

# Resilience: Great concept ... but what does it mean?

**Dr. Erica Seville**

In 2003, when our New Zealand based Resilient Organisations<sup>i</sup> team first embarked on resilience research, few organizations were talking 'resilience'. The term had been used in a variety of academic disciplines ranging from ecology through to psychology, but it remained quite a theoretical concept; there was little advice available on how to achieve greater resilience in practice. Rolling forward to 2008 and one of our Steering Committee members recently joked that "resilience is the new black". Everywhere you turn, the word resilience just keeps cropping up. Like its sister concept 'sustainability', it seems that resilience is being presented far and wide as a shining goal for the future – but many are still unsure what it actually means in practice. This Briefing Bite sets out some of the fundamental concepts that are relevant to defining resilience, and will hopefully whet your appetite for further discussion and debate at the workshop.

## ***Definitions and Concepts***

The concept of resilience has emerged from many different disciplines and been applied to many different things. Whilst all of these different groups have used slightly different definitions, as I think you will see below, they all follow similar overarching themes:

- Individual resilience in psychology is the positive capacity of people to cope with stress and catastrophe. Resilience is defined as a dynamic process whereby individuals exhibit positive behavioral adaptation when they encounter significant adversity or trauma<sup>ii</sup>.
- Community resilience is the capacity of a community to absorb stress or destructive forces through resistance or adaptation; to manage or maintain certain basic functions and structures during disastrous events; and the capacity to recover or 'bounce back' after an event<sup>iii</sup>.
- There are also several alternative definitions of organizational resilience, for example, it has been defined as the ability to design and implement positive adaptive behaviors, matched to the immediate situation, while enduring minimal stress<sup>iv</sup>.
- In engineering there is a whole new field called Resilience Engineering that focuses on how to help people to cope with complexity under pressure<sup>v</sup>.

- In the UK a more inclusive definition of resilience has been adopted, where resilience is the ability, at every relevant level, to anticipate and, if necessary, to handle and recover from disruptive challenges<sup>vi</sup>.

There are several dimensions to resilience. It is:

1. the ability to prevent negative consequences occurring,
2. the ability to prevent negative consequences worsening over time, and
3. the ability to recover from the negative consequences of an event<sup>vii</sup>.

Resilience is also about finding the ‘silver lining’ – seeking out the opportunities that always arise during a crisis to emerge stronger and better than before.

Within our research program, we like to think of a resilient organization as one that is still able to achieve its core objectives (that which is held dear to the organization), even in the face of adversity. From case study research, the qualities that more resilient organizations tend to exhibit over those that are less resilient include<sup>viii</sup>:

- An **organizational ethos** to constantly strive for improved resilience
- Good **situation awareness** of the threats and opportunities facing the organization through the active monitoring of strong and weak signals
- A strong commitment to proactively identify and manage **keystone vulnerabilities**, and
- A culture that promotes **adaptive capacity**, agility and innovation within the organization

Under these headings, there is a suite of 23 characteristics that we propose as indicators of resilience; but for now, let’s just keep it simple and define resilience as:

*...the ability of an organization to thrive, in both good times and in the face of adversity.*

## ***Resilience of...?***

It is important to recognize that while the discussion at the workshop will focus on the resilience of organizations (businesses, government agencies, institutions etc), an organization sits within an ecological like system and resilience is required at all levels of this system.

No organization is an island; the resilience of your organization is directly related to the resilience of the other organizations on which it depends (customers, suppliers, regulators, and even competitors). In addition to this, your organization is dependent on the individual resilience of your staff and the communities that they live in. In a symbiotic relationship, your organization, in

turn, contributes to the resilience of these communities. Similarly, your organization's resilience is directly related to the resilience of your sector, and your sector's resilience is intertwined with the resilience of the nation.

The fact that resilience concepts apply at all these levels offers both challenges and opportunities. The challenge comes from the sense that 'resilience encompasses everything' – making the problem too big. The opportunity comes from the ability to leverage common concepts and terminology to raise the game at several levels in society simultaneously.

The multiple levels of resilience can be likened to the generic risk management process. The principles are the same but the application and the scope shifts depending on if you are focusing on enterprise risk management, risks for a single business unit, or risks for a single project. The trick comes in defining the context so that the questions are framed appropriately, and therefore the answers we get out are relevant to the actual problem at hand.

### ***Resilient to...?***

Resilience is contextual. Each organization has their own 'perfect storm' – a combination of events or circumstances that has the potential to bring that organization to its knees. For a financial system, the worst nightmare might be sudden loss of customer confidence creating a snowballing 'run on the bank'. For other organizations it may be the failure of a key supplier, contamination on the production line, a disgruntled employee wreaking havoc, etc. Similarly an organization may be very resilient to some types of crisis, but less resilient to others. This creates challenges when trying to benchmark the resilience of one organization against another. To overcome this, it is important to define resilience for an organization, independent of the cause of crisis. It is also important to recognize that even though your organization may be very resilient there are always sets of circumstances where the chances of survival are minimal, and thresholds, above which your organization is not prepared to invest to become resilient to. An investment in resilience is an investment in giving yourself the best possible shot at turning a crisis into your organization's finest hour; it is no guarantee of it.

### ***Resilience is Dynamic***

In the social sciences field, Bruce Glavovic<sup>ix</sup> uses great imagery when talking about resilience; he talks of '*waves of adversity and layers of resilience*'. What he is referring to is the dynamic nature of resilience and threat environments. To extend Bruce's analogy, during peace-time a community strives to build up layers of resilience – a bit like sand building up a sand-dune. A big storm comes along and takes some of that sand away, but so long as the dunes are high enough, the storm surge causes little damage. After the storm passes, the dunes start

rebuilding again. With any luck, the sand dunes will be high enough by the time the next major storm arrives.

In the same way, the ability of a community or organization to survive through a major crisis is influenced by what has come before. The community or organization may be highly resilient to begin with, and may bounce back from their first crisis very well. However, by the time the community or organization has suffered three or four crises in quick succession, even the best will become battle-weary, with resources stretched and defenses weakened by earlier events.

With this in mind, an organization needs to design its resilience strategy to be layered –the more and greater diversity of resilience strategies available to the organization the better. More layers have the effect of raising the sand-dunes – providing a bigger buffer to survive larger crises, or the cumulative effect of more frequent crises. Variety provides diversity of options. All sand-dunes have their limits; no matter how high the sand-dune is, one day it will be overtopped by a freak wave. It is important to have other types of resilience strategies in place, such as setbacks for development, buildings designed to let the water flow through, and a well practiced evacuation plan. The same is true for an organization; the crisis that comes is more than likely not the one that has been planned for, so it is important to have as many options as possible in the toolbox to respond and recover.

The resignation of a key staff member, a fractious round of wage negotiations, or the installation of a new IT system can all shift the resilience space that an organization is operating in. This dynamic nature of resilience therefore requires constant vigilance and effort to achieve maximum potential resilience given the circumstances.

## ***Risk and Resilience***

I'm often asked how Resilience fits with Enterprise Risk Management. My PhD is in risk assessment and I believe risk management provides a good framework for organizations to be more proactive in thinking about and managing the unexpected. However there are limitations in the way that risk management is applied within many of our organizations. Sometimes the focus on following the risk management *process* draws attention away from really thinking creatively about the risks that face our organizations. This is where I believe that resilience thinking can provide benefits for the risk-weary organization. Resilience concepts can be used to creatively seek out your organization's weaknesses, and then leverage the Enterprise Risk Management frameworks already in place to address them.

Risk managers the world over are faced by the challenge of the things that 'we don't know that we don't know'. From a risk perspective we call these ontological uncertainties. These are the risks that are not identified during the risk identification process. We need to be careful that having a good risk

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management process in place does not lead to over-confidence that all risks are being managed appropriately. The problem with ontological uncertainties is that the unexpected and unpredicted (sometimes referred to as Black or Grey Swans<sup>x</sup>) tends to happen more frequently than we like to admit!

Risks are often evaluated in isolation. Crises tend not happen because 'one thing went wrong', but emerge from a pattern of several issues coinciding in space and time. Risk registers tend to struggle with this concept, and although we have techniques for addressing interdependencies and combinations of risks from a quantitative risk perspective, it is rarely addressed adequately during the more common qualitative risk assessment approach.

The move towards Enterprise Risk Management as a strategy for managing risks more holistically represents a significant improvement in the thinking on risk management and promotes improved resilience; but I'm not sure it provides the total solution. Resilience also requires strategies to be in place for managing those risks that haven't been identified – the hidden interdependencies, the complex risks that are lurking in the background as Black Swans waiting to surprise us. It is important to also invest in adaptive management strategies that can get us out of a hole, just in case our risk management is not quite as effective as we would have liked it to be... In the end, well managed risks and effective planning are still no substitute for great leadership and a culture of teamwork and trust which can respond effectively to the unexpected. The concept of resilience incorporates these aspects.

### ***Defining Resilience using a Competencies Framework***

Another key challenge that arises when talking about resilience is whether it is something we *do* (i.e. defined by inputs) or something we *are* or *strive to become* (i.e. defined by outcomes). In preparing this Briefing Bite, I have been asked to comment on whether it is possible/useful to start identifying competencies that resilient organizations demonstrate. My reaction to this is mixed – it depends on how the competencies framework is defined. I'll start with the negatives and then go on to talk about how we have tried to overcome these.

Firstly, we need to be very careful not to define resilience by the management systems and processes in place to try to build resilience. Case studies show that many of the qualities that prove to be the saving grace of an organization during times of crisis are not easily defined. For example emergent crisis leadership, levels of trust, buy-in and engagement of staff, and the ability to overcome silo mentality can be just as influential on an organizations performance under pressure as the robustness of its risk management processes, continuity planning arrangements etc. I once heard someone describing how the concept of Corporate Responsibility tends to dissolve once you try to define it. Listing all of the things that you need to do to achieve Corporate Responsibility becomes like trying to list everything related to good governance and management, but the

concept is still useful as it helps define the vision or goal that the organization sets out to achieve.

Care is also needed to not become too rigid in our thinking about what a resilient organization looks like; what works will depend on if you are a small family run business or a large multinational corporate. The other reason for being cautious about progressing with a competencies-based framework is that there are many alternative pathways to achieving resilience. Trying to define them all into a coherent road map may actually limit our thinking. I liken it to the challenge faced by risk managers to ensure their organization really engages with thinking creatively about the risks that they face rather than falling into the trap of a 'checkbox mentality' or simply updating the risks identified last year. If we go down a competencies based route, we need to consciously continue to explore and evolve this framework as our understanding improves.

With these cautions in mind, but recognizing that what gets measured gets managed, our research program has developed a series of 23 behavioral indicators that summarize our current thinking on what to look for when trying to assess an organization's resilience:

***Resilience Ethos:*** *A culture of resilience that is embedded within the organization across all hierarchical levels and disciplines; where the organization is a system managing its presence as part of a network and where resilience issues are key considerations for all decisions that are made.*

Indicator	Definition
Commitment to Resilience	A belief in the fallibility of existing knowledge as well as the ability to learn from errors as opposed to focusing purely on how to avoid them. It is evident through an organization's culture, training and how it makes sense of emerging situations.
Network Perspective	A culture that acknowledges organizational interdependencies and realizes the importance of actively seeking to manage those interdependencies. It is a culture where the drivers of organizational resilience and the motivators to engage with resilience are present.

***Situation Awareness:*** *An organization's understanding of its' business landscape; its' awareness of what is happening around it, and what that information means for the organization, now and in the future.*

Indicator	Definition
Internal & External Situation Monitoring & Reporting	The creation, management and monitoring of human and mechanical sensors that continuously identify and characterize the organization's internal and external environment, and the proactive reporting of this situation awareness throughout the organization.
Informed Decision Making	The extent to which the organization looks to its internal and external environment for information relevant to its organizational activities and uses that information to inform decisions at all levels

	of the organization.
Recovery Priorities	An organization wide awareness of what the organizations priorities would be following a crisis, clearly defined at all levels of the organization, as well as an understanding of the organization's minimum operating requirements.
Understanding & Analysis of Hazards & Consequences	An anticipatory all-hazards awareness of any events or situations which may create short or long term uncertainty or reduced operability. An understanding of the consequences of that uncertainty to the organization, its resources and its partners.
Connectivity Awareness	An awareness of the organization's internal and external interdependencies and links and an understanding of the potential scale and impact that expected or unexpected change could have on those relationships.
Roles & Responsibilities	Roles and responsibilities are clearly defined and people are aware of how these would change in an emergency, the impact of this change, and what support functions it would require.
Insurance Awareness	An awareness of insurance held by the organization and an accurate understanding of the coverage that those insurance policies provide. (Note – this indicator seems at a more micro-level than the others, but we regularly observed organizations using insurance as a security-blanket, without a good understanding of the limitations of that cover!)

**Management of Keystone Vulnerabilities:** *The identification, proactive management, and treatment of vulnerabilities that, if realized, would threaten the organization's ability to survive.*

Indicator	Definition
Robust Processes for Identifying & Analyzing Vulnerabilities	Processes embedded in the operation of the organization that identify and analyze emerging and inherent vulnerabilities in its environment, and enable it to effectively manage vulnerabilities to further the networks' resilience.
Planning Strategies	Effectiveness of organizational planning strategies designed to identify, assess and manage vulnerabilities in relation to the business environment and its stakeholders.
Participation in Exercises	Participation of organizational members in rehearsing plans and arrangements that would be instituted during a response to an emergency or crisis.
Capability & Capacity of Internal Resources	The management and mobilization of the organization's physical, human, and process resources to effectively respond to changes in the organization's operating environment.
Capability & Capacity of External Resources	Systems and protocols designed to manage and mobilize external resources as part of an interdependent network to ensure that the organization has the ability to respond to crisis.
Organizational Connectivity	Management of the organization's network interdependencies and the continuous development of inter-organizational relationships to

	enable the organization to operate successfully, and to prevent or respond to crisis and uncertainty.
Staff Engagement & Involvement	The engagement and involvement of staff so that they are responsible, accountable and occupied with developing the organization's resilience through their work because they understand the links between the organization's resilience and its long term success.

**Adaptive Capacity:** *The organization's ability to constantly and continuously evolve to match or exceed the needs of its operating environment before those needs become critical.*

Indicator	Definition
Strategic Vision & Outcome Expectancy	A clearly defined vision which is understood across the organization and reflects its shared values and empowers its stakeholders to view the organization's future positively.
Leadership, Management & Governance Structures	Organizational leadership which successfully balances the needs of internal and external stakeholders and business priorities, and which would be able to provide good management and decision making during times of crisis.
Minimization of Silo Mentality	Reduction of cultural and behavioral barriers which can be divisive within and between organizations, which are most often manifested as communication barriers creating disjointed, disconnected and detrimental ways of working.
Communications & Relationships	The proactive fostering of respectful relationships with stakeholders to create effective communications pathways which enable the organization to operate successfully during business-as-usual and crisis situations.
Information & Knowledge	The management and sharing of information and knowledge throughout the organization to ensure that those making decisions or managing uncertainty have as much useful information as possible.
Innovation & Creativity	An organizational system where innovation and creativity are consistently encouraged and rewarded, and where the generation and evaluation of new ideas is recognized as key to the organization's future performance.
Devolved & Responsive Decision Making	An organizational structure, formal or informal, where people have the authority to make decisions directly linked to their work and, when higher authority is required, this can be obtained quickly and without excessive bureaucracy.

As part of our research we are currently developing a Resilience Benchmarking survey which will be piloted with 200 organizations in Auckland, New Zealand from February next year. The benchmarking will consist of an online survey, to be completed by a cross-section of staff to give a snapshot of the organization's current resilience strengths and weaknesses. It is a diagnostic tool; knowing that you have a problem is a good start to getting it solved.



A benchmarking survey is naturally going to have its limitations – keeping the survey short enough to get a good completion rate, while trying to capture something as rich as organizational resilience is always going to be a trade-off. For your own organizations, I would suggest a good a place to start would be getting your risk/resilience team together and self assessing your organization on a scale of 1 - 10 for each of the above indicators. Although it is a subjective assessment, the results provide a rich source of debate and can form the basis for developing a program for identifying and addressing shortcomings. Whichever tools you develop or use, it is important to keep in mind that the greatest value from resilience thinking can come from the articulation of resilience as a goal; forcing ourselves to constantly look at our organizations through a fresh set of lenses.

### ***Food for Thought***

I hope that some of the above has provided a platform for stimulating and challenging debate at the workshop. I certainly don't have all the answers when it comes to organizational resilience, and it is through challenge and debate that we really explore and innovate. With this in mind, I look forward to hearing your ideas for how to foster and promote greater resilience within and beyond our own organizations.

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<sup>i</sup> Resilient Organisations Research Programme. [www.resorgs.org.nz](http://www.resorgs.org.nz)

<sup>ii</sup> Luthar, S. S., Cicchetti, D., & Becker, B. (2000). "The Construct of Resilience: A critical evaluation and guidelines for future work. *Child Development*, 71(3), 543-562

<sup>iii</sup> Twigg, J. (2007) *Characteristics of a Disaster-Resilient Community: A guidance note*. Report prepared for the DFID Disaster Risk Reduction Interagency Coordination Group. Benfield UCL Hazard Research Centre.

<sup>iv</sup> Mallak, L.A. (1999) *Toward a Theory of Organizational Resilience*. Portland International Conference on Technology and Innovation Management.

<sup>v</sup> Hollnagel, E. Woods, D. D. & Leveson, N. (2006) *Resilience Engineering: Concepts and Precepts*. Burlington, Vt. Ashgate Publishing, Ltd.

<sup>vi</sup> The Civil Contingencies Secretariat, Cabinet Office, UK

<sup>vii</sup> McManus, S. (2008) *Organisational Resilience in New Zealand*. PhD Thesis, University of Canterbury. Accessible online at [www.resorgs.org.nz/pubs](http://www.resorgs.org.nz/pubs)

<sup>viii</sup> McManus, S., Seville, E., Vargo, J. & Brunsdon, D. (2007) *Resilience Management: A framework for assessing and improving the resilience of organisations*. Resilient Organisations Research Report 2007/01. [www.resorgs.org.nz/pubs](http://www.resorgs.org.nz/pubs)

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<sup>ix</sup> Glavovic, B (2005) *Social Resilience: Building layers of resilience to transcend waves of adversity*. Resilient Infrastructure Conference, Rotorua, New Zealand. 8th August 2005, CAE.

<sup>x</sup> Taleb, N (2007) *The Black Swan: The impact of the highly improbable*. New York: Random House