OR needs an ignition system, lubrication between the parts and some method of monitoring and maintaining the source of power that keeps the whole thing moving. So, our ultimate structure will need to represent the optimisation of its various contributing components through understanding that all of them, even the seemingly lower priority, can be just as important as any other. An engine needs flywheels and pistons, but it also needs tiny pins and springs, nuts and bolts – and without that lubrication and power it ceases to function.

The essence of effective OR is in the understanding that the interdependence of the sub-disciplines is the secret to its success – and that should not be a secret for any of us. The identification of organisational priorities and the understanding by our people of their part in it, must be reflected in any OR approach. Our teams must realise that the unity of effort in seeking improvements to the bottom line or organisational effectiveness will be just as necessary across all our response and recovery processes. The eagerness to co-operate, consult and collaborate in an efficient manner in search of organisational reward should be replicable and reflected in our eagerness to work in the same way in search of organisational resilience. OR is about the contribution to our ability to maintain our opportunity focus; and therefore, it should and does make absolute sense that the alacrity with which we seek profit and reward should and can also be embedded in our efforts to protect and improve capabilities when problems arise. Therefore, the clarity that is necessary to make OR work for our organisations must be engendered by the purpose of OR is a need for positive action before and after events, supported by a positive mindset. OR and its sub-disciplines necessarily operate in a negative context; we mitigate risks, respond to crises, emergencies and disasters, and manage impacts for continuity. However, despite the negative effects of getting things wrong, our organisational approach to OR should aim for the positive. Luthar, Cichetti and Becker (2007) stated that: 'Resilience refers to a dynamic process encompassing positive adaptation within the context of significant adversity.' The inference of adversity, however, doesn't necessarily infer that we cannot adapt and overcome that adversity through the development of holistic and comprehensible processes, functions and strategies that are achievable and manageable. However, the development of a mindset and psychology is *the* challenge for OR; as all the components exist but many organisations are unwilling to face its realities and what is required of them.

Think about this:

The clarity with which we need to approach OR is in taking what we have and making it work. The need for a fluid and dynamic response to fluid and dynamic, risk-based developments means that commensurate agility in thought and idea need to be developed and implemented. Moving away from fixed views of what is 'in' and what is 'out' of scope for OR is an important, crucial, way to progress; where the pace and state of mitigation are not dictated by events; but are equal to them, anticipatory and with enough dynamism of their own to allow organizations to overcome and continue – and to be resilient enough to move forward with confidence and capability.

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About the Author:

Phillip Wood, Head of Department, Security and Resilience, has extensive depth of knowledge in a wide range of security, resilience and asset protection disciplines. Before joining Buckinghamshire New University in September 2009, he was employed as a commissioned officer in the Royal Air Force Regiment and with an internationally recognised corporate security training company.

Throughout his military career, he was involved in counter-terrorism and physical security planning and implementation, as well as training development, coordination and provision to many audiences and professionals. He also represented the UK in liaison with NATO committees and international armed forces personnel on security and anti-terrorist operational matters. He has also developed and delivered training and consultancy in asset protection to corporate clients worldwide including many multinational companies and their senior security staff. Phillip has a MSc in Security and Risk Management (Leicester), is a member of ASIS International, and has achieved the organization's most senior designations, the CPP and PSP.

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Chapter Two

What is Organisational Resilience?

By Pete Gervasoni and Derek Schagen

Organisational Resilience (OR) stems from a growing need to manage the uncertainty of complex and interconnected modern societies and economies. It is an organisation's ability to absorb and adapt in a changing environment that is either sudden or incremental.

Traditionally, an organisation would manage known risks via risk management plans, business continuity and emergency management plans generally in a siloed uncoordinated manner. Although these disciplines are attributes of a resilient organization, they cannot act in isolation. These approaches to uncertainty rely upon the ability to make predictions about the source and nature of risks, as well as their potential disruptive impact. They are planning-related activities ultimately limited in scope by the boundaries of the risk scenarios they are designed to address, and typically undertaken by a business unit within an organisation; they may not include the knowledge or input of all relevant organisational staff, key stakeholders and inter-dependent organisations.

Contrasted to this, organisational resilience is a more holistic approach that assists in managing change events. It is a strategic approach to build adaptive capacity within an organisation to enable it to prepare and respond to change. OR is not seen as a plan, or a checklist. It's something you do. Resilience is found in an organisation's culture, attitudes and values. In creating appropriate knowledge, culture, attitudes and values, an organisation builds its capacity to survive change events. An organisation needs to understand it's OR capabilities (to survive, adapt, evolve and grow in the face of change) and develop an OR system that underpins its strategic and operational capabilities.

Resilience: Organisations are required to exhibit high reliability when faced with the challenges of change and adverse events, and decision-makers must consider not only the events that they know will or might occur, but also the events that they cannot predict.

Resilience is a function of an organisation's:

- Situation awareness.
- Management of keystone vulnerabilities [1]and
- Adaptive capacity in a complex, dynamic and interconnected environment.

Organisational Resilience is both planning to manage the unexpected, as well as adapting and reacting to changing circumstances.

A resilient organisation has the following characteristics:

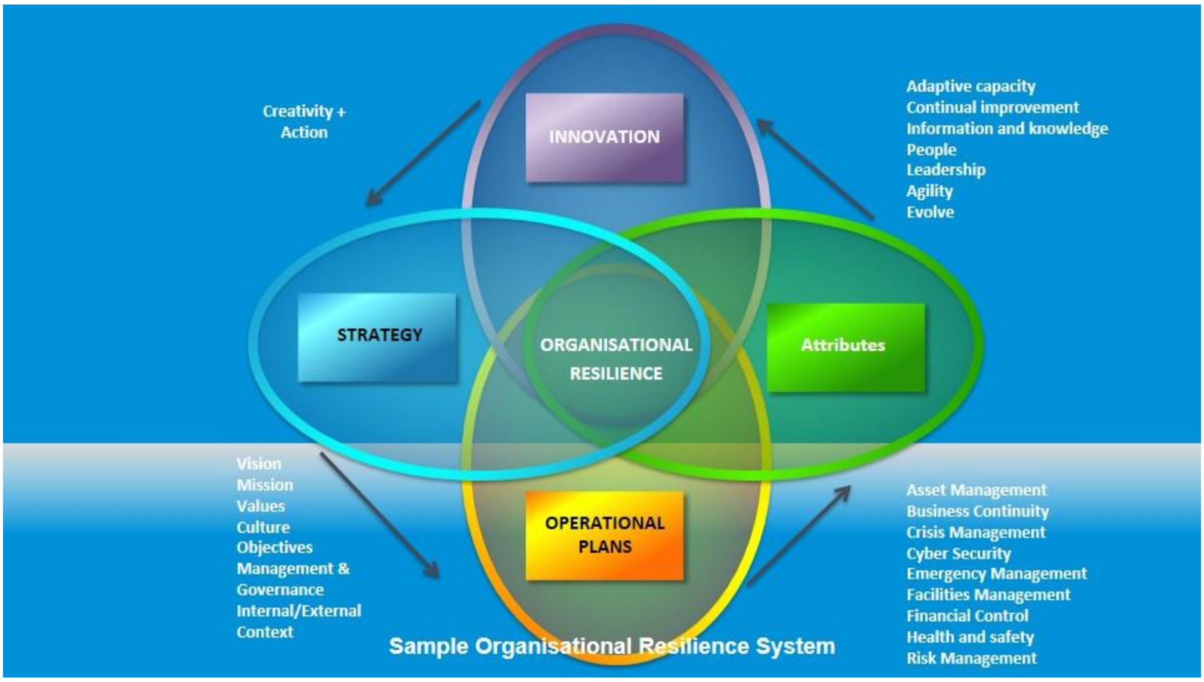
[1] Vulnerabilities have the potential to negatively impact the organisation in a crisis, both from a management and operational perspective. The impacts may be instantaneous or insidious, so it is crucial that organisations have a good understanding of the relationships between the components or component that has failed and the vulnerabilities that are generated by this.

Leadership and culture: Strong, aware, and empathetic leadership combined with staff that are empowered, trust each other, and are well looked after.

Networks: Effective external partnerships, well-managed internal resources, and the ability to leverage knowledge across the organisation.

Change-Readiness: A unity of purpose and a proactive posture combined with the regular testing of plans to counter vulnerabilities.

Organisational Resilience System: Organisations aspiring to enhance their resilience should consider building a system to underpin their strategic objectives, a system that can operationalise resilience strategy and integrate into operational plans. The system should promote a culture of creativity and innovation, strategic leadership and adaptive capacity. The system is supported by the many attributes of a resilient organisation including



As highlighted in Chapter One, risk management, and everything that goes with it, is a cornerstone of effective OR. OR is not a defensive strategy, but a positive, forward-looking 'strategic enabler', which allows business leaders to take measured risks with confidence. Robust, resilient organisations are flexible and proactive – seeing, anticipating, creating and taking advantage of new opportunities in order, ultimately, to pass the test of time.

but not limited to risk management, business continuity and emergency management.

Adaptive Capacity: Adaptive capacity can be viewed as the ability of an organisation to make appropriate decisions in a timely manner, both in a crisis and on a day-to-day basis. It considers:

- Leadership and decision-making structures.
- Communicating and sharing information,

knowledge and skills.

- Creativity and flexibility that the organisation supports or tolerates.

The academic literature has identified organisational resilience as adaptive capacity that is, where the organisation uses adaptive capacity already present to cope with an existing challenge. This is a first order response. However, the second level of response or adaptive capacity is true resilience as the organisation is not able to use planned strategies and resources as the 'demands exceed the limit of the first order adaptations' - failure to absorb the change - (Woods and Wreathall, 2008, p.146).

The first order response is often referred to as Risk Management as it is characterised by anticipation and planned mitigation preparedness. The second order response is characterised by innovation and this is the time of emerging resilience. Second order adaptive capacity, namely resilience, cannot occur unless a robust first order adaptive capacity exists within the system. Thus, Risk Management underpins organisational resilience and without which, resilience cannot exist.

Resilience can occur at different levels, individual, work teams/units, organisation and wider contexts such as industry and community resilience to name a few. Although this document concerns itself with 'organisational' resilience, it is critical to understand that an organisation should strive to build resilience at work team/units and individually as part of its overall resilience strategy. In this way, 'resilience' embeds itself in an organisation's component parts - its leaders and individuals and work units.

Characteristics of resilient organisations:

- Clear vision, mission linked to performance
- Outward looking – conscience of its environment and what is required to survive and thrive in change
- Inward looking - 'capable of reflecting on itself, its performance and how it can change to improve' including learning from experience – knowledge management

- Flexibility in structure and operations
- Interaction and integration with other functional units (i.e. no silos)
- Communication
- Adaptive leadership

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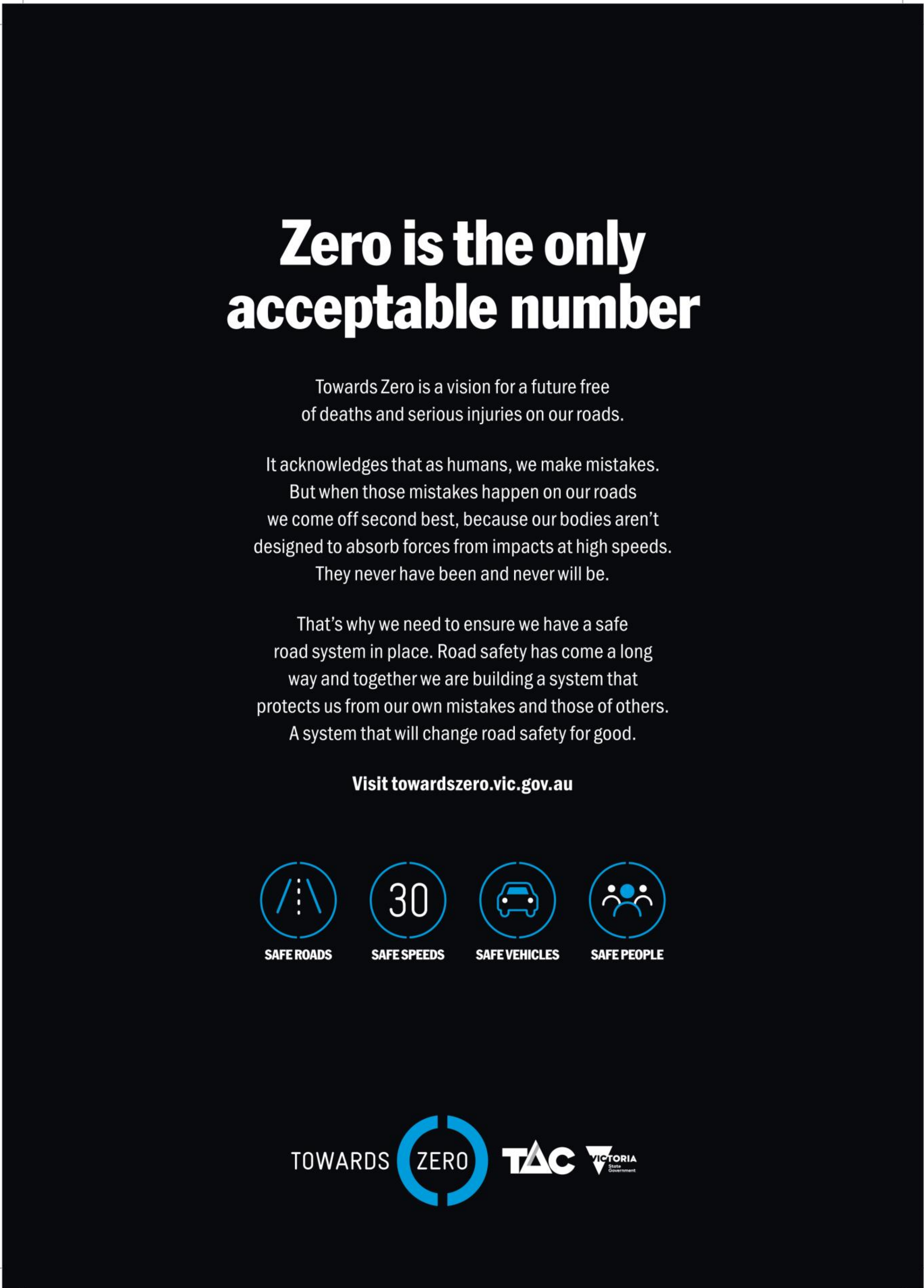
About the Authors:

Pete Gervasoni has worked in risk related roles for more than 10 years and currently specialises in Organisational Resilience. Pete has held management positions in multiple levels of Government across diverse sectors including Enterprise Risk Management, project management, policy development, quality assurance, international bilateral negotiation and innovation.

Currently working at the Transport Accident Commission (TAC) as a Senior Risk Partner, he provides an internal risk management consultancy to the Executive and Senior managers together with developing the TAC Organisational Resilience Framework. Pete was formally the Deputy Director for International Arrangements & Services at the Defence Materiel Organisation providing Government Quality Assurance services and advice including risk management to Major Defence projects and operational elements, including International Partners & Industry.

Derek Schagen has 30 years' experience as a police officer in NSW Police and the Australian Federal Police. He has worked in senior roles including as the Commander of the Terrorism Investigation Branch the Airport Police Commander, Sydney and NSW Identification Services Branch. He holds a Bachelor of Social Science in Human Resource Development, a Graduate Certificate in Management as part of the NSW Police Command Development Program and a Master of Business Administration, Certificate IV in Training and Assessment and Risk Management. He is a graduate of the Australian Institute of Police Management's Executive Leadership Program and the Australian Institute of Company Directors and a member of the RMIA.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Chapter Three
Why Organisational Resilience?

By Robert Crawford

Organisational resilience is a relatively new management discipline. The term resilience is derived from the Latin word *resilio*, meaning 'to jump back' (ASPI 2008). Therefore, *organisational resilience* can refer to an organisation's ability to 'jump back' from an adverse event, therefore minimising disruption to its operations, no matter where they may be located. Resilient organisations embrace adversity as opportunities from which they learn and build awareness. Often these learnings will transform into efficiencies that drive growth. Growth is of course an imperative in any business. Resilient organisations according to Sheffi (2015, p. 368) adopt the Nietzschean adage that 'what does not kill me makes me stronger'.

This aim of this chapter is to answer the question, 'Why Organisational Resilience?' To provide some clear and unambiguous reasoning as to why organisations should adopt 'resilience' as a key management concept. This chapter does not advocate the replacement of enterprise risk management and business continuity management. Both are extremely invaluable management tools especially for building organisational resilience. However, as this chapter will explain, if traditional risk management is failing to keep pace with an increasingly complex and dynamic global economic environment it is now time that organisations embrace resilience.

Jakarta, Indonesia 2016.

On the 14th January 2016 four (4) terrorists inspired by the Islamic State of Iraq and the Levant (ISIL) armed with weapons and explosives executed a coordinated attack in the centre of Jakarta, Indonesia. One attacker detonated a suicide vest at the Starbucks café across from one of central Jakarta's best-known landmarks, the Sarinah department store. A short time later another attacker detonated a bomb at a police post only a few dozen meters from the Starbucks cafe. Almost 10 minutes later as people ran towards the scene to satisfy their curiosity another two (2) attackers opened fire. Uniformed police arrived and engaged the terrorists in an exchange of gunfire killing all four (4) of them. Subsequent investigations confirmed at least eight (8) people were killed with another 23 injured.

Rather than capitulating to the fear of terrorism the residents of Jakarta harnessed their community spirit through social media. As a demonstration of defiance, Jakarta residents quickly took to social media with the trending hash tag on Twitter *#kami tidak takut* (we are not afraid) in support of their President's condemnation of the terrorist attacks. The New York Times (2016) reported that the residents of Jakarta seemed to shrug off the attack. Other media outlets including television, newspapers and social media all described how life returned to normal the next day. Starbucks issued a statement advising their customers that they would close all their Jakarta stores; however, they quickly reversed their decision and reopened stores with the exception of the store that was involved in the attack (Starbucks 2016).

What is remarkable about this event is the community response. A population of almost 10 million people demonstrated their resolve by returning to work the very next day, some in businesses located very close to where the attacks took place. Food cart vendors set up and sold their bowls of bakso and mei goreng to Jakarta residents who once again had to contend with the world's worst traffic.

Police officers took up their usual positions at the surrounding police posts. Office workers ordered their morning coffee from a coffeehouse chain synonymous with the West whose customers, both foreign and Indonesian, were just the previous day targets for terrorists. Jakarta residents collectively absorbed the event and then simply continued with their daily routine. Their response was a demonstration of resilience from a community that had been through it all before. Organisations can learn from such responses.

An increasingly complex environment

Like communities all organisations face risk. These risks are the consequence of operating in an increasingly uncertain and complex environment. However, what is not often recognised is the intrinsic relationship between organisations and communities. Organisations provide services, products, cash flow and employment to communities. In return communities and consumers increasingly demand that organisations exhibit high reliability in the face of adversity. In times of adversity it is often organisations that provide their communities the resources, essential services and expertise in order for communities to respond and recover. As McAslan (2010) argues, there is an expectation that an organisation's decision makers are able to address not only the crises that they know will happen, but also those that they cannot foresee.

How organisations contend with such uncertainty has led to an increase in awareness of the term 'resilience'. The concept of organisational resilience was first used to describe the need for companies to respond to a rapidly changing business environment. In their paper *The Quest for Resilience*, Hamel and Välikangas (2003) stated,

'*that strategic resilience is not about responding to a onetime crisis. It's not about rebounding from a setback. It's about continuously anticipating and adjusting to deep, secular trends that can permanently impair the earning power of a core business. It's about having the capacity to change before the case for change becomes desperately obvious'*.

In the decade since this paper was written the world has become increasingly complex as discussed in the World Economic Forum (WEF) Global Risks report 2016. This report comprehensively outlines the increasing interconnectedness and rapidly evolving nature of global risks. See Figure 1:

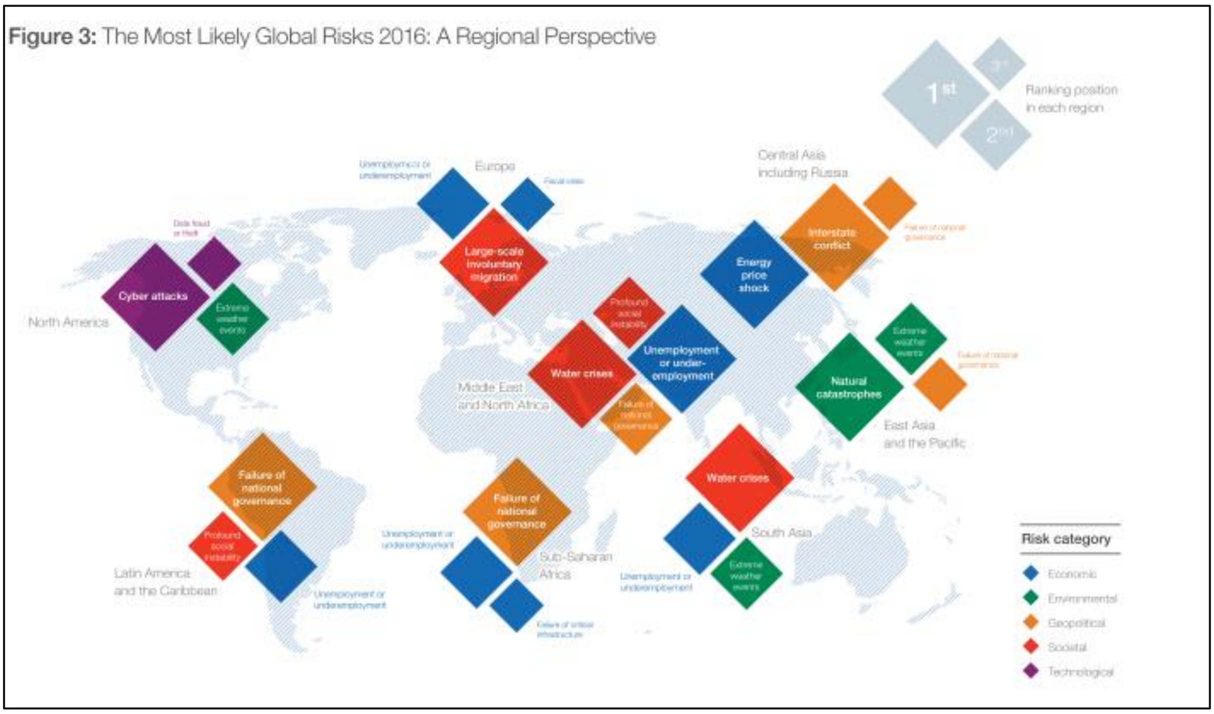

Figure 3: The Most Likely Global Risks 2016: A Regional Perspective

Figure 1: Global Risks 2016. Source Global Risks Perceptions Survey 2015

The report (WEF 2016) states that these risks have materialized in new and unexpected ways and are becoming more imminent as their consequences reach people, institutions and economies. At the same time, advances in technology and rapid digitization are fundamentally transforming societies, economies and ways of doing business. In his new book Klaus Schwab (2016) asserts that we are at the beginning of a revolution that is fundamentally changing the way we live, work and relate to one another. He refers to this changing global paradigm as the Fourth Industrial Revolution. Consequently, the shifts and disruptions of the Fourth Industrial revolution have rippled across all industries.

Advances in technology have not just altered the manner in which we as humans share knowledge and communicate. Technology is also reshaping governments and institutions as well as systems of education, healthcare and transportation. Historically bricks and mortar universities use to only educate the tiny elite; however, technology has opened up universities through online learning so that the knowledge has now become democratised. Geographical barriers that previously constrained students to a physical classroom have been removed by the internet so that anyone with a smartphone or laptop can access that knowledge. Online education is broadening educational opportunities as well reducing the inequality gap. Such disruption to the traditional education system is bringing positive change to those previously excluded from higher education.

Technology is also disrupting the business environment. New companies taking advantage of enhanced connectivity are emerging at a rapid rate to disrupt traditional business models. The peer-to-peer-based sharing of access to goods and services has broadened significantly in recent years. Uber and AirBnB are good examples. These companies have used the disruptive nature of a complex world to their advantage. However, the emergence of these new business models associated with the 'sharing economy' have highlighted the failure of governments to keep pace in terms of regulation. Consequently, such a failure presents significant risks for organisations whose staff may use these services.

The relationship between risk and resilience

For each organisation, there exists some event that could cause it to collapse. For Australia, it seems that when China coughed many mining related companies seemingly caught a cold that has led to their collapse. A disgruntled employee tampering with a product as in the Herron Pharmaceutical case many years ago almost saw its collapse. Successive plane incidents have had a dramatic impact on Malaysian airlines. Similarly, as these examples demonstrate some organisations may 'bounce back 'easily from crises but not so quickly from others. An organisation's risk management framework goes someway to identify the risks an organisation faces but there are limits to its overall effectiveness and responsiveness.

Risk assessment methodologies and risk management principles are generally well understood. Enterprise Risk Management (ERM) is a strategic business discipline that supports the achievement of an organization's objectives by addressing the full spectrum of its risks and managing the combined impact of those risks as an interrelated risk portfolio. It emerged in the late 20th century in the wake of several high-profile company failures and shareholder value being given greater consideration in strategic planning. Its successful implementation within an organisation is incumbent upon the senior executive establishing the parameters, subsequent policies and structure. Within many organisations a senior executive often holds the ERM function.

Business Continuity Management (BCM) is the holistic management process that identifies potential threats to an organisation and the impacts to business operations those threats, if realised, might cause, and the framework for building an effective response. Key elements include Business Continuity Planning (BCP), IT Disaster Recovery Planning, Crisis Management and Emergency Management. Their application may differ depending on the industry in which they are applied.

However, the increasing volatility, complexity and ambiguity of the world not only heightens uncertainty around the "which", "when", "where" and "who" addressing global risks but also clouds the solutions space (WEF 2016). Whilst ERM may inform an organisation of the risks it faces and BCP encapsulates the planning, response and recovery functions they alone may not make an organisation resilient to the rapidly evolving nature of global risks. In the aftermath of crises, risks are often evaluated in isolation. There tends to be a focus onto the one thing that went wrong rather than understanding that crises occur due to a combination of issues that coincided in a given space and time. Such combinations are not often captured by an organisation's risk register. The concept of resilience provides a framework for incorporating these events. A resilient organisation is one that possesses the capacity that allow it to 'jump back' from such adverse events.

Furthermore, resilience is about building layers. It is about using each previous event as an opportunity to build in layers that protect the organisation. There are many examples of organisations using disruptive events that they have previously encountered to understand their own responses. These reviews identify how their clients or customers reacted and how they can do better. Often an examination will reveal opportunities previously hidden but now open to exploitation that may drive growth or increase efficiencies. Resilient organisations that undertake these reviews recognise that they don't operate in isolation. They operate in a global economy of increasing interconnectedness governed by symbiotic relationship between the organisation, stakeholders and its environment.

Resilience is also about building in strategies that adequately handle those unidentified risks. In 2012, the United States, Secretary of Defence, Donald Rumsfeld made a statement regarding risk. He was somewhat ridiculed for his confusing statement. However, what he was trying to articulate was the foreknowledge of risk. There are risks that are known as they occur frequently or it is known that such risks will emerge in time. Other risks, the 'known unknowns' will occur infrequently. The 'unknown unknowns' are the risks that have not been thought of. Malaysia airlines would not have foreseen that two of their planes would be involved in two unique events. Whilst risk management offers a proactive framework to think about what could happen and how that may affect the organisation it does not often adequately prepare an organisation for that 'unknown unknown'. Such unexpected events require an organisation to develop resilience.

Conclusion

Organisational resilience is a relatively new management discipline. All organisations face risk as they operate in an increasingly uncertain and complex environment. However, there is an expectation that an organisation's decision makers can address not only the crises that they know will happen, but also those that they cannot foresee. Risk management and business continuity management go some way to inform and prepare an organisation for these crises and their consequences. However, as history shows there are always those unknown unknown events that that an organisation's risk register will fail to capture. Resilient organisations understand and embrace this fact. Resilient organisations use each risk event to inform and build awareness to plan and prepare for the unexpected. Such preparations build in processes and enhance an organisation's ability to 'jump back 'from an adverse event.

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Robert Crawford is the group manager for security and organisational resilience for Thiess, the world's largest contract mining company with operations across the globe. Prior to this role he held leadership roles with leading private military and risk management companies operating in extremely complex environments. Robert enjoyed an 18-year career in law enforcement that spanned a broad range of roles that included general and specialist policing positions, investigator and managing police establishments.

He has extensive experience in the delivery of complex and sensitive projects including critical infra-structure projects on behalf of governments and MNC. He has consulted for clients across the Middle East, Africa and Asia. Robert is now leading the organisational resilience program for Thiess. His operational experience is reinforced by extensive educational qualifications that includes a Bachelor of Arts in Political Science, a Graduate Certificate in Project Management and a Master of Business Administration. He is currently finalising his thesis for an MA in Political Science. He holds additional qualifications in training, risk management and occupational health and safety.

Chapter Four
The Benefits of Organisational Resilience

By Ken Simpson

So far we have explored what OR is, and is not. In this chapter we explore the benefits and some techniques we can use to realise those benefits. Reading and talking is not enough, to close the "resilience gap" between "today's organisational capabilities and tomorrow's need for resilience"[2] we need to make a start and continue to act.

As shown in the earlier chapters there are numerous attributes that could be used as markers for resilience. For example, the Resilient Organisations research group in New Zealand have identified 13 factors[3], grouped into three categories. The UK-based Insurance & Risk Management Association (Airmic) identifies 5 principles, 4 business enablers and 8 hallmarks (or action points) that differentiate resilient organisations[4].

This chapter presents 4 focus areas to start realising benefits.

Once on the OR journey it will be easier to add more attributes and success factors as you progress.

Resilient Organisations – Categories and Factors

Leadership & Culture	Networks & Relationships	Change Ready
• Leadership • Staff Engagement • Situation Awareness • Decision Making • Innovation & Creativity	• Effective Partnerships • Leveraging Knowledge • Breaking Silos • Internal Resources	• Unity of Purpose • Proactive Posture • Planning Strategies • Stress Testing Plans

Airmic

Principles	Enablers	Hallmarks
• Risk Radar • Resources and Assets • Relationships and Networks • Rapid Response • Review and Adapt	• People and Culture • Business Structure • Strategy, Tactics and Operations • Leadership and Governance	• Raise Risk Awareness • Avoid Board risk blindness • Develop risk architecture • Plan crisis management • Determine risk attitude • Undertake risk assessments • Establish resilience

[2] Valikangas, L 2010, The Resilient Organization: How Adaptive Culture thrive even when Strategy fails. McGraw-Hill Education.

[3] http://www.resorgs.org.nz/what-is-resilience

[4] https://www.airmic.com/technical/library/roads-resilience-building-dynamic-approaches-risk-achieve-future-success

- Personal Skills
  - managing ourselves, managing up and enabling collaboration
  - a key enabler of other success factors
- Integrating the Disciplines
  - as noted in the previous chapter, the operational disciplines need to contribute to overall OR objectives.
- Awareness and Detection
  - Uncertainty rules in today's world. Risk is dynamic and we need to be alert and aware in order to adapt and survive.
- Metrics, Models and Benchmarking
  - the reality of Enterprise life is that we need to measure things to manage them.

As with the concept of OR itself, your success factors will demand specific research, analysis and customisation. They need to be tailored to the context of your organisation. Even the forthcoming International Standard on OR will not provide universally applicable formulae and metrics. In the words of the Chair of the ISO Committee producing it

"The standard is not designed to be a manual for resilience. It is a guide to thinking"[5]

The first focus area for benefits is an essential enabler that must become part of the Personal Skills for the OR practitioners.

Critically evaluate and adapt, rather than simply accepting and applying, the learning from case studies.

The challenge to think about resilience in our own organisation's context also implies that we need to critically review Case Studies to understand their context. What works for another organisation may not be universally applicable.

Following the 9/11 attacks on the World Trade Centre in New York, case studies were published describing the attributes of successful recoveries. In one widely promoted case a financial services company had 6,500 staff displaced, recovered to alternate facilities, built an improvised trading floor in a hotel and was online within 48 hours of the attack. The company also went on to introduce innovative working practices in the months after the attack such as flextime to enable hot-desking and introduced Telecommuting. The company also reportedly increased their focus on Business Continuity Planning following the attack and their successful recovery.

Seven years later, on September 15 2008, Lehman Brothers filed for bankruptcy as part of the fallout from the US Subprime mortgage crisis[6].

Lehman Brothers were not resilient when it came to areas of strategic, market and credit risks. For all we know they may still have been able to mount an effective recovery to an operational risk at the time they went out of business.

The second personal benefit area for the practitioner is to broaden their focus and look beyond operational risks and physical disruptions and be capable of addressing Strategic and Commercial risks. That will require making OR a strategic-level focus.

[5] Crask, J. 2016, "Building Bridges" CIR Magazine (Continuity Insurance and Risk) January 2016, p12

[6] https://en.m.wikipedia.org/wiki/Lehman_Brothers

Model Resilience from the top down

The need for appropriate Leadership and top management engagement is reported as a success factor in virtually every article on OR. As we note in Chapter 2, resilience is something you are, not something you do – culture and behaviours will have a significant impact.

To be successful the resilience practitioner will need to effectively manage upwards.

This is not just getting a policy approved but getting commitment to behaviours and decision making that encourage effective risk mitigation and adaptation. This might include formal changes such as adding some of the roles and responsibilities discussed in Chapter 3.

Two specific attributes that are continually reported as key for deriving benefits from resilience include;

- Willingness to hear bad news
  - Enables risks and vulnerabilities to be safely reported to Executives – and it will not happen without top down acceptance and encouragement.
  - Assists in early detection and therefore the opportunity to respond and avoid adverse impacts.
  - Use the well-known story of the Nokia/Ericsson responses to the Albuquerque, New Mexico fire to sell the idea.
    - "We encourage bad news to travel fast, we don't want to hide problems."[7]
- Executive engagement in Scenario Planning and "Crisis Management" simulations.
  - This is not to exercise a crisis plan, this is adaptive problem solving, working with novel and emerging threats.
  - These activities get strategic and tactical teams working together, building trust and the "adaptive capacity" we talk about in other sections of this paper.

	NOT AGILE	AGILE
DISCIPLINED	BUREAUCRATIC & PROCEDURAL	ADAPTIVE More resilient
NOT DISCIPLINED	DYSFUNCTIONAL	Ad Hoc & REACTIVE

Figure 2 - Adapted from Harald

Integration and Collaboration between disciplines

In general business terms a success factor is often assessed from an external perspective - that of the customer or investor. The critical requirement for this focus area is explained in Chapter 1, but Integration and Collaboration of the disciplines cannot be assessed internally by each – it needs to work as an end to end process.

"a process that creates the capability to execute one task concurrently defines disabilities in executing other tasks."[8]

Perhaps this may be a new risk domain to be considered to realise the benefits – "resilience risk", the impact of existing skills, processes

[7] Sheffi, Y, 2005. The Resilient Enterprise. Overcoming Vulnerability for Competitive Advantage. MIT Press. p5

[8] https://hbr.org/2000/03/meeting-the-challenge-of-disruptive-change

and systems (current practice) on achieving the objective of resilience?

In the aftermath of Hurricane Katrina in the USA the national emergency response was seen to have performed poorly. The system was overly bureaucratic (parts of which had been internationally adopted as best practice[9]). Accused of "fighting the last war" - focussed on terrorism post-9/11 rather than natural disasters. The structure was extremely rigid and not able to adapt.

Significant changes were introduced after Katrina; increased focus for monitoring and situational awareness, more emphasis on flexible and devolved decision making amongst other things. The result was a much more effective response to Hurricane Sandy when that struck. The upgraded system was able to adapt and evolve while retaining the discipline to execute.

Where do your OR sub-disciplines fall on the Agility and Discipline map[10].

Awareness – Dynamic Risk Management, not Risk Register Management

Risk registers can be a useful tool when used correctly. Too often it can become the replacement for actually managing risk[11]. Registers are static and risks in the modern world are dynamic. The register is often not extended to cover the strategic risks.

As noted above the risk function is ideally positioned to pull together diverse elements to make the engine of resilience function. First we need to ensure the risk process has adapted to resilience thinking.

Two specific adjustments that can nudge the risk function in a more dynamic direction could be;

- Adopt the "Power laws" of resilience
  - Research shows that many so called "low Probability-High Impact" events (what we often call Black Swans) are not always low probability.
  - Many disruptive events, especially natural disasters, are best understood statistically using Power Laws rather than a normal distribution. Make the risk process more dynamic by just using a different model of statistics.
  - These models are harder to understand and calculate as they do not use simple linear relationships.
  - Sheffi[12] offers more on this subject including a simple method to adapt the traditional 2x2 Likelihood/Impact matrix by using different and non-linear scores on each axis.
- Handle risk and Uncertainty differently
  - We know that ISO31000 defines risk as the impact of uncertainty on objectives. But when the risk process is implemented based on assessing likelihood and impact – then what we cannot estimate we cannot manage with the concept of risk mitigation.
  - Risks are the events we can anticipate.
  - The "Unknown Unknowns" are the domain of uncertainty – not only can we not assess the

[9] e.g. The National Incident Management System

[10] Adapted from Harrald, J. 2006 Agility and Discipline: Critical Success Factors for Disaster Response. The Annals of the American Academy of Political and Social Science. Vol 604 pp256-272

[11] https://normanmarks.wordpress.com/2013/07/14/are-risk-registers-a-useful-tool-or-a-trap/

[12] Sheffi, Y . The Power of Resilience: How the Best Companies Manage the Unexpected. MIT Press. 2015 pp34-36

impact but we often struggle to imagine the event, these are the events that require an adaptive resilience capability.

Detection – weak signals and near misses

The risk and response process can also be more aligned with resilience thinking by including a focus on Detection in addition to the traditional Prevention and Preparedness activities. Enhancing our capability to detect enhances our resilience by converting the uncertainties discussed above into risks, and unknowns into knowns.

Sheffi[13] adds the Detection dimension, to the traditional Likelihood/Consequence space to create a 3-dimensional risk model. Threats have different lead times to detect (the time between knowing that a disruption will take place and the first impact). Some such as population ageing and other identified social trends have long lead times, Hurricanes have some advance warning, a Fire is generally an instantly detected event but some events (e.g. product contamination or some cyber attacks) may only be discovered some time after the event has impacted.

The strategy to address the risk will vary based on negative, short or long detection times.

Two practices to improve the capability to detect;

- Monitoring BAU incident feeds and establishing "watch lists" to monitor unexpected or unusual trends. Many organisations already do this in a siloed manner – each discipline monitors for impact on their operations.
- Structured Review and Learning from near misses
    - Often this activity simply involves recording "Lessons Observed" – where nothing is really learned nor implemented.
        - Make it a focus for resilience by ensuring there is learning and changes implemented.
        - Links back to being open to receive bad news
    - Make the review holistic rather than specific to the unit/function that experienced the problem.
    - Learn about the detection and escalation monitoring of the incident, as well as mitigation and response aspects.

Benchmarking Tools and Metrics

No matter what benefits are claimed for OR, there will be a demand for tools to measure and report – and to benchmark against other enterprises. There are a range of these available for immediate use – or to adapt as you need.

The Resilient Organisation model was referenced earlier in this chapter and has a fully developed benchmarking tool. There are published case studies of the use of this benchmarking tool;

- Comparing Sydney Water to other water utilities[14]
- Benchmarking resilience across the city of Auckland, New Zealand[15].

The Australian Government also has an OR Health Check tool (a variant of the ResOrgs benchmark) freely available via their

[13] Sheffi 2015, pp43-44

[14] http://www.resorgs.org.nz/images/stories/pdfs/OrganisationalResilience/sw_resilience_scorecard.pdf

[15] http://www.resorgs.org.nz/images/stories/pdfs/measuringandcomparingorganisationalresilienceinauckland.pdf

Organisational Resilience website.[16] This tool has been widely used and can be quickly implemented as a tool to establish an initial benchmark against a well-respected resilience model.

Also in the Australian context the Torrens Resilience Institute have developed a Community Disaster Resilience Scorecard.[17] While this is not specifically targeted at OR, the toolkit does provide useful ideas for how you might approach this in your own context. For further hints and tips on using a tool like this, there is a published case study of several implementations.[18]

The UK-based Airmic, working in conjunction with Canfield School of Management, developed two comprehensive models that could be used to benchmark and report against;

- Roads to Ruin
- Roads to Resilience

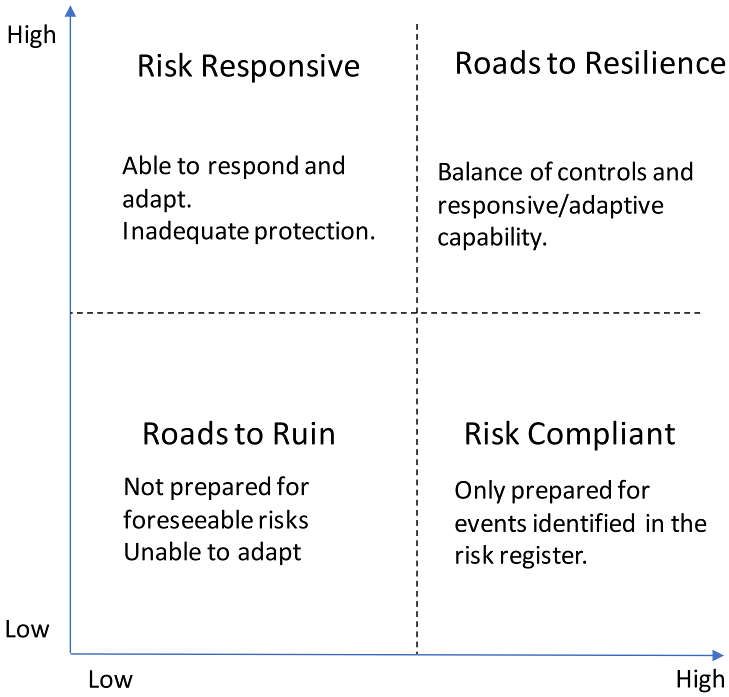

Figure 3 Adapted from Roads to Resilience

There are a number of other benchmark models that can be discovered in references in this paper and from the literature review that can be used to create a local customised tool for benchmarking the benefits on your OR journey.

About the Author:

Ken Simpson has 30+ years' experience as a manager and leader in both public and private sector organisations. During that time, he has led internal Risk, DR and BCM teams and recovery operations following a major incident. He is a Fellow of the Business Continuity Institute and holds a range of academic and professional qualification including a BA (Social Sciences), an MBA and Certified Organizational Resilience Professional by ICOR.

Ken has held Executive roles as a CIO, CTO and contrasting experience as a Head Coach in the Women's National Basketball League (Australia). He is currently an independent management consultant and an active podcaster, blogger, author and speaker on the subjects of risk, Business Continuity and resilience. This experience as practitioner, academic, coach and Executive provides unique insights into the resilience disciplines and ways to improve our practice in the future and create greater relevance to management.

[16] http://www.organisationalresilience.gov.au/Pages/default.aspx

[17] http://www.flinders.edu.au/fms/documents/NP1314_Revised_TRI%20Toolkit%20and%20Scorecard%20Version%202.pdf

[18] https://ajem.infoservices.com.au/items/AJEM-31-02-09

Chapter Five
Roles within Organisational Resilience

By Lisa Cameron de Vries

In the previous chapter, we explored the key components of organisational resilience. We discussed that there are certain attributes a resilient organisation should have and what disciplines interact with it. It clarified that the tools of risk management are useful in improving the resilience of the organisation. The model below depicts their interaction.

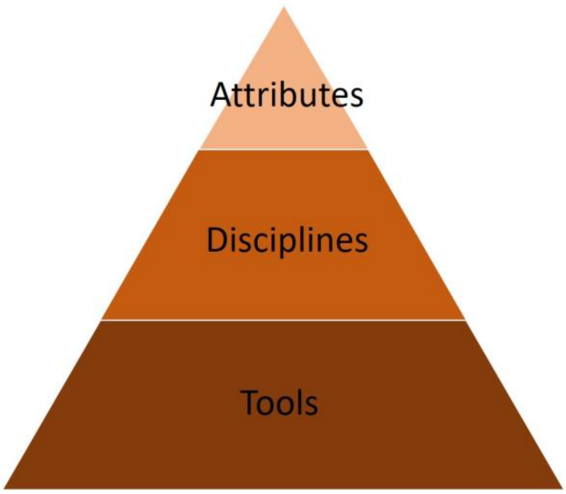

Fig. From strategic to practical organisational resilience

It is agreed that to improve organisational resilience we must move away from a silo-approach and strive towards integration. Integration requires collaboration within the organisation. To do this effectively it is important to understand the different roles organisation members have.

Roles

Improving the resilience of the organisation stands or falls with the vision and commitment of the CEO, supported by the senior leadership team.

They are responsible for setting the strategy, demonstrating the commitment, introducing new initiatives, allocating the resources, assessing the effectiveness of measures and continually improving the systems.

Everyone in the organisation has an important role to play though and, most importantly, everyone should come together to share knowledge and expertise. This Chapter dissects the roles across the organisation and provides a narrative on the evolution risk management should go through to remain relevant in the process of achieving organisational resilience.

Evolution of Risk Management

The responsibilities allocated to risk management in the above table are different from the roles often found in organisations where application of risk management just focusses on identification of threats and hazards.

If risk management wants to remain relevant as the concept of organisational resilience develops, more and more organisations need to evolve their risk management practices also into the area of identifying opportunities.

As mentioned before the characteristics of a resilient entity are: aware, diverse, integrated, self-regulating and adaptive [4]. Linking these characteristics to risk management can create a more contemporary approach:

1. Aware: OR starts with developing the ability to see potential consequences to your organisation of events (internal or external), changes and global dynamics. If the context mapping (ISO 31000 requirement) for the risk assessment is done more extensively this could be a key tool (awareness) for the whole organisation. For example, the risk department could collaborate with, for example, marketing (market data), business intelligence and business architecture (internal process maps) to establish an organisation wide, detailed

Designation	Organisation Resilience Responsibilities
CEO [1]	• Instil and drive a culture that stimulates innovation, change and creative thinking • Ensure the importance of Organisational Resilience is communicated throughout the organisation • Allocate resources to improve Organisational Resilience • Endorse processes and procedures that maintain a focus on improving the resilience of the organisation
Chief Financial Officer [2]	• Provide data and reports on the health of the organisation • Provide estimates on the viability of operational improvement, marketing, business development and R&D initiatives • Highlight and investigate sudden changes in financial performance and/ or developing trends • Provide the holistic overview of performance, vulnerabilities, weaknesses and strengths across the organisation
Chief Operating Officer	• Identify weaknesses and vulnerabilities in the operation • Design and implement initiatives/measures to improve the resilience of the organisation
Chief Risk Officer or Corporate Risk Manager [3]	• Provide the tools to improve the awareness of the organisation on the weaknesses, threats, strengths and opportunities (SWOT). This includes short term impacts as well as long term impacts (incl change) • Provide a methodology and process to assess what threats, vulnerabilities and hazards are a priority for treatment • Provide a methodology to structure and support the identification of advantageous, lucrative opportunities to ensure long term sustainability of the organisation • Create and facilitate the collaborative forums where awareness data is gathered, analysed and resilience improvement initiatives are discussed and designed
People and Culture/ HR	• Instil a culture that embraces innovation, change and collaboration • Drive a culture that encourages early reporting of bad news – along with the solution.
Business Development/ Marketing	• Improve awareness by gathering data on developments and trends within: technology, the market, customer behaviour, competitors
Research and Development	• Design process, product, service improvements and/or new products, services that suit the rapid changes in the market and customer behaviour
Business Continuity/Emergency& Crisis Management/ Health&Safety/Security	• BC: ensure the organisation is prepared, resourced and competent to return to business-as-usual operations as soon as possible after a disruption • Emergency Management: ensure the senior leadership is prepared and able to manage any crisis facing the organisation (cyber attack, media scandal, major H&S incident etc) • Health, Safety: ensure measures are designed and implemented to protect the health and safety of staff, contractors, visitors etc • Security: ensure measures are implemented to protect the assets (infrastructure, data, staff, IP) of the organisation
Operational staff	• Understand that organisational resilience is your responsibility as the survival of the organisation and your job and your livelihood depend on it.
Note: This Table is based on a generic breakdown of roles. It is acknowledged that every organisation has their own titles, structures and roles.	

context map that could be used as an awareness/intelligence tool to determine what direction the organisation should take. This also increases the ability of the organisation to be adaptive: knowledge is power.

2. Aware: Risk management provides advanced techniques for identifying threats, hazards, vulnerabilities and weaknesses. Risk management tools are easily adjusted to also identify opportunities. For example, if a threat is rapid technological development by competitors providing them with a competitive advantage, then investment in R&D for a unique, innovative digital application could be an opportunity.

Also, as the risk department gets actively involved in identifying opportunities they will gain more management support as they're not continuously the one highlighting negatives or additional investment requirements for no immediate Return-on-Investment in the eyes of a CEO.

3. Integration: Risk management is done by the many different departments within an organisation and an integrated enterprise wide approach, instead of the common silo approach, to risk greatly improves integration and collaboration within the organisation.

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Lisa Cameron de Vries has an MSc in Industrial Engineering and 12 years of relevant experience in the design, implementation and verification of management systems (business continuity, risk, security, QHSE and emergency management) for organisations in Europe, Asia, Middle East and Australia. She spent four years doing this work in the most austere and war-torn environments in the world. In this time, she dealt with the emergency response and recovery activities for major incidents including air crashes, fuel storage facility fires and multi casualty terrorist attacks.

Lisa's expertise is globally recognised. She has presented at technical meetings and conferences led by US Department of Defense (US DoD), UK Ministry of Defence (UK MoD), North Atlantic Treaty Organisation (NATO), US Central Command (CENTCOM), Defense Logistics Agency (DLA) and the International Air Transport Association (IATA). Four years ago, Lisa moved to Australia where she founded Phoenix Resilience.

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Chapter Six
Key Factors for Success in Organisational Resilience

By Jason Gotch and Mark Carrick

A major factor in understanding organisational resilience is the realisation that it is truly defined by a paradox, in that while there are generic concepts that can be applied, it remains a truly bespoke piece. It should not be assumed that one organisation's program will automatically suit another's. Consideration needs to be given to the culture and behaviours within the organisation itself for these are unlikely to be identical, making a straight "like for like" approach impossible.

A significant challenge for practitioners will be in achieving a balance between education, awareness and implementation. These three key areas form the foundation of initial and ongoing conversations around an organisation's resilience proposition with each needing the correct level of commitment and management support. While practitioners are often quick to note the simplicity, effectiveness and expected outcomes of building resilience within an organisation, general acceptance and understanding amongst those in supporting roles can take considerable time.

By way of comparison, recognised disciplines such as risk and security management are still generally contained within the operational levels of organisations, rather than at the more influential strategic level.

Organisational resilience requires genuine top management support, for without such support, cross departmental synergies and silo breaking is both unrealistic and improbable. In many ways

building resilience across departments or organisations, needs to be done horizontally and not vertically. This requires not only a full understanding of the structure of those areas of the organisation, but also a comprehensive evaluation of the critical interdependencies that exist. Resilience strategies introduced in isolation within specific business divisions or units will only strengthen existing silos, as opposed to breaking them down.

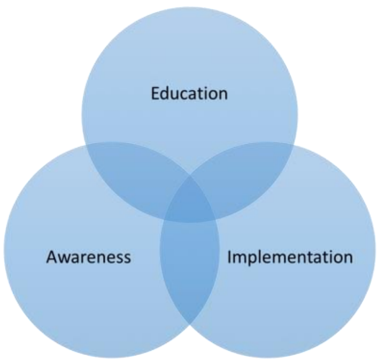
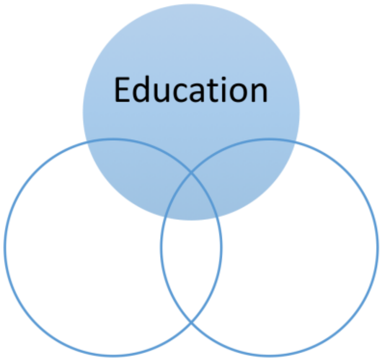
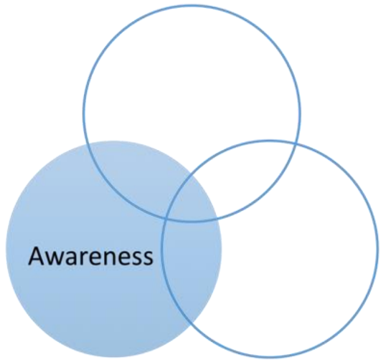


Fig 1: Venn diagram describing the three critical interconnected phases of establishing and building organisational resilience



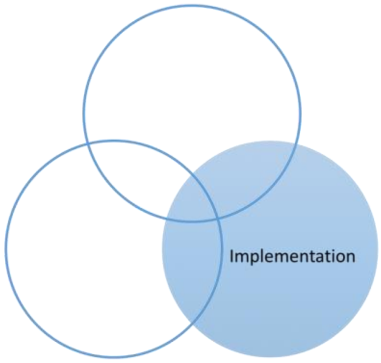


Phase One: Given the relative immaturity of organisational resilience globally, education should be the priority activity assigned to those establishing a program as there remains significant debate internationally around definition, required disciplines, organisational ownership and overall responsibility. While these areas of discussion will undoubtedly continue, individuals introducing these concepts for the first time must ensure that they build a general understanding around the attributes of resilience and not simply focus on the outcome.

Resilience should be considered a journey, as opposed to a process leading to a destination, for any organisations resilience can only be measured at a given point in time. While organisational pace must be taken into consideration with suitable reference points for milestones and benchmarking, a resilience program needs to take a measured approach that restricts overnight adoption or inclusion in a short-term change management program.

Phase Two: This phase could also be considered the marketing phase, for it is designed to not only build awareness of the benefits of resilience, but to engrain the concepts and to identify possible departmental champions within selected business units. While the aspirational goal of any resilience programme, will remain focussed on top management support, initial buy in will more than likely come from lower operational levels.

Departments such as facilities, risk or security can be early adopters of resilience thinking as their focus will more than likely be in supporting recovery strategies following disruption. Facility departments offer a significant avenue for the promotion and adoption of resilience, given their all-encompassing profile, that includes touch points across entire organisations.



Phase Three: While implementation represents the primary goal of any resilience programme, consideration should be given to a slow phased approach, as opposed to the quick introduction of a set of principles or attributes. It should be remembered that the two key aspects of education and awareness form the backbone of the resilience program and their state needs to be seen as both evolving and live. Each of these primary support principles will be utilised at different times throughout the program with appropriate emphasis given as per requirement or importance. An organisation that mandates for resilience introduction that has a lower level of overall maturity may spend significant time within each of these primary areas, whereas more mature organisations, may grasp concepts quickly and move towards integration and implementation.

Gaining Executive Support

During these phases a key success factor will be the appropriate level of stakeholder identification, involvement and sponsorship. The success or failure of any change program within an organisation will hinge dramatically on the programs successful identification, engagement and support of stakeholders across the entire organisation. History has demonstrated that time after time change management projects have stalled and failed because an organisational wide stakeholder engagement plan was not considered and constructed prior to roll out. The identification of first, second and third order effects is essential in truly understanding the depth the education journey to organisational resilience needs to reach. Before we can achieve organisational resilience, we must first make sure we have organisational awareness, acceptance and sponsorship of the project at the appropriate levels from executive level through to where the rubber meets the road.

Gaining executive support in the form of a sponsorship stimulates the power and influence dynamic of any change management program, however achieving that support is the fundamental challenge facing Organisational Resilience practitioners irrespective of their position within the organisation. The adage of "are you costing money, or making money" will always apply. A sound argument that has been articulated many time throughout the content of this white paper.

We are all aware and well ingrained in the benefits of solid and flexible risk driven decision making, the extent of the relationship between risk and resilience is debated all the time, and one of the sound a compelling argument for striving to attain true Organisational resilience is the ability of an organisation to identify opportunities as a result of sound risk management principles, and then execute a strategy to deliver and exploit these opportunities to the ultimate growth of the organisation. Growth as an entity and growth for its employee culture. This is a significant "by in” point when gaining executive support for Organisational resilience.

The ability to understand the operational environment from a protection posture across the spectrum to the attack posture, which allows an organisation to attain agility in this, every changing and complex global environment. Clearly stated the bottom line and sustainability of organisation is the primary concern for all executives. Organisational resilience sold in the appropriate way cannot be ignored or dismissed, as attaining it allows a greater understanding of all the elements of its operational environment and provides confidence in expanding its risk appetite to derive more value for its self, shareholders and employees.

In closing, the systematic approach as outlined in this chapter assists in building a culture that drives resilience, understanding the power and influence dynamics and considering all stakeholders, supporters and potential blockers to this endeavour will be essential for a successful journey to OR. One size does not fit all, however there are some significant similarities and well walked paths that can be relied on to support the attainment of OR.

About the Authors:

Prior to joining Dynamiq as a Business Development Manager, Jason Gotch was employed in similar roles at companies such as Knight Frank, AEG Ogden, Westfield and Foxtel. Jason is a senior member of the Australian Resilience community having formed both the Organisational Resilience Group (ORG) and the NSW Chapter of BANG (Business & National Government) for Resilience & Business Continuity Professionals.

In addition to these positions he is a committee member of the RMIA for the NSW Chapter and chair of the RMIA's Special Interest Group (SIG) on Organisational Resilience. He was recently appointed to Standards Australia/ISO working group (MB025/TC292) on Security and Resilience and holds an elected membership of the United Kingdom’s Security Institute (SI).

As a sought-after resilience speaker, he has delivered presentations to leading organisations such as the Risk Management Institute of Australasia (RMIA), Business Continuity Institute (BCI), Transport Accident Commission (TAC), The Institute of Public Administration Australia (IPAA) and the Organisational Resilience Group (ORG). Jason’s areas of specialisation include business resilience and travel risk management, he is currently completing MBA studies with the Australian Institute of Management (AIM), adding to existing postgraduate qualifications in business continuity, security and emergency management.

Mark is the founding director of Global Business Resilience (GBR) a boutique independent, resilience-building consultancy specializing in helping organisations anticipate and manage the process of defining its strategy, or direction, and making decisions on allocating its resources to pursue this strategy. GBR supports clients by providing strategic consultancy; expert analysis and in-depth strategy to ultimately assist in delivering its mission.

Mark was one of Australia’s most experienced Counter Terrorism practitioners, with over 20 years’ experience in Law Enforcement spanning many disciplines including, General Policing, Witness Protection, Close Personal Protection, Crime Management, Change Management and Counter Terrorism Intelligence. In 2007 Mark was appointed the National Capability Advisor on Counter Terrorism Intelligence to the Australian Government’s National Counter Terrorism Committee, a position he held until July 2013. In this capacity Mark was responsible for building capability in the field of National Counter Terrorism. He has been responsible for identifying and addressing emerging technologies, policy and procedural changes within the Australian Law Enforcement and Intelligence communities. Mark has a Master’s in Business Administration (MBA) from the University of Sydney and is a graduate of the Australian Institute of Company Directors.

Chapter Seven
Examples of Organisational Resilience

By Amit Bansal and Jennifer Le

In many organisations, benefits of Resilience and sometimes even Risk Management are always questioned. Few organisations see it just as a compliance / regulatory exercise. If there was ever a doubt that 'Risk and Resilience' assist and are vital in all kinds of organisations, then the case studies below clearly establish it.

In order to discuss the benefits of resilience, it is important that your organisation defines how it will evaluate resilience. Currently there is no agreed singular method to evaluate resilience for an organisation. However, the evaluation criteria for your organisation does need to be determined in conjunction with the executive team.

While it is evident that the criteria will be different for each organisation and industry, there are several common elements. Resilience can be determined by type of disruption - internal or external, or due to a particular incident or issue, or by categories - in which case different benchmarks are used.

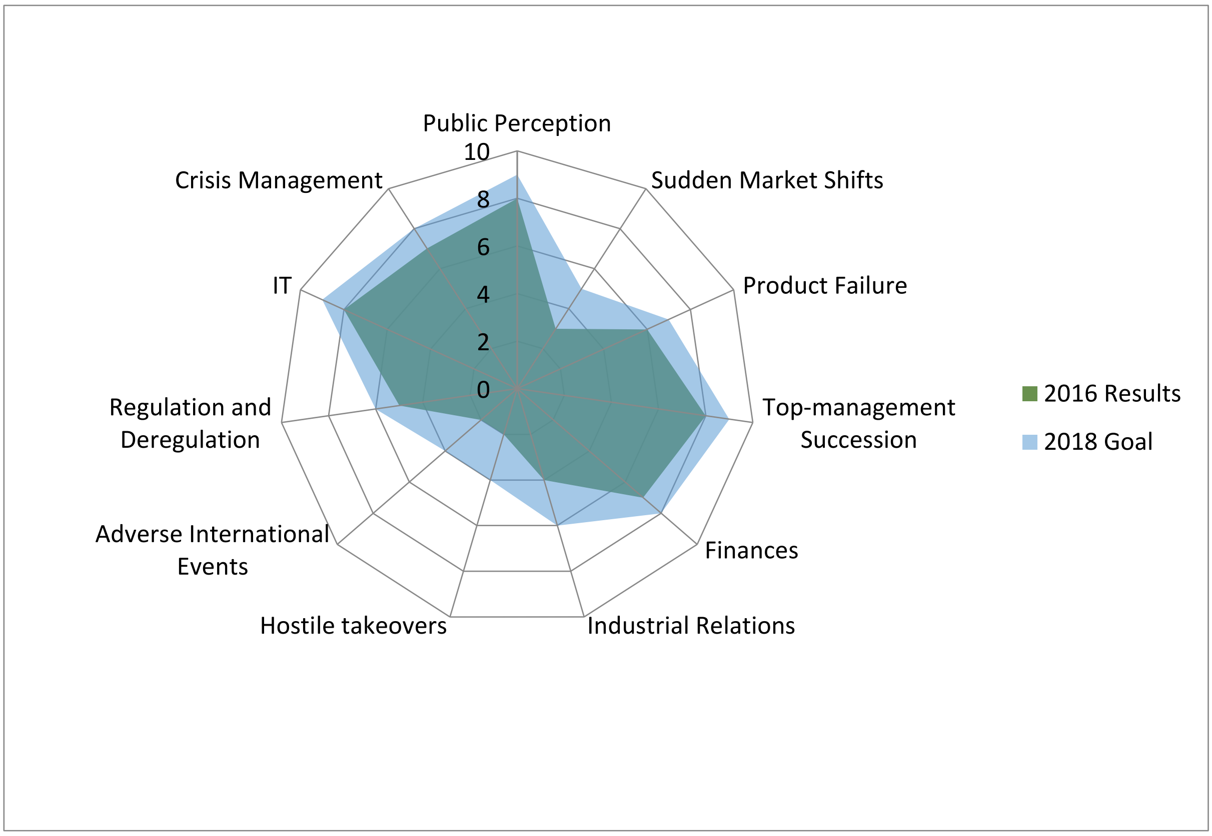
It is generally suggested that the measures be grouped by category as most disruptions affect the whole organisation, as opposed to just one sector. Depending on the category, and its effects, the means of achieving resilience within that category can be different.

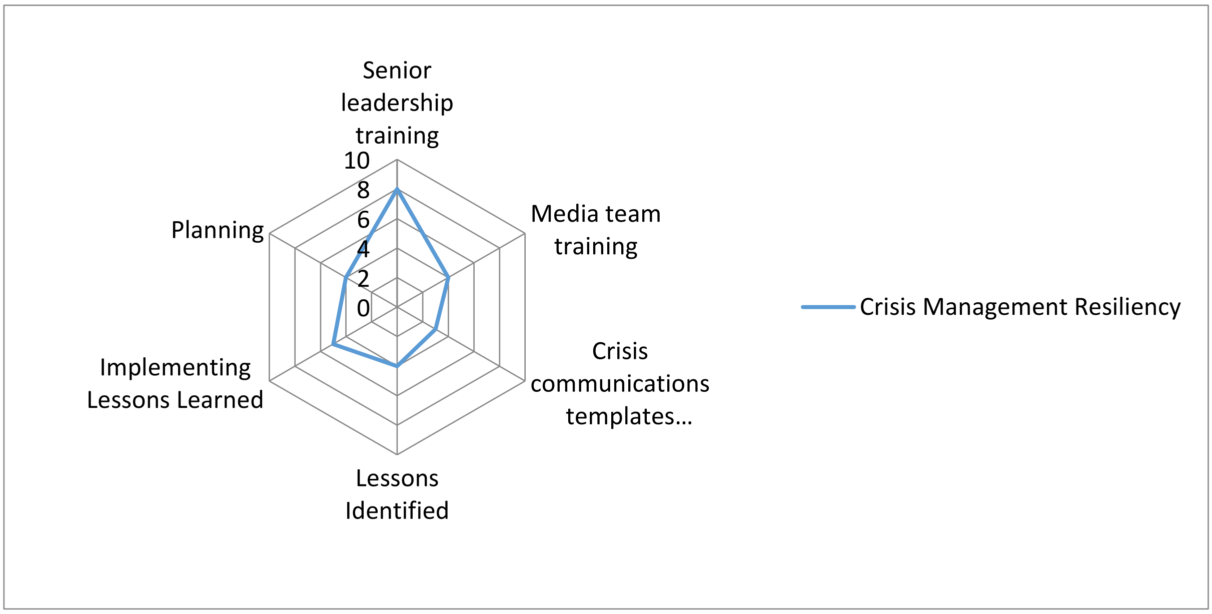
To use the airline industry as an example, with a focus on the Finance category, to promote resilience, and combat disruption, there are many options:

1. Fuel Hedging – used to combat disruption within fuel prices, an airline might use Fuel Hedging as a means to hedge against increasing costs.
2. Foreign Exchange Options - to combat disruption caused by currency fluctuations, an airline might use forex options to hedge against increased costs due to currency fluctuations.

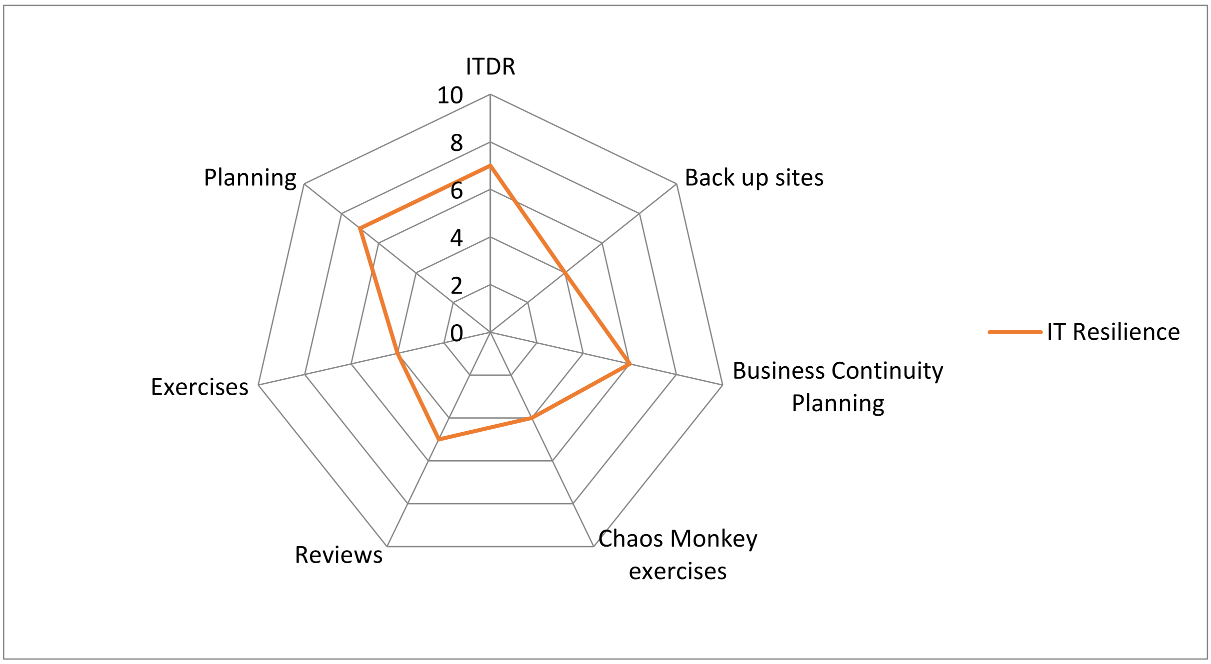
Other categories could include crises in public perception, brand confidence, and brand reputation, sudden market shifts, product failure, top-management succession, finances, industrial relations, hostile takeovers, adverse international events, and regulation and deregulation (Meyers, (1988).).

It is also important to emphasise that there are degrees of resilience, and these degrees will change over time. Resilience is a constant process, not a static goal. The organisation may be resilient in terms of its staffing and management succession, or site resilience (primary, secondary and tertiary sites), or financial resilience, however, not as resilient in terms of IT infrastructure. Reputational resilience should also be considered. It is the combination of the organisation's operations, communications and branding resilience.





It may also be useful to display your organisation's multifactorial approach to resilience in a radar graph as shown below.



It can further be refined into sectors, examples shown below:

Once the evaluation factors are defined, the organisation can then measure, prioritise and plan for targets and improvements. Those plans, processes and changes all contribute to creating a more resilient organisation.

Case Study: Airline Industry & Malaysia Airlines

In 2016, Emirates flight EK521 crash landed at Dubai. The 282 passengers were safely evacuated, there was one casualty, a firefighter responding to the event. The airline crisis management was very well conducted, inclusive of the communications, messaging, assistance and care shown to passengers.

The airline's CEO confirmed that all passengers were safely evacuated, and that the flight crew were the last to evacuate the plane. This all assisted in creating the narrative that safety was the biggest priority at Emirates and aided the company's public perception despite the event. Their reputational resilience was not adversely affected.

In 2014, Malaysia Airlines suffered from two massive crises in the span of five months - the disappearance of flight MH370, and the downing of MH17. Prior to these events, the airline was already under pressure suffering from severe financial losses and competing against low cost entrants in the market. Discussions to plan for restructure to better adapt and compete were still under discussion. More a matter of timing, but if these discussions had been completed and actions taken, perhaps Malaysia Airlines would have been more resilient. Reputation is critical in the airline industry. Reputational resilience during a disruption depends on a combination of factors. Malaysia Airline's crisis management and handling of public perception with MH370 were poorly conducted.

Examples include the slow acknowledgement and lack of urgency in response, incomplete and internally inconsistent accounts that undermined confidence in any future announcements, informing and offering condolences to relatives of passengers on board via text message.

The communications aspect of their crisis management let them down – if Malaysia Airlines had prepared processes in place beforehand, the airline would have been better equipped to communicate coherently and consistently with their stakeholders. As this was not the case, the airline's public perception suffered. Shares in the airline dropped 28% that year and sales in China fell 60% in March. The poor execution of their crisis management affected the airline's public perception, and coupled with their previous financial losses, Malaysia Airlines were more vulnerable in their ability to respond to further disruption.

In the case of MH17, Malaysia Airlines had learnt from their previous mistakes. They quickly confirmed via statement and social media that they received notification from the Ukrainian Air Traffic Control that flight MH17 had lost contact at 14:15 GMT. The crisis communication was also now consistent, with the airline's social media sending the same message as the airline's official statements. Refunds were offered to any passengers who wished to cancel and relatives of passengers on the flight were communicated with frequently and with transparency.

The airline is still operating today. Since 2014, Malaysia Airlines reformed their crisis management, restructured staff levels from 20 000 to 14 000 employees, renegotiated supplier contracts, and reorganized their management structure. In the process they became more adaptable and responsive to disruptions.

There are many cases of airlines unable to adapt and react well to disruptions – American Airlines suffered from consistent financial losses, exacerbated by deteriorating relationships with its unions and staff, unable to reach agreement. They filed for bankruptcy in 2011. Creating better resiliency across their finances and industrial relations could have better placed American Airlines to respond to these problems. Pan Am recovered and were resilient in the face of the fatal air disaster over Scotland in 1988, however, ill prepared for the skyrocketing fuel prices, coupled with lower demand for their transatlantic routes, Pan Am filed for bankruptcy in 1991 and is no longer operating.

In 2008, a British Airways flight crashed at Heathrow Airport. There were no casualties but the fault was a product failure in the Boeing Rolls Royce engine. The event called into question the airline's safety and reputation. The airline's crisis management and care shown to passengers involved both during and post the crisis phase were effective and efficient. Public perception following the event was very favourable - British Airways had a strong safety record prior to this crash and their reputational resilience assisted greatly in reassuring travellers that the airline was still safe to fly.

Simply being resilient in one factor is rarely enough - it is useful to be able to visualise which areas within each factor needs improvement to be able to increase resilience. Being resilient across the whole organisation builds capability and allows for the organisation to be better placed in responding and adapting to adverse conditions and disruption.

Case Study: Oxfam New Zealand and Deloitte Humanitarian Innovation Program

More than ever, humanitarian organisations have been put to the test in the past 10 years around their disaster response capability. In 2010 alone, humanitarian crises from Haiti to Pakistan inundated the UN agencies, donors and international NGO's ability to respond. With the growing number of national / man-made disasters, the expectation to provide support and relief is growing exponentially.

One of the biggest problems that impact humanitarian organisations to support nations in crisis is the ability to deliver vital lifesaving supplies efficiently and quickly. To provide support to the neighbouring countries following a disaster, Oxfam NZ collaborated with Deloitte [19] to develop a more resilient process in supply chain and logistics.

According the Oxfam NZ executive director, Racheal Le Mesurier, disasters such as cyclones in the pacific region are more prominent, intense and have greater impact to communities than ever. Oxfam NZ is always seeking ways to become more resilient and looking for ways to get vital water and emergency supplies to pacific communities faster and more efficiently.

Deloitte and the Oxfam New Zealand team, worked together to develop and implement a logistics and supply chain framework along with management plans for disaster support and relief in the pacific region. The framework assists NGOs such as Oxfam during various disaster response stages. Apart from the framework, they also worked to develop simulation tools, risk and control registers and metrics to measure the effectiveness of the response.

The Business Continuity Institute completed a study on Supply Chain Resilience in 2011 and found that 85 percent of global supply chains had experienced at least one significant disruption over the preceding 12 months. [20]

Case Study: Toyota and the Japanese Tsunami

Toyota (Annual Company Report, 2012) reported that the great East Japan earthquake of March 2011 caused massive disruption to suppliers based within the Tohoku region and adjacent areas. Domestic vehicle production stopped and it is estimated that production of over 750,000 vehicles was lost. In July 2011, floods in Thailand had a similarly disruptive impact on Toyota's suppliers and caused an estimated production loss of approximately 250,000 vehicles. These two events cumulatively amounted to approximately one million vehicles lost from production, but Toyota reported that by sourcing and switching activities across elements of its global supply chain, it was able to recover production of approximately 600,000 vehicles. The events provided an important lesson for Toyota. Its further commitment to managing such supply chain risks more effectively in the future are covered by Canis, 2011, Leckcivilize, 2012.

Even world-class supply chains are not immune to disruption. Toyota has long been recognized for the excellence of its supply chain and supplier controls. Yet the earthquake and

[19] "Improving disaster relief in the pacific", Deloitte.com, humanitarian-innovation.

[20] "Supply Chain Resilience 2011," November 2011, Business Continuity Institute.

tsunami that hit Japan in March 2011 wreaked so much havoc on the company's supply chain that it required six months to fully recover. The disaster spurred Toyota to launch a major improvement initiative with the goal of reducing its future recovery time to two weeks. While mapping its supply chain, the company discovered that Tier 1 suppliers it thought were unrelated actually relied on the same Tier 2 suppliers, creating dangerous common dependencies. In order to avoid potential disruptions and increase resilience, Toyota is working with at-risk suppliers to build additional facilities, and is standardizing its parts with other automakers so they can share components manufactured in different locations.

Case Study: Resilience and Chaos Monkey[21]

In the old days, Risk Management taught us to use all our operational and system capabilities to prevent failure. Netflix however, came up with a completely contrary approach to manage disruptions i.e. by causing regular micro disruptions to their live environment on a daily basis. That's right, on a daily basis. Michael Nygard says that – 'Netflix created "Chaos Monkey" which is named for the way it wreaks havoc like a wild monkey set lose in a data center.' The concept is very simple; if you want to avoid major failures, we must constantly create minor ones. Within Netflix's environment, they randomly shut down virtual servers to simulate failures. It's like deliberately damaging the production environment and the software, ensuring that video streaming never stops, it must survive the disruption. Netflix considers this as "Routine Sabotage" which helps ensure that Netflix's production systems are antifragile.

What is even more fascinating is that Netflix has taken this to a new and higher level and Chaos Monkey is just one tool in their collection of open source cloud testing known as Simian Army. Apart from Chaos Monkey, another tool called 'Chaos Kong' makes Chaos Monkey look like a Chihuahua. While chaos monkey shuts down individual servers, Chaos Kong disrupts an entire AWS region (Amazon Web Service). Netflix published information on their experience in a "Principles of Chaos Engineering" [22].

National Australia Bank (NAB) has been using tools like Chaos Monkey and Bees with Machine Guns (Developed by Chicago Tribune) to test the resilience of nab.com.au which is hosted by Amazon Web Service(AWS). [23] The idea of using these tools was to test resilience of Nab.com.au for brute force load. NAB uses chaos monkey on its production environment which randomly attacks the system which is then automatically replaced by AWS. According to David Broeren (Digital Portfolio Director at NAB), they use chaos monkey on the production environment 24x7, 365 days of the year. Michael Mygard [24] asks a very interesting question to us all: "So how do we take these ideas and translate them to the organisation that's running right now?"

Organisations must keep the lights on though. For example, if we take the chaos monkey

[21] "The New Normal", 24th March 2016, Cognitect.com: Embracing Failure with Netflix

[22] http://principlesofchaos.org/, September 2015

[23] Monkeys, armed bees deliver resilience for NAB, April 2014, Computerworld

[24] "The New Normal", 24th March 2016, Cognitect.com: Embracing Failure with Netflix

analogy and apply it in the HR world, we could randomly dismiss several employees every few weeks (give some people unplanned vacation) and see what happens to the organization? A modified business continuity simulation but in this case we do this continuously. The truth is anyone can disappear at any time (health issues, family issues, accidents, winning lottery etc.) and resilience practices should be developed by organisations to ensure relative information is documented and articulately shared between teams, keeping in mind there is a possibility management is not available to guide.

About the Authors:

Amit has over 10 years' experience in the area of Enterprise Risk & Resilience, Crisis Management, Business Continuity, Information and Physical Security. His work experience includes leading / supporting various organisations in managing crisis situations, delivering resilience capability, deploying business continuity planning and managing ICT Risk incidents across Media, Government, Manufacturing, Telecommunications, Education and Financial services industries.

At present Amit Is responsible for delivering crisis and resilience capability across Foxtel, one of the largest media organisation in Australia. In 2015 Amit co-presented at RMIA conference and at governance institute of Australia on the topics of organisational Risk and Resilience. Amit is a certified lead auditor of ISO 22301 and holds a post graduate diploma in Business from University of Auckland.

Jennifer is responsible for the Emergency Management and Business Continuity at the University of Technology Sydney. Jennifer has broad experience across different industries, and both in the SME and large scale organisations and is passionate about transitioning organisations from a reactive, to an integrated approach to embed resilience.

In 2015, Jennifer wrote the Emergency Management Plan for the Australian Facility for Taphonomic Experimental Research, the only Taphonomy site in Australia and the Southern Hemisphere.

Her thesis focused on evaluating quality-based return on investment – vital in gaining buy in for any Emergency Management or Business Continuity program. Jennifer's emergency services experience includes having served operationally as a rescue member of the NSW State Emergency Service, as well as in the Incident Management Team for large scale operations.

Chapter Eight
Where to now?

In this whitepaper, we have strived to provide you with a balanced overview of the context and purpose of organisational resilience. We have discussed that certain disciplines have an obvious role in OR, but that effective OR requires participation, integration and collaboration across the whole organisation.

Risk management should be considered a primary component in achieving organisational resilience, however, this paper argues that certain amendments in the traditional approach are required to optimally support the organisational resilience objectives. There is no ‘one-size-fits-all’ solution to organisational resilience. Every organisation should adopt a customised approach that suits their unique profile. Through insightful leadership, collaborative organisational culture and implementation of effective tools the organisation can reap the organisational resilience benefits. For organisational resilience to be successful the organisation must go through the phases education, awareness and implementation. The concept of organisational resilience and its practical application will develop further and so will the research by the RMIA Special Interest Group on Organisational Resilience. We want to provide our members and the wider business community with relevant and current insights on the ever-evolving relationship between risk management and organisational resilience. The 2017 RMIA SIG will focus on establishing a set of appropriate skills that a practitioner should seek to enhance or develop in order to be considered a resilience specialist. Given the accelerated rate of interest around resilience both nationally and internationally, demand for recognised and suitably qualified practitioners may well exceed availability.