Business recovery from disaster: A research update for practitioners

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Abstract

In the week following the Darfield magnitude 7.1 earthquake on September 4th 2010, researchers from the Resilient Organisations research group convened in Christchurch to set out a plan for learning as much as possible about the effects of the earthquake on organisations across their shaken region. This began a six-year process of data collection, analysis, and learning about the way organisations are affected by, adapt to, and recover from major disruptions. Between November 2010 and September 2016, our research team interviewed and surveyed over 1000 organisations across the Canterbury region through a series of earthquakes and disruptions, building a broad and rich dataset of insights that can now help other organisations facing disruptions in the future. In this article, we identify the top ten lessons for managing through crisis, being agile and adaptive in the face of change, and finding opportunities in disruption based on the experiences of real organisations. The lessons learned in the Canterbury event can inform resilience enhancement for the many organisations facing complex hazard risks, including those in New Zealand's capital, Wellington.

Keywords: *Business recovery, organisational resilience, disasters, disaster recovery*

The Canterbury Earthquake Sequence

At 4:34am on 4th September 2010 a magnitude 7.1 earthquake rocked residents in the Canterbury region of New Zealand (NZ). The event caused widespread damage and infrastructure disruption across Canterbury but there were no direct fatalities, partly due to the timing of the earthquake. Although the earthquake caused significant damage it was considered manageable and a local state of emergency was lifted after 12 days. Then, a destructive aftershock occurred on 22nd February 2011 at 12:51pm. This magnitude 6.2 earthquake, centred 13 kilometres from the Central Business District (CBD) of Christchurch, caused multiple building collapses and resulted in the deaths of 185 people. Consequently, a cordon was erected around the entire CBD. This cordon was reduced in size gradually over the next two and a half years as buildings were demolished and roads reopened. In the interim, over 51,000 workers and 6,000 businesses across the region were forced into different ways of operating to survive (Stevenson, Seville, & Vargo, 2012).

Since November 2010, the Resilient Organisations Research Group[1] has surveyed over 1000 organisations, interviewed over 100 organisations, and worked alongside scores of businesses and government agencies within the region to understand the impacts of and response to the Canterbury earthquake sequence. Through this process we have gained a rich view of how a major disruptive event can have lasting effects on a city and those who live and work there. These insights can now help other organisations and regions facing future disruptions. This paper details the top 10 lessons learned by Resilient Organisations researchers, and is supported by numerous references originating from the Resilient Organisations Research Group (Brown, Chang, Hatton, Malinen, Nilakant, Poontirakul, Sampson, Seville, and Stevenson). We present these lessons as a guide for organisations and the regions they support who may face disaster recovery in the

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1   Resilient Organisations was formed in 2004 as a network of researchers across New Zealand interested in the newly-emerging topic of organisational resilience. In 2014, Resilient Organisations transformed into a social enterprise, continuing to research as well as offering consulting services to help organisations understand and develop their resilience.
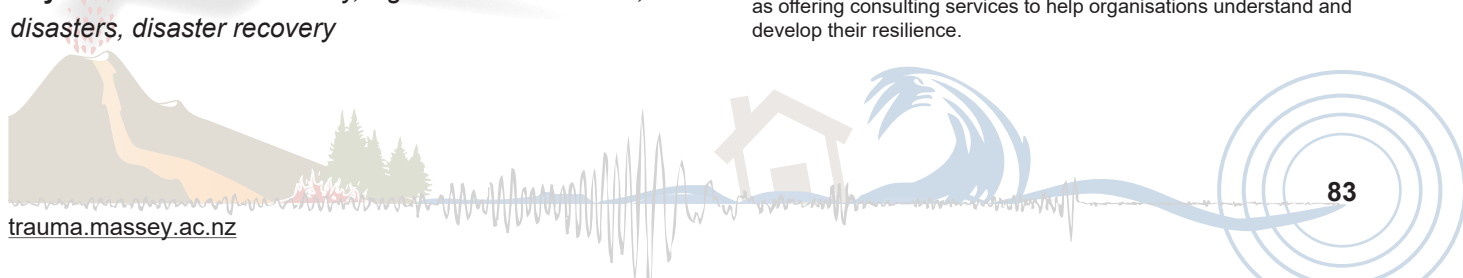
future. More details about the methods used and specific results can be found in the papers cited throughout this article, which represents a brief overview of the main lessons drawn from the body of work carried out by our team.

Take care of your staff

"He aha te mea nui o te ao
What is the most important thing in the world?
He tāngata, he tāngata, he tāngata
It is the people, it is the people, it is the people"

Māori whakatauki (proverb)

Following the Canterbury earthquake sequence, businesses consistently reported that one of the most challenging aspects of the recovery was managing staff (Brown, Stevenson, Giovinazzi, Seville, & Vargo, 2015). Post-disaster staff well-being can be supported in a number of ways, including acknowledgment of the extra efforts of staff in the post-earthquake environment, providing increased autonomy and flexibility around job descriptions and performance management, commitment to well-being initiatives such as the five ways to well-being (Aked, Marks, Cordon, & Thompson, 2008), and helping to ensure staff have access to necessities (water, food, shelter, child care, etc). Organisations in Canterbury that undertook these initiatives saw staff better able to cope with difficulties and a noticeably more positive mood towards their ongoing challenges (Malinen, Hatton, Naswall, & Kuntz, 2018).

Although everyone experiences a disaster differently, common patterns tend to emerge (Figure 1). Understanding the highs and lows of recovery will help those working with people to anticipate and respond to challenges through the recovery period. Effective leadership and planning should consider the emotional journey of recovery to ensure that leaders as well as staff are supported as best as possible.

Organisations do not need to wait for a disaster or disruption to improve staff well-being. The recent release of the International Standard (ISO 22330) "Guidelines for people aspects of business continuity" focuses on the duty of care that organisations have to ensure staff well-being before, during, and after a disaster (International Organization for Standardization, 2018). Recovery agencies and authorities can assist their communities by ensuring these messages are available and accessible in the disaster aftermath as well as enacting them within their own organisations.

Look after your leaders

"You cannot pour from an empty cup."

Unknown

Leading in a post-disaster environment requires significant time and energy; this includes not just managing business matters but often also supporting staff, and sometimes customers, to cope with stress (Malinen et al., 2018). Leaders can come from unexpected places and looking after them is vital for ensuring your organisation can recover and thrive.
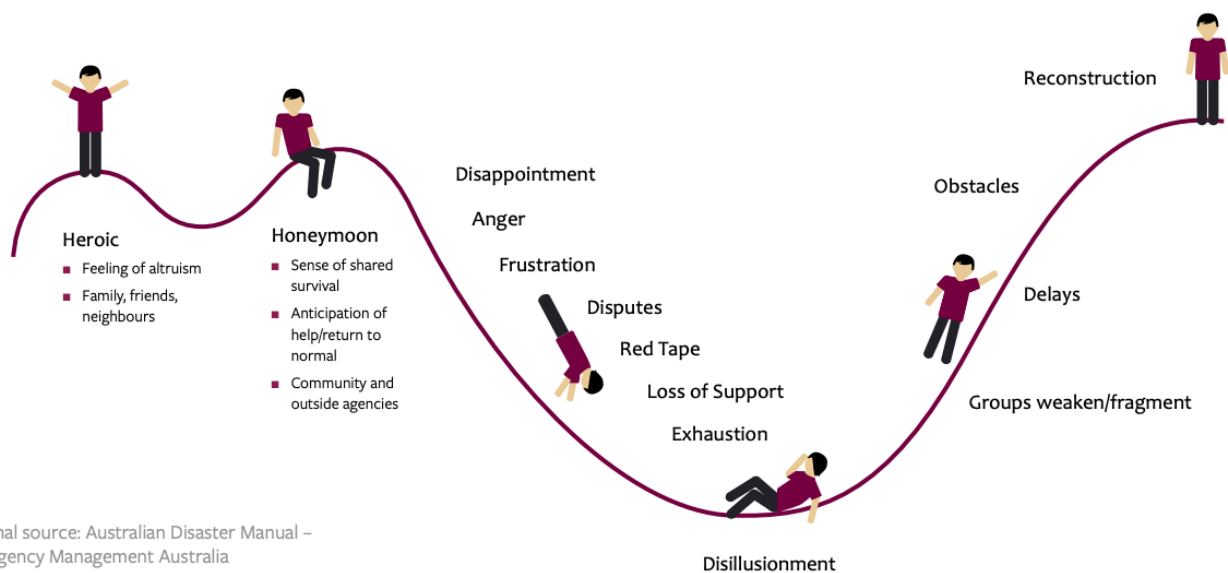
Original source: Australian Disaster Manual – Emergency Management Australia

Figure 1. The highs and lows of disaster recovery (McNaughton, Willis, & Lallemant, 2015).

Organisations with high resilience tend to adopt a devolved style of leadership, empowering the leadership of many rather than one, to ensure that any issues that arise can be dealt with promptly (Seville, Van Opstal, & Vargo, 2015) and to reduce the potential for leader burn-out (Malinen et al., 2018).

Post-earthquake in Canterbury, our research group found that levels of staff engagement depended more on the leadership qualities demonstrated by their one-up manager than on senior leadership decisions (Nilakant, Walker, Rochford, & Van Heugten, 2013). Senior management may do well at expressing their support for employees, but line managers need to also have the understanding and skill to offer both practical and emotional support to their teams. It is therefore important to spend time with your managers pre-crisis and post-event to support them to be good leaders.

There is no such thing as too much communication

"The single biggest problem in communication is the illusion that it has taken place."

George Bernard Shaw

Disasters generate environments filled with uncertainty. Businesses must be prepared to communicate early and often with their staff, suppliers, customers, neighbours, insurance companies, and, in some cases, the public at large. In all cases, this means both delivering clear outward communications and soliciting and meaningfully responding to questions, concerns, and insights from those with whom you are communicating.

Internal communications should be a first priority for any organisation. Assessing staff well-being after an event and letting all people and parts of the business know about the situation as it unfolds is critical. Maintaining constructive two-way communication with staff can be difficult following a period of disruption. If not done well, employee performance and productivity can suffer (Malinen et al., 2018).

Ongoing two-way communication with suppliers and customers is essential throughout the response and recovery period. Customer perceptions can affect levels of demand following an earthquake. Ensuring that current and potential customers are informed about what happened and the impact on the organisation as well as reinforcing the customers' importance to the business can reduce the likelihood of misinformation, confusion, and mistrust. In Canterbury, organisations and business associations went to great lengths (e.g., site visits,

marketing campaigns, websites, and social media) to demonstrate their capacity to deliver their products and services (Hatton, 2015). Frequent communication with a wide array of partners and stakeholders reduced negative outcomes and created opportunities for earthquake-affected organisations.

No organisation is an island

"No man is an island, entire of itself; every man is a piece of the continent, a part of the main."

John Donne

The ability of a business to deliver its product can be affected by a disturbance at any point in its supply chain. Following the Canterbury earthquakes, organisations whose suppliers were disrupted were significantly more likely to experience decreased productivity than organisations whose supply chains were entirely functional (Seville, Stevenson, Brown, Giovinazzi, & Vargo, 2014). Continuous open communication with suppliers and a willingness to adjust on both sides of a supply relationship is important. Following the Canterbury earthquakes, disrupted organisations that communicated well with their suppliers were able to negotiate changes to their supply arrangements and were more likely to receive donated supplies, discounts, extended credit, and deliveries outside of normal work hours (Stevenson et al., 2014).

Supply chain resilience can be built prior to a disruption by selecting suppliers with good track records (Mascaritolo & Holcomb, 2008), building social capital with suppliers (Stevenson et al., 2014), and diversifying the business's portfolio of suppliers (both in terms of organisational diversity and geographic diversity; Tang, 2006). Understanding your supply chain structures, including how information flows through the supply chain, can also help communications post-disruption and allow lessons to be learned and integrated collectively by all organisations throughout the chain.

Collaboration for success: Work with your old friends and make new ones

"Naku te rourou nau te rourou ka ora ai te iwi.
With your basket and my basket the people will thrive."

Māori whakatauki (proverb)

It is well established that building relationships pre-event is good practice in disaster preparedness (Aldrich, 2012). We also found many cases where successful

collaborations were formed post-event based on no prior relationships. The majority of these involved organisations "moving in together", creating innovative new ways to satisfy their urgent needs for spaces from which to trade. Building trusting relationships between organisations, including competitors, customers, and business associations provided organisations with resources, moral support, information, and inspiration that supported recovery. For example, some customers offered to pay in advance, place extra orders, or defer orders in an effort to help impacted businesses. Treating customers well during business-as-usual will increase the likelihood of these offers of help occurring during disruption. Suppliers offered space and often flexibility over payment terms. These relationships were also the source of a much-needed sense of camaraderie and help in generating ideas of how to adapt to the post-disaster environment.

In some cases, the event spawned new ways of collaborative working that has had long-lasting benefits. The Enterprise Precinct and Innovation Campus (EPIC) Sanctuary is a purpose-built office complex in the Christchurch CBD. The complex includes shared meeting areas, kitchen, and bathrooms as well as individual offices for 17 companies in the Information and Communications Technology (ICT) sectors. EPIC was founded by a group of 40 small ICT business owners that had lost their premises in the earthquakes and were having difficulties finding alternatives. A major disaster with long-lasting effects creates many of the conditions theorised to enable swift trust (Beck & Plowman, 2013; Hatton, 2015). This means that providing opportunities for organisations to interact with each other, regardless of their prior interactions, is an important mechanism to enable emergent collaborations post-event.

Recovery for a new environment

"A time in crisis is not just a time of anxiety and worry. It gives a chance, an opportunity, to choose well or to choose badly."

Desmond Tutu

All too often, people and organisations rush to return to their pre-earthquake state. Sometimes this is out of an understandable and pressing need to make ends meet. However, earthquakes and other disasters can change the business environment positively or negatively and either temporarily or permanently. Changes are often seen in customer behaviours and demands (Sampson,

Hatton, & Brown, 2018); suppliers, operational costs, and staff availability (Stevenson et al., 2011); and regulation changes (Chang et al., 2014). As a result, businesses need to evolve accordingly.

Following the Canterbury earthquakes, organisations faced the full spectrum of these disruptions. The University of Canterbury experienced a 16% reduction in student numbers as students sought to avoid the disrupted post-earthquake environment (University of Canterbury, 2012). Many businesses in the central city were forced to relocate, at first due to a cordon and then to enable the implementation of the Central City Blueprint for recovery (CERA, 2011). In some cases, this meant a loss of connection with a business community and loss of customer visibility, causing some businesses to re-think their business model (Hatton, 2015; Stevenson, 2014). Businesses need to be ready to adapt to a new environment and to take advantage of a unique opportunity to reinvent themselves to be ready for the future.

Recovery is a marathon not a sprint

"There is no success without hardship."

Sophocles

The anticipated duration of recovery changed dramatically over the seven years following the earthquakes as the long-term picture of Canterbury's future became clearer. Initial estimates were that the central city would be fully open to the public within six months (Stevenson et al., 2011). However, many did not expect that "six months" would turn into two and a half years (O'Connor, 2013).

The recovery period for many businesses was also longer than expected. More than two years post-earthquakes, Stevenson, Brown, Seville, and Vargo (2018) found that 99% of 541 surveyed organisations had reopened and resumed trading. However, 38% of organisations identified themselves as still being either in "survival mode" or "recovering" from the earthquakes. Table 1 illustrates the many different trajectories facing organisations post-disaster.

Organisations need to be prepared for a long journey. They need to be ready to adapt and change decisions if needed and keep moving forward in times of crisis, even with incomplete information. Recovery managers can help mitigate the stress of uncertain timelines by being open and honest around recovery estimates.
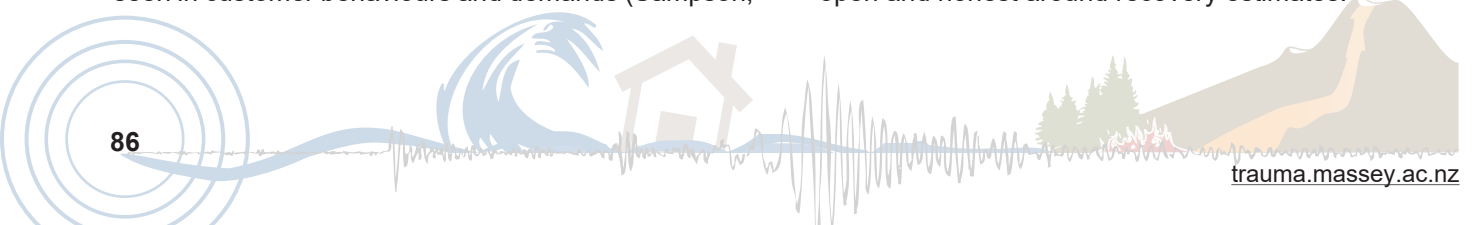
Table 1.
Self-assessed organisational recovery status two years post-earthquake.

Organisational Recovery Status	% of organisations
The earthquakes never impacted our organisation	12%
The earthquakes were positive for our organisation	27%
We have fully recovered from the earthquakes	22%
We are still recovering from the earthquakes	30%
We are still in survival mode following the earthquakes	8%
We are no longer trading	1%

Note. Table adapted from Stevenson et al. (2018).

The paradox of insurance

"Yesterday is not ours to recover, but tomorrow is ours to win or lose."

Lyndon B. Johnson

High insurance coverage has, counterintuitively, created some challenges for business recovery. Many features of the Canterbury earthquakes such as depopulation, the central city cordon, regulation changes, and delays in settling material damage claims meant that significant business losses were not covered by insurance (Brown, Seville, & Vargo, 2016). Fear of *capital flight* (from cash-settled insurance claims) and uncertainty around ongoing availability of insurance[2] (Chang et al., 2014) has also made some developers and business owners slow to re-invest in the city.

Some organisations fell into the trap of expending their time and energy on maximising their insurance pay-out while neglecting to ensure their business was sound in the post-earthquake environment. In some cases this led to worse outcomes than businesses that had no insurance at all (Poontirakul, Brown, Seville, Vargo, & Noy, 2017). While insurance is a good risk-transfer and cost-recovery mechanism, it cannot eliminate risks. Businesses need to understand the limit of their insurance coverage and to ensure their post-disaster efforts are focused on the long-term direction of their organisation.

2   After each significant earthquake event, an insurance moratorium was put in place as insurers reassessed their risk profile.

Staff engagement: More than just a buzzword

"The way your employees feel is the way your customers will feel. And if your employees don't feel valued, neither will your customers."

Sybil F. Stershic

Organisations benefit from focusing on improving employee engagement pre-event. An employee that is engaged and supported is more likely to go above and beyond for the organisation when a crisis occurs (Seville, 2016). Past studies have shown that organisations with engaged employees tend to perform significantly better than organisations where employee engagement is below average (Harter, Schmidt, & Hayes, 2002) in times without crisis. If your employees are motivated to perform well every day for the good of the business due to their high level of engagement, they can pull together even more when the business is in need. Engaged employees in Canterbury provided solutions for business problems, endured difficult conditions, and supported management and each other through the difficult post-disaster conditions. An engaged team is competent (skilled, practiced, and ready to improvise) and made up of committed people who are empowered to be part of the solution.

Planning and preparedness: Plan to adapt

"Resilience is 50% planning and 50% agility."

Resilient New Zealand (2016)

Good business continuity planning arrangements enable organisations to reduce the impacts of events and begin their recovery journey more quickly. Canterbury organisations that had good communication plans were able to cover the basics such as checking on staff and contacting key customers and key suppliers quickly and efficiently. ICT backups enabled ready access to important information. Unfortunately for some organisations without good ICT backups, the loss of customer and accounting databases created a major task in medium to long-term recovery (Hatton, 2015). Having clearly-defined critical functions enabled organisations to begin their recovery arrangements quickly and with a lower likelihood of effort wasted on non-essential actions (Hatton, Grimshaw, Vargo, & Seville, 2016).

However, those key elements of a business continuity plan alone are not sufficient in a major regional event. Plans need to also take into account the level of
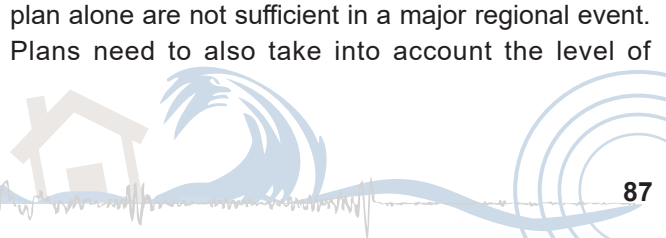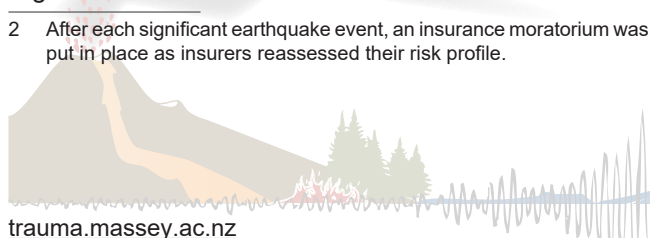
societal and personal disruption that is likely to occur, including loss of access, impacts on staff, and changes to demand. While these may be hard to specifically plan for, there are steps that can be taken pre-event to position organisations to better adapt in the post-disaster environment:

- Include principles in your plans to support staff post-event;

- Build the personal resilience of employees in non-crisis times;

- Identify and develop leadership at all levels within the organisation;

- Ensure plans remind you to consider the opportunities in the post-disaster environment; and

- Build an organisational culture that captures lessons learned promptly and enacts rapid improvement.

Conclusions

There is no one-size-fits-all approach to disaster recovery. The experience of every organisation in the aftermath of a disaster will be unique, but there are steps that all organisations can take to improve their ability to survive and thrive. Following an event, organisations need to be adaptive in an environment that will be constantly changing. They need to communicate fully and openly, value and support staff, leverage existing and new relationships, and have a clear vision of where their organisation is going. Those who build the resilience of their organisation and people before disaster strikes reap rewards not only during a time of crisis, but in business-as-usual too. Preparing for the worst ensures that our organisations will manage well through crisis, be agile and adaptive in an ever-changing environment, and find opportunities to thrive in disruption.

Acknowledgements

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