

Collaborative Approaches to the Post-Disaster Recovery of Organisations

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By Tracy Hatton

University of Canterbury

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ResOrgs has a multi-disciplinary and growing team of over 35 researchers, representing a synthesis of engineering, science and business leadership aimed at transforming organisations into those that both survive major events and thrive in the aftermath.

This thesis is part of an on-going sequence of research concerned with the impacts of, and recovery from, the Canterbury earthquakes. As such, this thesis forms part of a programme seeking both to advance knowledge with regard to organisational resilience but also to provide timely and practical information and advice for organisations working on the recovery process.

ABSTRACT

Organisations play a vital role in assisting communities to recover from disasters. They are the key providers of goods and services needed in both response and recovery efforts. They provide the employment which both anchors people to place and supports the taxation base to allow for necessary recovery spending. Finally, organisations are an integral part of much day to day functioning contributing immensely to people's sense of 'normality' and psychological wellbeing. Yet, despite their overall importance in the recovery process, there are significant gaps in our existing knowledge with regard to how organisations respond and recover following disaster.

This research fills one part of this gap by examining collaboration as an adaptive strategy enacted by organisations in the Canterbury region of New Zealand, which was heavily impacted by a series of major earthquakes, occurring in 2010 and 2011. Collaboration has been extensively investigated in a variety of settings and from numerous disciplinary perspectives. However, there are few studies that investigate the role of collaborative approaches to support post-disaster business recovery. This study investigates the type of collaborations that have occurred and how they evolved as organisations reacted to the resource and environmental change caused by the disaster.

Using data collected through semi-structured interviews, survey and document analysis, a rich and detailed picture of the recovery journey is created for 26 Canterbury organisations including 14 collaborators, six non-traders, five continued traders and one new business. Collaborations included two or more individual businesses collaborating along with two multi-party, place based projects. Comparative analysis of the organisations' experiences enabled the assessment of decisions, processes and outcomes of collaboration, as well as insight into the overall process of business recovery.

This research adopted a primarily inductive, qualitative approach, drawing from both grounded theory and case study methodologies in order to generate theory from this rich and contextually situated data. Important findings include the importance of creating an enabling context which allows organisations to lead their own recovery, the creation of a framework for effective post-disaster collaboration and the importance of considering both economic and other outcomes. Collaboration is found to be an effective strategy enabling resumption of trade at a time when there seemed few other options available. While solving this need, many collaborators have discovered significant and unexpected benefits not just in terms of long term strategy but also with regard to wellbeing. Economic outcomes were less clear-cut. However, with approximately 70% of the Central Business District demolished and rebuilding only gaining momentum in late 2014, many organisations are still in a transition stage moving towards a new 'normal'.

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ABBREVIATIONS AND ACRONYMS

ACC	-	Accident Compensation Corporation
CBD	-	Central Business District
CBRT	-	Canterbury Business Recovery Trust
CCBA	-	Central City Business Association
CCDU	-	Central City Development Unit
CDC	-	Canterbury Development Corporation
CECC	-	Canterbury Employers' Chamber of Commerce
CERA	-	Canterbury Earthquake Recovery Authority
CPIT	-	Christchurch Polytechnic Institute of Technology
EDANZ		Economic Development Agency of New Zealand
EPIC	-	Enterprise Precinct and Innovation Campus
ESS	-	Earthquake Support Subsidy
EQC	-	Earthquake Commission
GDP	-	Gross Domestic Product
GFC	-	Global Financial Crisis
IRD	-	Inland Revenue Department
MBIE	-	Ministry of Business Innovation and Employment
MSD	-	Ministry of Social Development
NGO	-	Non Governmental Organisation
NZTE	-	New Zealand Trade and Enterprise
SME	-	Small and Medium enterprise

Chapter One - Introduction

1. Overview

Organisations play a vital role in assisting communities to recover from disasters. They are the key providers of goods and services needed in both response and recovery efforts. They provide the employment which both anchors people to place and supports the taxation base to allow for necessary recovery spending. Finally, organisations are an integral part of much day to day functioning contributing immensely to people's sense of 'normality' and psychological wellbeing. Yet, despite their overall importance in the recovery process, there are significant gaps in our existing knowledge with regard to how organisations respond and recover following disaster.

This research fills one part of this gap by examining adaptive strategies enacted by organisations in the Canterbury region of New Zealand. Canterbury was heavily impacted by a series of major earthquakes occurring in 2010 through 2011. These events constituted the most damaging natural disaster to occur in New Zealand's short history.

A change to usual business practice was evident in both early research on the disaster (Stevenson, Seville, Kachali, Vargo, & Whitman, 2011; Stevenson, Vargo, et al., 2011), and in media and business support organisations' reports. Rather than the typical "survival of the fittest" type business model, increasingly evident were models that emphasised collaboration and mutual benefit. Many collaborative arrangements, such as sharing premises or equipment, were created solely as short term response measures in the immediate aftermath. Other collaborations, which are the core focus of this thesis, were created many months after the initial events with a focus on mid to long term recovery.

Collaboration has been extensively investigated in a variety of settings and from numerous disciplinary perspectives. However, an initial review of the literature found no studies that investigated the role of collaborative approaches to support post-disaster business recovery. This study contributes to filling that gap, investigating in depth the type of collaborations that occurred. Additionally, the efforts and outcomes of those involved in collaboration were compared with organisations who had not recovered two years after the disaster and others who followed non-collaborative paths to recovery.

This thesis took a trans-disciplinary approach seeking to incorporate existing bodies of knowledge regarding collaboration, disaster recovery and business performance in order to most effectively

generate insight as to the role and process of collaboration between organisations seeking to recover from major disasters.

The impact of disasters on urban environments is immense and the ability of organisations to recover from these extreme events is critical to the overall recovery of the communities affected. It is hoped that this study will contribute to a better understanding of actions that can be taken to mitigate the effects and recover from the unavoidable damage that will continue to be caused by extreme events globally.

2. Research Aims and Questions

Anecdotally, collaborative arrangements are clearly evident in the recovery of Canterbury organisations from the on-going earthquake sequence. However, there is little mention in the disaster recovery literature of this feature, nor in the collaboration literature with regard to the disaster context.

This thesis focuses on three aspects of collaborative post-disaster recovery:

- (a) The nature of the collaborative relationship.
- (b) Features of organisations entering into collaboration.
- (c) Different paths of collaborative and non-collaborative recovery.

With regard to the collaborative relationship, questions such as what led to the collaboration, how did it work, what form did it take and ultimately was it successful are asked. In the case of the participating organisations, did they have particular characteristics that led to, or enabled, collaborative strategies over alternatives? In order to answer this question, a third strand is added to this research. This strand contrasts those organisations characteristics with non-collaborating organisations, examining whether the collaboration itself is of significance or whether particular organisational factors are of the most relevance in determining recovery choices and outcomes.

Thus, the key research aims of this thesis are to:

- Explore the nature of collaborative relationships entered into by surviving organisations and assess the value of this strategy for organisational recovery.
- Understand what factors influenced the differences in recovery decisions and outcomes and how this informs the practice of disaster recovery.

Specific research questions that need to be answered to fulfil those aims are:

- What is the nature of the collaborations that occurred – what form did they take, what was their primary purpose, what were the characteristics of the organisations and key personnel involved, what were the antecedents, institutional conditions and actual process of collaboration?
- Were the collaborations successful?
- What were the key factors, both at an individual, organisational and institutional level that helped or hindered the success or failure of those collaborations?
- Was there something different about organisations involved in the collaborations?
- What were the different paths of collaborative recovery?
- Is collaboration a good disaster recovery strategy?
- What are the implications of this for government or recovery agency post disaster actions?
- What is the significance of those findings for Canterbury recovery, for the next disaster, and for the body of knowledge regarding business success or failure in both disaster and normal times?

3. Approach and Contribution

This thesis used data collected through semi-structured interviews, survey and document analysis to create a rich and detailed picture of the recovery journey for 26 Canterbury organisations. 14 of these organisations participated in collaborative activity as part of their journey to recovery. Six were not recovered in that they had not resumed trading within the data collection period. Five continued to trade without being involved in collaboration and one was newly created during the recovery period. The collaborations included cases where two or more individual businesses collaborated, as well as two larger, multi-party, place based collaborations. Comparison both within the collaborating organisations and with the differing paths of the other organisations was used to assess the importance of particular factors in the decision, process and outcomes of collaboration, as well as in the overall process of business recovery.

This research adopted a primarily inductive, qualitative approach drawing from both grounded theory and case study methodologies in order to generate theory from the rich and contextually situated data. This study made a significant contribution to the subject of organisational recovery from disaster, often cited as one of the least researched areas of disaster recovery.

Answering the research questions contributed significantly in a number of areas:

- Adding to existing knowledge about the disaster recovery process.
- Adding to, or confirming, existing theories regarding collaborative processes, in this specific disaster context.
- Adding to the body of knowledge regarding the key factors that make organisations resilient.
- Informing government and other interested parties of strategies to aid organisational recovery.

4. Thesis Structure

Figure 1 illustrates the arrangement of this thesis and the views developed over the course of analysis with regard to influences on recovery outcomes. Context and Organisational Characteristics impact on decisions made by organisations either to collaborate or follow other recovery paths. This decision making element is under-represented in disaster recovery literature with studies taking quantitative approaches focused more on demographics and outcomes, rather than the differing ways that organisations may adapt or overcome the context or characteristics. The context, characteristics and decisions made then impact on outcomes both in terms of individual organisations, regional recovery and future aspirations

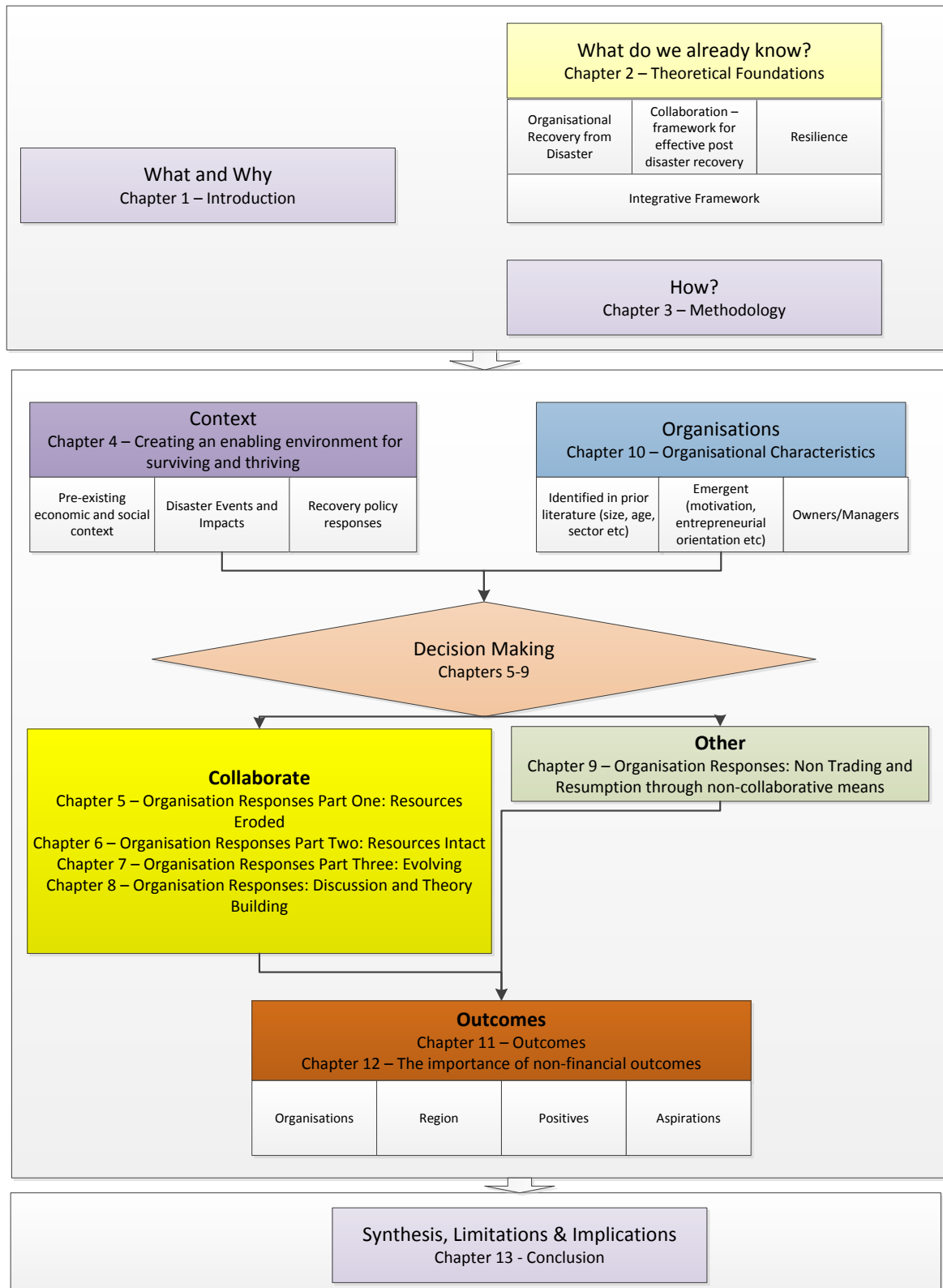


Figure 1 - Visual representation of thesis arrangement

Specific thesis chapters are arranged as follows:

Chapter 2 examines the existing literature. This review firstly defines the key terms of organisations, disasters and recovery. An in-depth review is then undertaken of existing research on organisational recovery from disaster identifying five types of recovery influences. Limitations and gaps in this literature are identified and discussed, including the issue of survivor bias and a lack of consideration of adaptive measures. Collaboration is identified as a recommended principle for disaster recovery but the review finds little detailed study conducted in that context. Literature from a variety of other disciplines is used to examine what constitutes collaboration, forms of, and reasons for collaborating. A framework for effective post-disaster collaboration is created through combining disaster recovery and collaboration best practice. Filling the gap with regard to considerations of post-disaster adaptive measures, the review then considers the emerging body of research from the resilience perspective which seeks to understand what enables some organisations to adapt and transcend disruptive events. Lastly, all of these perspectives are combined into an integrative framework which summarises the impact on organisations into resource and environment effects and suggests a 2x2 framework of the adaptive strategy needed to address those impacts.

Chapter 3 explains and justifies the inductive, qualitative approach used in this research, which draws from both grounded theory and case study methodologies. The underlying theoretical perspective of critical realism is discussed before both the methods of data collection and data analysis are summarised. Finally measures taken to ensure the quality of the research are outlined.

Chapter 4 develops an argument that the context in which Canterbury businesses were seeking to recover was an important enabling factor. This chapter firstly summarises the pre-existing business context in line with suggestions from prior researchers that trends that exist prior to a disaster are important influencers on post-disaster patterns. It is argued that the free-market, non-interventionist approach of the New Zealand government is hugely significant in influencing organisational expectations and actions after the disaster. The earthquake events and impacts are then discussed in order to give a detailed understanding of the environment. Government policy responses that directly impact on organisations are then explained and summarised. Finally, the key building blocks of a resulting environment supportive of business recovery are presented.

Chapter 5 is the first of four chapters examining collaborations. Collaborations are categorised by purpose using the 2x2 matrix created in Chapter 2, which suggested four categories from a spectrum of resources intact or eroded and environment intact or eroded. This chapter details collaborations relating to two of these quadrants; resources eroded and environment similar, and resources eroded and environment different. The collaborations are described and the questions of what form did the

collaboration take, what was their primary purpose, what was their duration, what were the characteristics of the organisations involved and, the actual process of collaboration are answered.

Chapter 6 examines two categories of collaborations; organisations with intact resources and changed environments, and organisations with both environments and resources that were similar.

Chapter 7 examines collaborations entered into for the initial purpose of solving resource needs, but which then evolved into long term strategic moves aimed at assisting function in the evolving environment.

Chapter 8 brings together the individual stories in the preceding three chapters. The efficacy of collaboration is discussed with the impacts of the individual business collaborations and multi-party, placed-based collaborations detailed separately. Key themes are examined with regards to post-disaster organisational impacts, variety and longevity of effects, post-disaster strategic choices and decision making. Finally the model of effective collaboration is reviewed against both the individual and multi-party collaborations and modifications relevant to the each suggested.

Chapter 9 examines the characteristics, decisions and processes of recovery for non-collaborating organisations including non-traders and those who resumed through non-collaborative means.

Unsurprisingly, the importance of networks in both enhancing situational awareness and in generating potential solutions is highlighted. Further support is provided for the framework for effective collaboration and its antecedents with analysis showing key missing elements that meant collaboration was not a viable solution for organisations in this chapter.

Chapter 10 seeks to answer questions regarding organisational characteristics and whether there are any significant similarities or differences both between and within the three categories of respondents.

Chapter 11 is the first of two chapters discussing the outcomes for participating organisations. Firstly, outcomes are discussed with a focus on traditional economic measures. Secondly, outcomes for the region's business environment are summarised before discussion of how the enormous changes that have occurred for both the organisations and region as a whole make measurement of outcomes problematic.

Chapter 12 This second outcomes chapter takes an alternative view to measuring outcomes, influenced by positive organisational psychology. This chapter examines the positives that have emerged for these organisations.

Chapter 13 concludes this thesis by reviewing the answers to each of the research questions and sets out implications of these findings both for future research and for those involved in the disaster recovery process.

Chapter Two -Theoretical Foundations

1. Introduction

This chapter explores what is currently known about organisational recovery from disaster. Firstly, key terms of organisations, disasters and recovery are defined. Existing studies of organisational recovery from disaster are then examined, focusing initially on the predominance of studies considering specific business attributes and secondly on policy and decision effects including recommendations that guide recovery. Issues and limitations in the literature are identified including the absence of work looking specifically at collaboration, despite its presence as a recommended principle to guide recovery. Work from both the organisational strategy and public policy realms is drawn upon to consider what is known about collaboration. Collaboration is defined and reasons why collaboration is an appropriate response in a disaster setting are examined. Practical considerations of how to collaborate are then outlined. A framework for effective post-disaster collaboration is created based upon a synthesis of the disaster recovery principles and best practice collaboration suggestions.

Consideration is then given to how business recovery following a disaster is effectively adaptation to change and what literature on adaptation and the field of resilience adds to our knowledge. An integrated framework is introduced to study the role of collaboration in the post-disaster setting consisting of a 2x2 matrix which categorises organisational needs in the disaster setting dependent upon the effect of the disaster on resource availability and changes in the post-disaster environment.

2. Organisations

There are a number of different theoretical viewpoints that can be used to define an organisation. A systems theory perspective suggests that organisations are open systems comprising multiple parts that interact actively with their external environment and where the parts together form a whole that is greater than the sum of their parts (Handy, 1995; Robbins, Millett, Cacioppe, & Waters-Marsh, 2001; Stephenson, 2010). Systems theory allows organisations to be viewed as dynamic rather than static entities that are continually interacting, reacting and evolving as a result of interactions both within the system and in response to external stimuli from outside of the organisational boundaries. The view of organisations as complex systems is one of the fundamental assumptions that underlies much of the work in the field of Organisational Behaviour although the exact boundaries of each organisation are in some cases becoming blurry with the advent of supply chain integration (Hill, Jones, Galvin, & Haidar, 2007; McShane & Travaglione, 2007). This thesis adapts this systems

perspective in order to aid in a broad and flexible perspective which encompasses both consideration of the human and rational efficiency elements of organisations.

3. Disasters

Disasters are fundamentally “disruptions of routines” (Stallings, 1998, p. 136) or “demands that exceed capabilities” (Tierney, Lindell, & Perry, 2001, p. 9). A disaster for an organisation may have its origins in either the physical or natural environment, or may result from human action or inactions. The focus of this research is on natural disasters. A natural disaster occurs when an extreme physical event interfaces with a vulnerable pattern of human settlement (Susman, O’Keefe, & Wisner, 1983). This definition captures the idea that the event itself, in this case the earthquakes, need not necessarily be a disaster; it only becomes a disaster when it occurs within proximity of people (Godschalk, 2003; Perry, 2006; Phillips, 2009).

In the business literature, the notion of discontinuous change, captures in part, the effects of disaster with discussions of such sudden change that may “overwhelm the adaptive capacities of resilient organisations” (Meyer, Brooks, & Goes, 1990, p. 93). Discontinuous change is usually discussed in the context of sectoral or technological changes (Nadler, Shaw, & Walton, 1995), but seems highly applicable to the disaster or crisis context.

Early research on disaster tended to emphasise the idea of shocked, barely functioning survivors requiring agencies to take charge and command (Berke, Kartez, & Wenger, 1993; Rodriguez, Quarantelli, & Dynes, 2006). This thinking has evolved as a result of empirical studies of disasters to acknowledge that most people are actually ‘active survivors’ who are capable of leading and participating in both the immediate response and recovery efforts (Hirshleifer, 1987). As Lindell & Prater (2003, p. 179) explain: “the majority of disaster victims engage in adaptive problem focused coping activities”.

This more recent view leads to the idea that disaster response and recovery need to be co-operative endeavours where organisations, communities and governments work together, collaboratively, to solve the problems created by the disaster (Rodriguez et al., 2006). Getting involved in response and recovery is highlighted by Eyre (2004) as hugely beneficial in terms of creating hope and empowerment for victims.

Was it a disaster or a catastrophe? Quarantelli (1999, p. 7) believes the line between the two depends on the extent to which the event “encompasses nearby geographically contiguous areas” as this will

affect the extent of outside assistance available. A similar argument is made from an economic standpoint where resources rather than geography are the key issue with the scale of the event depending on the amount of damage to the resources of a particular unit (Rossi, Wright, Wright, & Weber-Burdin, 2004). Using these criteria, the Christchurch earthquakes would seem to fit the disaster categorisation as some 87% of the country's population were relatively unaffected and theoretically able to offer assistance. While the resources of Christchurch were severely impacted, the resources of New Zealand were not. Again though, the unit of analysis is the key. For New Zealand this may not be a catastrophe but for individual families and businesses it undoubtedly was. For the organisation which lost three-quarters of their employees in the collapse of their building, this was a catastrophic event.

4. Recovery

Recovery is a multifaceted concept which incorporates both physical structures, social and economic routines and individual physical and psychological wellbeing, all of which inter-relate to influence each individual's perception of overall community recovery. Business recovery, the focus of this thesis, is not a standalone concept that can be divorced from these other areas. Organisations, as open and complex systems are continually interacting with the broader recovery environment.

At the macroeconomic level, Rose defines recovery as: "the ability of a system to recover from a severe shock to achieve a desired state" (Rose, 2006, p. 228). Also making reference to some kind of desired state is Brown et al., (2008, p. 1) whose definition is: "an attempt to bring a post-disaster situation to a level of acceptability through the rectification of damage and disruption that has been inflicted upon an urban systems' built environment, people and institution."

Neither of these definitions makes any reference to returning to 'what was' and this is the main area of difference between the many definitions of recovery. Immediately after the disaster event, a natural focus is on the restoration of what was. Given that psychology and change management will tell us people are naturally resistant to change, this is to be expected (Kotter, 2007; Nadler et al., 1995; Nilakant & Ramnarayan, 2006). However, according to Alesch et al., (2001) there is a gradual period of adjustment post disaster where people realise that there is no going back to what was and that recovery can only be about achieving some new normal. This gradual period of adjustment is in line with work by Bridges (1986), who describes change as resulting in a period of transition. Transition has three stages whereby those affected by change must firstly accept the change or let go of the old before entering a period of disorientation or confusion which is described as a 'neutral

zone'. Only after time in these states can a new beginning can commence. Table 1 illustrates the two differing views on recovery.

Return to pre-crisis	Reach a new 'stable state'
the phase where organisations seek to minimize the impact of the crisis (Runyan, 2006)	Bringing the post disaster situation to some level of acceptability which may or may not be the same as the pre-impact level (Quarantelli, 1999)
the stage at which organisations attempt to learn from the crisis and manage the external impact (Hale, Dulek, & Hale, 2005)	The re-establishment and improvement where appropriate of an organisation's core functions, adjusted to the new post-disaster environment (Stevenson, Seville, et al., 2011)
Maintaining or resuming business operations during or after a major disaster (Zolin & Kropp, 2007)	Not returning to the status quo ante, but establishing a new better reality (Business Civic Leadership Centre, 2010)
Recovery – Those capabilities necessary to assist communities affected by an incident to recover effectively, including, but not limited to, rebuilding infrastructure systems; providing adequate interim and long-term housing for survivors; restoring health, social, and community services; promoting economic development; and restoring natural and cultural resources (Federal Emergency Management Agency (FEMA), 2012)	The coordinated efforts and processes to effect the immediate, medium and long term holistic regeneration of a community following a disaster'. Recovery is a developmental and a remedial process encompassing the following activities: <ul style="list-style-type: none"> • Minimising the escalation of the consequences of the disaster; • Regeneration of the social, emotional, economic and physical well-being of individuals and communities; • Taking opportunities to adapt to meet the social, economic, natural and built environments future needs; and • Reducing future exposure to hazards and their associated risks. (Ministry of Civil Defence and Emergency Management, 2012)
Actions taken to repair, rebuild and reconstruct damaged properties and to restore disrupted community social routines and economic activities (Tierney et al., 2001)	the process of approaching a redefined state of equilibrium (C. Liu, Black, Lawrence, & Garrison, 2012)

Table 1 - Definitions of recovery

Another way of capturing the differing conceptions of recovery is the bounce back or bounce forward typology which has developed out of the resilience literature and can be applied to any unit of analysis. The Australian Resilience Expert Advisory Group (2011) uses the following four classifications to summarise potential outcomes for organisations post-crisis (Figure 2):

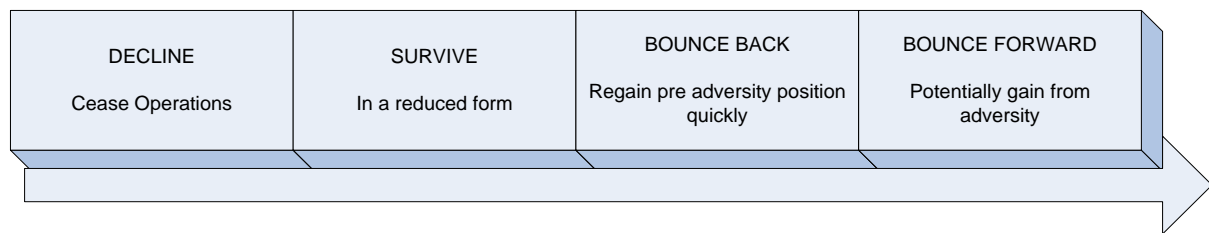


Figure 2 - REAG post crisis outcomes

Adapted from (The Australian Government Resilience Expert Advisory Group, 2011)

As is evident from the use of a continuum, decline is clearly the less desirable state and bounce forward can be considered the ideal state where an organisation surpasses its pre-crisis performance. Manyena, O'Brien, O'Keefe & Rose (2011) suggest that resilience should actually be defined as the ability to bounce forward after a disaster.

The world does not stand still while a community recovers from disaster and therefore any definition of recovery has to encompass some degree of change (Chang, 2010). Alesch et al., (2001) go so far as to say that recovery is not possible unless business owners recognise (and adapt) to the fact that there is always going to be a different community after the event. According to Manyena, et al., (2011) it is a given that disasters result in change. These arguments are persuasive. Even if one takes the simple dictionary definition of return to normal, this still includes change – constant on-going change is part of our 'normal'. The Canterbury Earthquake Recovery Authority (CERA), the body tasked with making the recovery happen in Christchurch has specifically stated that recovery involves change;

“does not mean returning Christchurch to how it was on 3 September” and that recovery will involve enhancement, where this improves functionality or resilience (Canterbury Earthquake Recovery Authority, 2012c, p. 7).

Another way of defining recovery which focuses somewhat more on individual perceptions rather than the physical state is the idea that recovery is when an event no longer defines you. This definition considers recovery to have occurred when disaster related effects are not a primary feature in most exchanges between people. The physical manifestation of this is captured in the description by Alesch, et al., (2001, p. 15) of: “some rebuilt urban settlement where evidence of the natural disaster's physical effects are no longer visible”.

Ates & Bititci (2011) introduce the idea that what a business owner classifies as recovered will depend greatly on the orientation of the business pre disaster. Work on small and medium enterprises (SME's) and strategy identifies two distinct orientations; Lifestyle SME's and Growth Orientated

SME's (Beaver, 2003; C. Gray, 2002; McMahon, 1998). A lifestyle SME is concerned with survival to the extent that it allows the owner to continue their desired lifestyle whereas a growth orientated SME is looking to continually increase their sales and profitability. Recovery for each group may look very different from an outside perspective. There is a possibility that recovery for the Lifestyle SME may in fact be viewed as non-recovery or failure if quantitatively assessed. Taking this view, then recovery could be defined as: "the attainment of certain predefined objectives that can satisfy stakeholder aspirations and which may culminate in performance that falls substantially below the optimal level attainable" (Beaver, 2003, p. 119). The intertwining of individual and organisational goals within a small or medium business means that business recovery is also closely tied to the psychological recovery of the owner.

The stage at which recovery is studied may also be hugely significant with a clear lack of longitudinal research having occurred. Alesch, et al., (2001, p. 1) note that many businesses may reopen and operate for a significant length of time: "only to exhaust their hope, their resources, and their endurance and, finally, give up the struggle".

The original work on the timeline of recovery by Haas, Kates & Bowden (1977) proposed four stages to the recovery process. These are the emergency response, restoration, replacement construction and betterment or developmental reconstruction. Current progress in New Orleans, devastated by Hurricanes Katrina and Rita, illustrates the logic of this model with an emergency response period of six weeks, restoration of repairable infrastructure one year and a prediction of at least a decade for reconstruction (Colten, Kates, & Laska, 2008). The original premise was that these stages would proceed in linear fashion with each taking around ten times as long as the preceding thus capturing some relativity to the scale of the disaster. This original model is highly influential in terms of the distinct stages of recovery; however the sequence and timeframes aspect has progressed towards a much more complex, iterative and disjointed process (Berke et al., 1993; Quarantelli, 1999). Haas's model which has a clear emphasis on the physical aspect of rebuilding has also been criticised for failing to take into account that recovery is less about buildings and infrastructure and more about people and their livelihoods and communities (Chang, 2010). Maki (2012) proposes a model of recovery where physical rebuilding is simply a mechanism to restore economic activity which is done with the primary goal or result of life recovery for the affected community. This is in line with the model adopted by CERA (Figure 3) who place community recovery at the core of all other activities (Canterbury Earthquake Recovery Authority, 2012d).



Figure 3 - CERA Recovery Model (Canterbury Earthquake Recovery Authority, 2012d)

Zolin & Kropp (2007) observed distinct stages in recovery in interviews with businesses affected by Hurricane Katrina. They suggest that in the initial day, survivors move from assessing their personal situation before moving on to the business's situation. The first two weeks is focused on finding people and reconstructing a management team and then, following this, on reconstructing business strategy including aspects such as suitable premises, access to required equipment and review of potential new opportunities. By the end of the first quarter, their interviewees had resumed operations, although often in a substantially different form.

Contrary to that swift trajectory, generally recovery is thought of as a long and slow process. According to Brown, et al., (2008), over half of the recovery projects undertaken in San Francisco and Santa Cruz are still being finished some 15 years after the Loma Prieta earthquake¹. Alexander (2002, p. 275) states that "reconstruction may take 10-25 years to complete".

5. The role of organisations in recovery

If businesses fail to survive a disaster, this affects both the involved individuals and their communities and potentially prolongs the overall process of recovery from disaster (Carrido, 2000). As illustrated in the recovery of the Kauai tourism industry following Hurricane Iniki in 1992 where previously antagonistic unions worked closely with hotel management, it is in the interests of both employees who need not just wages but also meaningful work and business owners to get businesses back on their feet (Durocher, 1994).

Business recovery, most specifically of the retail sector, is linked by Liu, Black, Lawrence & Garrison (2012) with psychological wellbeing and individual perceptions of self-efficacy; an individual's perception regarding their capability to cope in the circumstances presented to them. In this context,

¹ 17 October 1989 MM 6.9 effecting the San Francisco Bay Area

access to retail facilities provide choice and ‘normality’ and their absence or deterioration leads to a decreased self-efficacy and satisfaction with living conditions.

A regional level study of recovery following the devastating Kobe earthquake of 1995, using official statistics, showed that ten years post disaster many business sectors were still experiencing significant declines, after accounting for overall national trends (Chang, 2010). Overall there was a reduction of 10% in economic activity despite the restoration of pre-disaster population levels.

6. Organisational Recovery

Recovery is the least well researched aspect of disaster and specific business recovery even less so (Berke et al., 1993; D. Brown et al., 2008; Dietch & Corey, 2011; Lam, Pace, Campanella, LeSage, & Arenas, 2009; F. Powell, Harding, Thomas, & Mora, 2011; Tierney, 1997b; Wasileski, Rodríguez, & Diaz, 2011; Webb, Tierney, & Dahlhamer, 1999a; Zhang, Lindell, & Prater, 2009). Disaster research has tended to focus on either macro-economic impacts with the locale or region as the unit of analysis (Chang, 2010; Jarmin & Miranda, 2009; Rose, 2006) or at households and communities (Webb, Tierney, & Dahlhamer, 1999b). There is also a largely separate body of work on resilience examining the traits that result in some organisations thriving following either crises or disasters and some failing (McManus, Seville, Vargo, & Brunsdon, 2008; Mitroff, Pauchant, Finney, & Pearson, 1989; Seville et al., 2007; D. Smith, 1990; Stephenson, Vargo, & Seville, 2010; Weick & Sutcliffe, 2007). These two bodies of work do not seem to have intersected, with the resilience field offering a significant body of theory that directly relates to helping businesses to recover but that has not been empirically tested in a disaster setting.

There are three perspectives on business recovery within the disaster research tradition. First, there are models that consider the characteristics of the business, with initial research focusing on factors such as size, age, sector, ownership structure, financial stability, property ownership status, degree of physical damage and disruption to operations (Corey & Deitch, 2011; Dahlhamer & Tierney, 1998; Kroll, Landis, Shen, & Stryker, 1991; Tierney, 1997a, 1997b; Webb et al., 1999a, 1999b). Second, there is a broadening to also include the community or local economy characteristics (Chang & Falit-Baiamonte, 2002; Dietch & Corey, 2011; Wasileski et al., 2011; Webb et al., 1999b; Zhang et al., 2009). Third, there are studies that also attempt to capture organisational reaction and notions of strategic choice (S. Miles & Chang, 2006; F. Powell & Harding, 2009; Runyan, 2006; Zolin & Kropp, 2007).

Miles and Chang (2006) have developed a conceptual model which attempts to summarise the theoretical and empirical findings from the disaster research tradition with the intention that further research can add to the refinement or addition of causation factors. This model attempts to capture the complexity of the recovery process incorporating the environmental determinant factors, some notions of strategic choice, and the interrelatedness of all strands of community recovery (Chang & Falit-Baiamonte, 2002; Corey & Deitch, 2011; Hiete & Merz, 2009). This model provides a useful framework within which to summarise the work to date. Miles and Chang (2006, p. 447) propose five “principal types of interrelated recovery influences”; pre-existing economic, social and sectoral trends, agent or unit attributes, interactions, spatial effects and policy or decision effects, all of which are discussed below.

6.1.Pre-existing trends - Economic, social and sectoral

All of the existing economic and social trends continue and many writers believe are hastened by the disaster recovery process (Alesch et al., 2001; Chang & Falit-Baiamonte, 2002; Dahlhamer & Tierney, 1998; Geipel, 1991; Passerini, 2000; Tierney, 1997a, 1997b; Zhang et al., 2009).

6.2.Unit Attributes

The existing disaster studies have considered the following attributes:

- **Financial Condition**

Evidence is mixed as to the direction of this relationship. The initial premise was that firms who were struggling financially pre disaster will not have the reserves to withstand the shock of the event (Dahlhamer & Tierney, 1998; Dietch & Corey, 2011; Durkin, 1984; Kroll et al., 1991; Zhang et al., 2009). However results from studies of the Loma Prieta earthquake and Hurricane Andrew showed the opposite, with firms in better financial condition pre disaster less likely to have recovered than businesses who reported themselves to be in a weak financial position prior to the disaster (Webb et al., 1999a, 1999b). The authors’ possible answer to this unexpected result was that better off businesses may have more to lose and would take longer to perceive that those losses had been recouped. Zhang et al., (2009) suggest that financial condition be measured by assessing the degree of fixed assets and inventory with higher levels of each leading to greater vulnerability. An additional consideration is the proportion of owned versus leased capital, with leasing leading to a higher propensity to fail due to the need to keep up with payments. Hiete & Merz (2009) extend this in the industrial context to specify how specialised that capital equipment is and therefore how easily replaceable or substitutable. In Christchurch, a small study by Bowden (Bowden, 2011), supported

the idea that resources are important with quick relocation decisions able to be made by those who could afford the additional expense. An alternative perspective, suggested by those currently working with struggling businesses, is that the potential flexibility offered by banks and taxation authorities following a disaster may actually be a bonus for businesses allowing them time they might not otherwise have had to improve their financial position (N Cimino, personal communication, 30 May 2012). A recent study in the context of small businesses in Pakistan severely impacted by flooding found there was a significant relationship between financial and economic capacity and recovery status (Asgary, Anjum, & Azimi, 2012).

▪ Size

It is generally hypothesised that larger firms will recover more readily due to the potential for them to operate in multiple locations, occupy more modern (and therefore less vulnerable) facilities and have greater access to both financial and other resources (Alesch et al., 2001; Corey & Deitch, 2011; Dahlhamer & Tierney, 1998; Kroll et al., 1991; Runyan, 2006; Zhang et al., 2009). Also applicable here is the concept of diversity. Rose (2006) proposes that at the macro-economic level, economies with a diversity of industries are more likely to be resilient to disaster and this also applies at the individual firm level with regard to how many potential resilience responses a firm has. Size is discussed by Quarantelli (1999) as an issue in overall disaster recovery, be it at the level of household or organisation or region suggesting that the larger units are more likely to recover. This is illustrated by considering the macro economic impacts of major US disasters (minimal) compared with national level disasters that have occurred in Jamaica or Montserrat where the number of impacted people may be smaller but is a larger percentage of some greater body (countries in this particular example) (Quarantelli, 1999). However, traditional business literature suggests an alternative view, that smaller enterprises have many advantages with regard to being more flexible and able to readily adapt to changed circumstances (Gunasekaran, Rai, & Griffin, 2011; Vargo & Seville, 2011). Bowden (2011) points out that large size can be a significant disadvantage in terms of finding suitable new premises to relocate to post disaster. Small size has been found to be a significant predictor of loss following both the Northridge and Loma Prieta earthquakes (Kroll et al., 1991; Tierney, 1997b). However there was no significance in a study of New Orleans four years post disaster (Deitch & Corey, 2011), or in Christchurch 2-3 years post-disaster (C. Brown, Stevenson, Giovinazzi, Seville, & Vargo, 2014).

▪ Firm Age

It is proposed that firms who have been in existence for lesser periods of time are less likely to recover (Dahlhamer & Tierney, 1998) although little attempt seems to have been made to factor out the pre-disaster trends of business failures. However Webb, et al's., (1999b) study of the effects of

Hurricane Andrew found the opposite, older firms were less recovered than newer. One possible explanation for this comes from Zolin and Kropp's (2007) proposition that newer firms may benefit from a greater entrepreneurial orientation.

▪ **Sector of Operation**

Many studies have shown that sector is an important aspect with significant winners and losers most notably in the construction, tourism and retail sectors (Chang & Falit-Baiamonte, 2002; Corey & Deitch, 2011; Dahlhamer & Tierney, 1998; Kroll et al., 1991; Wasileski et al., 2011; Webb et al., 1999b; Zhang et al., 2009). There are many different aspects to sector - firstly the issue of the competitiveness of the sector (Chang & Falit-Baiamonte, 2002). Can customers easily visit alternative outlets that are less affected by the disaster or can they substitute products – for example hiring DVDs rather than visiting movie theatres (Hirshleifer, 1987)? Secondly, are the types of goods produced by the sector essential or discretionary products? Zhang et al., (2009) suggest that victims tend to increase their consumption of luxury goods post disaster whereas economic logic would suggest that the financial uncertainty associated with disaster is more likely to lead to a reduction in discretionary consumption. Related to this aspect is the notion that disasters may cause a significant change of priorities for consumers. Anecdotal evidence suggests that consumerist behaviour may be, at least in the short term, significantly changed as the events cause a re-evaluation of life priorities. Fourthly, disasters require the restoring of buildings and contents, a key factor contributing to sectoral winners and losers. Lastly, the market orientation of and within the sector may be important with businesses dependent upon local trade potentially suffering from the many causes of local demand disruption whereas those with an export (either regionally or international) focus are likely to suffer significantly less demand disruption (Chang & Falit-Baiamonte, 2002; Webb et al., 1999a; Zhang et al., 2009). The significance of sector may also be highly dependent upon the time period following the event with Lam et al., (2009) finding that reopening rates by sector begun to equalise some two years post Katrina.

▪ **Building ownership status**

Dahlhamer & Tierney (1998) propose that renters may find recovery more problematic due to their lesser degree of control over access and repair along with access to secured finance. This was found to be the case by Chang & Falit-Baiamonte (2002) and Wasileski, et al., (2011). This feature is difficult to separate from the attributes discussed above with regard to financial position and also potentially relates strongly to insured status.

- **Firm ownership**

Dahlhamer & Tierney (1998) propose that individually owned firms will have more difficulty than franchisees or members of a chain due to the access to resources and decision support provided by the franchisor or chain management. If we consider the statement by Boin and T'Hart (2006, p. 49) that “the bewildering pace, ambiguity and complexity of crises can easily overwhelm normal modes of situation assessment”, the advantage of decision support could be a potentially crucial factor.

- **Length of closure**

Chang & Falit-Baiamonte (2002, p. 61) propose that reopening quickly is one of the “most important determinants” of recovery due to the potential loss of customers and cash-flow difficulties caused by closure. This idea is supported by Paton & Hill (2006) who quote Lord Levene speaking to the World Affairs Council in 2004, claiming that 90% of medium to large companies that do not reopen within five days of a disaster will go out of business. There are several problems with this hypothesis. Firstly, it seems to imply that businesses are simply re-opening to what was before; a view that was discussed in the definition of recovery as being potentially misguided. A business that re-opens when its customer base or supply chain is still severely disrupted or when access is difficult may be more logically likely to fail as they continue to pay the outgoings associated with being open with little trade. The second issue with this hypothesis is that it is based largely on American disasters where insurance is often not purchased or inadequate and government aid, personal savings or loans from relatives seem to be the primary support mechanism (Business Civic Leadership Center & International Economic Development Council, 2008; Corey & Deitch, 2011; Wasileski et al., 2011; Zhang et al., 2009). If business interruption insurance is comprehensive and covering the loss of trade then length of closure may not be as significant. Runyan (2006) found that a number of businesses in New Orleans were taking a wait and see approach to resuming operations due to their concerns about the changing demographics of areas. These issues also highlight the problem of the timing of studies. Yes, businesses that remain closed may be classed as non- recovered but this does not mean they will not recover in a longer-term horizon.

- **Extent of physical damage to building, equipment and stock**

The degree of damage to premises and stock was a significant factor effecting recovery in both the Loma Prieta and Northridge earthquakes (Kroll et al., 1991; Tierney, 1997b; Webb et al., 1999b). However, both these authors and Chang & Falit-Baiamonte (2002, p. 66) state that “damage alone is a poor predictor of business loss”.

■ Pre-disaster mitigation effects

Studies have attempted to address the question of whether preparatory efforts pre-event have helped in organisational recovery (Corey & Deitch, 2011; Runyan, 2006; Tierney, 1997a). Preparatory efforts considered by Tierney (1997a) include the purchase of insurance, development of business emergency and recovery plans, improvements to property and to contents storage, along with immediate aftermath issues such as stored water, first aid and access to batteries or generators. Out of a possible 16 preparedness factors, businesses in Los Angeles and Santa Monica who were surveyed after the 1994 Northridge earthquake had performed only an average of 3.9. Only half of the businesses studied by Corey & Deitch (2011) in storm prone New Orleans had an emergency response plan despite Webb et al's., (1999b) hypothesis that those who have experienced prior crises should be more prepared. Studies have found little significant correlation between preparedness and recovery (Chang & Falit-Baiamonte, 2002; Corey & Deitch, 2011; Webb et al., 1999b). Zhang et al., (2009) suggest that this may relate to the notion of a greater degree of pre-existing hazard vulnerability and that preparedness actions have simply cancelled out that greater vulnerability. Webb et al (1999b) suggest that the lack of correlation found between mitigation efforts and recovery may simply reflect the very limited nature of most mitigation efforts whose focus is on response and life safety rather than true recovery. This point is reinforced by Tierney who suggests that recommendations as to what preparatory actions businesses should take may be flawed (Tierney, 2006).

6.3.Interactions

A systems perspective recognises that “there are multiple inter-dependencies within and between different organisations” (Seville et al., 2007, p. 259). The recovery of the wider community is a key influence on individual business recovery (Green, Miles, Gulacsik, & Levy, 2008). The most basic interdependency is that of businesses on lifeline infrastructure – power, water, sewerage and communications (Wasileski et al., 2011). The on-going failure of critical infrastructure was highlighted as a key issue for New Orleans in recovering from Hurricane Katrina (Boin & McConnell, 2007) and was found to be a significant factor hindering recovery in studies by Tierney (1997b) and Webb et al (1999b). Runyan (2006) highlights that restaurants in New Orleans who foresaw the massive supply chain interruptions that occurred and were able to establish alternatives were able to re-open quickly and benefit enormously from being one of very few operational. Organisations rely on the presence of staff and customers, availability of supplies and issues with either of these can cause an interacting domino effect on businesses and community recovery (Chang & Falit-Baiamonte, 2002; Lindell & Prater, 2003; Vargo & Seville, 2011; Zhang et al., 2009). Key issues for operations are access to labour (a particular issue if large population relocation occurs), supplier vulnerability (it

is of little use if you are the only restaurant undamaged but all of your suppliers and their alternatives are closed) and customer vulnerabilities. In a quantitative study of hospitality industry recovery in the North Central United States, Sydnor-Bousso (2009) found that these interactions or what they call indirect effects of a disaster on any specific business explain more of the variance in survival status than direct disaster impacts.

At a more micro level, interactions also refer to the social networks and support that may assist both individuals and organisations to recover from adverse events. Social capital is well understood as an enabler of adaptive efforts post disaster (D. Aldrich, 2012; Chamlee-Wright & Storr, 2011). Neef, Panyakotkaew & Elstner (2015) found the role of social networks to be of far greater significance than any government or external aid in aiding small businesses to recover from the devastating Indian Ocean Tsunami.

6.4.Spatial effects

All of the conditions which resulted in businesses locating in a particular area such as access to customers, transport and complementary products or services are applicable in terms of their post disaster choices (LeSage, Pace, Lam, Campanella, & Liu, 2011). This is particularly relevant in terms of re-opening/relocation decisions as businesses try to ascertain whether their offerings will be appropriate for the customer base of the relocated environment or the new and changed old location (Runyan, 2006). These effects are hugely interrelated with policy decisions in terms of trying to reduce the level of uncertainty within which businesses are trying to operate (Natural Hazards Centre, 2001). According to Dietch & Corey (2011, p. 321) investigating recovery from Hurricane Katrina: “the most dramatic differences between worse performing organisations and all others were the problems caused by the health of the larger neighbourhood and city”.

6.5.Policy and decision effects

Both policy and decision effects include various actors and multiple time frames. Actors include national and local government agencies and individual businesses. The timeframe may include policies enacted or decisions made both pre and post disaster. This is the category of influence which starts to capture, at least in part, the notion that disasters do not just happen to businesses, they in turn have an impact on their own survival through the decisions they take pre-disaster (mitigation efforts discussed under unit attributes) and post disaster. This is also the least explored area of influence.

▪ Organisational level

Alesch et al., (2001, p. 3) note that the adaptive capacity of organisations may be a key feature of recovery – not just what has happened to a business and its surrounding community but what actions the business takes to adapt to a new environment. These authors introduce the idea that survivors are those who “have a repertoire of responses at least equal to the array of environmental challenges”.

Kroll, et al., (1991) suggested that firms in Oakland and Santa Cruz made accommodations such as flexible hours, carpooling, expanded opening hours, and home working as adaptations to allow them to cope with the hugely disruptive damage to transportation infrastructure following the Loma Prieta earthquake. Dietch & Corey (2011) appear to be the first to attempt to include concepts of decision making in a quantitative study however their results showed no significant correlations. The authors note that this study included only those still operating four years post disaster who had clearly demonstrated at least minimal managerial competence. Fraccastoro (2011) found that motivation, persistence and an internal drive to succeed were key factors in a small study of business recovery from Hurricane Rita in Texas. Geipel (1991, p. 131) refers to “the mentality of the workforce” as an aid to recovery in his study of the reconstruction of Friuli in Italy. Asgary, Anjum & Azimi (2012, p. 10) found in the context of less developed nations that “business owner’s situational awareness and leadership” were positively associated with recovery status.

A study carried out in New Zealand looks at business recovery in the small North Island town of Gisborne following a MM6.8 earthquake in 2007 which caused localised but significant damage to the town (F. Powell & Harding, 2009). The authors discuss the idea of human adaption introducing the idea of Locus of Control as an influencing factor in recovery. Their hypothesis is that business owners are more likely to take steps to prepare for disaster if they perceive themselves as having control over how external circumstances affect them. If individuals perceive that they have little control over the effect of external circumstances, they are less likely to prepare. While the authors discuss this in respect to pre-disaster planning the concept seems also potentially relevant to post disaster actions. In a study reviewing the concept completely unrelated to crisis or disaster, Kormanik and Rocco raise the question “does an internal orientation mitigate the crisis of critical events?” (2009, p. 471) One of the key factors noted as helping Gisborne businesses recover was community support. Interviews with business owners revealed that many owners were overwhelmed by the process of recovery and the difficulties of dealing with insurance and repairs and led to the recommendation that mentoring or other forms of advice be made available to owners following disaster.

In 'normal' times, research shows that change proves problematic for both large and small companies (Hamel & Valikangas, 2003; Kotter, 2007; Nilakant & Ramnarayan, 2006). Lewin proposed that in every organisation two forces compete – forces of stability and forces of change (Nilakant & Ramnarayan, 2006). The forces of stability derive from organisational rules, routines and processes. At their core, the concept is that we do not think hard about every action we take – we rely on our mental models regarding the appropriateness of what action in what context. Our mental models are formed and reformed over time by experiences, beliefs, values and perceptions. Our mental models typically contain many errors and contradictions but our actions based upon them become routine and strongly embedded. Change is more likely to succeed when these forces of stability are weakened rather than the forces of change strengthened (Nilakant & Ramnarayan, 2006). In a disaster, the forces of stability for many organisations are shattered and this brings a very real psychological challenge for organisational members to accept and adapt (Harvard Business Essentials, 2003). Disasters require “the ability to dynamically reinvent business models and strategies as circumstances change” (Hamel & Valikangas, 2003, p. 2). Approaches from the strategy field suggest that: “organisations survival depends increasingly on devising entrepreneurial responses to unforeseen discontinuities” (Meyer et al., 1990, p. 93).

Theories around change management, strategy, crisis management and resilience do not seem to have been considered in the disaster recovery research which has largely come from a sociological and geographical base. One of the pioneering authors in business recovery research notes that there may be much to be gained by placing business recovery within the framing of organisation and management theory (Tierney, 2006). Approaching the subject matter also from the resilience framework where “rigorous empirical evidence is required” to support the conceptual framework will aid to understanding in this field (Burnard & Bhamra, 2011, p. 5595).

Zolin & Kropp (2007) appear to have taken just this approach in their study of recovery following Hurricane Katrina. They propose that the same things that cause business failure in non-disaster conditions are what cause post disaster businesses to fail including important aspects such as entrepreneurial orientation, degree of autonomy and innovation, pro-activity, risk tolerance and access to networks. Based on interviews with Hurricane Katrina survivors, they compare the responses of business post disaster with those normally found in a new business with an emphasis on what businesses do following a disaster, rather than the business or the disaster's characteristics. This approach is also reinforced in studies of discontinuous change with Meyer et al (1990, p. 108) suggesting that managers “assume the role of entrepreneurs reinventing both their organisations and their environments”. It is suggested by Casillas and Moreno (2008) that the entrepreneurial orientation of a firm will have an even greater impact on their performance when the environment is characterised as dynamic or hostile; terms which very much describe the post disaster context.

Entrepreneurial Orientation (EO) is a prominent concept within management and strategy studies. Its roots can be traced back to Mintzberg who theorised that there is a “managerial disposition characterised by the active search for new opportunities in uncertain environments” (Covin & Wales, 2012, p. 1). Covin and Slevin who are responsible for the most commonly employed EO measurement scale found that “an entrepreneurial strategic posture” contributes to high performance of small firms operating in hostile environments (1989, p. 83).

▪ **Policy level**

Looking at the higher level of policy as it relates to decisions of those responsible for leading recovery, a review of the literature addressing the recovery of organisations following disasters generated a number of general principles along with some specific initiatives to assist businesses. The specific focus of this review is on research after the disaster has occurred rather than the area of pre-disaster mitigation and preparation. Table 2 lists the general principles that should shape any recovery initiatives.

Principle	Sources
All sectors involved in, or affected by any recovery initiative should be involved in both the design and implementation of the project	(Berke et al., 1993; Dixon & Murphy, 1994; Hayashi, 2007; Mannakkara & Wilkinson, 2014; Natural Hazards Centre, 2001; Vallance, 2011)
Create new visions - do not seek to restore the old	(Business Civic Leadership Centre, 2010; Natural Hazards Centre, 2001)
Enact short term measures to maintain economic continuity – promote early wins	(Natural Hazards Centre, 2001; Vallance, 2011)
Creatively use traditional economic revitalisation tools such as redevelopment authorities	(Natural Hazards Centre, 2001)
Create business districts that are interesting and diverse places	(Natural Hazards Centre, 2001)
Seek investment and expertise partners from outside of the effected community or region	(Natural Hazards Centre, 2001)
Proactively bring potential partners together	(Dixon & Murphy, 1994; Natural Hazards Centre, 2001; Phillips, 2009)
Ensure plans are not too ambitious as this creates a high cost in time and uncertainty – aim to reduce uncertainty	(Kates, 1977)
Promote public/private sector collaboration	(Business Civic Leadership Centre, 2010)

Table 2 - Principles guiding business recovery initiatives

The three themes that emerge from these principles are collaboration, innovation and realistic goal setting. One of the key aspects of the collaboration theme is the inclusion of citizens and organisations; creating a bottom-up, rather than top-down recovery (Berke et al., 1993).

Alongside those general principles, six specific initiatives were found in the literature to assist businesses and these are listed in Table 3.

Initiative	Sources
Provide temporary facilities for businesses to trade	(Dixon & Murphy, 1994; Durkin, 1984; Kendra & Wachtendorf, 2006)
Establish a business assistance centre	(F. Powell & Harding, 2009; Runyan, 2006)
Monitor and potentially intervene in contract and retail prices	(Alexander, 2002)
Run co-ordinated marketing campaigns	(Dixon & Murphy, 1994)
Promote and organise assistance from other businesses such as emergency labour support, extended credit, accelerated payments, larger purchase volumes, adopt-a-business	(Dixon & Murphy, 1994; Zhang et al., 2009)
Relocation to cyberspace	(Phillips, 2009)

Table 3 - Specific initiatives to support business

Many of these initiatives are evident in the Canterbury recovery. Of most relevance in this thesis is the suggestion of providing temporary facilities for businesses that have lost their premises. While, providing temporary facilities seems a logical response following a disaster, the majority of studies on accommodation needs following disasters seem to focus on residential housing (Alexander, 2013; Comerio, 1997; Hirayama, 2000). This is clearly a crucial area but one that needs to be viewed in conjunction with amenities and facilities including places of employment and retail (Hayashi, 2007) .

The three studies that provide the basis for this recommended initiative come from America. In Dade County, Florida, impacted by Hurricane Andrew, temporary office facilities were created by the local economic development agency who took the lead in developing assistance for businesses, with equipment provided by corporates (Dixon & Murphy, 1994). In Santa Cruz, California, impacted by the 1989 Loma Prieta earthquake, pavilion tents were constructed to house businesses from the damaged city centre. The tents were completed in time for holiday season sales and promoted heavily with an emphasis on creating a pleasant atmosphere (Kendra & Wachtendorf, 2006). Both of those studies provided only descriptive views of those projects as a minor point in their broader aims. The one study that did consider the effectiveness and satisfaction with temporary facilities was that of Durkin (1984) who surveyed businesses recovering from an earthquake in Coalinga, California. Initially a school gymnasium provided booths for displaced retailers for a period of one month. Modular Trailers were then provided, funded by donations from the International Chamber of Commerce and provided at a subsidised rental (Durkin, 1984). Feedback from businesses who utilised these trailers seemed primarily negative with the principal issues being their small size, their location in relation to customers and concerns with regard to their strength while significant aftershocks were continuing (Durkin, 1984).

Surprisingly, given the obvious need for the provision of facilities not just for housing but also for employment after a disaster, an extensive literature search found little other mention of the provision of business facilities.

Despite the acknowledged importance of business recovery and the identification of policy and decision effects as key recovery influences, little detailed study appears to have been undertaken in this area.

7. Issues/problems/limitations

Survivor bias is a key issue with much of the research to date. Businesses in operation at the time of these surveys are by definition partly recovered – they are operating (Corey & Deitch, 2011). Even where studies have attempted to include businesses not in operation, there is no mention of asking those businesses any different questions from those of the survivors which means that other than largely descriptive characteristics such as size, sector, age, degree of damage, the opportunity to explore the human action based responses is lost. Asking those who have not re-opened and contrasting that information with those who have, may give significant insights as to the most significant predictors of recovery status. It can be very difficult to track down businesses that have ceased to trade between the disaster event and the time of the survey but this does mean that survival and recovery estimates may tend to be largely over stated and that the key variables that relate to failure may not be revealed. While survivor bias is, as Battisti & Deakins (2012) state, ‘inevitable’, attempts to focus on non survivors could be a source of rich insight. There are currently efforts underway in New Orleans to produce what would appear to be the first large scale study to track, trace and interview non surviving businesses (Schrack, Marshall, Hall-Phillips, Wiatt, & Jones, 2012).

The majority of studies rely on self-report measures of organisational performance and recovery. This is arguably correct – if we refer back to the definition of recovery as reaching a new stable state, then business owner perceptions are the only way to reliably judge whether that state has been reached. However, there is still a sense that some data reflecting a quantitative assessment would be useful (Chang & Falit-Baiamonte, 2002). An additional problem with using perception as a key measure is that if business is doing poorly, then managers are likely to perceive some things as poor in a natural attempt to find something or someone to blame – it is often the case that this is the easy target of the government (Deitch & Corey, 2011; Runyan, 2006).

The biggest area of weakness is that the majority of the studies to date are environmentally deterministic (Bowden, 2011). They fail to adequately take into account the concept that

organisations’ “are able to exert an important influence over their own performance and survival” (Bhamra, Dani, & Burnard, 2011, p. 5377). This is perhaps understandable given that environmental factors, size and sector for example, are somewhat easier to quantitatively study rather than the much more ephemeral concepts of organisational behaviour, change management and strategy. This also perhaps mirrors work in the strategy field where thought has moved from Porters five forces focus on the external environment towards a focus on how firms deploy their resources to adapt to those environments (Hill et al., 2007). According to Seville et al (2007, p. 259): “an organisation’s ability to survive a major crisis depends on its organisational structure, the management and operational systems it has in place and the resilience of these”. Very little of this aspect is captured in the existing studies of recovery factors. Section 9 considering Resilience Theory and Section 10 which outlines a categorisation matrix which draws from organisational strategy are introduced to assist in capturing the actions taken by organisations in response to the disaster.

The largest of the quantitative studies to date has explained only a small proportion of the variance in recovery status: 13.7% in Northridge (Dahlhamer & Tierney, 1998), 26% in South Dade² (Webb et al., 1999b) and New Orleans (Dietch & Corey, 2011), and 21% in Santa Cruz³ (Webb et al., 1999b). None of the studies include the notion of partnerships, collaboration or social networks as an influence on recovery and these will be considered next.

8. Collaboration

8.1.What is collaboration

Studies on collaboration come from a wide variety of theoretical perspectives; transaction-cost economics, resource dependence, resource and industry based strategy, inter-organisation theory and general management and leadership theory and no one perspective offers a full explanation (B. Gray & Wood, 1991; Hoffmann & Schlosser, 2001; Imperial, 2005). This research will use all of these perspectives seeking simply to find a ‘productive synthesis’ that considers what role collaboration plays in business recovery from disaster(Hoffmann & Schlosser, 2001).

There is a wide range of collaborative arrangements – consortium, alliances, joint ventures, roundtables, networks, associations (Adobor, 2006; Hardy, Phillips, & Lawrence, 2003), clusters (Waite & Williams, 2009), partnering (Phillips, 2009) and mutual aid agreements, however many of the terms are often used interchangeably and remain in many articles ill-defined (Battisti & Peter,

² Badly effected by Hurricane Andrew on August 24, 1992

³ Town affected by the Loma Prieta Earthquake

2011; Hardy et al., 2003; Wood & Gray, 1991; Woodland & Hutton, 2012). Which particular structure is used will depend on the physical, cultural and regulatory environment as well as the purpose of the collaboration (Bryson, Crosby, & Stone, 2006; Peng, 2009). In the case of this research, collaboration is a key evaluand and so needs to be clearly defined in order to be observed, analysed and assessed (Woodland & Hutton, 2012).

Collaboration is a commonly used word, generally understood to mean some kind of joint working in order to achieve common goals. If collaboration involves, ‘Organisations, working together, towards a common goal’, - then need it be defined any further? It appears to allow quite a wide ranging array of efforts, does not specify any particular form or purpose other than common goal. One issue may be with the definition of ‘common goal’. Complementary goals may be more appropriate given that some of the collaborative efforts in Canterbury may be between those in need and those undamaged. One may be largely philanthropic, and one a need for resources. Another possible wording is that of “mutually compatible goals” (A. Cameron & Street, 2007, p. 240), the important specification here being not a shared aim but congruent with each other. Gray avoids the difficulty of identifying common goals by introducing the idea that collaborative arrangements are about problem solving – collaboration is,

“The pooling of appreciations and/or tangible resources e.g. information, money, labour etc.; by two or more stakeholders; to solve a set of problems which neither can solve individually” (B. Gray, 1985, p. 912).

Again this definition is problematic with regard to what is a problem; often collaborative arrangements may be entered into in order to exploit potential opportunities rather than solve problems.

Lawrence Hardy & Nelson (2002) go further than our proposed definition specifying that collaboration is voluntarily entered into and cannot be imposed. However, they fail to adequately justify why this must be the case or just how ‘voluntary’ might be determined. There are potentially many cases of organisations being left with little choice but to join a collaboration - or lose any possibility of obtaining work in a particular area. A further specification used by these authors as well as Hardy et al (2003) is that it does not rely on market or hierarchical control mechanisms. These words are used in order to distinguish from those relationships that are purchased (supplier or customer) or regulatory such as local or national government (Lawrence et al., 2002). This seems something of an unnecessary distinction given that those kinds of relationships are unlikely to meet the initial criteria of working together and common or complementary goals. Some authors also view buying and selling relationships as potential collaborations (Adobor, 2006).

Longevity is introduced by Battisti & Peter as relevant with their view suggesting that collaboration occurs over a long time frame. They also suggest the relationship should “extend beyond one single task” (Battisti & Peter, 2011, p. 249), however this seems unnecessarily restrictive given that a single task may be a very large undertaking.

A definition from the governmental sector which seeks to capture a broad range of activities and avoids some of the issues discussed above is “Any joint activity, by two or more organisations, intended to create public value by working together rather than separately” (Imperial, 2005, p. 286). If this public sector definition is amended to replace public value with mutual benefit then this is perhaps a useful inclusive definition which allows for a wide range of potential collaborative efforts to be included in this study.

For the purposes of this study, collaboration will be defined as:

The pooling of resources; either tangible or intangible by two or more organisations to achieve complementary goals.

This definition is inclusive of a wide range of efforts, gives an indication of some degree of depth or longevity in the pooling of resources (rather than the somewhat weaker ‘working together’) and allows for potentially unequal benefit from the endeavour through the complementary rather than joint goals.

8.2. Specific Forms of Collaboration

The following represents the various forms that collaboration may take.

Alliance, Joint Venture and Consortium are usually used in reference to a formal, legal venture established either by contract or as a new corporate entity. There would ordinarily be equity input from the members in the case of new corporate entities or revenue sharing arrangements for contractual alliances. Strategic Alliances can reduce barriers to entry, enable the sharing of risk along with knowledge and expertise and allow each member to potentially achieve more (Gunaratne & Plessis, 2007).

Roundtables, Networks, Associations are less likely to exist in any formal, legal terms or require equity input although there would ordinarily be some degree of cost allocation. They are likely to include larger numbers than the preceding form.

Industry clusters are defined as “geographic concentrations of interconnected companies and institutions in a particular field” (Waite & Williams, 2009, p. 500). They developed as a popular concept originating from Michael Porter’s ideas with regard to the competitive advantage of nations (Porter, 1990). While they are commonly described as a formal network (Waite & Williams, 2009), they fit within the definition of a collaboration depending on the particular nature of interactions between members. While many of the interactions may be market governed (buy or supply), there may also be many instances of non-market governed cooperative actions such as information sharing, joint project work and knowledge development. Industry clustering could be viewed as providing the readymade close network within which collaboration is expected to occur. As stated by Khare (2012, p. 29): “the mere existence of a cluster or geographic proximity of enterprises results in only limited benefits, however it provides a facilitating framework for subsequent developments”.

Mutual Aid Arrangements are either formal or informal agreements usually made prior to a disaster or crisis between two or more organisations who indicate their willingness to make available resources or assistance in the event of a disaster. The intent is to establish advance relationships rather than legally binding agreements (Tarrant, 2012). These are more commonly found between lifeline providers and governmental agencies but are equally applicable to other contexts.

Co-operatives are a common organisational form in New Zealand, most notably in farming, and agriculture. To a certain extent co-operatives evolved as a mechanism to negate the bargaining power of either suppliers or customers by pooling together many small enterprises into one united body (Evans & Meade, 2005). The distinguishing features of a cooperative, whatever its legal form are that the owners are also the patrons of the company and their returns are based on the level of patronage rather than financial investment (Evans & Meade, 2005).

Resource Sharing or Ad Hoc Support agreements – this is not a description that features in the literature but is being observed as a common feature in Canterbury where either labour, premises or equipment are being shared by organisations, in what appears to be a completely informal trust based relationship.

8.3. Why collaborate

“no single agency or individual possesses all of the information, skills, or resources needed to manage large-scale threats alone”

(Sylvester & Comfort, 2012, p. 78)

The Corporation is a creation of society, a legal mechanism for pooling capital to allow us to accomplish tasks that individuals alone cannot do. In effect, it is the original legal mechanism for collaboration. Collaboration between organisations is no different; it can be thought of as a mechanism for pooling capital (of any form) to allow us to accomplish tasks that individual organisations alone cannot do.

The field of organisational strategy is concerned primarily with “explaining differential firm performance” (Dyer & Singh, 1998, p. 660). This is fundamentally what studies of business recovery from disaster also seek to explain – why it is that some organisations fail, some survive and some thrive post-disaster. There are traditionally two fundamental approaches to explaining differential performance. Firstly the industry view which believes the structural characteristics of an industry and firms strategic choices related to them are key factors and where strategy formulation is about looking at external opportunities and threats. Secondly the Resource Based View which argues that good strategy formulation involves looking internally at what resources an organisation has and what you can do best with them before considering the external environment (Barney & Hesterley, 2008; Dyer & Singh, 1998; Hill et al., 2007; Peng, 2009). Peng (2009) also suggests a third view or perspective, the institutional, which argues that along with the external environment and the internal resources, organisations need to also consider the influences of the formal and informal rules of the game that exist in their environment. While this view was focused on examining largely nation state differences it may also be applicable in considering the context that exists post-disaster – for example, did a norm or informal rule exist that companies would share resources to get through the immediate post disaster period? In practice, it is suggested that each of these perspectives is needed to provide a full account of differential firm performance (Peng, 2009).

The Resource Based View of the firm sees competitive advantage as stemming from an organisations control of resources that are in some way superior to those of their competitors (Barney, 1991). While the original development of the concept focused primarily on things within the boundaries of the firm itself, many authors (Barney, 1991; A. Cameron & Street, 2007; Hoffmann & Schlosser, 2001; Nahapiet & Ghoshal, 1998) suggest that the potential benefits brought by external relationships can be considered as part of these resources. Hence, collaboration is entered into because it generates some

kind of superior resource or capability than that of its competitors. However to be valuable the relationships must still fit the Value, Rarity, Imitability and Organisation (VRIO) criteria – see Table 4.

Value	• Does the relationship enable (or potentially enable) an organisation to exploit an opportunity or counter a threat?
Rarity	• Does everybody have it?
Imitability	• Is it easy for another organisation to obtain or develop (either the relationship or the benefits the relationships confers)?
Organisation	• Is the firm organised to actually be able to get the benefits from the relationship?

Table 4 - VRIO Criteria to assess relationship value potential –

Source: Adapted from (Barney & Hesterley, 2008)

This framework helps to illustrate why successful collaboration is difficult – the relational skills required to make collaboration work are rare; most particularly in a culture where individuality and competition are predominant, relational skills are not easily imitated and firms organised around common principles of closely holding information may not be well placed to actually benefit from any relationships. The specific leadership skills required to enable successful collaboration may differ from the skills required to lead in traditional hierarchical organisations (R. Morse, 2008).

Peng (2009) suggests that the reasons for collaborating all fit within these existing views of strategy as per Figure 4.

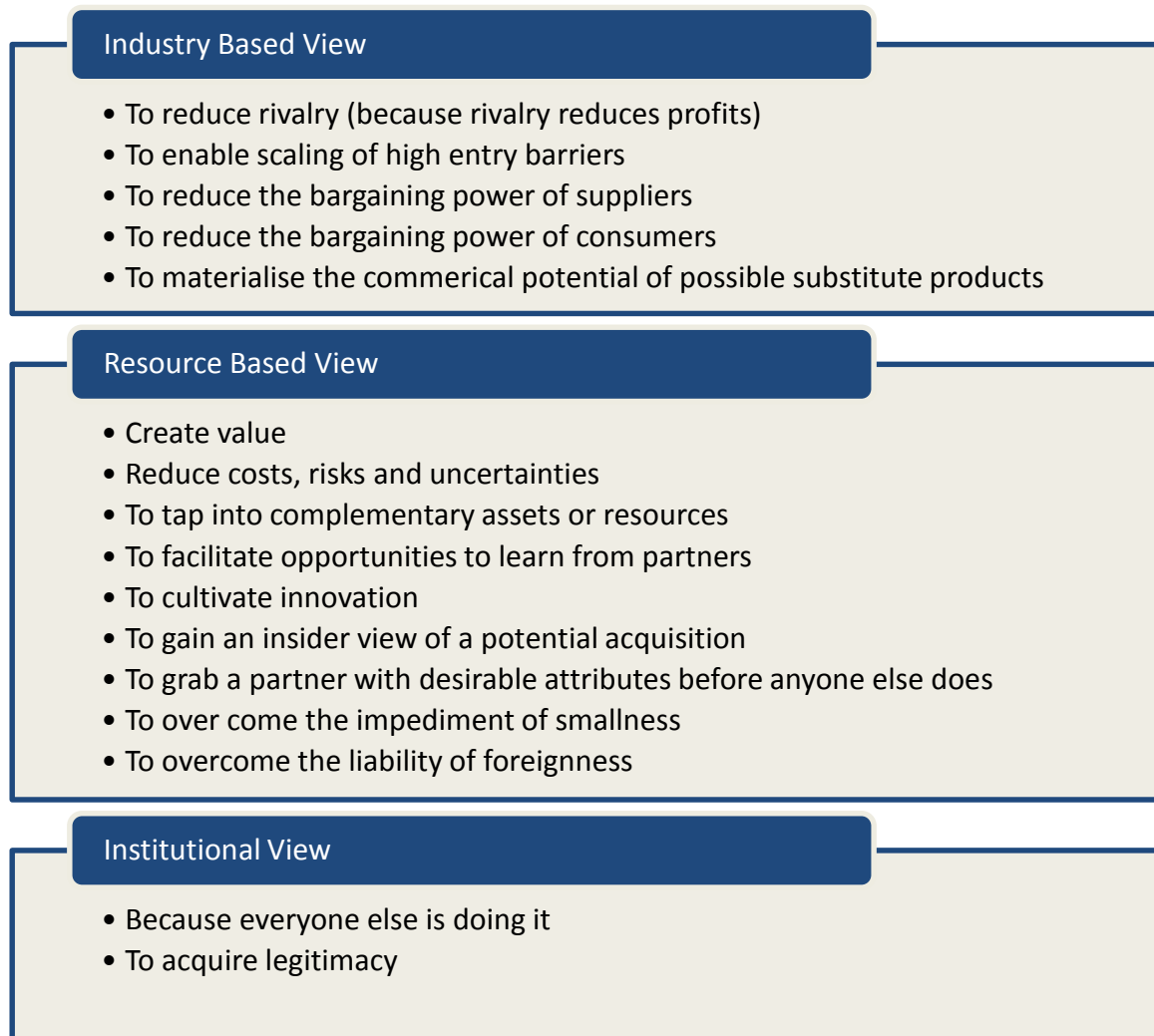


Figure 4 – Why collaborate?

Sources: (Adobor, 2006; Battisti & Peter, 2011; Dacin, Oliver, & Roy, 2007; Fjeldstad, Snow, Miles, & Lettl, 2012; Hardy et al., 2003; Peng, 2009; Waite & Williams, 2009; Woodland & Hutton, 2012)

A further two explanations are offered that do not fit within the strategy viewpoints but come more from a political perspective. These are to acquire power or control over other members (Hardy et al., 2003) and to enable the sharing of power and responsibility (Bryson et al., 2006)

Dyer & Singh (1998) simplify this by suggesting that there are four ways that alliances or collaborations can create a competitive advantage. Firstly, by investments in assets specific to the relationship allowing for the combining of resources to obtain some kind of specialised asset that generates greater value for the firms. Secondly, through significant exchange of knowledge between the partners to result in joint learning that enables either process or product to be in some way superior to competitors. Hardy et al (2003), differentiate this aspect stating that there can be both

knowledge transfer effects between partners and also knowledge creation as a result of the interactions between partners. Thirdly, through the combining of scarce resources or capabilities that are complementary, and that allow the partnership to create unique products or processes. Lastly, the potential for lower transaction costs due to efficient and effective governance mechanisms.

In relation to not for profits and governmental organisations, it is argued that the value of collaboration is in providing solutions to problems that seemed otherwise unsolvable (Donahue, 2004; Trist, 1983). Disasters seem to have much in common with the ‘mess’ described by Ackoff (B. Gray, 1985) and ‘messes’ require responses that are inter and multi organisational. Bryson, et al., (2006) continue this theme in suggesting that complex modern problems require not just collaboration between organisations within a sector but collaborations across all sectors; businesses, non-profits, government, communities and the entire public. They also suggest that resistance to collaboration is such that this will only occur when prior efforts to solve the problem have failed and it becomes apparent that an organisation cannot get what it wants without doing so. Much of the literature (Hoffmann & Schlosser, 2001; Innes & Booher, 1999; Meyer et al., 1990) suggests that collaboration is more likely to occur in dynamic, turbulent environments. However, countering the usefulness of collaboration in the post disaster environment is the idea that both forming and maximising the benefits of alliances takes time (Hoffmann & Schlosser, 2001).

While it seems clear that the potential reasons to, and advantages of, entering into a collaboration apply equally to small or large organisations, studies show that “SMEs” propensity to co-operate is significantly less than that of large companies” (Hoffmann & Schlosser, 2001, p. 358). In the New Zealand context, Battisti & Peter (2011) report that, based on a Statistics New Zealand Innovation Survey, collaborative arrangements are quite rare. These authors identify three specific barriers to collaboration in a study of New Zealand SME’s. These were owner/managers perceptions that collaboration involves high risk, the wish to maintain independence and a lack of knowledge about who might be suitable collaborators. The potential benefits of collaboration are recognised by the Economic Development Agency of New Zealand (EDANZ) which is the linking organisation for all of New Zealand’s regional economic development agencies with particular reference made to its potential to overcome the “tyrannies of size and distance” (Economic Development Agencies of New Zealand, 2010, p. 14). The Canterbury Employers Chamber of Commerce (CECC) has recognised the potential benefits of collaboration, particularly with regard to the resourcing of rebuilding, and launched a new website in 2012 aimed at providing assistance to organisations in identifying potential partners along with information regarding the legal and process aspects (Cimino, 2012).

Innes & Booher (1999) introduce a longitudinal viewpoint on collaboration suggesting that there are first, second and third order effects. First order effects are those immediately tangible direct results of

the collaboration. Second order effects may occur long after the commencement of collaboration and may be on or outside the boundaries of that specific collaboration. Second order effects may include other new partnerships or joint actions, changes in practice and changes in perceptions. Third order effects may occur significantly later than first and second and relate to changes in behaviours, norms or patterns of behaviour or patterns of organisation. This longitudinal view adds yet another complicating dimension to the issue of how the success or failure of collaboration is judged – solely on its achievement of stated short term aims, its longevity, or with some kind of view as to any attitudinal, behavioural or structural changes that it may have led to (Hoffmann & Schlosser, 2001)?

8.4. How to collaborate

According to Battisti & Peter (2011, p. 249),

“understanding the dynamics of collaboration and the persistent forces in the pattern of social activity requires analysing not only the purpose and structure of the collaboration, but relational and cognitive elements as well”.

Networks and social capital are believed to be important aspects of organisational resilience and potential competitive advantage and are generally expected to be an antecedent to a collaborative endeavour. A network is “a collection of relationships that binds a group of independent organisations together” (A. Cameron & Street, 2007, p. 240). Networks help an organisation to “recognise opportunities or challenges and co-ordinate appropriate responses” (Cross, Liedtka, & Weiss, 2005, p. 125). The existence of networks or relationships between parties is a potential precursor to those parties entering into a specific collaborative arrangement. Cross et. al, (2005), along with Battisti & Peter (2011), make the point that it is important to promote network connectivity with a view to how it might benefit the organisation noting that more connectivity is not necessarily of benefit to the organisation unless it is with the right connections.

While a network may be seen as the tangible linkages between people and organisations, the value derived from those linkages can be described as social capital which is a concept similar to networks but with a focus on the resource potential of the relationships. Social capital is defined as,

“the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit”
(Nahapiet & Ghoshal, 1998, p. 243).

Social capital is generally believed to be an aid to business development, innovation and globalisation as well as in adaptive efficiency. In the context of post disaster collaborations it would be expected to be a clear antecedent to the creation of a specific collaboration. However, it is also noted that firms with strong social capital may also be held back from enacting innovative solutions by the strong norms of their network (Nahapiet & Ghoshal, 1998). Social capital forms from the diverse and complex series of interactions between individuals within organisations. There are a variety of ways of characterising social capital. Nahapiet and Ghoshal (1998, p. 244) distinguish three dimensions; structural, cognitive and relational. Structural dimension refers to the “configuration of the linkages between people or units – the pattern of connections”. The cognitive dimension refers to the shared codes, language or narratives of the network. The relational dimension describes the actual bonds between the individuals; the degree of shared norms, trust and obligations that develop. Another influential work in this area is that of Granovetter (1973) who discusses strong and weak ties and their roles in spreading knowledge and influencing group norms. Strong ties are, as implied, more frequent and deeper connections, and weak ties are occasional and more superficial. Weak ties are advantageous as they provide the bridge to other networks (Granovetter, 1983). A recent focus on examining the role of social capital in overall recovery from disaster has highlighted its importance (D. Aldrich, 2012; Cox & Perry, 2011; Nakagawa & Shaw, 2004; Stevenson, 2014). A study of recovery in Kobe, Japan, found that social capital was the strongest predictor of population recovery (D. Aldrich, 2011b). Social Capital may also have a dark side. Similarly to Nahapiet & Ghoshal’s (1998) view that social capital may have some negative effects, Aldrich (2011a) found that minorities who are not part of the existing networks in South East Asia may be excluded from the recovery process.

The necessity for trust and the benefits of forming collaborative ventures from existing networks is a common theme with regard to enhancing the success of any collaboration (Austin, 2000; Bradach & Eccles, 1989; Bryson et al., 2006; Dyer & Singh, 1998; Fukuyama, 1996; Hoffmann & Schlosser, 2001; Hughes & Weiss, 2007; Innes & Booher, 1999; Lipnack & Stamps, 1994). Writing with regard to collaboration in supply chains Daugherty et al (2006) believe that many of the potential benefits of collaboration have failed to be realised due to inadequate attention being paid to the mechanisms of collaboration such as structuring and formalising the relationships. They point out that maximising the benefits of collaboration requires letting go of typical business practices of carefully guarding information and that a key necessity to get past this block is the formation of trust between the partners. They imply that formalising how firms are to work together can assist in building this trust. This idea is also supported by Dyer & Singh (1998) who suggest that multiple governance mechanisms are commonly used to ensure that opportunism is not risked by reliance on trust only safeguards. Peng (2009) points out that many successful alliances were built upon existing strong relationships between organisations and believes that the existing strong ties help to combat the

perceived threat of opportunism by creating an existing culture of trust. Collaboration either within or across sectors is more likely to succeed when effort and on-going attention is paid to trust building activities (Bryson et al., 2006; Hughes & Weiss, 2007). Another perspective on trust is that it can be very difficult to build trust in a multi firm collaboration if two or more (but not all) of the members have existing strong ties (Adobor, 2006; Fukuyama, 1996).

With regard to the process of collaboration, work on domain collaboration – “the set of actors that become joined by a common problem or interest” (B. Gray, 1985, p. 912) is potentially relevant to some of the Canterbury context. Work in this area proposes a three stage process (B. Gray, 1985). Firstly, that of problem setting where the problem is defined and the relevant stakeholders identified. Bryson et al., (2006) point out that often a sponsor with a perceived high degree of legitimacy or a similar brokering organisation – a Chamber of Commerce for example, are often the initial force that sets this process underway. During this process, stakeholders acknowledge the interdependence of members and the need for collaborative action. The second stage is of direction-setting where a common vision or purpose is established. Lastly, is the structuring phasing where processes to manage the collaboration may be designed and systems and structures formed to enable the pursuance of the groups’ goals. Within this process model, there are a number of conditions identified for each stage which are likely to facilitate the operation of the collaboration – see Table 5 (B. Gray, 1985). The role of prior relationships – the degree of structural embeddedness of the members may greatly affect the success of each process stage (Bryson et al., 2006).

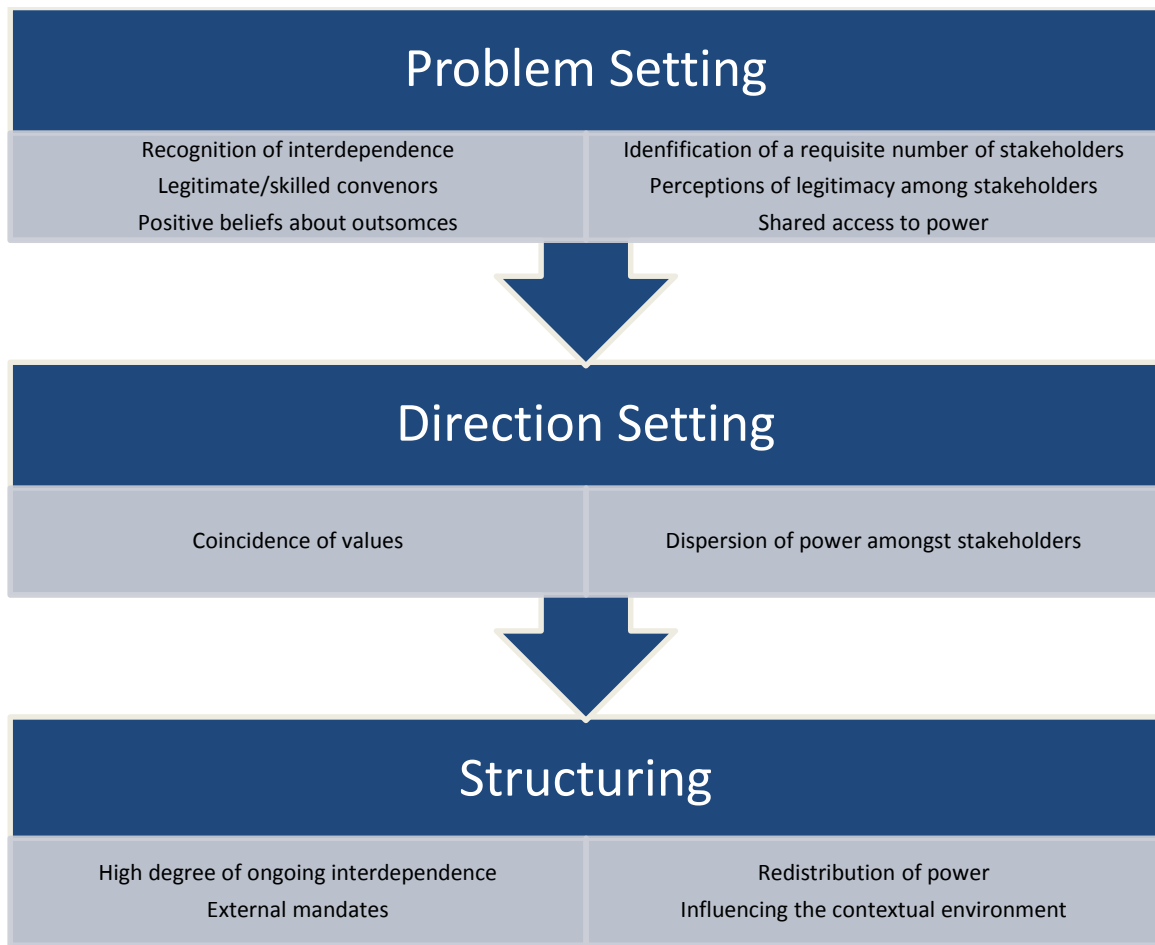


Table 5 - Facilitative Conditions at Each Phase of Domain Collaboration

Source: Adapted from (B. Gray, 1985)

According to Beck and Plowman (2013, p. 2) collaborations can be emergent; driven by a shared perception of problems that are insoluble by one organisation, or engineered where a central person, authority or convenor proposes the formation of some kind of collaboration to people or organisations who are “unaware of, or uninterested in the need to work with other organisations”.

8.5.Choosing collaborators

According to the strategic management literature, more strategic alliances fail than succeed Spekman, 1996 #565}(Park & Ungson, 2001) and much of the discussion as to the cause of these failures relates to inadequate attention being paid to partner choice. While the literature discussed above considers relationships and trust as the key influencers on partner choice, strategic management literature (Park & Ungson, 2001; Spekman, Isabella, MacAvoy, & Forbes, 1996) places greater emphasis on complementary skills, compatible goals, cooperative cultures and equality of risk (Brouthers, Brouthers, & Wilkinson, 1995). These authors suggest that alliances should only be considered where

the existing organisational cultures are co-operative. This co-operation is facilitated by similarities such as in size, financial strength and management philosophies. Cultural norms with regard to group or individual orientation are also highly relevant. This issue of culture is in line with the suggestion in the VRIO criteria (Table 4) that a firm must actually be organised to be able to get the benefits from a relationship. Skills refer to the potential for a partner to make a contribution and to be willing to give to and depend upon the partnership (Brouthers et al., 1995). Goals refers to the need for any alliance to meet the strategic needs and direction of each partner (Brouthers et al., 1995). Finally, Brouthers, Brouthers & Wilkinson (1995) suggest that there needs to be equality in the level of risk with regard both to financial and competitive risk. This approach to collaboration requires a detailed and intensive investigation period to ensure that partners do meet these criteria.

8.6.Evaluating collaborations

There are many different ways in which to categorise collaboration and each may lead to a different dimension of understanding with regard to its behaviour and performance. The aim of classification is to “stimulate thought and aid the formulation of a hypothesis” (Adobor, 2006, p. 130). The most obvious initial categorisations relate to purpose as discussed in Section 0 and organisational form discussed in Section 8.2. Other categorisations that may lead to an enhanced understanding include those considering the on-going interactions and those considering the origins.

In order to assess the impacts of various forms of collaboration within one Non-Governmental Organisation (NGO), Hardy et al., (2003), developed a set of dimensions by which to describe the characteristics of collaboration. These were involvement and embeddedness. Involvement focuses on how the collaborating organisations actually interact with each other. This would include issues such as how many personnel from each organisation are involved, how many organisations are involved, the actual structure of the relationship and whether information flows were uni, bi, or multi directional. Embeddedness considers the degree to which the collaboration is firmly “enmeshed in inter-organisational relationships” (Hardy et al., 2003, p. 338). Austin (2000) proposes characterising collaborations using the following similar model (Figure 5).

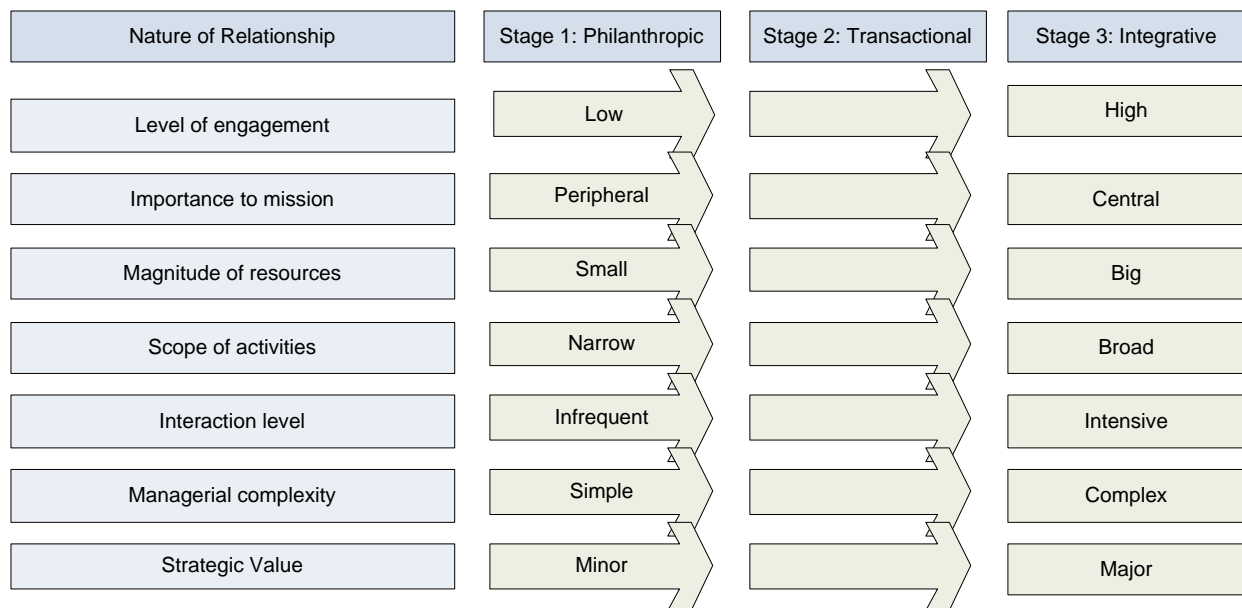


Figure 5- Austin collaboration characteristics model

Source: Adapted from (Austin, 2000)

Although this is based upon research into collaboration between not-for-profit and business the dimensions seem equally valid with regard to business to business. Collaborations that are highly involved and embedded are more likely to result in knowledge creation whereas those that are only highly involved are likely to generate strategic benefits (enhanced competitive advantage). Those that are only highly embedded have greater political effects (Hardy et al., 2003). Their conclusions suggest that some trade-off is required between knowledge creation and strategic benefits. Some combination of these dimensions may be useful, when devising dimensions to categorise Canterbury business.

Adobor (2006) suggests that classifying collaborations based on their origins is a useful way to understand the nature, dynamics and performance. He proposes four categories of origin:

1. **Spontaneous or Naturally Occurring:** collaboration that emerges from the actions of many but not as a result of design based on the concept of “spontaneous order” which has a long history of study in both natural and human sciences (Strogatz, 2003). Emergence is aided by proximity or geographic boundedness which results in frequent interactions and a common perception of threats or mutual interests. Spontaneously occurring collaborations are hypothesised as having high trust levels and their organisation form is likely to be informal, non-equity based.
2. **Individual Firm Initiated Alliances:** the traditional view of two firms identifying some mutual benefit from working together and negotiating over time to do so with the aim of

improving their competitive advantage. In these forms, trust grows over time as each partner interacts. It is hypothesised that this origin will lead to a wide variety of organisational forms.

3. **Convenor Facilitated:** An enabling environment for collaboration is provided by a person or organisation. These collaborations often involve multiple firms rather than just two but have potentially greater issues with regard to distributional conflict. These collaborations are hypothesised as more likely to be configured as networks.
4. **Third Party Facilitated:** Where collaboration occurs as the result of “direct or indirect intervention by a third more powerful actor”. This more powerful actor could include governmental agencies or larger organisations. It is hypothesised that organisational forms are likely to be formal and legalistic in order to counter the difficulty of establishing trust in a directed relationship.

Looking at collaborations in this way suggests that to understand outcomes requires an understanding both of the processes but also the antecedents to the collaboration.

8.7. Disaster research and collaboration

Work focusing on collaboration in the disaster arena has usually focused on the immediate response phase and on intergovernmental organisations (United States Government Accountability Office, 2009), the interface between public and private agencies (G. Stewart, Kolluru, & Smith, 2009), solely non-profit agencies (Simo & Bies, 2007) or from particular sectoral concerns such as land use planning (G. Smith, 2010). However, all of the lessons from these studies have potential applicability to the arena of individual business recovery. The United States Government Accountability Office (2009, p. i) report which reviews governmental responses to five disasters⁴ suggests that: “effective collaboration among stakeholders can play a key role in facilitating long term recovery”. The key lessons they highlight are that it is important to establish common goals, to leverage resources of the combined group and to ensure that progress of initiatives is monitored and evaluated.

Vallance (2011) examines collaboration from the perspective of assisting communities in getting involved in the recovery process. She gives a series of tips such as using small collaboration projects to create trust and develop relationships that can then create an environment enabling later larger projects. She points out the potential psychological lift that getting involved in initiatives to aid recovery can bring. Again this work is aimed at a particular sector of community groups but applies equally to business groups.

⁴ Loma Prieta 1989 earthquake, Hurricane Andrew 1992, Northridge earthquake 1994, Kobe earthquake 1995 and Grand Forks floods 1997

Carrido (2000) promotes the concept of a Disaster Recovery Business Alliance as a collaborative model to address the survivability of the business community. This is similar to the post-natural disaster pact proposed by Claringbull (2007). This would represent an attempt to go beyond individual firm level resilience and continuity measures to address the interlinked nature of the business community by forming groups representing business, science and government to discuss and plan prior to disaster. This form of alliance would fill a gap in New Zealand's current preparedness strategies whereby individual entities (both households and businesses) are encouraged to plan and prepare for disaster (see for example www.getthru.govt.nz) but this fails to take into account the intensely interrelated nature of both community and business recovery (Business Civic Leadership Center & International Economic Development Council, 2008; Dietch & Corey, 2011; Lam et al., 2009; LeSage et al., 2011; Paton & Hill, 2006; Seville et al., 2007). Palm Beach County, Florida provides an example of this with the establishment, in 2006, of a Business and Industry Emergency Support Function comprising business, government and community leaders who are creating a resiliency wish list comprising tasks such as preparing a database of recovery resources, business preparedness and recovery training, businesses helping businesses programs and provision of temporary business facilities (Business Civic Leadership Centre, 2010).

Khare (2012) is studying collaboration in the context of a cluster of Japanese pottery makers severely affected by the 2011 Great East Japan Earthquake. His preliminary findings indicate that firms who were previously engaged in few joint efforts, did increase their interactions as a mechanism to try and overcome the severe difficulties faced in both repairing facilities and bringing back tourists to their area. He found that "the common aim of reconstruction was the new common thread binding them" (Khare, 2012, p. 49).

The inadequate coverage in the disaster recovery literature focusing on collaboration may in part reflect an underreporting of this informally organised and therefore less noticed and reported aspect (Quarantelli, 1999). Solnit (2009) has written an entire book detailing the ways in which people respond altruistically and co-operatively in post disaster situations and speculates how we might harness those positive emotions and enhanced social ties in order to continue their benefits past the response phase and into recovery. Economic theorists have gone to great lengths to explain what many may perceive to be outside of normal economic behaviour as relating to individuals rational self interest in maintaining an orderly and functioning society; co-operative and supportive behaviours which wither as long run recovery commences and individuals resume their normal self-interested actions (Douty, 2004; Hirshleifer, 1987). Aptekar (1994) observes that less developed traditional societies are more likely to behave cooperatively on a longer term basis with their strong kin or community structures assisting them in recovering from disasters.

Researchers in the disaster recovery field recommend collaborative approaches (Section 6.5.2), and those looking at collaboration suggest it is a highly appropriate response to the dynamic and turbulent environment created by disaster. However, there seems to be little work that links the two literatures and considers how to enable that collaboration in the specific post-disaster environment. This thesis therefore seeks to combine these two domains in order to propose a framework of best practice for collaboration in a disaster environment.

▪ **Effective Post-Disaster Collaboration**

Both the strategy and public policy problem solving perspectives offer insight relevant to the recovery of organisations in a disaster context where societal good and problem solving must be matched with the commercial imperatives of business. Best practice suggestions for building effective collaborations that are relevant in the disaster context have been drawn from public policy, strategy, organisational management and disaster literatures. The key points and sources of this literature are included in Table 6 and then synthesised to create a proposed framework for effective post disaster collaboration in Figure 6.

Area	Key points	Sources
Membership	Members have previously established trust based relationships	(Adobor, 2006; Granovetter, 1985; Hoffmann & Schlosser, 2001)
	Clear and evident reason to work together with shared perception of importance of solution	(Austin, 2000; Dyer & Singh, 1998; B. Gray, 1985; Logsdon, 1991; Nathan & Mitroff, 1991; United States Government Accountability Office, 2009)
	Members with necessary expertise	(B. Gray, 1985)
	Sufficient variety of members to enable wide range of viewpoints, and to ensure that those who must accept the solution are involved in the design	(Berke et al., 1993; B. Gray, 1985; Natural Hazards Centre, 2001)
	Need to be dissatisfied with current situation	(B. Gray, 1985)
	Legitimacy – members bring appropriate resources or skills and are clearly impacted by problem under review – there is common agreement that they have the right to participate	(B. Gray, 1985)
	Geographic proximity of members	(Adobor, 2006; B. Gray, 1985)
	‘Cultural-fit’ between members allowing common	(Hoffmann & Schlosser,

	agreement on values	2001)
Process	Creation of organising structures to support and enable continuation of collaborative approach	(B. Gray, 1985)
	Leverage resources of all stakeholders to achieve maximum benefits rapidly	(Hardy et al., 2003; United States Government Accountability Office, 2009)
	Draw in more participants as understanding of the situation develops	(B. Gray, 1985)
	Equal power distribution with all stakeholders able to influence direction and development	(B. Gray, 1985; Hoffmann & Schlosser, 2001)
	Ordered development with sufficient attention paid to defining the problem and the stakeholders, and then agreeing direction and values before structure is created.	(B. Gray, 1985)
	Cultivating champions or sponsors reinforces goals and collaborative norms	(Adobor, 2006; Bryson et al., 2006; Hoffmann & Schlosser, 2001)
	Progress towards goals is monitored, evaluated and communicated	(Daugherty et al., 2006; United States Government Accountability Office, 2009; Woodland & Hutton, 2012) (Hoffmann & Schlosser, 2001)
	Maintain realistic expectations about the time required to go through effective consensus and trust building process	(Hoffmann & Schlosser, 2001)
	Obtain rapid results – from a small project or task to assist in building credibility and commitment	(Hoffmann & Schlosser, 2001; Natural Hazards Centre, 2001; Vallance, 2011)
	Process is important – the best outcomes and wholehearted support and commitment come from good process that includes all relevant stakeholders and with consensus reached through fair and open discussions	(Innes & Booher, 1999)
Leadership	Initiator of collaborative action is widely recognised as having ‘legitimate authority’ – either as a ‘natural authority’ in the field, or through personal experience and connections (position and influence), In the case of an organisation this could be because of an organisations size or prominence within a domain	(B. Gray, 1989; Simo & Bies, 2007)
	Leader has collaborative capabilities and mind-set	(Linden, 2003; R. Morse, 2008)

Structure	Interweaving of appropriate authority structure e.g. independent entity controlled by separate hierarchy to participant members WITH Trust	(Bradach & Eccles, 1989)
	Adequate structure to give members belief that success is possible and that continued collaboration will provide solutions	(B. Gray, 1985)
	Formalisation (of rules and roles) to reduce uncertainty and provide focus	(Daugherty et al., 2006; Hoffmann & Schlosser, 2001)
Context	Existing social norms or rules of the game supportive of collaborative endeavour (including both industry, cultural and legal norms)	(Adobor, 2006; A. Cameron & Street, 2007; Dyer & Singh, 1998; B. Gray, 1985)

Table 6 – Principles for Effective Collaboration

▪ Framework for effective post-disaster collaboration

Drawing from both the collaboration literature (Table 6) and the principles of guiding business recovery (Table 2), the proposed framework for effective post-disaster collaboration (Figure 6) draws attention to the importance of people encompassing both membership and leadership, along with process and structure.

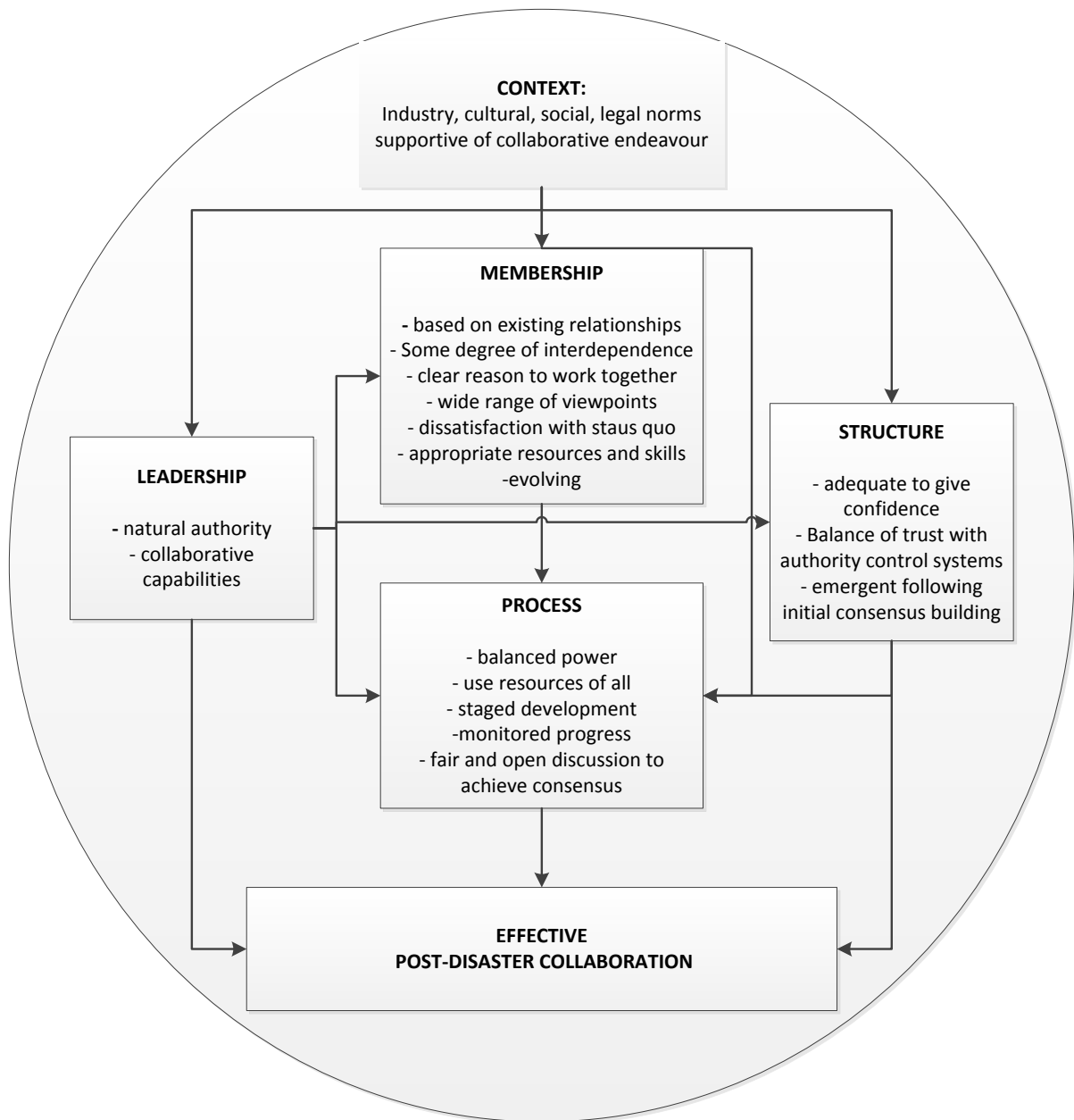


Figure 6 - Framework for Effective Collaboration to assist Disaster Recovery

The arrows demonstrate the flow and dependency elements within this framework. For example, leadership, membership and structure all flow from the context and are dependent upon that context.

Context

Context is important in creating an enabling environment. Context includes both the legal and institutional frameworks that allow the creation of collective structures, as well as the cultural and social rules of the game. In the disaster recovery domain, the cultural and social norms are often

those of mutual assistance and collective problem solving, however this may often be constrained by the institutional frameworks and the command and control nature of initial disaster responses.

Membership

A great deal of literature deals with the importance of trust in enabling both the formation and success of collaborative endeavours (Austin, 2000; Bradach & Eccles, 1989; Bryson et al., 2006; Dyer & Singh, 1998; Fukuyama, 1996; Hughes & Weiss, 2007; Lipnack & Stamps, 1994). Collaborative initiatives that form from existing relationships and that also engage in trust building activities are theorised to be more effective and likely to succeed. Trust is important in the context of co-operative behaviour in terms of both encouraging the risk of investing in a cooperative venture (Rousseau, Sitkin, Burt, & Camerer, 1998) and in relation to its role as a control mechanism (Bradach & Eccles, 1989). Many different enablers of trust are noted including mutual dependence, existing social structures or shared norms, interpersonal attachments, reputation, qualification, historical reliability, and potentially the existence of deterrents (Rousseau et al., 1998). Deterrents, such as “the prospect of ostracism among peers” are included by some writers as a trust issue and by others as simply a coercive force influencing decisions (Ring & Ven, 1992; Rousseau et al., 1998). Reputation also may relate not just to an individual but to a family whereby an individual member is trusted because of relations with others in their family (Ben-Porath, 1980). According to Blomqvist (2014), innovation in response to radical change is more likely to occur if trust is founded on both cognitive or rational evaluations of who to trust as well as affect or relationship based foundations. Hoffman & Schlosser (Hoffmann & Schlosser, 2001) who studied alliances between small and medium businesses suggest that trust is a necessary but not sufficient condition for successful collaboration.

Other conditions for membership of the group relate to the inclusion of all affected by the project – an issue where the disaster recovery literature speaks about ensuring that communities are involved in both the design and implementation of projects – a ‘bottom up’, rather than ‘top down recovery’ (Berke et al., 1993; Kweit & Kweit, 2004; Mannakkara & Wilkinson, 2014; Natural Hazards Centre, 2001; Vallance, 2011). In addition to this requirement is the need to ensure that the appropriate skills and resources are present within or easily accessed by the group.

Structure

The actual legal form that the collaboration takes does not seem to be of importance in determining success. What is important about structure is that governance mechanisms reduce the risk of opportunistic behaviour where one party in a collaboration benefits at the expense of another. Structural concerns are a continuation of ensuring trust and compatible goals between involved parties. Structure is also important with regards to actual operational matters in terms of best task

allocation and use of resources (Daugherty et al., 2006; Hoffmann & Schlosser, 2001; United States Government Accountability Office, 2009).

Process

Process is also an important theme with effective collaboration requiring attention to different elements at each stage of development (B. Gray, 1985). Collaborative processes have been related to models of group formation such as Tuckman's forming, storming, norming, performing by Woodland & Hutton (2012). Innes and Booher (1999) contend that well designed processes will lead to sustainable and beneficial outcomes. Well-designed processes are those that ensure the involvement of all stakeholders in an inclusive and transparent process where sufficient time is allowed for discussion and exploration of ideas before consensus is sought.

Gray (1985) proposed a model that considered collaboration as a three stage process with differing enablers at each stage of the formation of collaborative arrangements. This model deals primarily with the development of appropriate structure, stakeholders and power relations suggesting that the success of collaborative endeavours is contingent upon successfully navigating the differing requirements at each stage of collaboration. Disasters lead to rapid decision making due to the urgent needs for action to resume normal functioning. While this staged model is still highly relevant, it is likely that the stages may be greatly compressed and potentially messier and more intertwined. The framework proposed here therefore does not explicitly suggest stages but does acknowledge that the importance of aspects will differ at different stages.

Leadership

Leaders need to have the appropriate mind-sets and capabilities to lead and inspire in a style that promotes mutual inclusiveness, trust and collective decisions. Leaders must be perceived by stakeholders as having authority in the field. This legitimacy may be because of their position within the domain and/or their existing relationships (B. Gray, 1985; Simo & Bies, 2007). Collaborative capabilities include the need to balance collective decision making with the need to move things along (Agranoff, 2006) and the ability to prioritise the solution of the problem rather than the implementation of their own solution (Chrislip, 2002). Communication and social skills are needed to manage the entire process of group formation, problem identification, information gathering and framing, solution generation and the overall implementation (Mumford, Zaccaro, Harding, Jacobs, & Fleishman, 2000).

8.8.Collaboration Summary

There is a gap in the existing literature in that collaboration is a recommended principle in the disaster recovery process but there is little study of the practicalities of this in the context of organisational recovery. The proposed framework for effective post-disaster collaboration brings together literature from various disciplines to inform this detailed study of collaboration in this context. The other gap identified in this review is a lack of empirical study considering perspectives from resilience and how this informs adaptations such as collaborative strategies and this will be considered next.

9. Organisational Resilience Theory

There is a growing body of work in the field of resilience seeking to understand: “how do some organisations overcome disruptive events and disasters while others fail? What enables these organisations to adapt and transcend these events?”(Burnard & Bhamra, 2011, p. 5582).

Resilience, with its focus on a behavioural aspect - an organisation’s reactions to crisis events, fills a gap in much of the disaster recovery literature which emphasises characteristics of businesses, rather than their reactions (Alesch et al., 2001; Rose, 2004; Tierney, 2006). The advancement of resilience theory (in the organisational context) is usually in the context of individual or sector level organisational crises and there does not appear to have been any large scale application of these models to disaster scenarios (Bhamra et al., 2011). However, the questions raised are clearly applicable to a disaster – what factors differentiate those who overcome the circumstances and those who do not – and most usefully, how we can enhance those factors to improve society’s ability to cope with the effects of manmade and natural disasters (McManus et al., 2008; Rose, 2004)?

Resilience as a concept can be applied to multiple units of analysis – from individual businesses, economic systems, communities or infrastructure systems and while the traits that enhance resilience may vary dependent upon this context, there is also significant interdependency between the units (Cutter, Burton, & Emrich, 2010; McManus et al., 2008; Rose, 2004). There is a growing emphasis in the wake of recent disasters on community level resilience – see for example (Colten et al., 2008; Queensland Reconstruction Authority, 2012; G. Stewart et al., 2009) There is not, as yet, agreement in the research community as to whether resilience is an outcome or a process (Cutter et al., 2010).

One of the challenges in applying resilience theory is the lack of agreement on its core definition. While the majority of definitions have the common element of a threat or crisis beyond what is normal, there are then two diverging approaches to the second element of what an organisation does

in response to that event (Boin & Eeten, 2013). Definitions vary on whether a resilient organisation is able to return quickly to 'normal', or whether they are able to emerge stronger (Boin & Eeten, 2013). These differences in conceptualisation are similar to the differing conceptions of recovery as a return to the status quo or the adaptation to a new state discussed in Section 5. This thesis adopts the later view in line with the Resilient Organisations definition of organisational resilience as the ability of an organisation to not only survive but potentially thrive in the face of adversity (Resilient Organisations, 2014; Seville et al., 2008).

Despite 30 years of academic interest and a general acceptance that resilience is to be aspired to, creation of tools and measurements to enable resilience development is only a recent initiative (R. Klein, Nicholls, & Thomalla, 2004). Researchers have developed a framework for identifying the attributes of a resilient organisation using empirical data collected in the New Zealand context (Lee, Vargo, & Seville, 2013; McManus, 2008; McManus et al., 2008; Seville et al., 2007, 2008; Stephenson, 2010; Stephenson et al., 2010; Whitman, Kachali, Roger, Vargo, & Seville, 2013). The framework includes 13 indicators which contribute to an organisation's resilience (Figure 7).

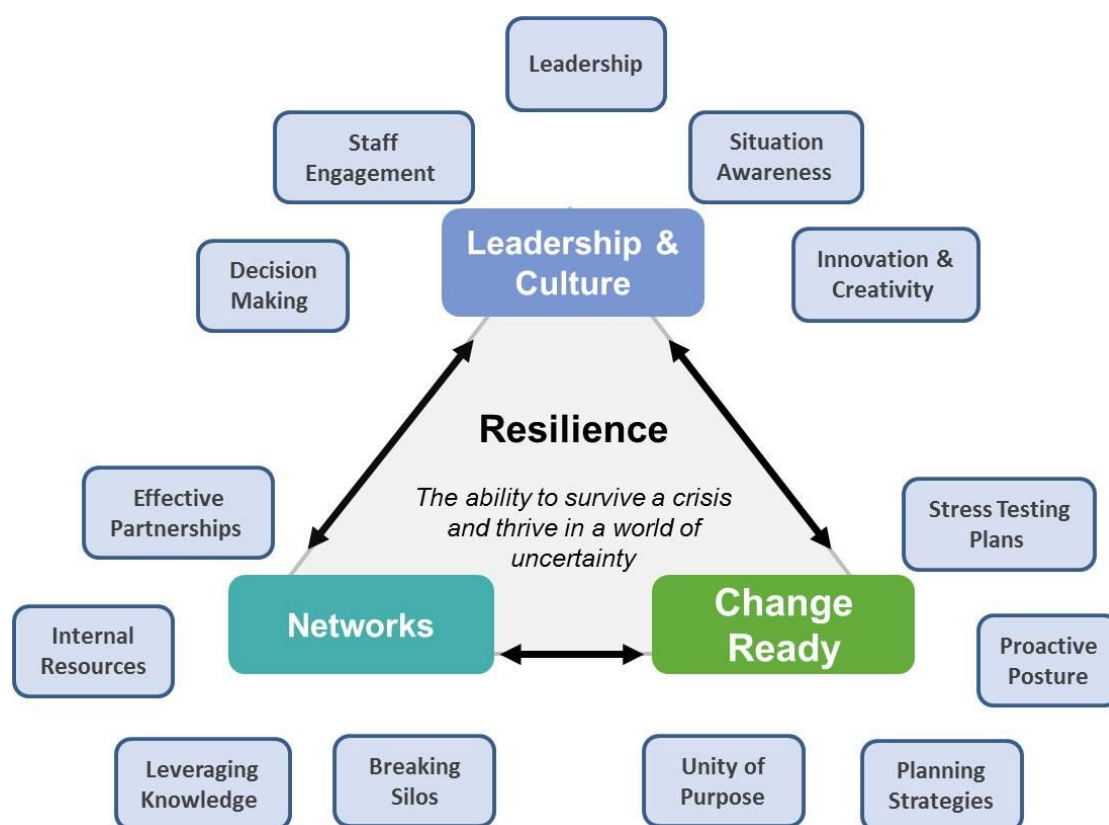


Figure 7 - Attributes of a Resilient Organisation

Source: (Resilient Organisations, 2014)

The Resilient Organisations model incorporates both a planned and adaptive component (Lee et al., 2013). Indicators of resilience such as planning strategies and stress testing plans emphasise the planning to identify and address vulnerabilities while other indicators emphasise creating the skills and culture that is able to adapt quickly.

Adaptation can be viewed as an organisation's ability to re-organise in the face of change (Ates & Bititci, 2011). The importance of adaptive capacity is recognised in the view of an organisation as an organism which must continually adapt to survive their environment (Robbins et al., 2001). Tierney (2006, p. 288) describes adaptability as an organisation's ability to "cope, improvise and innovate". There is a rich body of literature in the field of change management recognising that the ability to change or adapt is a key aspect of business survival in non-crisis conditions (Doppelt, 2010; Kotter, 2007; Nilakant & Ramnarayan, 2006). Tetenbaum (1998) suggests that the modern organisation is better understood through the lenses of chaos or complexity theory, given that the "law-abiding and predictable universe" promised by Newtonian science fails to accurately portray the complexity and pace of change characteristic of organisations' environments today. He suggests that to succeed in today's world, organisations need to embrace disorder and chaos in order to ensure that "organisations can respond to the fast-changing environment". This idea is supported in part by Hamel & Valikangas (Hamel & Valikangas, 2003) who suggest that organizations must "embrace paradox" and ensure that as much time is devoted to exploring the new than improving the efficiency of the old. In reference to the thriving aspect of resilience, Meyer, et al., (1990) believe that discontinuous change creates enormous opportunities for businesses to create both new strategies and new organisational forms, one of those forms potentially being collaborative arrangements. From literature focusing on small and medium enterprise performance, Beaver (2003, p. 3) states: "for any firm to remain in business over a given period there must be a capability to adapt to changing circumstances".

Tetenbaum (1998) suggests that planning is not relevant in today's world and that the ability to tolerate messiness, disequilibrium and ambiguity are key attributes. In contrast, many authors suggest that planning is still an important aspect of resilience (Alexander, 2005; Ates & Bititci, 2011; Boin & McConnell, 2007; McManus et al., 2008; Spillan & Hough, 2003; Stephenson, 2010). According to Paton & Hill, (2006, p. 251) "a capability to reorganise will not just happen, nor will it be possible to conduct such a reorganisation during a crisis", thus some degree of planning is a necessary attribute of a resilient organisation. Planning is required, not just to establish the capacity for adaption but also to identify what options for adaption exist.

One aspect of resilience not captured within the Resilient Organisations 13 indicators model is the role of family. Stafford et al. (2013) differentiate family businesses resilience from others, suggesting that it is the adaptive capacity of the owning family, rather than the organisation that is fundamental to

successful recovery. This is also supported by Haynes et al. (2011, p. 96) who suggest that “healthy businesses need to be supported by healthy and resilient families”. Aldrich & Cliff (2003) make a similar point with regards to family being a much overlooked part of social capital. Regardless of whether the organisation is a family business, family connections often have key roles both in driving business start-up and transitions. In relation to small and medium enterprises, this point is similar to that made in the earlier discussion of recovery with regard to owner and organisational resilience being intertwined.

10.Integrative Framework

The Resilience perspective fills the gap in Disaster Recovery studies which have largely considered organisational and event characteristics rather than adaptive capacities or actions. In the final section of this chapter, this adaptation focused perspective is incorporated with knowledge of disaster effects and organisational strategy approaches into a framework showing how collaboration can assist organisations with responding to a disaster.

The strategy needed to recover from a disaster is dependent upon both the changes experienced by the organisation, and the changes in their environment. The impact of the disaster on an organisation may include changes in their financial, human and physical resources; all of which may affect their capabilities. This is illustrated in Figure 8 which is based on disaster impacts identified by a variety of authors including Miles & Chang (2006), Zhang, Lindell & Prater (2009), Whitman et al., (2014), Brown, Stevenson, Giovinazzi, Seville, & Vargo (2014), and Stevenson et al., (2013).

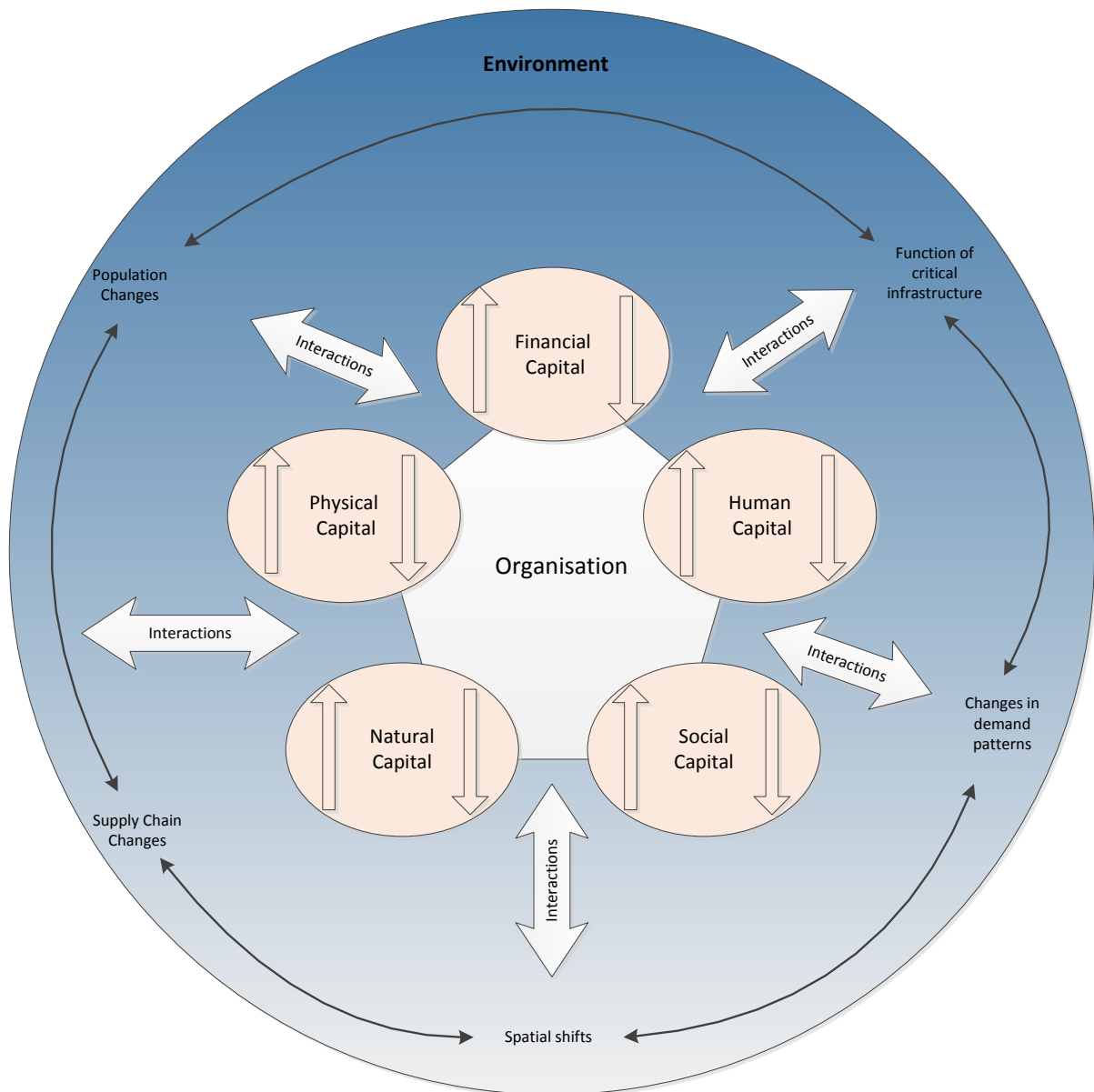


Figure 8 - Post-Disaster Organisational Impacts

Considering the impact of the disaster on the resources of an organisation is in line with the Resource Based view of Organisational Strategy (Barney & Hesterley, 2008; Dyer & Singh, 1998; Hill et al., 2007). The process of doing this involves many of the resilience traits as per the model presented in Figure 7 (Resilient Organisations, 2014). Particularly relevant during this process is the need to appropriately manage and mobilise organisational resources (Internal Resources and Staff Engagement indicators within the Resilient Organisations model), along with a readiness to respond and adapt to changes in the internal environment before crisis point is reached (Proactive posture and Decision Making). Being able to innovate and use creative ways to address impacts is also important in this process.

Impacts on the physical environment relate to physical damage to infrastructure, housing and commercial environments, alterations to supply and demand patterns, impacts on demographics and changing patterns of spatial demand. Consideration of the external environment parallels the Industry Based view of Organisational Strategy (Hill et al., 2007; Porter, 1996, 1997). This process also relates to traits of resilient organisations, most particularly their ability to understand, recognise and analyse what is happening in their external environment by using all possible resources and sources of information (Situational Awareness and Effective Partnerships). Resilient organisations need leaders (leadership) that are able to perform and encourage others to be constantly assessing the opportunities and threats that exist in the ever changing post disaster environment.

Figure 9 illustrates how the effects on the organisation, and the organisation's environment, which were shown in Figure 8 impact the strategy necessary to recover.

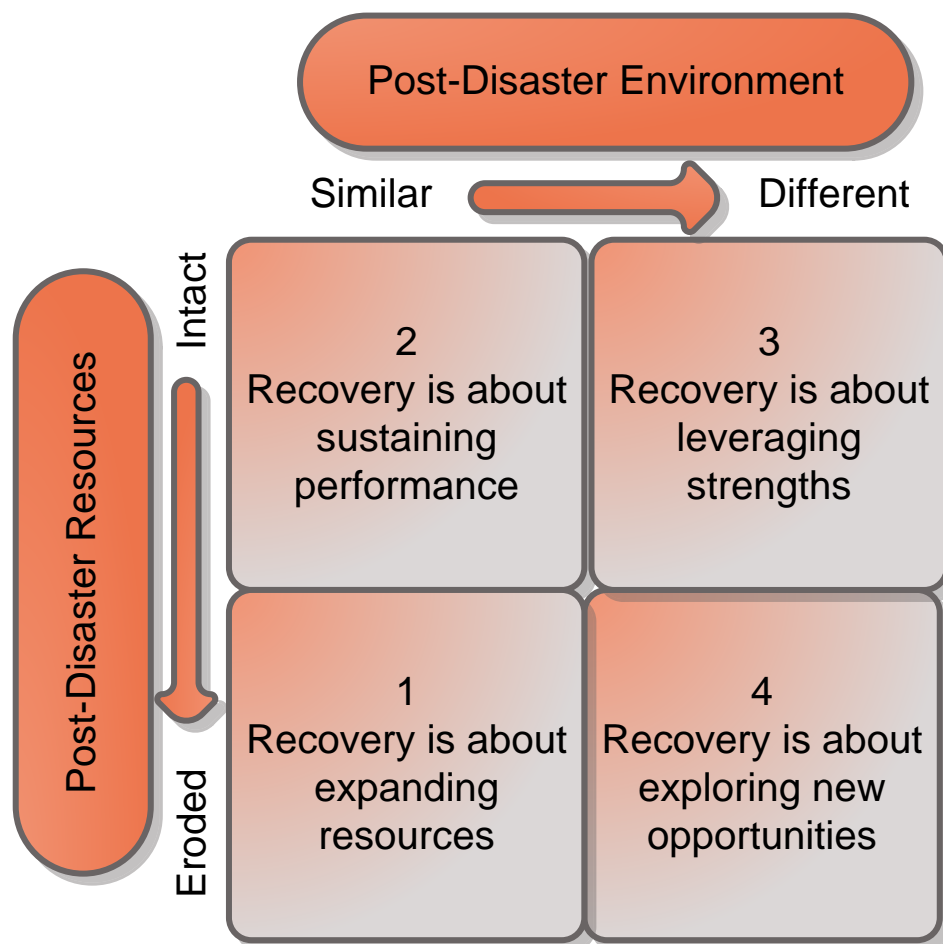


Figure 9- Post Disaster Strategy Matrix

Adapted from: (Nilakant, Walker, Heugten, Baird, & Vries, 2014)

Resources in this model refer to all of the capitals, illustrated in Figure 8 , utilised by an organisation. This five capital model, proposed by The Sigma Project (2003) defines the capitals as follows:

- Natural Capital – the natural world upon which an organisation depends for resources
- Social Capital – relationships and networks of an organisation
- Human Capital – the employees of the organisation
- Manufactured Capital – also described as physical capital encompassing assets of the organisation
- Financial Capital – cash and debts

Organisational sustainability requires attention to be paid to all of these five areas (Tencati, Perrini, & Pogutz, 2004).

This model suggests that disaster impacted organisations will initially find themselves in one of four quadrants which are detailed below.

10.1. Quadrant 1: Resources Eroded/Environment Similar

For organisations which experience significant erosion of their resources, often through the physical loss of their premises but also due to staff exiting the disaster zone, recovery requires the re-expansion of their resources in order to regain their capacity to operate. If resources are not obtainable, recovery may require a short-term holding or survival mode of operation until resources are available. Resources refers to impacts on any one or more of the five capitals illustrated in Figure 8

10.2. Quadrant 2: Resources Intact/Environment Similar

For organisations whose resources are mostly intact and markets relatively unchanged, recovery requires them to sustain their performance while their workforce, suppliers and customers experience significant disruption. In the midst of great trauma, carrying on with business as usual is difficult psychologically. For these organisations, sustaining performance may require them to assist in helping others to resume their own performances. Others may include employees, suppliers, customers and place based relationships such as neighbours and communities. Offering assistance to others is a way for these organisations to acknowledge that business was not ‘as usual’ for many other organisations and make a contribution to the overall recovery effort, upon which their own sustained performance may depend. Whether the environment is ‘similar’ is a subjective judgement. The word ‘similar’, rather than the ‘same’ is deliberately used in this model to address the fact that no post-disaster environment is exactly the same. However, the key aspects that impact on a particular

organisation may be similar regardless of the overall change and disruption affecting the region as a whole.

10.3. Quadrant 3: Resources Intact/Environment Different

Organisations which either retained, or were quick to take actions to regain the necessary resources, may still be greatly impacted by the changes in the environment resulting from the disaster. Reasons may include the loss of their customer base, reduction in demand for particular items or difficulties resulting from damage and de-population in their location. These organisations need to assess how their strengths and capabilities can be deployed in ways that suit this changed environment. Options include diversification, different delivery mechanisms or different locations. Examples of adaptive behaviours in this quadrant include a café turned external caterer, day-time hospitality venues offering evening dining, temporary shrinkage to online purchasing only and diversification into new product lines such as cloud rather than server based products.

10.4. Quadrant 4: Resources Eroded/Environment Different

This quadrant is the most challenging. It encompasses organisations who have experienced significant loss of capability and greatly impacted environments. Although challenging, this quadrant also offers the most opportunity for re-invention and innovation. Organisations in this situation need to re-assess what opportunities exist and how their reduced resources could be deployed to meet these. For some organisations in this category, strategic choices may include ceasing trading either temporarily until the post disaster environment changes or permanently as part of new personal rather than organisational opportunities.

There are many potential ways to categorise collaborations. Adobor (2006) suggests that insight may be gained by classifying by origin – whether they occur spontaneously, are initiated by individual firms or by a convenor or facilitator. Hardy, Phillips & Lawrence (2003) suggest considering the level of involvement between the collaborators and the embeddedness of arrangements into organisational routines. Both of these classification systems stem from examination of collaborations within the not for profit sector. The model presented above (Figure 9), which is grounded in explanations of collaboration generated from the field of strategic management, has been selected as offering the greatest insight by applying ‘business as usual’ theories of organisation strategy and decision making in this post disaster setting.

11.Synthesis

This thesis adopts a view of organisations as complex open systems seeking to recover from a massive disruption fitting the concept, from the business literature of discontinuous change that requires rapid adaptation. Existing studies of disaster recovery suggest that five areas are relevant to understanding recovery for organisations in this study. The first is pre-existing trends and influences that reside largely outside of disaster impacts. This finding suggests that understanding this pre-existing context is a necessary pre-requisite to understanding actions and decisions following the disaster. Secondly, and most emphasised in existing studies are characteristics of the organisations. Although findings are mixed and have not yet explained a great deal of the differential recovery status, these organisational characteristics need to be considered and assessed for importance. Thirdly existing literature emphasises the inter-related nature of all aspects of recovery. With this in mind, a holistic view that is alert for the impacts and interdependencies both to and from businesses in this study is adopted. Fourthly, the importance of spatial effects are noted and point to the need to consider not just what is happening within the boundaries of each organisation studied but also their surroundings. Finally, the need to consider policy or decision effects which are lesser studied in work looking specifically at business recovery but which are supported by the growing emphasis on resilience and the adaptation and change needed when recovering from disaster. Concepts from both organisational strategy and the field of organisational resilience are introduced to assist in ensuring adequate consideration of adaptive efforts.

The lack of literature looking specifically at business collaboration as a post-disaster recovery strategy led to a combining of literature from disaster recovery, public policy, organisational strategy and management in order to understand how collaboration works and what leads to effective collaboration. The results of this search were used to create a framework for effective post-disaster collaboration (Figure 6) which can then be assessed, reviewed and refined when compared with the experiences of organisations in this study.

Consideration of literature from both resilience and business management with its emphasis on change, adaptation and appropriate strategy selection, led to the creation of a 2x2 matrix within which businesses collaborative endeavours could be categorised and effectiveness assessed (Figure 9). This matrix is used to frame the discussion in Chapters 5-8 with regard to whether collaboration was an effective disaster recovery strategy.

It is clear from the existing literature that business recovery from disaster is a complex process. Understanding of that process can be best achieved through a combination of knowledge from

multiple disciplines. Business as usual approaches such as organisational strategy which informs both the post-disaster strategy matrix and the framework for effective collaboration need to be combined with specific disaster recovery studies to embrace that complexity and best utilise existing knowledge.

Chapter Three - Research Methodology

1. Introduction

The underlying rationale for the methodological choices within this thesis is the idea from Bell (2005) that the question should not be ‘which method’, but rather ‘what do I need to know’ to answer the research questions. The approach used has much in common with the principles of the emerging framework of trans disciplinary research (Carew & Wickson, 2010; Wickson, Carew, & Russell, 2006). Trans disciplinary research is research that acknowledges complex contexts and interactions between systems and seeks to contribute knowledge that helps to solve these real world complex problems (Carew & Wickson, 2010). This thesis is focused on the problem rather than on any single disciplinary view. Ultimately the aim of the research is to contribute understanding and theory that assists in the creation of practical initiatives to help organisations recovering from crisis events.

With these issues in mind, along with the limitations of existing research in the area of business recovery, this research adopted a primarily inductive, qualitative approach aiming to generate theory from the rich and contextually situated data. In the quest to generate theory relevant to this specific context, both exploration and theory testing was carried out in support of theory development. This approach allowed for emergence of new propositions that are generated by the data alongside existing theories that are newly applied to this disaster context. This is in line with Duk & Hak’s (2008) suggestion that research efficiency is gained by considering what is known to assist in generating new propositions. This is also supported by Melia (1997) who suggests that ultimately a ‘pragmatic approach’ which is informed by, but not constrained by methodological approaches is desirable (Barbour, 2001).

This chapter outlines the basic premise of the inductive approach taken, the ontological and epistemological approaches that underpin the methodology and discusses the issues arising from being an embedded researcher. Following this, the data collection and data analysis processes are summarised and measures to ensure quality discussed.

2. Research Approach

The research approach drew from both case study research (Dooley, 2002; Dul & Hak, 2008; Eisenhardt, 1989a; Eisenhardt & Graebner, 2007; Tsang, 2013; Yin, 2009, 2012) and the Grounded Theory method (Charmaz, 2008, 2014; Glaser & Strauss, 1968; K. Locke, 2001).

Grounded Theory emerged in the 1960's as a counter to the dominant paradigm of scientific methods and quantitative research. Grounded Theory provided a means to create theory that is based upon full and rich data sets from which themes have emerged through a rigorous process of data coding, analysis and constant comparison (Charmaz, 2014). Much debate and further refinement has ensued since this initial introduction of Grounded Theory with some authors viewing it as a prescribed and regimented method and others taking a much more flexible view that sees grounded theory as a "constellation of methods" (Charmaz, 2014, p. 14). While the varying approaches to the generation of grounded theory differ in their ontological assumptions, they share the common ground of emergence (Bryant & Charmaz, 2007; Charmaz, 2008, 2014). This study uses the description in line with Charmaz's view of grounded theory as a flexible approach that is primarily inductive whereby data has been subjected to a lengthy and iterative process of comparison in order to develop theory. Explanations and mid-range theories are generated or emerge from this rigorous process of coding and comparison. There are few studies looking in depth at the emergent and adaptive strategies used by organisations following a major disaster. The grounded theory methodology with its emphasis on emergence is appropriate for this context.

This thesis departed from the original recommendation from Glaser & Strauss, the original proponents of Grounded Theory (Charmaz, 2014). They suggested that a literature review should be carried out as the final stage in the research process, rather than prior, in order to ensure that the data collected was viewed through fresh eyes rather than influenced by extant knowledge. The approach adopted in this study was more in line with case study research and the suggestion by Eisenhardt (1989a) that literature is used to aid in the a priori specification of constructs to ensure that the right questions are being asked, while still allowing for emerging themes or relationships between constructs (Yin, 2009). Time with interview respondents is precious and ensuring that the questions being asked are relevant and likely to lead to greater understanding and insight was considered of more importance than issues of methodological purity, especially given the post-disaster environment where time is a scarce resource.

Drawing from the tradition of case study research (Darke, Shanks, & Broadbent, 1998; Eisenhardt, 1989a; Eisenhardt & Graebner, 2007; Yin, 2009, 2012), one of the outcomes of this research is a detailed understanding of each specific case situated within its particular context. This creates an understanding of the events for each organisation studied as well as the key factors that combined to create them (Tsang, 2013). This is the most appropriate methodology to explore these phenomena with the aim of understanding their complexities and potentially building theory from this exploration (Dooley, 2002; Dul & Hak, 2008; Eisenhardt, 1989a; Yin, 2009). Case study research has previously been of value in research on collaboration leading to good theoretical and practical insights (Austin, 2000) and allowing us to develop a more comprehensive understanding than would be possible using

quantitative methods (Hardy et al., 2003). In the specific context of disaster recovery, (Chang, 2010, p. 304) says “Case studies can provide invaluable understandings of the complexities, politics and processes of disaster recovery”. Additionally, cases have been used to test extant knowledge developed in a non-disaster setting regarding collaboration.

The data forming these cases have then been developed in line with a grounded theory approach to generate themes and codes, search and explain variations and ultimately attempt to develop theory that is applicable to all of the cases and that has emerged from these themes (Charmaz, 2014; Laws & McLeod, 2004; Tsang, 2013).

3. Theoretical Perspective

The underlying assumptions of the research approach are those of a critical realist. Realist means that we believe there is an independent reality that exists (Ackroyd, 2010; Tsang & Kwan, 1999). In other words “there is a reality that is separate from our descriptions of it” (Bryman & Bell, 2011, p. 17). The ‘critical’ acknowledges that it may not be possible for us to be certain about what that reality is, although we constantly strive towards that aim. We believe an external world exists however “obtaining reliable knowledge about it is not straightforward” (Ackroyd, 2010, p. 3).

This approach is also consistent with the view that researchers cannot be entirely objective. The experiences and beliefs of the researcher influence both the overall epistemological approach along with the way in which data is interpreted. We aim to be objective but we are never truly able given the existing knowledge we bring to the research. This applies to all researchers who cannot undo their existing store of knowledge, but who can attempt to be aware and explicitly acknowledge how this many influence their work. An additional element to the subject of objectivity is the disaster context in which this study takes place. Christchurch is my home and has been for around 65% of my life. This offers many advantages with regard to local knowledge, local contacts and an overall perspective of the broader recovery of the city as an active participant in it. However this does of course have some potential disadvantages with the need to maintain what Wickson (2006) describes as “critical distance”.

4. Data Collection

The primary method of gathering data was through semi-structured interviews with the owners or senior leaders within each respondent organisation. The semi structured interview methodology was chosen as it is able to provide comparable data between the cases studies while still allowing for new

and unexpected insights or research directions that may arise. Due to the expected interview length and the advantages that may arise from building a rapport with subjects, the majority of interviews were carried out face to face (Baxter & Jack, 2008).

It became apparent in the compilation of the interview guide, that many of the questions, particularly those that drew upon the findings of prior disaster recovery studies, involved largely factual, quantitative data. It was therefore decided to proceed with both a questionnaire to capture these aspects which provide important contextual or descriptive information and the semi structured interview. The questionnaire provides both factual characteristics of the organisation and the owners as well as measurement of their entrepreneurial orientation, resilience and locus of control. This then provided a context for an exploration through the semi structured interview of the experiences of the individual manager and their organisation following the earthquakes and their decisions to enter into collaborative arrangements. This approach was both facilitative, in that the questionnaire provides the context for the interview discussions, and complementary in order to explore whether organisational characteristics proposed in the literature have any bearing on collaborative decisions (Hammersley, 1996). The research design most resembles the fully mixed concurrent equal status design proposed by Leech and Onwuegbuzie (2009) in that the purpose of mixing methods is to answer the research questions and both the qualitative and quantitative elements were of equal weight and analysed concurrently. This choice of methodology was led by both the research questions and the fundamental underlying ontological or epistemological considerations (Creswell & Clark, 2007).

The remainder of this section will detail the research instruments, measures used and methods for identifying the four different types of respondents in this study. Methods for data recording and security of data are outlined and the interview process is discussed.

4.1.Individual businesses who collaborated

▪ Creation of research instruments

Interview themes were arranged to reflect the chronological sequence of events for the organisation with the exception of questions relating to financial data. Questions firstly sought to understand the nature of the organisation prior to the earthquakes, what happened to the organisation in and immediately following the earthquakes leading to the collaboration process, characteristics of the organisation now and, lastly, information regarding financial performance and owner characteristics.

The nature of the organisation prior to the quakes involved both factual data regarding location, size, ownership as per the Unit attributes previously studied by disaster researchers as well as more

descriptive questions seeking to understand the essence of the organisation. Respondents were then asked to explain what effect the earthquakes had on their business leading into questions regarding the collaborative endeavours entered into. Questions regarding the collaborative endeavour involved both factual, what happened, when and with who and the explanatory, why and the evaluative, what worked and what did not.

▪ **Explanation of Measures Used**

Entrepreneurial Orientation – Survey Question 9

The Miller/Covin and Slevin EO scale was used to measure Entrepreneurial Orientation (Covin & Slevin, 1989). While the literature does contain debate regarding the nature of the construct and the measures, as well as discussion regarding the cross cultural applicability of the scale, this does still seem to be the commonly used measure despite its development occurring over 20 years ago (Covin & Slevin, 1989; Covin & Wales, 2012; B. George & Marino, 2011; Runyan, Gee, Dong, & Swinney, 2012). Slight changes were made to the wording of the questions to reflect the small nature of the organisations in the study and that interviews occurred with the manager or owner. An indication of entrepreneurial orientation was calculated using the mean ratings of the items as suggested by Chadwick, Barnett and Dwyer (2001).

Locus of Control – Survey Question 10

While the literature review also showed that Locus of Control may be an interesting area to consider in relation to disaster recovery, the instruments most commonly used to measure this such as the popular Rotter (1966) scale were too long to include here, given the inclusion of the also lengthy EO scale (Beretvas, Suizzo, Durham, & Yarnell, 2008; Kormanik & Rocco, 2009). One question was therefore sought to give an approximation of owner tendencies, informing the analysis as to whether this was an area of significance, while not adding length to the interview time. If the results did indicate any links with recovery process or outcomes, then a fuller study of this concept could be carried out at a later point.

Resilience – Survey Question 13

The Short-Form Resilience Benchmarking Tool developed by Resilient Organisations was used to give an indication of the organisations' resilience as at the time of interview (Resilient Organisations, 2014; Whitman et al., 2013). This tool has 13 questions which are scored on a range from Strongly Disagree (Non-Resilient) to Strongly Agree (Resilient). Strongly Disagree is coded as 1, and Strongly Agree as 8. The average across the 13 indicators has been presented in the results.

▪ Identification and approach to collaborating organisations

A list of potential collaborative efforts was compiled primarily from publicly available online data. This included media coverage, official recovery websites and unofficial recovery information portals. Additionally, informed commentators such as Chamber of Commerce staff, Resilient Organisation researchers and business acquaintances were consulted. Brief details of the collaborations were compiled categorised by purpose, sector and nature. Additional snowball sampling occurred as discussions with the business community led to the identification of other interesting collaborations, or other stakeholders relevant to a particular case (Bernard & Ryan, 2010).

Collaborations that were of interest in this study are those that have an overriding purpose of supporting organisational recovery from disaster. Collaborations that occurred as part of 'business as usual' or were entered into by existing strong businesses whose survival was not in doubt as a result of the disaster were excluded.

Purposive sampling was then carried out seeking to select case studies that represent a wide variety of forms, sectors and purposes – that provide the greatest opportunity to learn (Bryman & Bell, 2011; Eisenhardt, 1989a; Eisenhardt & Graebner, 2007). Ideally, all of the collaborative efforts would be studied in order to provide the broadest possible range of insight and to provide the greatest potential for reaching theoretical saturation – the point at which adding cases offers little additional learning (Eisenhardt, 1989a). However, the nature of a doctoral thesis demanded that a limit be placed on the number of cases. Eisenhardt (1989) suggests that between four and ten is an ideal number, hence an initial 10 collaborations were selected.

As this research has a large exploratory iterative component, cases were not selected at commencement of the study but rather as the study evolved. The initial case selection was made on the basis of a paired comparison – selecting two collaborative groupings that appear to have the same rationale for existence. This is in line with the grounded theory method of theoretical sampling (Charmaz, 2008) whereby tentative categories were created for the first of the pair, which were able to be then compared and extended for the second. The next pair were then selected based upon the tentative coding of the preceding pair and aimed to extend those categories. This process was at times complicated by practical issues with a small number of selected organisations unwilling to participate.

Once an organisation had been selected, internet and media resources were searched to provide as much background information as possible on the collaborators and the collaboration as recommended by Darke, Shanks & Broadbent (1998). Initial contact was then made by telephone with the owner or senior manager of the organisation to ascertain their willingness to participate. If respondents agreed

to participate, a date and time for interview was agreed and an email address obtained. Respondents were then emailed a confirmation of the interview date and time along with an information and consent form regarding the study. They were also sent an electronic link to the survey which they were asked to complete prior to the interview date if possible. This approach was favoured in order to ensure the contextual background was acquired prior to the interview in order that prompts and questions could be informed by this, but not at the time of the interview as this would lead to an unreasonably long face- to- face contact time. Reference was made during the interview to the survey and to its instructions regarding the before the quakes section and the after the quakes section to help ensure that those questions had been understood and answered appropriately. In the few cases where respondents had not completed the survey prior to interview, paper copies were completed at the time of interview.

The interview guide, survey and information and consent can be found in Appendix 1-3.

4.2.EPIC and Re:Start collaborations

EPIC and Re:Start differed from individual business collaborations in that they were large multi-party efforts with either charitable or governmental funding that benefited multiple parties. Data in relation to these two collaborative projects was obtained from semi-structured interviews conducted with a founding member of the project team and business owners who became tenants in each project. A separate interview guide was compiled for the founders and can be found in Appendix 4. With the exception of one interview carried out by phone, these interviews were also face to face. In addition to the interview, documents were provided by the Re:Start respondent and sourced from the internet in relation to EPIC.

4.3.Non-Trading Organisations

▪ Creation of research instruments

A separate interview guide and questionnaire was developed to use with non-trading organisations. This was based upon the collaboration guide and questionnaire but with the removal of sections that related to collaboration and current trading and the insertion of questions relating to the reasons for closure. A separate ethics application was submitted and approved in relation to these. The interview guide, questionnaire, information and consent forms are located in Appendix 5-7.

- **Identification of and approach to non-traders**

One of the key reasons for the lack of research including non-trading organisations is the difficulties of identification and location. However, the growing use of digital technologies including organisations' own websites, on-line directories and social media have provided new options for attempting to overcome these issues. A pilot study was carried out with the dual purpose of assessing the difficulty of identifying and locating non-trading organisations and assessing the number of organisations who were not-trading as at the date of study.

The closed Central Business District area was selected as the focus of the study, due to the existence of a database of businesses retained as a historical record by the Central City Business Association (CCBA). This database is a listing of 355 businesses that were members of the CCBA and were located in the predominantly retail central CBD area, predominantly in the streets bounded by Lichfield, Hereford, Manchester and Oxford Street (Figure 10).

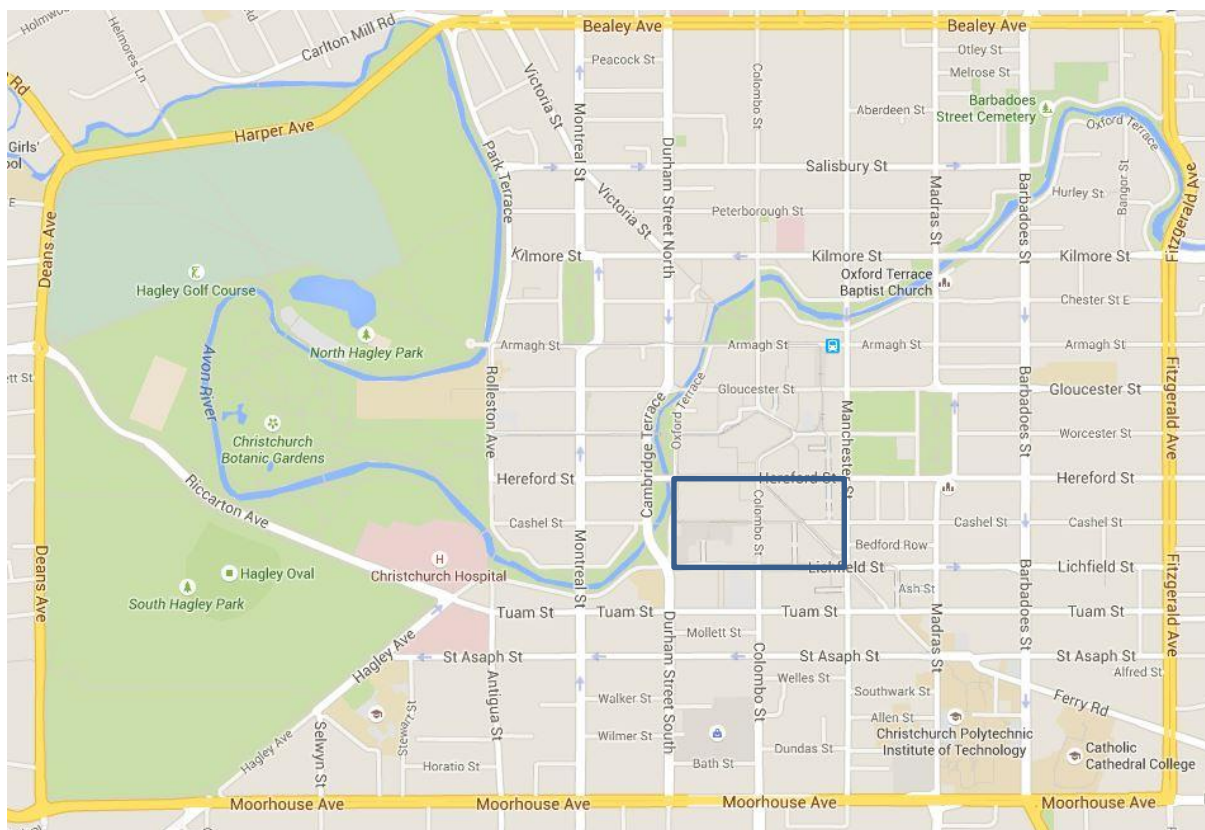


Figure 10 – Christchurch Map showing main focus area of Central City Business Association

The database provided the name of the organisation, their previous address and phone number and in many cases a website address and description of the business. An internet search was then conducted on each individual business to ascertain the organisations current status. Where a new location was found for an organisation, either local knowledge or a confirmatory phone call was used to confirm.

From an initial assumption that organisations would either be closed or open, ten categories were needed to encompass the variety of outcomes and these are shown in Table 7.

Code	Description	No. of organisations
0	have found a 'now at' location	115
1	Unable to be found via simple web search	75
2	Chains that is still operating but now DO NOT have store in Christchurch (chains NOT franchises which are treated as individual businesses)	28
3	Definitely not operating e.g. website or Facebook stating that not operating	52
4	Relocated to another centre (and only had one store)	7
5	No premises/operating home-online	11
6	Operating at same location	6
7	Reopened in new Location with NEW NAME	6
8	Still operating but have downsized e.g. Did have two stores in Christchurch but now only have one	53
9	Relocated and reopened but now closed down/failed	2
10	Reopening in same location with new name	0

Table 7 - Coding of ex CCBA businesses

Organisations that were unable to be found via a simple web search were then subjected to a more systematic rigorous internet search using directory listings and social media sources. Additionally their pre-earthquake phone numbers was called to provide more confirmatory evidence of their status.

The results of this pilot study produced the six non-trading organisations interviewed for this study through two avenues. Two respondent's, within the surveyed area, had their business phone lines redirected to homes giving the opportunity to request an interview after confirming their business status. The other four respondents (who came from locations outside of the CCBA area) identified themselves to me via email after media coverage of the project. Once contact was made with the non-traders the same process as collaborators was used to agree a date and time for interview and then email further information, consents and survey links.

4.4. Continuing Traders – not collaborating

▪ Creation of research instruments

The interview guide used for collaborators was also used for continuing traders, simply with the removal of the section regarding collaboration. The questionnaire was unchanged but was administered in person within the interview time period.

▪ Identification of and approach to continuing traders

All of the current traders emailed the researcher in response to media coverage regarding the study. While they represent a variety of sectors and sizes, similarly to the 4 non-traders who voluntarily contacted the author, there is significant potential for bias in that certain characteristics of these individuals or their organisations led them to voluntarily participate in this study.

All of the remaining topics relating to the interview process and the analysis of data were common across the three categories of respondents

4.5. Participant Summary

Table 8 summarises the respondents within each category discussed above.

Category	No. of organisations
Collaborators	14
Non-Trading	6
Continued or New Traders	4

Table 8 - Categorisation of participating organisations

Table 9 provides brief introductory information with regard to the sector, size, age and immediate post-earthquake status of the organisations involved in this study.

Organisation Code	Sector	Size (Employees)	Approximate Age of business (years)	Status of premises immediately Post EQ
Collaborators				
A	Retail	1	>1 year	Inaccessible
B	Hospitality	7	3.5	Inaccessible
C	Retail	6	40	Inaccessible
D	Manufacturing	53	28	Accessible-inoperable equipment
E	Retail	10.5	15	Inaccessible
F	Retail	2.5	6	Operable
G	Retail	10	22	2 x Inaccessible
H	Retail	110	25	1 x Operable 2 x inaccessible
I	Service	300	30	Operable
J	Service	20.5	45	1 x inoperable 1 x operable
K	ICT	5.6	7	Inaccessible
L	ICT	11.9	16	Inaccessible
N	Manufacturing	4.2	12	Operable
O	Manufacturing	9.5	62	Operable
Continued Traders (non collaborative)				
CTA	Retail	1.6	4	Inaccessible
CTB	Retail	2.5	New	n/a
CTC	Retail/Service	9	110	Operable
CTD	Construction	1	66	Operable
Non Trading				
NTA	Hospitality	6.5	3	Inaccessible
NTB1	Hospitality	9	16	Inaccessible
NTB2	Hospitality	10.5	3	Inaccessible
NTC	Service	2	3	Inaccessible
NTD	Hospitality	4.5	7	Inaccessible
NTE	Retail	3.5	17	Inaccessible

Table 9 - Introduction to Respondents

4.6. Pilot Testing and Ethics Approvals

After approval was obtained from the University of Canterbury Human Ethics Committee, both the survey and the semi structured interview guide were pilot tested on friends and colleagues of the researcher to check for any difficulties with language, understanding or flow. The interview schedule and overall aims and research questions were reviewed after each of the first three interviews with slight adjustments made to the interview guide

4.7. Data Recording

Each interview was recorded with the consent of the respondent. Following the interview, personal impressions and observations were recorded and in the initial stages of the research, notes or amendments made to the semi-structured interview guide. Interview recordings were sent to a professional transcription service. When transcripts were received, these were then checked against the audio recording and corrected where necessary by the author. This process of reviewing recordings some days after the original interview was also very useful in growing the researcher's interview skills. It was often clear on review where probes could have usefully been used and where silence rather than affirmatory replies may have been more helpful.

Survey information was entered directly into Qualtrics by respondents or manually by the researcher for organisations who completed paper surveys. These results were then downloaded from Qualtrics and matched to transcripts.

All respondents were offered the opportunity to receive copies of the interview transcripts. Six respondents were emailed the transcripts but no revisions were received.

4.8. Interview Process

The post disaster environment even some two years later caused some difficulties with regard to interview locations with many organisations still operating out of smaller semi temporary premises, often with significant background noise. Two interviews were carried out in residential homes and a significant number were in cafes. Additionally many owners or managers were very busy managing current business, insurance issues and future strategy and I was very fortunate to have obtained the consent of many to participate. In this regard, there was some benefit in being a local researcher who had shared the disaster experience and could empathise and understand from personal knowledge some of the issues described, however this also increased the level of challenge required to ensure a

‘naive enquiry’; and not assume that there is a shared understanding and agreement where none actually existed.

As identified by many authors, to carry out an effective semi-structured interview is a highly skilful process (Bernard & Ryan, 2010; Harvey-Jordan & Long, 2001; B. Leech, 2002). Significant attention was given to building a rapport with respondents in order to try and encourage the free and open discussion necessary to fully understand their experiences. However, this attention to rapport building was at times in conflict with the detached, impartial role of the interviewer. Rapport requires a two way exchange of communication, not merely impartial nods. Interviewing technique improved greatly over the course of data collection, particularly with regard to allowing more silence, rather than filling the gaps and resisting the temptation to join in discussion. At times, respondents became emotional when recounting disaster impacts and decisions made and it was sometimes necessary to offer empathy and reassurance to respondents.

It was impossible to remain emotionally detached from some of the stories of struggle and perseverance. Listening with empathy and admiration to the stories left the interviewer both at times uplifted at the endurance and concern for others shown by most respondents, and at times, somewhat depressed at the struggle some in Canterbury still face. Those respondents who so generously shared their time and their experiences with me deserved an empathetic and understanding audience and this is something I sought to provide while drawing the very fine line of remaining a ‘naive enquirer’.

The information and consent form informed or reminded all respondents that:

“This study does require reflection on the effects of the earthquakes on your organisation which has the potential to cause some emotional distress. There are a number of free services accessible should this occur. The Quake Support and Counselling Services Helpline 0800 777 846 can offer practical support, information or advice on quake related issues, including counselling”

4.9. Additional data sources

Additional data sources included media reports, Facebook and other social media posts by organisations, reports from recovery authorities such as the Canterbury Earthquake Recovery Authority and Christchurch City Council, and organisations and others websites. The growing volume of digital information proved to be very helpful in this research with smaller companies increasingly using sites such as Facebook as well as developing their own web presence.

4.10. Follow up

Throughout the course of this research, I continued to track the progress of the respondents, either as a passer-by, through media coverage or through direct searches on company's websites. The public status of all was reviewed in November 2014. Specific approaches via telephone were made to four organisations to confirm questions that arose during the analysis process.

4.11. Confidentiality and security of data

All respondents participated on the basis of complete confidentiality with assurances that each organisation will be referred to by code only and care taken to ensure no information is provided in published reports that would enable identification. Given the sensitive nature of questions relating to financial performance, no consideration was given to leaving confidentiality to be a choice. All identifiable data relating to the study has been kept in locked and secure facilities at the University of Canterbury and will be destroyed within ten years.

5. Data analysis

A multi-stage process was used for data analysis conducted over many months in keeping with the Grounded Theory Method. Data gathering and initial data analysis were carried out concurrently with analysis of the initial cases informing amendments to further interviews.

Firstly, each case was written up as an individual entity to allow complete familiarity with the case as a standalone entity (Dooley, 2002; Eisenhardt, 1989a). This write-up was based on both interview transcripts and survey responses and included information regarding the context, the individuals and their particular characteristics, the events, the problems and the conflicts. Some cross-case comparison was then carried out using a more deductive approach where characteristics identified by the prior literature were compared. The case study write-ups are not included within this thesis due to the difficulty of removing information that would enable identification of the respondent while maintaining the readability and coherence of their story.

Each transcript was then uploaded to NVivo where an initial open coding process assigned codes to define what the data "are about" (Charmaz, 2014, p. 111). This was an iterative process with additional codes added to transcripts as later interviews prompted realisation of themes not recognised in the initial code creation. After initial coding had been completed for all transcripts, a process of review was undertaken looking for and merging duplicate codes.

After an intensive period of reflection and the use of both NVivo, Visio and Sticky Notes to arrange and rearrange the codes, a hierarchical structure was created with themes or heading and sub heading levels created, grouping codes into thematic areas that reflected the emerging relationships (Bazeley, 2007). Each thematic area then became the focus of analysis with the relevance of each theme reviewed for each organisation. This structure was then used to create a preliminary model in NVivo which provided the initial structure to allow a long process of comparison and iteration and refinement of that structure. Both NVivo and Visio were used as a means to visualise the data and relationships (QSR International, 2010). During this process, I cycled between data, coding and literature in order to build theory.

The results of both the cross-case comparison and the themes that emerged through coding and structuring became the key topics discussed in this thesis.

5.1.Evaluation

An ongoing debate exists as to how the quality of qualitative research can be assessed (Bryman & Bell, 2011; Creswell & Miller, 2000; K. Locke, 2001; M. Miles & Huberman, 1994; Seale, 1999). Quality is often referred to using terms from quantitative research such as reliability and validity. Reliability is concerned with whether the results of a study would be repeatable and refers to whether measures are stable and consistent. Reliability is concerned with whether one would get the same answers if you repeated the test. Validity refers to the integrity of the conclusions generated by the analysis process. While some writers argue that these terms can also be used for assessing qualitative research (Creswell & Miller, 2000; J. Morse, Barrett, Mayan, Olson, & Spiers, 2008), others propose alternative criteria (Guba & Lincoln, 1994; Phillips, 1997). Alternatives proposed include credibility, transferability, dependability and confirm-ability.

The originators of grounded theory, Glaser and Strauss, suggest two criteria for evaluating the 'goodness' of the resulting theory (K. Locke, 2001). The first of these criteria is whether the theory is practically useful – does it actually work. They used the terms 'fit', 'understand- ability', 'general' and 'control' to describe the need for a 'good' theory to be useable by an end audience consisting not just of academics. Theory must obviously fit with the data but this fit must be comprehensible not only by theorists but by those within the social setting it purports to explain. Their second criterion was that of credibility. Credibility as explained by Charmaz (2014) relates to both the amount of data obtained, the amount of immersion or familiarity demonstrated by the researcher with the setting and topic, the logical links between data and analysis and the sufficiency of evidence provided for this. Other criteria for evaluation suggested by Charmaz include the question of whether any new insight or

originality is evidenced in the study and whether that insight has any practical or theoretical significance.

These three criteria of practicality, credibility and originality guided my approach to ensuring the quality of this study. Specific techniques adopted from Creswell & Miller (2000) used to assist in this aim include reflexivity, disconfirming searches and triangulation. Reflexivity refers to a constant process of considering, constantly reviewing and acknowledging the biases brought by the researcher. This also includes constantly reviewing all of the data and using numerical techniques to ensure that ideas are truly a product of the data and not of the researcher's brain. Disconfirming searches is the process of searching at all stages of analysis and theory building for cases or data that do not support theory including intensive consideration of any outliers and explanatory factors for their status. An element of triangulation was included through the inclusion of 'different' organisations; the non-collaborating and ceased cases as well as through the extensive review of media, recovery authorities and academic articles regarding the events in Christchurch.

6. Conclusion

The approach to this research was driven by both methodological and pragmatic considerations with regard to the most effective means of answering the research questions and growing knowledge. Methodological approaches have drawn from the rich literature on both case study and grounded theory in order to explore, describe and develop theory. Theories and extant literature have been drawn from multiple disciplines in order to aid in this process. Data was gathered via semi-structured interviews, survey and document analysis in order to obtain detailed and contextually rich information. Data was analysed using an iterative multi stage process and with a variety of techniques used to ensure the quality or 'goodness' of the resultant themes.

Chapter Four - Business Recovery from Disaster: Creating an Enabling Environment for Surviving and Thriving

1. Introduction

Businesses do not survive or fail because of disasters. They survive or fail due to decisions made by the business owners or managers following the disaster. These decisions may be strongly influenced both by pre-disaster institutional, social and sectoral trends, and also by policy responses enacted to assist recovery following a disaster. This chapter considers the important contextual factors impacting business decision making following the Canterbury earthquakes and suggests that this context created an enabling environment which empowered businesses and organisations to lead their own recovery through adaptive and innovative strategies. I suggest that there are lessons to be learned for future disasters with regard to the importance of context and attention to the many differing areas that contribute to it.

A deeper understanding of the influences on business decisions in disaster environments enable those entrusted with responding to disaster events, to understand not only the potential consequences, but the appropriate interventions to assist in the recovery of communities from extreme events. While a number of studies have considered organisational attributes that may affect business recovery following a disaster, lesser consideration has been given to the impact of contextual factors that impact on recovery. This chapter contributes to the literature in highlighting the importance of creating an enabling environment for business recovery and illustrates ways in which this occurred in Canterbury.

Firstly, the pre-disaster context is outlined. Issues that existed pre-disaster may significantly influence mind-sets in the post-disaster setting. Secondly, the earthquake events are described and an overview of their impacts on the region given. Thirdly, policy responses which impact the business environment are described. Fourthly, the impact of these factors in assisting to create an environment supportive of individual business recovery efforts are discussed and key building blocks of an enabling context identified. Finally, I suggest that while many aspects of the context are specific to New Zealand, they may still be of value, if modified appropriately, to other developed world contexts.

2. Theoretical Foundations

Miles and Chang (2006, p. 447) propose five “principal types of interrelated recovery influences” as illustrated in Figure 11. The influences include pre-existing economic, social and sectoral trends, agent or unit attributes, spatial effects and policy or decision effects. The fifth recovery influence is the multiple interactions that occur between all of these areas as illustrated by multi directional arrows. This chapter focuses on three of these influences, pre-existing trends, policy or decision effects and their interactions.

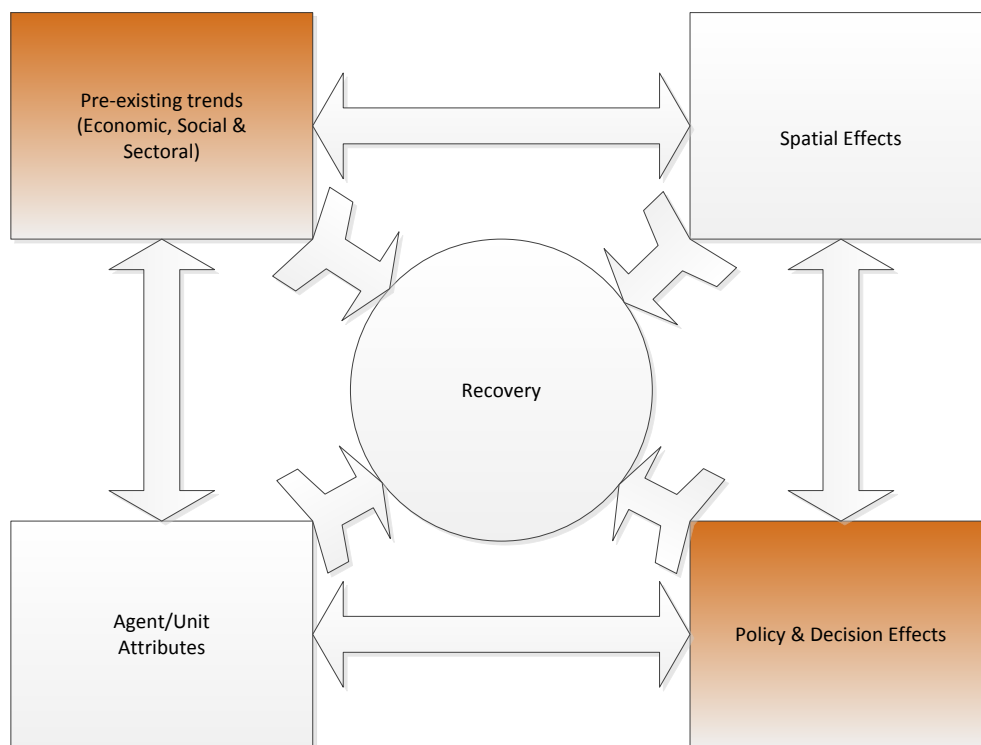


Figure 11 - Recovery influences

Source: Adapted from Miles & Chang (2006)

3. Pre-existing Context

All of the existing economic and social trends that exist prior to a disaster continue and may be hastened by the disaster recovery process (Alesch et al., 2001; Chang & Falit-Baiamonte, 2002; Dahlhamer & Tierney, 1998; Geipel, 1991; Passerini, 2000; Tierney, 1997a, 1997b; Zhang et al., 2009). This section will set out the key contextual factors impacting Canterbury businesses prior to the events.

3.1. New Zealand economy

Since 1984, New Zealand has transformed itself from a highly protectionist economy with extensive regulation, tariffs and protection into one of the least regulated economies within the Organization for Economic Cooperation and Development OECD (The Treasury, 2012b). Changes in the 1980's resulted in enormous public sector reform. The Government of the day commenced a comprehensive review of the role of the state resulting in privatisation or corporatisation of many state assets and deregulation of all sectors. The focus then, and now, became ensuring that “the state was to deliver policy and goods and services only where market failure demonstrably existed” (United Nations Economic and Social Commission for Asia and the Pacific, 2012). In practical terms this philosophy often means that the first question to be asked in relation to any business issue is whether it is the role of the Government to get involved.

New Zealand also has a strong social welfare tradition, with \$22 billion spent in the last financial year in social security and welfare payments. This is 22% of core Government expenditure and 11% of Gross Domestic Product (The Treasury, 2012a). Also of relevance to New Zealand's policy framework is the stable nature of governance and institutions, high levels of satisfaction with public service and its' ranking as the least corrupt public sector in the 182 countries considered by Transparency International (State Services Commission, 2011; Transparency International, 2012). New Zealand ranks 1st out of 183 countries for ease of starting a business and 3rd for the ease of doing business (World Bank, 2011).

3.2. Canterbury business context



Figure 12 - Canterbury Region Map and districts

Canterbury is a region of 521,832 people as at the June 2006 census, which is the last census prior to the earthquake events of 2010-11. This is approximately 13% of the New Zealand population. Canterbury is the second largest region in New Zealand. The region contains approximately 220,000 dwellings (Statistics New Zealand, 2006). 424,935 (81%) of the population are located within the most earthquake impacted districts of Christchurch, Selwyn and Waimakariri (Statistics New Zealand, 2006).

Small businesses dominate the region⁵ with 63% of enterprises being sole enterprises and a further 23% having five or fewer employees. Rental, Hiring and Real Estate Services together with Agriculture Forestry and Fishing are the sectors with the largest number of businesses (Statistics New Zealand, 2011a). While large firms with 100 plus employees make up less than 1% of the region's businesses, they employ 29% of the region's workers with the largest employment contributions coming from the manufacturing, healthcare, and social assistance sectors.

The average annual birth rate of new enterprises nationwide was 10% as at February 2010 and the death rate was 11% (Statistics New Zealand, 2011b). Sole proprietor enterprises represented 92% of 2010 business deaths. Of those companies born in 2005, only 42% were still in existence as at 2010 (Statistics New Zealand, 2011b).

3.3.Macro-economic Trends

The Canterbury earthquakes occurred at a time when the economy was just beginning to recover from the widespread effects of the 2007/08 Global Financial Crisis. After a period of recession, the nine months prior to the first earthquake was a period of low growth as measured by Gross Domestic Product (Canterbury Development Corporation, 2014). As at 2010, Canterbury contributed 12.2% of total New Zealand GDP (Statistics New Zealand, 2010). Unemployment rates, which had grown steadily since 2007, were 5.3% for Canterbury and 6.5% for New Zealand in 2010.

As at August 2010, consumer confidence remained below its historical average according to one monthly consumer survey (ANZ Bank, 2010). Business confidence as at July 2010 was down prompting fears of a “stalling recovery” after much higher confidence in the prior quarter (New Zealand Institute of Economic Research, 2010a, 2010b).

⁵ Statistics are for the Canterbury Regional Council area – encompassing Christchurch, Waimakariri, Selwyn, Hurunui, Kaikoura, Ashburton, MacKenzie, Timaru, Waimate and Waitaki.

3.4.Sectoral Trends

Table 10 illustrates that conversion to dairying in the wider Canterbury region resulted in a rapid growth in agriculture's contribution to the local economy which is now the 3rd largest sector in the region. More steady growth was recorded by the GDP contribution made to the region by Finance and Insurance Services, Education and Training and the Rental, Hiring and Real Estate sectors (Statistics New Zealand, 2014c).

Sector	Annual GDP contribution - Millions				
	2007	2008	2009	2010	2011
Manufacturing	2,894	2,884	3,114	3,106	3,143
Professional, Scientific, Technical, Administrative and Support Services	1,619	1,787	1,900	1,812	1,984
Agriculture	937	1,435	1,184	1,585	1,834
Rental, Hiring and Real Estate Services	1,398	1,356	1,407	1,567	1,739
Health Care and Social Assistance	1,314	1,396	1,510	1,610	1,591
Owner-Occupied Property Operation	1,617	1,669	1,647	1,488	1,582
Construction	1,282	1,463	1,413	1,423	1,446
Information Media, Telecommunications and Other Services	1,393	1,461	1,433	1,362	1,357
Forestry, Fishing, Mining, Electricity, Gas, Water and Waste Services	912	924	1,052	1,096	1,207
Transport, Postal and Warehousing	1,024	1,184	1,079	1,063	1,193
Wholesale Trade	961	1,006	1,075	1,159	1,186
Education and Training	873	951	1,034	1,093	1,120
Retail Trade	1,070	1,120	1,100	1,045	1,114
Financial and Insurance Services	733	762	864	963	1,008
Public Administration and Safety	687	759	776	849	779
Accommodation and Food Services	516	546	520	557	574
Total All Industries	19,229	20,701	21,109	21,777	22,859

Table 10 - Contribution by sector to Regional Gross Domestic Product

Source: Statistics New Zealand, 2014c

The impact of existing sectoral trends was acknowledged by many businesses in this study:

“Yeah, our business would probably look different anyway, no matter what” (Organisation 11).

“And we’ve had a double hit in many respects because prior to the earthquakes, you had the global financial crisis and people stopped spending and non-essential expenditure in IT was one of the areas that’s certainly in the sector which we operated was hit. So then, having the

earthquakes layered on top of that, it brought those issues that were already there. It was quite stressful really” (Organisation 21).

3.5.Spatial Trends

The inner city retail area had been in a period of decline over the course of many years prior to the earthquakes with a shrinking core area of activity. This is attributed to the rise of suburban shopping malls, ‘big-box’ retail parks and the ease and low cost of parking and access to these relative to the central city. Efforts were being made to revitalise parts of the inner city with an extension of tram lines to carry primarily tourists to more areas of the inner city, the formation of active and engaged business associations such as the Central City Business Association (CCBA), and general improvements to the look and feel of key areas.

3.6.Insurance

Businesses in Canterbury have relatively high levels of insurance cover (C. Brown, Vargo, & Seville, 2013). According to the SwissRe catastrophe database, approximately 80% of the economic losses from the Canterbury earthquake sequence are covered by insurance (King, Middleton, Brown, Johnston, & Johal, 2014). Who pays for recovery is extremely important, particularly with regard to empowering organisations to determine their own courses of action.

3.7.Pre-existing context summary

Existing trends highly relevant to understanding the context in which this disaster occurred include:

- Free market economy – the state only to intervene where demonstrable market failure
- Social Welfare – minimum standard of living through unemployment benefits and other government payments
- Economic - recovering from GFC economic downturn, high proportion of micro and small business
- Sectoral – ongoing shifts with increase in agriculture and declining growth in manufacturing
- Central Business District – long period of decline
- Insurance – estimated 80% of losses covered

4. The events

The sequence of earthquake events commenced on September 4, 2010, when a MM7.1 earthquake occurred 40km west of the Christchurch CBD. No lives were lost in this event, thanks largely to the 4:35 a.m. timing. While this initial earthquake did cause significant damage in some areas of the

region, there was a sense of this being manageable as indicated by the declaration of a local (rather than national) state of emergency, which was lifted 12 days later (Parliamentary Library, 2010). The most devastating earthquake, still technically classified as an aftershock occurred when a MM 6.3 quake centred 13km south east of the CBD occurred at 12:51 on 22 February 2011. This caused 185 deaths and resulted in enormous damage to the central business district as well as many residential areas. A national state of emergency – the first in New Zealand’s history, was declared and was in place for almost two months (Christchurch City Council, 2012a).

Earthquake risk has always been known as an issue for Canterbury with its proximity to the major Alpine Fault approximately 70km to the west (Elder, McCahon, & Yetton, 1991). However, the events of 2010 and 2011 caused a level of damage and disruption beyond expectations. Within the Central Business District, ground shaking far exceeded design specifications (Bradley, Quigley, Dissen, & Litchfield, 2014; Cubrinovski et al., 2011). This was due to a combination of proximity and low depth of the earthquake (Giovinazzi et al., 2011). Extensive liquefaction – the process of soil shaking and liquefying (Environment Canterbury, 2014) affected both the CBD and large amounts of residential housing. Peak Ground Acceleration (PGA) was the highest ever recorded in New Zealand (Bradley & Cubrinovski, 2011).

A further two major aftershocks above magnitude 6 occurred in June 2011 and December 2011. This heightened period of seismicity, with large numbers of earthquakes above magnitude 4⁶ (Table 11) continued with a gradual decline in frequency throughout 2012 and early 2013 (GeoNet, 2014).

Magnitude Range	Number
7.0 and above	1
6.0 – 6.9	3
5.0 – 5.9	51
4.0 – 4.9	496
3.0 – 3.9	3648
TOTAL	4199

Table 11 - Number of earthquakes in the Canterbury region from 04.09.10 to 18.02.14

Source: Geonet (2014)

This long period of frequent earthquakes, while not necessarily causing further damage to property was hugely significant in terms of psychological stress, coping and decision making as illustrated by this quote from a Christchurch journalist;

⁶ Commonly the threshold at which earthquakes are ‘felt’

“We're just sick and tired of bloody earthquakes and their confidence-destroying buddies, aftershocks” (Anderson, 2011)

Many Cantabrians turned to humour to assist in coping with the ongoing stress with a book published of Canterbury earthquake humour such as (Raines, 2011):

“You know you’re from Christchurch when:

- before you fly out of Christchurch, the pilot announces, ‘expect severe turbulence – should ease once we’re off the ground.’*
- You see a lovely park in another city and think it would make a good evacuation point*
- The only items you have on your shelves are things you want to claim insurance on”*

The mind-sets reflected in these quotes persisted for a significant length of time as seismicity continued. The June (MM6.3) and December 2011 (MM5.8) had significant effects on confidence throughout 2012.

5. Impacts - overview

As with many natural disasters, impacts were unevenly spread with some residents experiencing little direct impact and some losing their homes, workplaces and loved ones. Regardless of the level of direct impact, all of Canterbury is now living with the aftermath of enormous physical damage, ongoing psychological impacts and the long slow journey to recovery. This section will set out the key impacts of the earthquakes on the central business district, other commercial areas, infrastructure and residential housing.

5.1. Central Business District

The degree of damage in the CBD resulted in its complete closure. Initial cordons manned by emergency services and the New Zealand Army encompassing 3.9 square kilometres (387 hectares) of the city (Figure 13). This cordon was gradually removed as buildings were demolished or made safe although this was a slow process with large areas still cordoned one year post disaster. By the end of 2013, around 980 buildings were either demolished or about to be demolished in the CBD. This represents approximately 70% of the central business district (MacMillan, 2013).

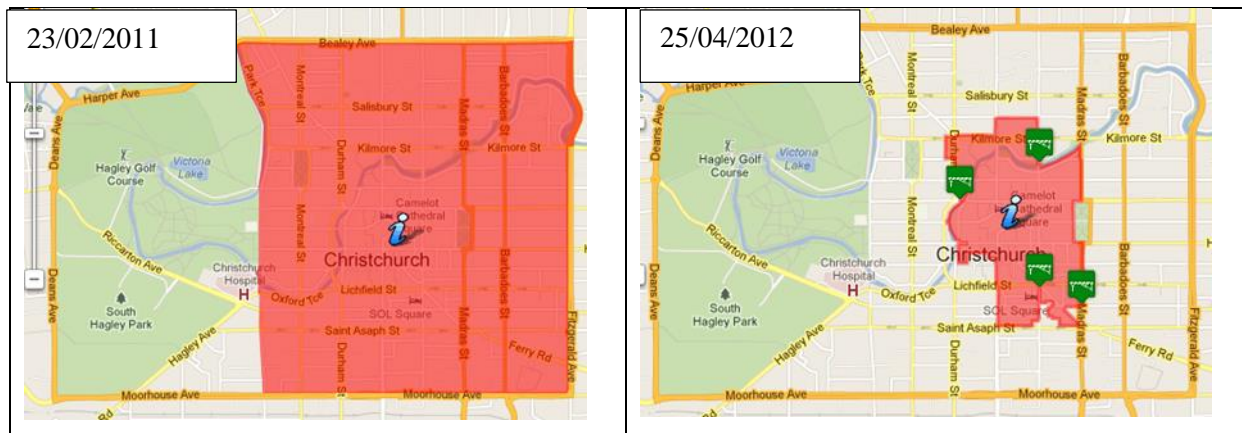


Figure 13 - Central City Cordon one day and over one year post-disaster

The degree of damage to buildings within the city had not been anticipated by any pre-disaster planning (McLean, Oughton, Ellis, Wakelin, & Rubin, 2012) and the cordon was a rapid and evolving response to ensure public safety – one that was vindicated by a lack of further injuries when major aftershocks in June and December caused further building damage. Access to properties within the cordon was strictly controlled – initially by Civil Defence and Emergency Management while the city was under a State of Emergency declaration and latterly by the Canterbury Earthquake Recovery Authority (CERA). There was significant dissatisfaction with the cordon access system, with businesses protesting at civil defence headquarters and complaints of buildings having been demolished in the emergency phase without notification to tenants⁷. Businesses who wished to inspect their premises and retrieve goods or equipment were initially blocked from doing so, although as noted in the review of the Civil Defence response to the disaster;

“stories are legion of unofficial entries, often by subterfuge, or entry gained through influence, as well as pressure being brought to bear by individuals and businesses whose assessment of the risks did not coincide with those setting and maintaining the cordon.”(McLean et al., 2012, p. 146)

The majority of modern buildings in Christchurch performed well with regards to preserving life safety. However, building codes and construction methods were designed to protect life and the reparability of buildings that have experienced these extreme forces has proved in most cases to be uneconomic. The high level of insurance coverage and the difficulties of repair have led to a high level of demolition. Insurance losses relating to the commercial sector are estimated at NZ\$10-12 billion (Muir-Woods, 2012).

⁷ Records held by the Christchurch City Council recorded building owners rather than tenants which made communication with effected parties more problematic.

5.2. Other Commercial Areas

Damage within the region to retail and industrial areas varied greatly. The initial 4 September, 2010 earthquake caused significant damage in more northern areas of the city, including the outlying area of Kaiapoi and its town centre. Damage from the 22 February, 2011 event was more severe in the east and south of the city.

Although many in suburban and outlying centres were able to recommence trade soon after the event, significant disruption with regard to premises is still possible either through the process of detailed engineering evaluations revealing a greater than expected degree of damage or simply through the non-urgent necessity to repair minor to moderate non-structural damage. Many buildings had preliminary inspections following all of the major events indicating that they were safe to occupy. However, when later examined in more detail, these have been found to be either significantly damaged or far below required building standards, resulting in their closure.

In many cases, the disruption caused by demolition/rebuilding or repair took place a significant time after the event. The loss of large amounts of commercial property, particularly at the lower end of the market, led to significant rental increases and caused enormous strategic challenges particularly for small enterprises. Lack of available space created a new mind-set of how space is used with many organisations re-conceptualising their requirements. According to a survey of 139 commercial office occupiers, over 66% reduced their office space with many having now only half the space prior to the earthquakes (Moricz & Bond, 2012). Large organisations such as the University of Canterbury have reviewed long held traditions such as individual private offices and are remediating and rebuilding facilities in more space efficient ways.

5.3. Infrastructure

A key factor enabling business resumption was the excellent performance of lifelines (critical) infrastructure in Canterbury (Fenwick & Brunsdon, 2012). Despite extensive damage, power was restored very quickly due to prior investment in seismic strengthening and an extensive mutual aid agreement which saw 700 workers from NZ and Australia contributing to swift repairs (Giovinazzi & Wilson, 2012). Water supplies were restored to two-thirds of the affected area within one week, although the need to boil water before consumption remained for many weeks. While roading and wastewater networks were significantly damaged, temporary solutions and detours allowed business to function. Two key gateways for supplies into the region – the airport and port both resumed

operations quickly, the same day for the airport and within days for the port. State Highways out of the region were largely unaffected.

However, the necessary repairs to ensure the ongoing functioning and resilience of underground infrastructure continues to cause significant disruptions with the majority of the city requiring infrastructure repairs over the course of a five year repair plan. Infrastructure repairs to roads, bridges, fresh, waste and storm water systems are estimated to cost between NZ\$ 2 – 5 billion (Brownlee, 2012; Stronger Christchurch Infrastructure Rebuild Team (SCIRT), 2012).

5.4.Residential

Extensive suburban areas were badly damaged particularly by the tilting and subsidence caused by liquefaction. In hill areas of the region, rockfall and slope collapse was a significant cause of damage. Many residents whose homes were uninhabitable left the region temporarily and for those who remained, there was sufficient capacity within the regional housing market for immediate shelter needs to be met without any large-scale provision of temporary accommodation. Many residents continued to occupy severely damaged housing which would later be demolished. 8061 residential dwellings badly affected by liquefaction, lateral spread or rockfall have been placed in a red zone where buildings are to be demolished and no development is to take place in the short term (Canterbury Earthquake Recovery Authority, 2014a).

Unlike many other developed but hazard prone nations, New Zealanders benefited from a comprehensive natural disaster insurance scheme run by the Earthquake Commission (EQC). As of 2006, which is the most recent census prior to the earthquake, Canterbury had 222,612 dwellings (Statistics New Zealand, 2006). Claims to EQC indicate the extent of damage to the overall region with 468,881 claims (Earthquake Commission, 2014). The high number of claims relative to dwellings reflects the sequence of events, with some households making multiple claims relating to each damaging event. Total estimated liability for EQC is over NZD 12 billion as of April 2014 (Earthquake Commission, 2014). As of April 2014, only 35% of claims to EQC have been closed. In addition to EQC, private insurers are dealing with 24,660 claims for damage above EQC limits and 73,160 claims for property excluded by EQC such as driveways, paths and fences (Insurance Council of New Zealand, 2014a). Total insurance losses for the residential sector are estimated at 17 billion (Insurance Council of New Zealand, 2014b; Muir-Woods, 2012).

In addition to the difficulties of creating the staffing structures and processes to deal with an event of this magnitude, the multiple insurers (EQC and private), and multiple events have created many

complexities in the repair and rebuild of residential property. Many Christchurch residents have been vocal in their unhappiness at the processes and delays involved in settling their claims. Insurance claim issues have significant impacts on focus and productivity for businesses with many managers and staff needing to spend considerable time and energy on resolving their residential issues.

5.5. Psychological

While a detailed examination of the psychological impacts of a major disaster is outside the scope of this thesis, an analysis of the impacts and influences on business decision making would be grossly incomplete without consideration of the cognitive disruption caused by such events. Cognitive disruption refers to an impairment in mental functioning proven to affect areas such as memory, problem solving and decision making skills (Helton, Head, & Kemp, 2011). Causes relate both to anxiety and stress as well as dissociative phenomena or being detached from reality (Cardena & Spiegel, 1993). In a much cited work, suggesting that psychologists have underrated the ability of many people to cope with extreme events, Bonnano (2004) writes that even the most resilient individuals exposed to loss and trauma will have a brief period, potentially several weeks, where their normal concentration and sleep patterns may be disturbed. In Christchurch, the sequence of four large earthquakes and the strong aftershock pattern over a period of two years created what McColl and Burkle (2012, p. 33) describe as a “major, sustained and unrelenting” event. Even for those resilient individuals as described by Bonnano, this sustained sequence created many repeated periods of sleep interruption and loss of focus. Commonly known by Christchurch residents as “Quake Brain”, the combination of stress and sleep interruption resulted in difficulties in focus and concentration.

5.6. Impacts – Summary

“The economic impact of the Canterbury earthquakes has been considerable. There is still uncertainty about all the precise timings but it is evident that, while progress is being made, there is still a long way to go to rebuild the city and surrounding areas. The effects of the earthquakes will be felt until the end of the decade and beyond.” (Parliamentary Library, 2014)

As this quote from a New Zealand government report issued in October 2014 illustrates, the impacts of the 2010-11 earthquake events have been enormous. Nationally, the adverse effect on GDP was short-lived with the region now contributing approximately 1% to annual economic growth (Parliamentary Library, 2014). National government’s latest estimated contribution to reconstruction is NZD \$15.8 billion. Latest estimates of the total cost of rebuilding is NZD \$40 billion, which is

approximately 20% of annual GDP (The Treasury, 2014). Regionally, population numbers have stabilised after two years of decline immediately following the events (Statistics New Zealand, 2013a). However, the composition of that population has changed with an increase in average age and a greater number of males. This reflects the exit of families with children and an influx of workers to assist with the rebuild

The high level of demolition in the Central Business District has completely changed patterns of travel within the city and while the central core is still rebuilding, many businesses are in somewhat of a holding pattern waiting more clarity over the form and function the rebuilt core will take. Smaller businesses who previously occupied lower quality commercial space, have in some cases taken leases on far more expensive and higher quality space, with something of a hope that the business will be able to cover the increased overheads.

Table 12 summarises some key impact areas of the disaster. While the focus of this research is on impacts to the business environment, this table includes residential and psychological impacts as these have significant flow on effects to the business environment.

Area	Impact	Estimated Loss
Central Business District	70% of buildings to be demolished	10-12 billion
Other commercial	Loss of lower quality commercial space Ongoing disruption due to repair	
Infrastructure	Quick restoration of basic functionality 5 years major disruption to repair	2-5 billion
Residential	8061 'red zoned' – 3.3% of regional stock 468,881 insurance claims 35% complete 2014	17 billion
Psychological	Prolonged stress due to series of high magnitude shakes	Significant effect on productivity and wellbeing

Table 12 - Impact Summary

Sources: (Brownlee, 2012; Canterbury Earthquake Recovery Authority, 2014a; Earthquake Commission, 2014; Insurance Council of New Zealand 2014; MacMillan, 2013; McColl & Burkle, 2012; Moricz & Bond, 2012; Muir-Woods, 2012; Stronger Christchurch Infrastructure Rebuild Team (SCIRT), 2012)

6. Institutional conditions – government policy responses

Most of the policy responses to the Canterbury earthquakes were created in response to the events, rather than as pre-determined plans. However, existing policies, specifically the Civil Defence and Emergency Management framework and the Rural Adverse Events Policy (MBIE Interview, 2012) guided their creation.

At the same time as pledging wholehearted support to help Canterbury recover, the Government showed a very clear awareness of the issue of moral hazard – of not giving advantage to people who have not looked after themselves. Tied with this concern was also the issue of setting precedents in terms of community's expectations of the Government in any future disaster (MBIE Interview, 2012). Key drivers of initial government response policies were the need for assistance to be specifically targeted, capped, timely, temporary and proportionate to the magnitude of effects (MBIE Interview, 2012). In the initial period of response and recovery, the government adopted a market-based approach to recovery, encouraging local initiatives rather than central co-ordination and control. It actively encouraged private-public partnerships to aid in recovery initiatives. Central coordination and control was initiated with the creation of the Canterbury Earthquake Recovery Authority in April 2011, however this had little impact initially on business initiatives, with the April 2012 creation of the Central City Development Unit (CCDU) more significant for business decision making (see below).

Central government put a range of policies in place to support Canterbury businesses following the 2010-11 earthquakes, which are discussed below.

6.1. Earthquake Support Subsidy (ESS)

Short term grants were made available to employers to allow them to continue wage payments in the immediate six weeks post disaster. The Earthquake Support Subsidy (ESS), rolled out only three days after the first earthquake (Parliamentary Library, 2010), allowed employers who intended to recommence operations a grant of up to \$500 per week per full time employee for up to six weeks or \$400 a week for six weeks for employees whose employers were un-contactable or who indicated their business was closed permanently (Ministry of Social Development, 2011). The intent of this policy was to enable business and employees to assess their situation and ideally prevent a massive surge in unemployment benefit applications (MBIE, personal communication, 29 August 2012). High level discussions ensured that ESS support was in addition to any business interruption payments receivable under insurance claims. The program was led by the Ministry of Social

Development and implemented via existing social welfare payment mechanisms. The ESS was very well received by business (Fischer-Smith, 2013) with comments that it “saved their business from failure and staff from the dole queue” (Steeman, 2011). Overall, payments were made to over 47,000 employees from 8,000 businesses at a total cost of NZ\$185 million (Fischer-Smith, 2013).

The ESS had four key benefits. First, it eased the immediate cash-flow concerns of businesses allowing reasoned rather than reactive decision-making. Second, the rapid roll-out of the program and the ease with which funds were accessed demonstrated to business owners that the government was concerned with regard to their welfare (Fischer-Smith, 2013), an important psychological boost which may have helped to build a positive mind-set towards recovery. Thirdly, it contributed to keeping individuals bonded to their organisations – allowing them to keep an important sense of structure and their place within it. This is an important concept discussed by Weick (1993) in relation to reducing panic in a crisis. His examination of the Mann Gulch fire disaster found that disintegration of a group is a causative factor of ensuing panic. He found that retaining group identity and maintaining group ties improve the ability to respond appropriately to stress. Lastly, this retention of identity as an employee of a Christchurch organisation, rather than an unemployed, may have assisted in reducing migration out of the city.

6.2.Tax leniency

Leniency was permitted for businesses who could not access their financial records or for whom cash flow was causing a temporary issue. Information brochures and a specific support line complemented an overall flexible approach taken by taxation authorities (Inland Revenue, 2011).

6.3.Managing the rebuild

The Earthquake Commission (EQC) appointed New Zealand’s largest construction firm, Fletchers Construction Ltd, to coordinate the rebuild for all residential housing with damages between \$10,000 (later raised to \$15,000) and \$100,000⁸. The aims of this move were to ensure that “the capital available for reconstruction is actually used for that purpose” (Cowan & Simpson, 2011, p. 9), standards are consistent, and demand pressures are managed so as to moderate inflation and ensure equity of access to limited contractors. The impact of this for the many SMEs involved in the construction industries was that they were acting as sub-contractors to Fletchers with designated rates of remuneration.

⁸ The maximum coverage provided by the state run Earthquake Commission. Damage above this figure is covered by the homeowner’s private insurance policy.

6.4.Recover Canterbury

The public service in Canterbury demonstrated remarkable innovation and adaptability in working collaboratively across departments and with the private sector to deliver support to Canterbury. The key collaborative effort focused on businesses was the formation of Recover Canterbury (Recover Canterbury, 2012). Recover Canterbury was a collaboration between existing business support agencies and government departments. Business support agencies were the Canterbury Development Corporation (CDC), which is the economic development arm of the Christchurch City Council, and the Canterbury Employers Chamber of Commerce (CECC). Government agencies included the Ministries of Economic and Social Development, New Zealand Trade and Enterprise, the Department of Labour, Inland Revenue and the Accident Compensation Corporation (ACC). Recover Canterbury was a temporary operation, which ceased in 2013. CECC or CDC provides assistance beyond this time.

Recover Canterbury provided a free one stop shop for business to obtain support – removing the necessity for business to find the right government agency for their needs and ensuring there was little duplication of efforts by various government agencies. A similar service was offered to the Kaiapoi and Rangiora boroughs through Enterprise North Canterbury. Business recovery coordinators worked with affected businesses on a case by case basis to assess viability and where appropriate, to make a business case for financial assistance from the Canterbury Business Recovery Trust (see below). Vouchers for coaching and training workshops were available through a pre-existing business support scheme run by New Zealand Trade and Enterprise and additional co-funding was provided by the Ministry for Business, Innovation and Employment for qualifying businesses. This financial assistance follows similar principles to those outlined at the wider government level – targeted, specific outcome orientated projects. Other activities carried out by Recover Canterbury included facilitating and assisting in the creation of local business associations, facilitating the co-location and coordination of SMEs in the arts sector and engaging in an on-going feedback process with business engagement groups to ensure that issues faced by Canterbury SMEs are identified and communicated.

Similarly to the ESS discussed above (Section 6.1), the creation of Recover Canterbury sent a clear message to business owners that their welfare was important. Even for businesses who only made contact and did not receive any actual further assistance or guidance, they provided a sounding board or a stepping stone validating owners existing decision making and plans.

6.5. Canterbury Business Recovery Trust (CBRT)

The Canterbury Business Recovery Trust (CBRT) was created following the February 2011 earthquake and was administered by Recover Canterbury. The Ministry for Business Innovation and Employment provided funding of \$2.5 million and assistance with structure and process, recognizing that many SMEs would simply require a small amount of financial assistance provided in an easily accessible and timely manner. Donations to this trust totalled \$5.4 million as of June 2012 (Canterbury Business Recovery Trust Fund, 2012). Grants have been made for marketing, fit-out costs or other activities relating to the specific businesses' recovery plan. Following the closure of Recover Canterbury, the remaining trust funds were to be distributed by the Canterbury Development Corporation (T. Stewart, 2013). According to the chief executive of Recover Canterbury, 380 businesses received funding through this Trust and as at the date of Recover Canterbury's closure, only 10 of those businesses had failed (T. Stewart, 2013).

6.6. Other MBIE initiatives

As well as their involvement in the creation and operation of both Recover Canterbury and the CBRT, the Ministry of Business Innovation and Employment also implemented the following assistance measures:

- Funding to pay Canterbury businesses' registration costs for Business Mentors NZ – a program giving SME owners access to a volunteer mentor to assist with a fresh perspective on their business.
- Funding for psychosocial support programs - recognizing that many SMEs did not have access to the employee assistance programs common in many larger organisations.
- Provision of resources and information through the business.govt.nz web portal prior to the full operationalization of Recover Canterbury.

6.7. Canterbury Earthquake Recovery Authority (CERA)

The Canterbury Earthquake Recovery Authority (CERA) was created in April 2011 with the aim of enabling a focused, timely and expedited recovery of greater Christchurch (Parliamentary Counsel Office: New Zealand Legislation, 2011). The creation of CERA to lead and coordinate recovery efforts is seen by some as an appropriate recognition that existing policies and structures were insufficient for the scale of the task in Canterbury, but by others as an erosion of local involvement and control over the recovery process. Whatever the concerns around the overarching powers granted

to CERA, it is also recognized that the creation of this body to guide and coordinate was a key step in facilitating recovery (Taylor, Chang, Elwood, Seville, & Brunsdon, 2012).

Economic recovery is one of the key work areas for CERA and their efforts included targeted initiatives for badly affected sectors such as tourism and education, monitoring of economic indicators and development of an overall economic strategy (Canterbury Earthquake Recovery Authority, 2012a). While they envisage that the majority of initiatives will be privately funded, Government spending is occurring following the principles of targeted intervention outlined at the commencement of this section (Canterbury Earthquake Recovery Authority, 2012b).

6.8.Christchurch Central Development Unit (CCDU)

The Christchurch Central Development Unit (CCDU) was created in April 2012 as a new unit within CERA. Its mission was to take the initial visions for the city developed by local government after extensive community consultation and create, within 100 days, a plan for the city rebuild. The CCDU plan released in July 2012 provided certainty over the location of major anchor facilities and the particular precincts within the city (Christchurch Central Development Unit, 2012). The plan included designations of particular areas within the city (the frame) for specific uses. This resulted in a large amount of compulsory land acquisition affecting existing businesses who had been able to reopen and operate premises which are now designated for other purposes (Christchurch Central Development Unit, 2012). Reactions to the plan, as reported by media, were generally very favorable; even from some affected business owners who acknowledged the need for an overriding vision for the city. However as with all aspects of recovery, certain issues remained extremely contentious, particularly in relation to the amount of compensation to be offered to affected owners and concerns over a lack of local input. While the aims of the central plan to reduce uncertainty and create a better long term outcome are admirable, issues around land acquisition and anchor project commencement dates have been blamed by many for a perceived delay in the central city rebuild. As at April 2015, many projects are underway to rebuild in the Central Business District, but with few yet complete and occupied within the central core.

6.9.Open for Business

New Zealand Trade and Enterprise, the Government's national economic development agency coordinated a communication program and travel grants to get the message out to export markets that New Zealand was still open for business. The speedy and coordinated response between Government and business was necessary to counter international perceptions of the entire country and every

business in the region being badly affected. Specific grants were also made by the Canterbury Business Recovery Trust for individual businesses to promote their new locations as well as local council initiatives such as the creation of a website, www.findchch.com aimed at enabling people to easily find open public facilities, restaurants and shops (Christchurch City Council, 2012b).

6.10. Targeted funding for specific projects

While the recovery of Christchurch is expected to be largely funded through insurance and private means, funding was made available for specific projects. \$1.8 million dollars was granted by the Science and Innovation Ministry and New Zealand Trade and Enterprise towards the creation of an Information Technology Hub which provides facilities for 17 innovation focused companies affected by the quakes (M. Wright, 2012). This project was in line with overall Government initiatives to build New Zealand's knowledge economy. \$1 million was made available by the Ministry of Education to support the badly hit education sector with the launch of a Christchurch Educated Initiative which is responsible for a number of initiatives designed to attract international students back to Christchurch (Mann & Law, 2012). Ongoing funding was also provided to the regional tourism marketing body in an attempt to boost reduced visitor numbers (Tremain, 2013).

6.11. Rebuild Central

The Christchurch City Council created a 'one-stop shop' in order to try and facilitate the process of rebuilding. This provided property owners and businesses easy access to designers, planners and resource and building consent advisors in one location (Christchurch City Council, 2012c).

6.12. Government policy responses summary

As illustrated in Figure 14 government policy responses addressed co-ordination and information needs, financial support, psychological wellbeing, practical planning, marketing and short term needs for time to sort out affairs.

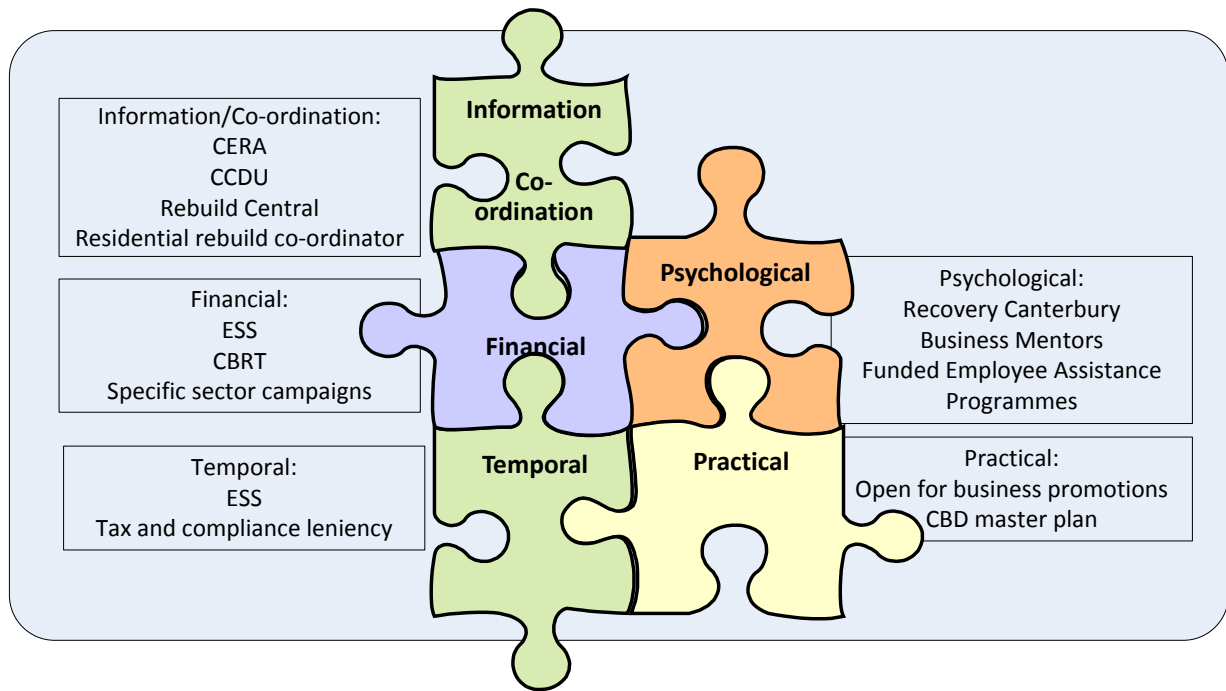


Figure 14 - Summary of government policy responses

Many of these responses, including the governance and co-ordination arrangements, were not planned. The swift creation of policies such as the ESS, and bodies such as Recover Canterbury, illustrates the rapid adaptation by civil servants and politicians to the needs of Canterbury organisations.

7. Discussion

The scale of damage and destruction and the ongoing sequence of earthquakes were unprecedented in New Zealand history. Neither businesses or local and national government were prepared for the scale of the recovery efforts needed. Canterbury businesses were little prepared, with one survey showing that 60% of surveyed organisations had no Business Continuity Plan (Hatton, Vargo, & Seville, 2012a). A survey of New Zealand businesses by Battisti & Deakins (2012) report even lesser levels of traditional preparation measures, with only 9% of New Zealand organisations having a formal written crisis management plan. However, businesses were accustomed to coping and adjusting to more difficult trading conditions, with the earthquakes occurring just as the economy was recovering from the effects of the global financial crisis.

Both local and national government had well prepared frameworks for disaster reduction, readiness, response and recovery. However, within this Civil Defence and Emergency Management framework, recovery had received the least emphasis (Hatton, Vargo, & Seville, 2012b). Existing plans or

guidelines which specified locally led recovery managed by local councils and civil defence staff were inadequate for the scale of the disaster.

Despite this lack of preparation, both government and businesses reacted with great adaptability and for the most part, timeliness to begin the recovery process. Approximately two years after the February 2011 earthquake, business owners interviewed for this study were asked what else the government should have done to aid their recovery. The only comment made by respondents was in relation to the Central City Development Unit and the potential negatives of the involvement into a centrally planned central business district. Respondents commented on the helpfulness of the Earthquake Support Subsidy and to a lesser extent on the other assistance accessed through Recover Canterbury but otherwise seemed to have adopted a self-resilient attitude to achieving their own recovery or chosen exit. There was no difference in responses between those organisations who were barely surviving and those who were thriving.

Look, I think the government did well, with the wage subsidies, I thought that was a great reaction to start with, I thought they did really, really, well. Recover Canterbury, awesome to deal with, you know – no I – yeah, I mean it was a shitty situation to be found in and at the end of the day you’ve gotta control it yourself, you can’t – I don’t think keep on asking the government for help all the time, so I think, no fine, yep.

(Owner – Organisation O)

No, I mean we just got on with doing what we did, yeah.

(Owner – Organisation D)

Several key aspects of the context and policy responses created this environment where individuals, organisations and businesses got on with the adaptation and innovation needed to ensure they survived the crisis. Canterbury businesses were accustomed to operating in a little regulated environment. This contributed to their approach of using personal resources and networks to innovate solutions rather than looking to the government for assistance

While a spirit of co-operation, collaboration and shared endurance commonly characterises the response phase of any major disaster (Lemieux, 2014), this is rather less documented in the recovery phase. In Canterbury, this spirit of co-operation and collaboration extended to the business community particularly with regard to immediate space needs with examples of firms in the less affected western area of the city offering temporary office space to their clients, bankers and in some cases competitors. Competitors even assisted each other with workloads and deliveries (Stevenson et al.,

2013). Many businesses in this study expressed a need to re-open to help their people, customers and communities – an explanation also found relevant to disaster recovery in rural areas in America by Haynes, Danes & Stafford (2011). The region's three tertiary education providers worked co-operatively. The least affected rural Lincoln University, provided space for both Canterbury University and the CPIT to hold lectures. Also in the education sector, a system of site sharing was devised by High Schools to enable relatively normal schooling and retention of school identity while two schools shared one schools facilities.

Government responses to the disaster significantly assisted in perpetuating this climate of mutual assistance and collaboration and aided in the process of positive cognitive framing. Cognitive framing, is the process by which owners or managers attempt to make sense of the environment and construct a simplified view or perspective through which all other information is then filtered (Dunegan, 1993; E. George, Chattopadhyay, Sitkin, & Barden, 2006; S. Kaplan, 2008). In other words, “frames influence opinions by stressing specific values, facts, and other considerations, endowing them with greater apparent relevance to the issue than they might appear to have under an alternative frame” (Nelson, Clawson, & Oxley, 1997, p. 569).

The cognitive framing of business owners in Canterbury was influenced by the collectively generated sentiments of mutual help, endurance and resilience. The Government approach of a market-orientated, self-driven context allowed locally led initiatives and partnerships to emerge through a ‘bottom-up’, rather than top-down process. The swift roll-out and ease of accessing the Earthquake Support Subsidy demonstrated a concern for welfare while emphasising that aid was a short-term measure to allow breathing space, not dependency. The receptiveness of Government to business needs as demonstrated by the New Zealand Trade and Enterprise, ‘open for business’ programme is a further example of demonstrating mutual assistance rather than Government directed or driven recovery. In the initial stages of recovery, the Government assisted by listening to the needs of business and creating an enabling environment for their initiatives rather than imposing a directed plan. This complemented the existing collaborative environment whereby individuals, organisations and businesses were engaged in co-operative endeavours to restore key aspects of their lives.

The creation of a new organisation - Recover Canterbury as a collaborative business and government initiative ensured that access to help and advice was available to all business owners, not just those with the existing networks or capital to access professional help. The example set by the swift creation and its collaborative nature illustrated to businesses that the rules of the game had changed. Government departments, not normally regarded as flexible and adaptive (Stark, 2014), were able to improvise, collaborate and innovate (Ombler & Washington, 2014). This may have helped some

businesses to appreciate the need to think differently about the options available to assist in their recovery.

7.1.Summary – Creating an enabling environment

Creating an enabling environment, which empowers individuals and organisations to lead their own recovery efforts, while providing the necessary support and co-ordination functions, is an incredibly complex task. Figure 15 illustrates some of the key building blocks of this context in Canterbury which together encouraged individual, organisation and community led efforts to restore business functions.

KEY BUILDING BLOCKS OF ENABLING CONTEXT FOR BUSINESS RECOVERY	
FINANCIAL Insurance main funder	Business decision making within own control once insurance claims agreed
SCALE Entire region effected by disruption Long Lasting	No prior experience and therefore little expectation of outside assistance Assisted in culture of “we are all in it together” enhancing collective cohesion which was maintained throughout sequence of events
INSTITUTIONAL CONDITIONS Free Market Less regulation of business better	Business accustomed to getting on with the job, free of government intervention or assistance
CULTURE Strong local identity	Strong sense of local pride and identity contributed to determination to do what is necessary to recover
PRE EXISTING TRENDS Change and adaptation the norm	Business accustomed to adapting and innovating to survive economic, sectoral and spatial changes
POLICY RESPONSES Timely and Adaptive	Hand up rather than Hand Out

Figure 15 - Key Building Blocks of Enabling Context for Business Recovery

Each building block contributed to creating an enabling context. Key aspects of the pre-existing context include the independence of business fostered by years of free market focus. This, together with the high levels of insurance contributed to the lack of expectations of centrally led recovery. Although insurance payments may have taken some time to agree and receive, they gave a sense of control to businesses with regard to how recovery efforts could be funded. The scale of the disaster

and the lack of any similar scale events in New Zealand history contributed to a culture of mutual help and assistance which was also assisted by a strong local identity within the region. Policy responses by the government supported that context working together with, rather than imposing from above, initiatives to help in both financial and practical terms.

8. Conclusions

Following the Canterbury earthquakes, businesses attempting to recover from its impacts faced a potential impairment in their own decision-making capabilities at the same time as the environment was rapidly changing around them. Many, already under strain from the effects of the global financial crisis and the long running decline of the inner city retail area now faced an enormous challenge with little preparation. Business owners and managers also faced significant challenges in dealing with residential issues of both themselves and their staff.

The pre-existing context, along with the government's adaptive responses to business needs following the first disaster of this scale, assisted in creating and perpetuating a climate of collaboration, mutual support and good will that assisted businesses in coping with the enormous scale of the disaster. Existing connections and networks allowed the needs of businesses to be communicated to government resulting in swift, targeted responses. Enablers of the adaptive responses include the small and connected nature of New Zealand, the severe scale of the February 2011 event, the advantages of national decision makers being located outside the impact zone (but still well connected to those within), and the long existing market orientation which has led to a business culture of self-sufficiency.

Understanding this context and the ways in which policy decisions helped to create and support it are an important step in understanding the decisions and recovery trajectories of both individual businesses and the overall community. Community recovery from disaster can be enhanced not just by the pre-existing social environment (Paton, Johal, & Johnston, 2014), but also by the actions taken post-event to encourage mutual support and collaboration. While many of the key factors identified as contributing to enabling business recovery are country or region specific, they highlight the many different ways and therefore many potential intervention points which can contribute to empowering business and organisations to lead their own recovery efforts.

Chapter Five - Organisational Responses Part One: Collaborations – Resources Eroded

1. Introduction

Many organisations impacted by the sequence of major earthquakes worked collaboratively with others to assist in resuming function. Mutual help and assistance are common in the response phase of a disaster but the extension of collaborative activities into the recovery phase does not appear to have been examined in any depth. This section (Chapters 5-8) examines organisational collaborations that endured or commenced long after the initial response phase of the disaster and assisted these organisations to recover from the earthquake impacts. The what, why and how of the collaborative relationships will be explained along with key characteristics of the organisations involved. The nature and structure of these collaborations are then contrasted with existing theory on collaboration and disaster recovery. Themes such as the role of trust, decision making processes and the importance of context are discussed.

Two distinct types of collaboration are examined within these chapters. The majority of collaborations examined are between 2 or more individual businesses whose focus is on their specific recovery. Two collaborations that differ somewhat, are the creation of the Enterprise Precinct and Innovation Campus (EPIC) and the Re:Start retail precinct. These collaborations involved multiple stakeholders alongside the directly affected businesses and also created something broader than just the recovery of individual organisations.

1.1.Organisation of chapters 5-8

Collaborations have been categorised by purpose using the Post-Disaster strategy matrix developed in Chapter 2 and repeated here as Figure 16.

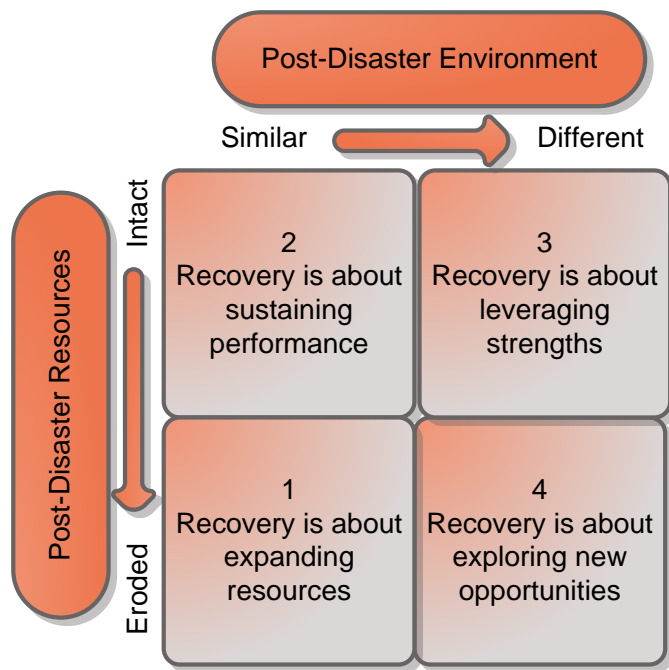


Figure 16 - Post Disaster Strategy Matrix

This chapter examines collaborations relating to the two resource eroded quadrants of this model (Quadrant One and Four), describing the collaborations and answering the questions:

- what form did the collaborations take,
- what was their primary purpose,
- what was their duration,
- what were the characteristics of the organisations involved and,
- the actual process of collaboration.

Chapter 5, 6 and 7 chapter outline how collaboration offered the avenue to achieve, or begin the journey to achievement, of the strategic needs for Canterbury organisations. Each collaborative endeavour is explained through a flow chart process followed by a discussion of each participating organisation's story. The initial unit of analysis is the collaboration, where a flowchart illustrates the key context, objectives and expectations of each participant and how these came together to result in collaborative action. Where a collaborating organisation did not agree to take part, these are described as non-participant (NP) and only information that is available via their website, other internet or media sources is included.

The following two chapters, Chapters 6 & 7, will answer these questions in relation to the final two categories of collaboration.

The final chapter in this section, Chapter 8, will discuss key themes that emerge from these collaborations. The efficacy of the collaborations is reviewed and the implications of this for organisational resilience considered. The framework for effective collaboration developed from the literature is reviewed and its fit and relevance to these collaborations assessed.

2. Business Collaborations: Resources Eroded/Environment Similar

The primary resource issue confronting organisations in this quadrant was physical resources in terms of premises and equipment (Figure 17).

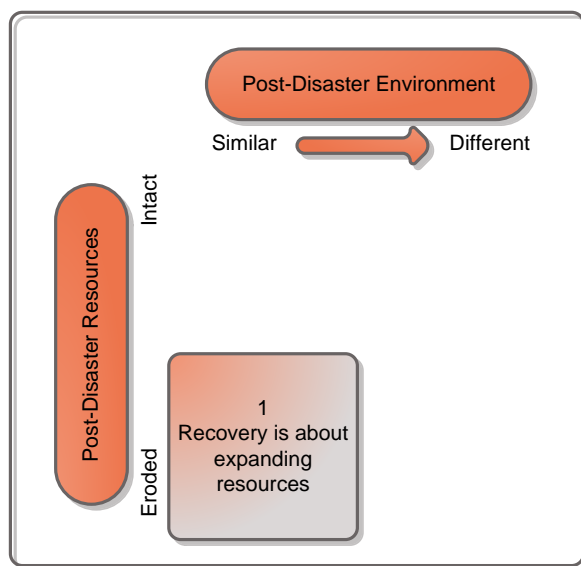


Figure 17 - Quadrant 1: Resources Eroded/Environment Similar

Many businesses that lost their premises in the earthquakes faced a difficult challenge in securing suitable and affordable replacement premises. Those who required customer-accessible and appropriate facilities were unable to operate while non-customer facing businesses were able to maintain a bare minimum operation largely from residential homes. The fast movers who were able to secure existing vacant space in suburbs near to the central city were able to resume operations quickly and may also have benefited from initially lower rents (Kemp, Chan, & Grimm, 2013). How and why some businesses were able to react quickly partly related to what kind of space they required. For example, professional service firms who needed office space did not need to consider issues of visibility and customer access to the extent that retail businesses do. Fit-out requirements are also relevant, particularly in the case of hospitality. Other issues affecting business owners' ability to secure vacant space include their ability to appreciate the scale of the disaster and the longevity of disruption and potentially cognitive impairment due to the trauma and stress of the events.

For many organisations, preferences as to what constituted acceptable space were forced to adapt in light of availability. One survey of commercial office occupiers indicated that 66% had reduced their

office size (Bond & Moricz, 2013) and 45% were now occupying lesser quality space (Moricz & Bond, 2012). Maintaining customer support and obtaining suitable premises were listed as the two most important aspects in enabling business survival in a separate survey of 209 businesses forced to re-locate within Christchurch (Kemp et al., 2013).

Businesses who were determined to re-open, but who did not immediately secure vacant space in the suburbs or fringes of the central business district, faced a hugely imbalanced market with high demand and little supply. The market was extremely competitive with one respondent being ‘gazumped’ – a British term for the situation where one party believes they have an agreement to buy (or lease) a property but is then told that their deal is not going to proceed as someone else has offered a higher price. According to one real estate professional, this situation was previously unheard of in Christchurch.

The participating organisations in this study that entered into collaborative arrangements in order to obtain space, included retail, hospitality, manufacturers and information and communication technology (ICT) organisations. In addition to their need for premises, one manufacturer utilised this strategy to also obtain both premises and access to specialised equipment. A number of collaborations commenced with the primary goal of meeting resource needs and then evolved further in order to adapt to the changed environment and capitalise on potential opportunities. These collaborations are discussed in Chapter Seven.

2.1.Collaboration 1 - Hospitality

Hospitality was one of the worst affected sectors following the disaster with official statistics showing a 10% decline in the number of hospitality businesses in Canterbury from 2010 to 2013. During this period, the hospitality sector in the rest of New Zealand (excluding Canterbury), grew 3.5%. Employment numbers in this sector, within the Canterbury region, also declined by 10% (Statistics New Zealand, 2013b).

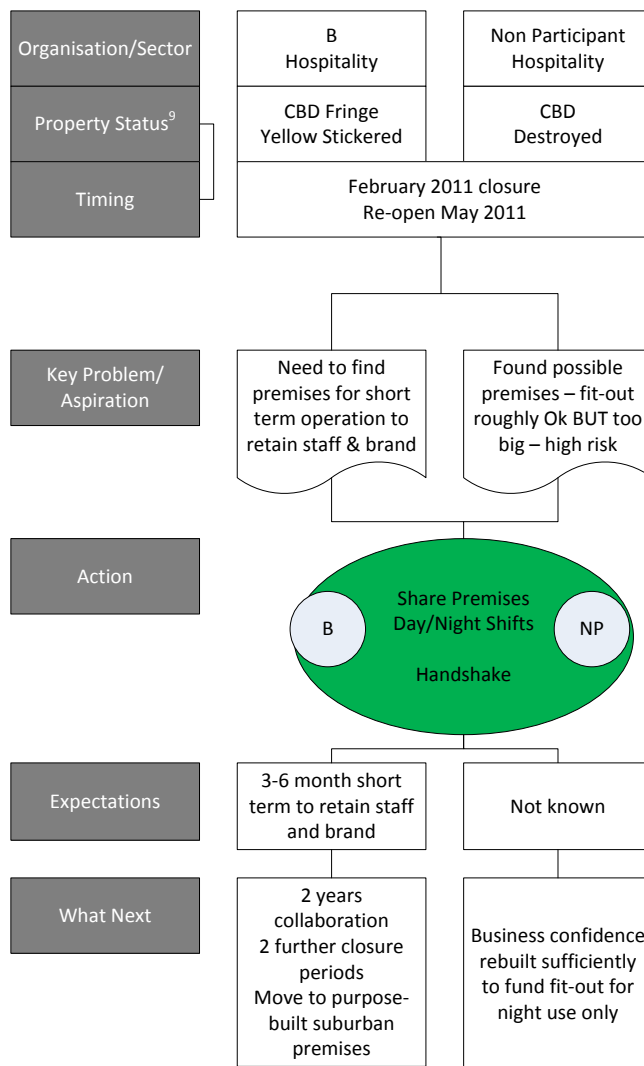


Figure 18 – Collaboration 1: Hospitality -Organisation B and NP⁹

Organisation B employed seven full-time and seven part-time employees. It catered to local residents, workers and tourists in a popular precinct area on the fringe of the central city. The business had been operating in its current form for three and a half years prior to the February earthquake. The owner described the business as being busy and successful with good products and good service resulting in a large volume of loyal repeat custom.

Their premises suffered substantial damage but were accessible due to the swift reduction of the initial cordon in their location. The owner's initial assumptions, was that it would take three to six months to repair the leased premises and resume trading. The owner had a significant attachment to the locale

⁹ Basic safety assessments carried out following each major earthquake event gave buildings a green, yellow or red categorisation. Green was judged to be safe to enter and use, yellow was restricted with supervised entry only, and red meant that entry was prohibited.

due to the level of repeat custom and the difficulty, at that stage of recovery, in comprehending the time-scales for recovery of the surrounding buildings.

He considered leasing alternative premises stating that there were many available but was concerned about the potentially high fit-out cost. He had comprehensive insurance; however, the fit-out of his original premises was not a complete loss and fit-out costs for any new premise would therefore have to be largely self-funded. In the meantime, while the owner was considering how to proceed, an inner city nightclub owner (NP), who had lost two premises identified a two storey cafe 200 metres from B's original location which was non-operational and for sale at the time of the earthquakes. One of B's staff was an acquaintance of the nightclub owner and the idea of sharing these premises grew from a discussion between them. The staff member introduced the two previously unacquainted owners, one of whom needed premises to use in the daytime, and the other who required night only use. They agreed to share the premises, both envisaging three to six month duration while their own buildings were repaired.

At the time we didn't have many other options, you know, it kept sort of 9 or 10 people employed and the business name going.

(Owner - Organisation B)

Their agreement was based solely on trust with no written agreements completed and costs, logistical issues and expectations based solely on discussion. The longevity of recovery led to this collaboration continuing for two years – interrupted by periods of closure while neighbouring buildings were demolished. From Organisation B's perspective, the collaboration was successful:

All I can say is we made no one redundant, we've kept employing people, we've kept our name out so we've done that. Hopefully along the way we've kept some customers happy and provided a service in uncertain times.

(Owner - Organisation B)

2.2.Collaboration 2 - Manufacturing

Hiete & Mertz (2009) propose that specialised capital equipment, such as that often needed by manufacturers, could be a significant vulnerability following a natural disaster due to the difficulty of rapid replacement. This issue is also compounded by New Zealand's geographic isolation.

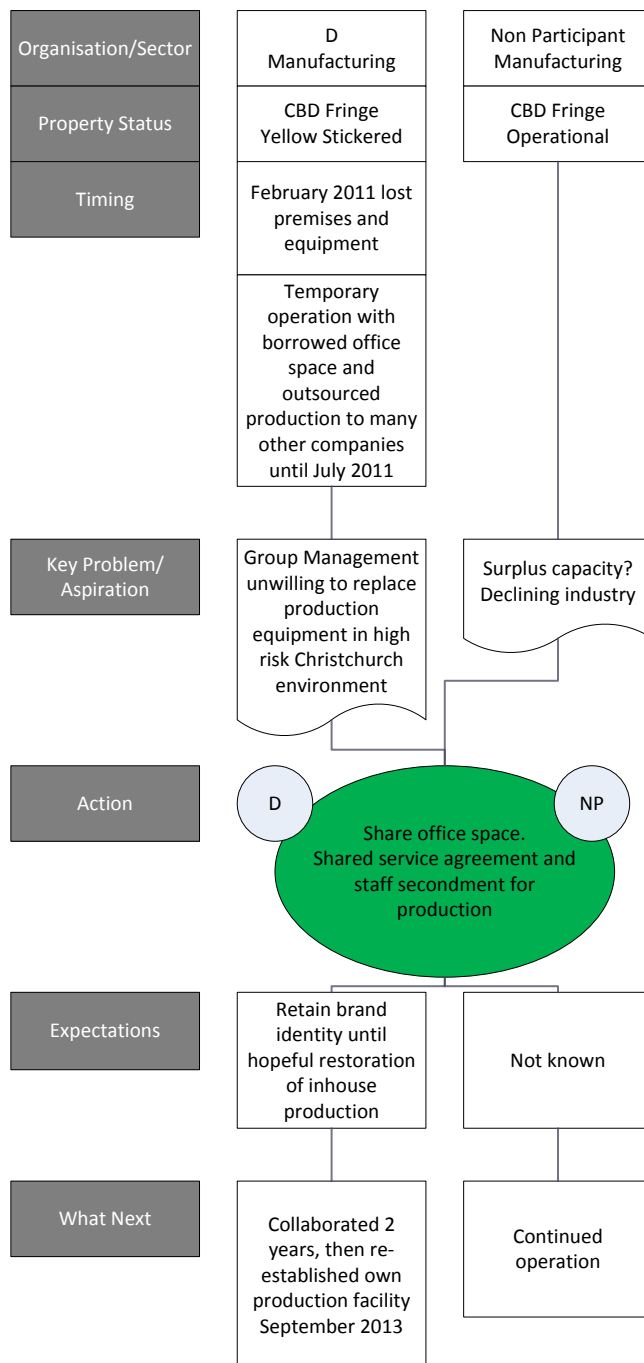


Figure 19 - Collaboration 2: Organisation D and Non Participant

Organisation D is a branch of a large national print and communications organisation. The business has been in operation for 28 years but under the current ownership for only one month prior to the September earthquakes. Located on the fringe of the CBD, the organisation was outside of the CBD cordon area. The business uses high value precision equipment which is very sensitive to shaking. The September quake caused little damage to the premises but did require the checking and recalibration of the equipment resulting in a ten day closure while engineers from around the country worked on the plant. There was no impact on staff with normal remuneration continued during this period. The February quake caused more extensive damage to the premises and the equipment with

the floor slab affected by liquefaction. Premises were accessible (but not useable) and engineers determined that complete refurbishment of the equipment would be required to get it operational. As this is extremely specialised equipment, the closest place able to do this was Kuala Lumpur and the machine was shipped there.

The company had an extensive Business Continuity Plan which had been previously tested following a fire at another of the group's offices in Wellington. Jobs in progress at the Christchurch plant were either shipped out or sent to the Wellington office for completion and a number of staff temporarily relocated to Wellington. Insurance for business interruption coverage extended for 15 months. Other office/sales staff worked from homes and cars for a period while production staff, unable to work, volunteered to a charitable organisation while being fully paid by the company. Sales continued with the production side being sent either to other company offices outside of the region or subcontracted to other operational Christchurch organisations. Temporary office premises in a light industrial area were offered to them by a supplier and utilised for four weeks before a bigger office space was offered by a client who knew of their situation and had an unused upstairs in their premises. In June 2011, senior management made the decision that they were not going to relocate the now refurbished equipment back to Christchurch, with the perceived risk of further earthquake damage too high. This resulted in the redundancy of all production staff on 1st of July 2011. During this time, the organisation continued to work for its clients with actual production going elsewhere.

After deciding not to relocate equipment back to Christchurch, a number of options were considered.

“Well, yeah, I mean it was just we were just throwing options around and that was one that we came up with and we'd been thinking through the possibilities of, you know, who we could work with. Whether we would be better aligning ourselves with someone in exactly or very similar capabilities to what we used to have or align ourselves with someone who is complementary to that or, you know, we just went through a lot of scenarios, and as far as people we thought we could work with and the best outcome for us that that was it”

(Manager – Organisation D)

These included establishing a small office with sales people working from homes with production outside the region, or partnering with a local production organisation. During this temporary period, a great deal of the production had been carried out by a local firm (Non- Participant) which was owned by a prior part-owner of Organisation D. The relationship between the two companies had deepened during this temporary period of out sourced production and discussions were held resulting in a formal shared service agreement between the two companies. This agreement led to one undamaged piece of equipment being leased by Org D to NP along with two staff and an agreed per job rate for

Organisation D's production to be carried out by NP. Office based staff were co-located and building signage had both companies' names.

These arrangements enabled Organisation D to survive, albeit in a much reduced form. Staff numbers dropped from 53 pre-quake to 8. Turnover is down 55%. The aim of the temporary business model is to break even.

At the time of interview, the future was uncertain with local management desiring a return to in-house production, and head office uncertain if this would occur. Follow-up research in 2014 indicates that this did occur in September 2013, with a return to local production with facilities in Christchurch now shared with a sister company within the group.

While these arrangements were driven by the earthquake, discussion with the respondent highlighted that reduction in the production capacity in Christchurch was likely to occur with the overall industry affected by trends away from print to electronic only. While he felt it very unlikely that his organisation would have been the loser, with reported strong customer growth pre quake the decisions made post-quake reflect the overall industry status and not just the earthquake impacts.

2.3.Collaboration Summary: Quadrant One

These two collaborative arrangements both served to allow these organisations restoration of the minimum resources they required to operate in a reduced form. Table 13 summarises the key characteristics of each.

Collaboration	1	2
Sector	Hospitality	Manufacturing
Longevity	2 years	2 years
Form	Informal	Legal contract
Commenced	May 2011	July 2011
Pre-existing relationship	None	Prior partner in business
Other alternatives considered	Yes – cease, suburban relocation	Yes – relocation, production in other region

Table 13 - Resources Eroded/Environment Similar Collaboration Summary

While many organisations in this study suffered from impacts to other areas of capital, particularly human and natural, collaboration appears only to have been considered as a response appropriate to the physical capital impacts relating to premises and equipment.

3. Business Collaborations: Resources Eroded/Environment Different

Quadrant 4 (Figure 20) of the post-disaster strategy matrix was noted in Chapter 2 as being one of the most challenging but also the most open to innovation.

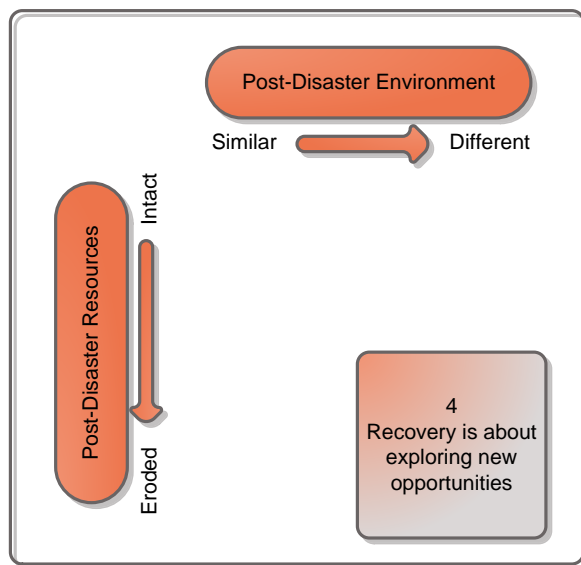


Figure 20 - Quadrant 4: Resources Eroded/Environment Different

The majority of Central city retailers are in this quadrant due to the complete cordoning of the central city and the length of time taken to demolish and rebuild the area. Collaboration 3 was a response to these conditions, reclaiming one small corner of the largely vacant central city.

3.1. Collaboration 3 - Retail

Retail was one of the most impacted sectors following the earthquakes, with a 6.5% reduction in enterprises relative to slight growth in the rest of New Zealand from the period 2010-2013 (Statistics New Zealand, 2013b).

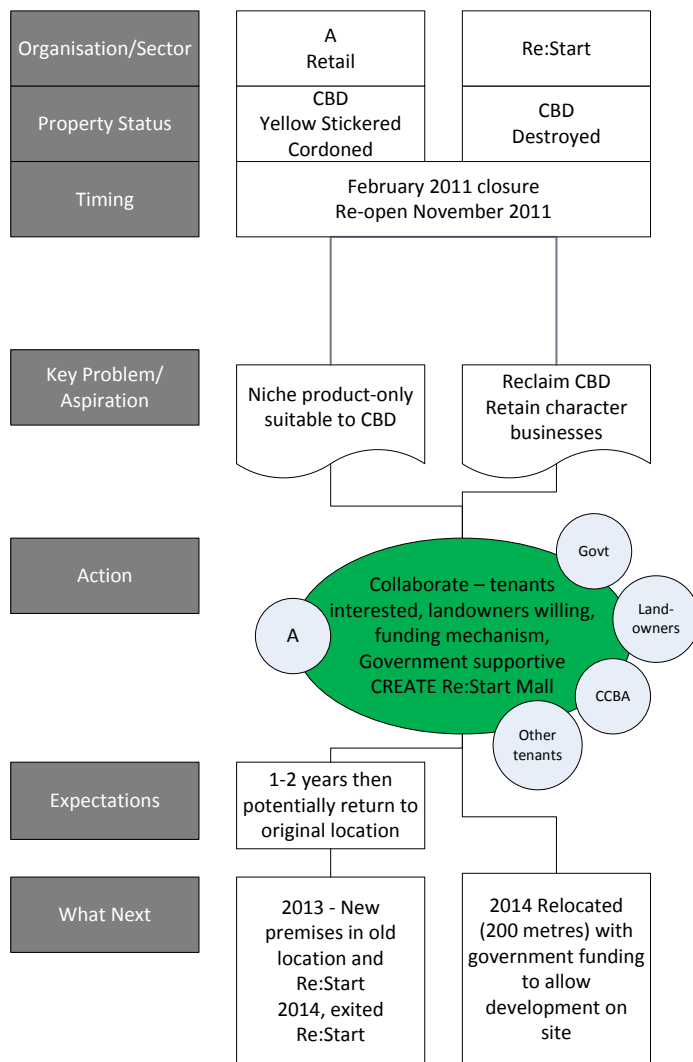


Figure 21 - Collaboration 3: Organisation A and Re:Start

▪ Re:START

Re:START (Figure 22) is a retail precinct in the heart of the prior retail core of the city. It comprises converted container crates, artfully designed and arranged in a laneways design. Colourful paint schemes and attractive landscaping complete the project. The precinct opened only nine months following the February 2011 earthquake and attracted 30,000 people in its first weekend of operation, demonstrating that people were willing to return to the devastated central city. The area initially provided accommodation for 27 businesses. This has increased over time to 50 with space for stalls and street performers additional to these numbers.



Figure 22 - Re:START retail precinct

Why and how

Documents supplied by one of Re:START's key founders refer to it being a product of both 'vision and partnership'. The initial vision emerged within only a few days of the February 22 earthquake as the manager and members of the Central City Business Association (CCBA) and Central City Property Owners Groups realised the extent of the devastation and the likely time frames for rebuilding. This awareness that the city centre would not be useable, for what at the time was thought to be 6-12 months, was key in enabling the start of the vision of temporary accommodation for retail. While in retrospect, this realisation seems obvious, at the time many business owners were still suffering significant cognitive disruption and were struggling to come to terms with just what had happened and what it meant. With the benefit of time, we now know that much of the CBD was largely unusable for approximately two years as demolitions occurred. Reconstruction is expected to take 5-8 years. However, this excerpt from an email sent by a small business on March 9, 2011, illustrates the difficulty faced by organisations attempting to comprehend their situation:

"we have no idea as to the extent of the damage to the buildingwe would be keen to re-locate if necessary but this would not be feasible without getting our equipment out.....I am a little bemused how this (temporary retail space) would proceed" (email from SME to CCBA March 9, 2011)

The manager of the CCBA sent an email to businesses on March 4 (10 days after the earthquake), making contact, showing concern for their situation and gauging support for preliminary ideas to create what was then envisaged as a temporary CBD in another location. This email followed days of discussing a broad idea to create something with major retailers and other contacts. One of the largest and longest-lived CBD retailers supported the idea and within one day of that initial email, 30 responses were received from potential tenants.

The initial rationale for the project was to create an area for temporary and flexible relocation to enable retailers and jobs to be preserved. Initial sites for the project included empty or derelict land on the fringes of the CBD, outside of the cordoned area. As the project developed, part of its rationale also became focused on returning economic activity to the CBD area. The final site emerged through ongoing discussions with landowners and the major retailer whose premises were amongst one of the few judged economically repairable in the central city.

Even in the very early stages of the project, it was recognised by the initiators that this was not just about providing space but also attracting customers. Established design principles with regard to a mix of businesses (retail, food and entertainment), layout, easy access and good parking were important. Also part of the project considerations from commencement was the survival of businesses considered unique and not found elsewhere – the idea that there needed to be a certain character to the area if it was to compete with the two fully operational large suburban malls. Both central and local government were kept informed with regard to the ideas for the project from inception in March.

The project design process involved a committed team of well-connected business people. The final proposal adopted was for the construction of a relocatable container mall with a funding model whereby tenants would sign commercial (but short term) leases at market rents. Rents would be used to repay construction costs that would need to be obtained from private or public sources. The funding source was the government administered Christchurch Earthquake Appeal Trust. This trust was formed on 27 February 2011 by the Prime Minister as the vehicle to receive the generous offers of monetary support coming into Christchurch both nationally and internationally. The Trust received over \$100 million of donations in its first year of operation, of which \$4.69 million was disbursed in the first year for economic revitalisation projects. \$3.36 million was granted as a loan for Re:START (Christchurch Appeal Trust, 2012). Sponsorship from a major bank provided a further \$300,000.

Funding was approved in August 2011 and the necessary demolitions and constructions commenced. A trust, Re:START the Heart, was formed to be the administering body of the funding. A target opening date of 29 October was set as this was immediately preceding a public holiday and an important Agricultural Show and Horse Racing Events occurring in the region. This time frame was

incredibly tight, particularly with the ongoing aftershocks, construction during adverse winter weather, (including two “one in 50 year” snowstorms), and the uncertainties of building status within and neighbouring the designated site. The enormous commitment of the organisers and construction crews enabled the opening of the precinct on schedule with a build time of 61 days.

Enablers

Re:START emerged from a person not only with an idea but also with the right connections to mobilise support and put a team together to improve upon and implement those ideas. Key members of the driving team behind the project had a history of working together to improve the central city and thus the traditional foundations of relationship building and trust, usually seen as antecedents to collaboration, were present. The pre-existing trends of central city decline had meant that members of the team had already worked as a group “openly sharing concerns “ and with “no hidden agendas” (Suckling, 2012). This initiative was an example of a bottom up initiative initiated by a group of people involved in, or well connected to both the businesses, and the communities it was designed to help. The project evolved in the very early stages of recovery where there existed a very real sense of community cohesion, mutual support and a breaking down of traditional thinking.

The goal of Re:START was also kept simple and clear. This enabled a large and diverse group to readily understand and participate in bringing the project to fruition. The founders created a new organisation whose speedy and rapid functioning was enabled both by the pre-existing relationships but also a completely clear vision of the purpose of the endeavour. The clear purpose also included a necessary completion date.

Barriers

Founding members of the project report that many people expressed significant doubts over the project. One of the greatest concerns was the public’s appetite to re-enter the devastated city, in light of the ongoing aftershocks and the traumatic experiences of many in the CBD on the day of the February earthquake. Unlike the story of EPIC (Chapter 7) where one of the initiators describes the motivational effect of the overwhelming support received for the project, the Re:START founders needed the vision and self-belief to enable them to ignore these doubts. Assisting in overcoming this negativity was the large core group involved, which aided positive affirmation within the group.

The Present

Re:START, in the words of the Mayor at the time of the opening, provided “a small candle burning in the heart of the city” (Sachdeva, 2012). Described by The Lonely Planet travel guides as one of the

reasons why Christchurch is still a place to visit, the area has evolved and expanded, with market stalls and food caravans as well as an ongoing series of events and promotional activities to attract custom.

Re:START is also credited by some with showing what is possible, breaking the mould of traditional retail development and assisting in creating a culture and norm of innovative thinking about the post-disaster possibilities.

In terms of business survival, only two businesses exited in its first year of operation, with demand far outstripping supply of space. One business owner describes trade as highly variable and weekend-dominated, but sufficient. Another commented that business would not have re-opened if it were not for the vibe and attractive character created by the attention paid to design.

Re:START's future looked increasingly in doubt at the end of 2013 as landowners of the blocks it occupied became ready to commence their rebuilding plans. As at July 2014, its' life has been extended through the relocation of part of the precinct to an adjoining piece of land enabled by a government grant of 1.27 million to fund the cost of relocation. The government's provision of this funding demonstrates the view of the precinct as an "icon for the recovery of Christchurch" (Brownlee, 2014).

▪ Organisation A

Organisation A was a new business established only one month prior to the February 2011 earthquake in a core CBD location. The owner considered relocation after the February earthquake but felt that the CBD was the only suitable location. Stock retrieved was put into storage and the owner travelled and undertook contract work in her pre-ownership field with no real sense of whether the business would resume. As she puts it:

"I knew it had potential so it was very frustrating. But I think it was just a bit disheartening as well. Like you put all this effort in, so much effort prior to launch, to get up and running and then a month later it's all gone. It was very frustrating. Maybe I just needed a bit of time to get over that".

(Owner, Organisation A)

When she became aware of the concept of Re:Start this re-engaged her enthusiasm for the business with a perception that it would provide the environment she believed necessary for success.

“we want (Organisation A) to be like a relaxing peaceful environment where you’ve got privacy and you take your time and there’s no stress. If I go into a big mall I just feel stressed and I want to get out of there as soon as I possibly can. That’s not the kind of environment we want to be in. So Re-Start, outside, sunshine, area to the street, quite quintessential you know, quaint little stores and things. Those are the kind of feelings we want people to have”

(Owner, Organisation A)

The relationship with Re:Start’s governing body – the Re:Start the Heart Trust is purely as a tenant on a short-term lease. They do have involvement in terms of providing feedback and suggestions to the precinct manager, many of which Organisation A finds are heard and acted upon.

Organisation A has found Re:Start successful, although as a new business with only one prior month of trading it is impossible to compare pre- and post-disaster performance. For her, Re:Start was the impetus to re-start trade. For Re:Start, Organisation A represented the unique local character business that the precinct aimed to attract and retain in the city.

▪ **Collaboration Summary – Quadrant 4**

The three collaborations discussed in this chapter represent two different approaches to utilising collaboration to assist in disaster recovery. Collaboration one and two represent individual businesses working together, whereas the 3rd is somewhat larger collaborative effort with a large number of stakeholders and beneficiaries. Each of these approaches offers different insights with regard to post-disaster collaboration. Table 14 summarises collaboration 3 from the perspective of the individual business participant.

Collaboration	3
Sector	Retail
Longevity	Ongoing
Form	Legal contract
Commenced	November 2011
Pre-existing relationship	Acquaintances via membership of industry group
Other alternatives considered	Yes – cease, suburban relocation

Table 14 - Resources Eroded/Environment Different Collaboration Summary

Table 15 summarises the overall Re:Start initiative as it relates to the effective post-disaster collaboration framework. A discussion of the broader implications of Collaboration 3 takes place in Chapter Eight.

Framework Element	Re:START
Context	Supportive of innovation but many still struggling with understanding situation. Fear over public perception regarding safety of the CBD.
Membership	Largely based on existing relationships and clear dissatisfaction with current situation. Clear power differentials between organising members and tenant participants but with clear common interest.
Leadership	Existing collaborative leader with strong networks
Structure	Evolving as plans finalised and funding support obtained.
Process	Initial stakeholder support key in initial stages. Final plans derived through extensive consultation. Clear vision. Power not balanced. Networks of all utilised.

Table 15 - Key collaboration elements: Re:START

4. Organisational Characteristics

The characteristics of organisations that chose to collaborate to aid recovery were considered both to gain as rich a picture as possible of their nature and to consider whether particular organisational characteristics impacted on their post-disaster strategic choices. For example, organisational size has been linked to vulnerability in prior research into business recovery. Table 16 lists the key

characteristics of organisations in this chapter. A full review of organisational characteristics takes place in Chapter 11 (Organisational Characteristics).

Collaboration	1		2		3	
Sector	Hospitality		Manufacturing		Retail	
Organisation:	B	NP	D	NP	A	N
No. of staff pre EQ	10.5 FTE*		53 FTE		1 FTE	P
Age (months)	40		337		1	
Current ownership (months)	40		1		1	
Sole store/Chain	Sole		Branch		Sole	
Entrepreneurial Orientation**	3.7		5.1		4.9	
Locus of Control**	4		4		6	
Post EQ:						
No. of staff	6.5 FTE		8 FTE		1.7 FTE	
Resilience Score***	5.15		6.92		5.46	
Owner/Manager:						
Age	40-49		40-49		20-29	
Gender	M	M	M		F	

*full time equivalent

**1=Low, 7=High (see Chapter 3)

***Average resilience score 1=Low, 8=High across 13 indicators

Table 16 - Key characteristics of organisations which collaborated to obtain needed resources

These three organisations provide an interesting contrast, with wide ranging characteristics. With regard to size they represent a micro owner operated business, an owner operated small business and a branch of a national chain with a regional staff level equating to a medium enterprise. With regard to longevity of operation, this ranges from only one month to 28 years. Their Entrepreneurial Orientation scores are somewhat unexpected, with the largest and longest established having a greater proclivity to entrepreneurship. Locus of Control is also somewhat unexpected given their determined and adaptive efforts to overcome the impacts of the disaster.

5. Conclusion

These three collaborations which all set out to solve the primary problem of premises and necessary equipment to operate, also illustrate the different approaches to achieving this. Collaboration 1 was based solely on a handshake between two parties with no prior relationship. Collaboration 2 utilised formal legal structures, and was based on pre-existing networks and relationships. Collaboration 3 represented a larger initiative aiming to assist multiple businesses, with a formal structure determined

by practicality and funding arrangements. For 1 and 2, the collaborative effort, while lasting far longer than initially envisaged, was solely a temporary move to ensure survival, albeit in a reduced form, until the context changed. Collaboration 3 initially envisaged as being needed for 3-6 months is still ongoing with little retail space yet completed in the rebuilding city. Further discussion of the efficacy of these collaborations and key themes emerging from them takes place in Chapter 8, after all collaborations have been discussed.

Chapter Six - Organisational Responses

Part Two: Collaborations – Resources Intact

1. Introduction

Organisations, which either retained or swiftly took action to regain necessary resources, may still be greatly impacted by changes in their environment resulting from the disaster. Reasons may include the loss of their customer base, reduction in demand for particular items or difficulties resulting from damage and de-population in their location. These organisations need to assess how their strengths and capabilities can be deployed in ways that suit this changed market. This chapter examines two categories of collaborations relating to adapting to environmental changes. The first two collaborations were entered into for the purpose of assisting in the adaption necessary to thrive in the changed environment (Quadrant 3). The third collaboration discussed relates to an organisation whose resources were largely intact and environment largely similar (Quadrant 2). As with the preceding chapter, the collaborations will be described answering key research questions regarding purpose, form, duration and process. The characteristics of the organisations involved are then outlined and briefly discussed.

2. Business collaborations: Resources Intact/Environment Different - Longer Term Strategic Moves

This section discusses organisations which entered into collaborations as a strategy to address the change in their environments following the disaster (Figure 23)

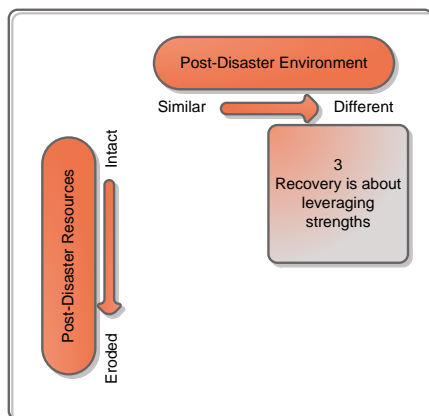


Figure 23 - Quadrant 3: Resources Intact/Environment Different

2.1.Collaboration 4 - Service

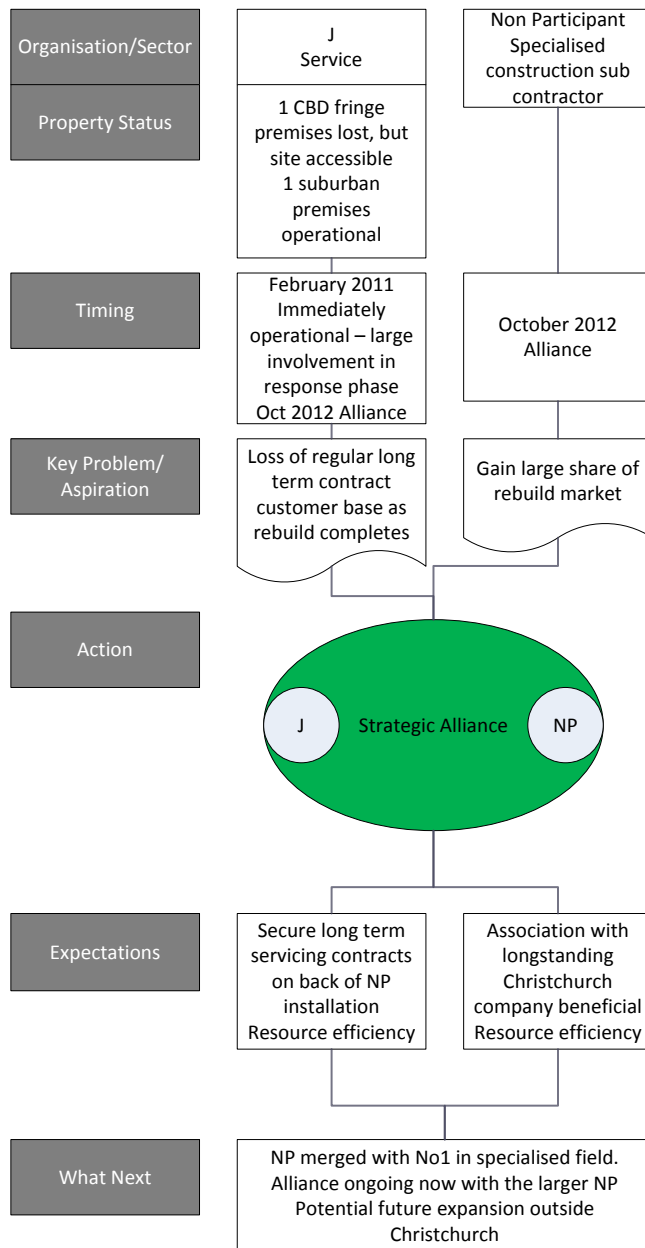


Figure 24 - Collaboration 4: Organisation J and NP

Organisation J is a long established Canterbury company in a specialised sector providing lock and electronic security products and services. They have been operating for 45 years, with the last 15 under current ownership. Prior to the February 2011 earthquake, their head office was located on the fringe of the CBD with a small branch office in a western suburb. The September event had little effect on the organisation. The February quake caused extensive damage to their head office premises with liquefaction and water damage caused by a sprinkler system. Although they lost their CBD

building, the organisation was able to utilise its suburban base as well as temporary buildings on its existing site to regain the resources necessary for operation very quickly.

The organisation was then heavily involved in the response phase of the disaster, running a 24 hour a day operation for approximately ten days post-earthquake. There was much evidence of a no-nonsense attitude of just doing what needed to be done, supported by the financial resources to be able to buy what was needed, such as pre-paid cell-phones to mitigate the lack of phone lines at their suburban base.

“We just moved as quickly as we could, bought new desks, bought whatever we could, we just went out and bought to keep us going”

(Manager – Organisation J)

After the initial response phase slowed, the organisation found themselves still very busy as the number of temporary re-locations and on-going movement of commercial tenancies required their services. Despite this influx of work, the general manager seemed very conscious of the longer term outlook, with a concern that the loss of the majority of the CBD buildings would ultimately gut the business of its long term contract customers who would now follow the direction of the lock and other access systems installers in new buildings. Organisation J was very conscious that installation was not its speciality, required different skills and staff, and would therefore be a very risky undertaking. Despite this, they tendered for a specialised aspect of the fit out of a temporary government building. They lost the tender by a significant sum, despite pricing their bid at a very low margin. This was further evidence that trying to gain long term business through participating in the rebuild was a doubtful strategy for them.

Looking for a way to ensure that the organisation continued to be the provider of services to the newly rebuilt offices, the general manager found out who had won the government tender and cold-called that Auckland based organisation, proposing a meeting. He flew to Auckland, and suggested an alliance whereby the two organisations would work together. Organisation J would continue with its speciality expertise in long term servicing and the Auckland based speciality hardware provider (NP) would continue with its expertise in hardware fitting. For NP this offered an opportunity to ride on the back of the long established reputation Organisation J has in Canterbury, enhancing its prospects of tendering success for rebuilds. The alliance also offered opportunities to even out peaks and troughs of resource demand, with each company helping the other out with resources on a hourly rate basis. Potential benefits were also envisaged through sharing training and buying power. The agreement between the two firms consisted of a “handshake with a set of rules”. Those rules are written but are not expected to be referred to.

The potential of the alliance was enhanced months after the initial agreement when NP, who are known as the number two company in that specialist market, merged with the number one company in their specialist industry. This resulted in J now having an alliance with the resulting larger company who dominate the market, giving J a likely shot at a large number of the rebuilds.

Ensuring their presence in the rebuild through this partnership has allowed Organisation J to consider other opportunities available as managing the alliance has taken up significantly less resource and time than attempting to diversify in this area alone. They have opened a new division, offering new but complementary products, and this has proved quite successful leveraging off their existing customer base.

The future of the collaboration is bright. There is a proposal under consideration to roll out the joint working to the rest of New Zealand. This would open up access to large corporate providers who would prefer to use one company throughout New Zealand.

“And I’d have to say, it’s worked extremely well for both companies, you know, we’ve helped them out getting them across the line with staff, we share staff training, there’s a lot of downstream benefits as well”

(Manager – Organisation J)

2.2.Collaboration 5 – Service

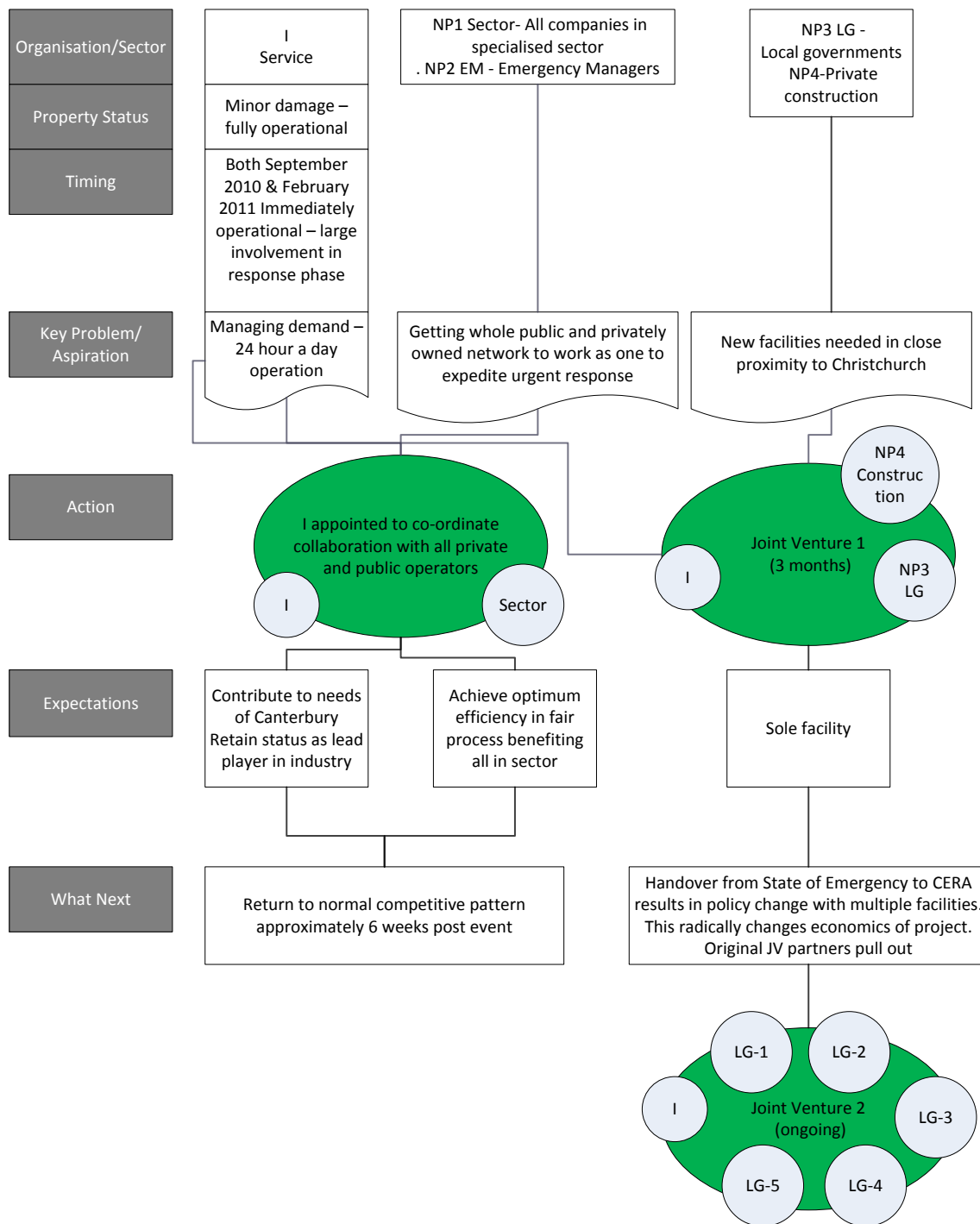


Figure 25 - Collaboration 5: Organisation I and various NP

Organisation I is part of a large international waste management company with 300 employees in Canterbury. They have operated in the region for 30 years, with the last five in current ownership.

For them, both earthquakes required an immediate switch into high gear to provide services needed as part of the response and recovery phases of the disaster.

They became involved in two separate collaborative endeavours. Firstly, they were asked by Civil Defence Emergency Management (CDEM) to coordinate the response needed immediately after both the September and February earthquakes. This organisation has strong pre-existing relationships and contracts with the City Council staff (who were the CDEM staff in the circumstances). Organisation I coordinated efforts utilising the resources of all companies in the sector to deal as quickly as possible with response. One of the foremost concepts mentioned in relation to this collaborative effort was a need to ensure fairness and equity between the companies, with the smaller firms initially concerned that Organisation I as the largest player and the organiser would benefit more. There were some minor issues in the first 48 hours of operation. However, these were easily resolved by Civil Defence having words with a couple of smaller players. Organisation I believes the collaboration worked extremely well and is one of the largely unnoticed success stories of the response phase.

The second collaborative effort was in establishing new facilities in Christchurch to manage post-earthquake demand, as existing facilities were too far away from the city. Organisation I were asked by Civil Defence to partner with a Christchurch City Council owned company, to establish this site. Organisation I also approached a construction firm to join, in order to provide the heavy machinery required. This joint venture was established successfully but then hit problems when the earthquake response policy changed. Initially, under Civil Defence control, this new site would be the sole facility in Canterbury. When control was handed to CERA, this policy changed to allow other operators to create multiple sites. Due to the nature of the sector, this majorly changed the economics of the project and resulted in the other two partners pulling out, leaving Organisation I as the sole owner. Their relationships with the city and reliance on government awarded contracts left them reluctant to pull out. They began to look for other partners as their parent Board were also 'spooked' at this point. They approached the five city councils with whom they have other joint ventures in order to share the financial risks. The councils all felt this was a project they needed to be involved in and came on board. The partners were not needed from an investment point of view but simply with regards to sharing the financial risks. The operation is difficult from an economic standpoint, with all of the income received up front but the costs of processing then incurred over the next 5 years. This collaboration is proceeding smoothly with the involvement of the councils giving Organisation I's Board comfort that their financial exposure is not huge and with volumes now approaching the level calculated as needed to achieve break even.

The earthquakes have left Organisation I thriving with decreases in some turnover areas being offset by increases in others and little increased cost to their operations. They indicated that they have

thrived for the entire post-earthquake period. The enormous pulling together that occurred to enable the response effort has been credited for strengthening relationships and understanding between employees in different departments within the business. Organisation I assisted their staff where possible in dealing with issues outside of work as the following quote illustrates:

we've got all our employees and the whole company in Australia contributed towards a fund which we allocate for earthquake recovery for our own staff. We set up two sites in Christchurch where staff who didn't have facilities at home could go and have a shower and do their washing and all that kind of stuff, you know welfare type sites -

- - - cos not everywhere had, you know for months had power, we, we're also a big distributor of the portaloos, they're out in the city, we got several thousands of those, so we made sure that our staff had a portaloos"

(Manager – Organisation I)

2.3.Summary – Quadrant 3

Both of these collaborations were entered into to assist these companies in retaining their positions as the dominant company in their specific sector. These organisations illustrate a very high level of situational awareness with a strategic long term focus. Both collaborations were entered into at a time when each organisation was operating at maximum capacity with extra work caused by the response and initial recovery phases. As shown in Table 17, one of the most remarkable aspects of Collaboration 4 is the complete lack of any prior relationship between the two companies with the alliance initiated by a phone call from a stranger. Literature on collaboration typically considers a prior relationship to be an essential precursor to collaboration (Dyer & Singh, 1998; B. Gray, 1985; Hoffmann & Schlosser, 2001). This differs greatly from Collaboration 5 where all of their various collaborative arrangements were with pre-existing contacts and involved a central convenor in the form of the Christchurch City Council.

Collaboration	4	5 (Joint Venture 2)
Sector	Service	Service
Longevity	Ongoing	Ongoing
Form	Alliance	Joint Venture
Commenced	October 2012	Late 2011
Pre-existing relationship:	None	Yes-service agreements and other JVs
Other alternatives considered:	Expansion into new product	Withdrawal, other partners

Table 17- Resources Intact/Environment Different Summary

3. Business Collaborations: Resources Intact/Environment Similar- Maximise Resource Use

Despite the widespread damage and disruption across the region, for some businesses, the post-disaster environment remained largely similar (Figure 26). The term similar rather than the same is chosen deliberately. The choice of whether an organisation faces a similar or very different environment is somewhat subjective and may be dependent upon the way in which they choose to frame the situation. This collaboration is categorised as environment similar due to the organisations' descriptions and interpretations of the post-disaster setting.

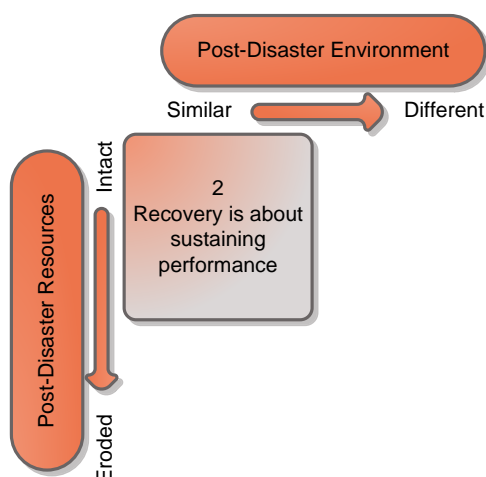


Figure 26 - Quadrant 2: Resources Intact/Environment Similar

3.1.Collaboration 6 – Retail/Wholesale & Retail/Service

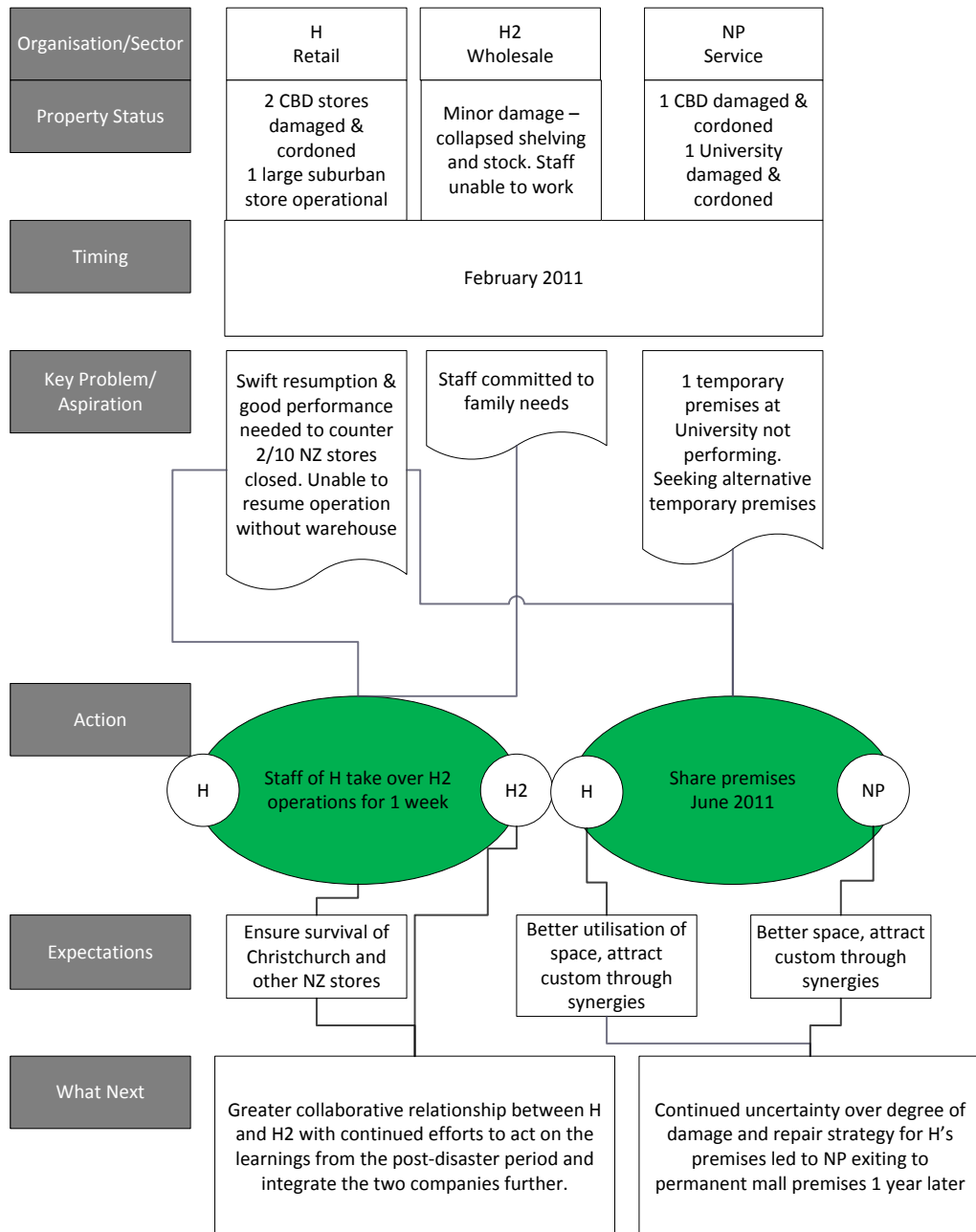


Figure 27 - Collaboration 6: Organisation H, H2 and NP

Organisation H is a national specialist retailer with two stores in the Central Business District and one large super store in a large retail centre. This store represented a new approach for the organisation and had opened only two days prior to the September 2010 earthquake. In addition, warehouse facilities were located in the suburbs and head office premises on the fringe of the CBD. The warehousing (H2) and retail operations (H) are two separate companies but are owned by the same individual. The respondent referred to the companies as sisters. The warehouse (H2) supplies goods

to many other retail operations as well as being the key supplier of H. H is the only organisation in this study with no business interruption or contents insurance for its damaged stores.

The September earthquake caused minor disruption with staff from the closed CBD stores relocating to the super store for a short period before the re-opening of the two CBD stores. The February 2011 quakes had a devastating impact with both CBD stores immediately out of action and up to NZD \$1 million of uninsured stock behind cordons. This stock was retrieved through a circuitous route involving a relative contacting an MP they knew, who contacted the Civil Defence head. Access was then arranged and their building was temporarily reclassified yellow for the few hours necessary for stock retrieval, with a red sticker then reinstated. This stock was then transferred to the super store; however this resulted in an enormous overstocking and a necessity to sell much of this stock at cost.

In the immediate aftermath of the quakes, the management priority was to get the group's warehouse, which supplied all stores around New Zealand, as well as competitors, up and running along with the super store. Three key reasons were given for this; firstly the need to ensure the continued operations of the 8 stores outside of Christchurch, given that the two Christchurch CBD stores had just been wiped out. Secondly, the need to have the super store up and running:

“because we had 20 staff that we needed to support, and if we didn't get that up and trading and selling product then we weren't going to be able to provide them with work or pay them and having to have that conversation with people who were quite severely stressed from the quake, it wouldn't have been a pleasant one”.

(Manager, Organisation H)

Thirdly, in relation to having the super store open, the products sold included emergency supplies which were then sold at a 30% discount to support Christchurch residents.

The employees of H2 were unavailable due to their personal circumstances. As the respondent explains it, it was simply the case that Organisation H's staff had fewer family commitments than those of H2. Although they were two separate organisations, Organisation H took over the operations of the warehouse (H2) for the first week. H tidied up and shipped out product to their other New Zealand stores along with other retail outlets who were competitors. Meanwhile those staff from the closed CBD stores, who wished to, relocated to the super store. The earthquake support subsidy was utilised to its maximum by the organisation as it sought to retain all staff, while trying to build trade at the super store. Ultimately, natural attrition of around 30-40% meant that all staff who wished to stay were retained.

Further collaboration occurred 3-4 months post-quake when the general manager of a travel company (NP) was in the super store meeting with Organisation H regarding a pre-existing co marketing agreement between the two companies. NP, part of a national chain, had lost both of their premises in Christchurch – one in the CBD and the other at a large education institution and were currently operating one premise out of temporary facilities at the University. This was not working very well and when in the store NP raised the possibility of using a space that was separately walled off and was being used as a children’s play area and a book room. Organisation H gave this proposal due consideration and believed it might bring significant benefit with regard to attracting customers to the store. They drew up a basic legal arrangement which was reviewed by both organisations’ lawyers and agreed upon. Rent was charged at a “pretty nominal rate” and they moved in, staying for one year. The collaboration was successful. Staff shared lunchroom facilities and there appeared to be spin off custom for both operations. There were a few minor issues with regards to shop hours and access if NP staff needed to work late, but these were regarded as minor. Organisation H would in hindsight have set up a more formal structure for communicating any issues. A number of these minor issues could have been easily solved but were only raised at the end of the agreement. The collaboration only ended due to uncertainty and a lack of clear communication from Organisation H to NP with regards to the future of H’s premises, with NP believing incorrectly that the building was going to be demolished. Organisation H are now using that space for hire products but would be very open to a similar sort of arrangement if the synergies were appropriate.

Trading then resumed as normal with a focus on trying to grow the super store trade. This has been quite successful with this area having become the new focus for their kind of product. From a store that represented an enormous risk innovating outside of their normal mode of operation, the unique circumstances of Christchurch have turned it into an enormous success. The aspirations of the business have been greatly affected – from a pre quake aspiration of further growth to a post-quake aspiration of simply returning to a stable state. The future is still hugely uncertain with their super store site needing significant repairs and their option on their old CBD premises about to run out.

3.2.Summary – Quadrant 2

The collaborations entered into by Organisation H with NP illustrate the effects of premises scarcity on organisation’s decision making. Prior to the earthquake, space was viewed in a very different way. The many stories of organisations temporarily moving into other organisations unused space illustrates the unimportance accorded to efficient space utilisation pre-earthquake. Organisation H discovered that its extra space, used simply as a play area to encourage parents to linger for longer in store, was of greater value and utility being used to extend a hand to an organisation in need, as well

as generating an income – however ‘nominal’. This collaboration was a very minor part of Organisation H’s post-disaster strategy, but a quite major part of NP’s. While there were financial advantages, and synergies in attracting custom, also evident in Organisation H’s descriptions was the idea of “it being the right thing to do” to assist a fellow business to get through the disaster.

Also evident in H’s story is the attitude of simply getting on with whatever was necessary after the earthquakes regardless of the normal rules. H took over the operation of its sister company which both enabled the continuation of its national operation and also its competitors, as well as enabling H2’s employees to take the time they needed to deal with family issues.

Collaboration	6 H & H2	6 H and NP
Sector	Retail/Warehousing	Retail/Service
Longevity	1 week	1 year
Form	Informal	Lease
Commenced	February 2011	June 2011
Pre-existing relationship:	Sister company	Co-marketing agreement
Other alternatives considered:	None mentioned	Other alternative premises

Table 18 - Resources Intact/Environment Similar Summary

4. Organisational Characteristics

These three organisations represent two differing positions on the Resources Intact categorisation. Organisation I’s premises and equipment were truly intact whereas both J and H suffered significant damage to facilities but were able to overcome this very matter-of-factly due to an existing alternative location which was outside of the cordoned CBD area. Along with the advantages this offered, they also both demonstrated an attitude of getting on with whatever was necessary in terms of resource deployment and financial outlays to operate successfully from these alternative locations. Size for these organisations, in relation to the multiple premises, did prove an advantage; however they also illustrated innovative and adaptive behaviours to overcome the issues they still faced. All three companies are long established and scored very highly on the Locus of Control question indicating their strong belief in how their actions influence outcomes.

Collaboration	4		5 (Joint Venture 2)		6
Sector	Service		Service		Retail/Wholesale/Service
Organisation:	J	NP	I	NP	H
No. of staff pre EQ*	20.5 FTE		300 FTE		110 FTE
Age (months)	540		360		300
Current ownership (months)	180		60		300
Sole/Chain	2xChch only		Branch Aus/NZ		Branch
Entrepreneurial Orientation**	4.0		4.3		5.9
Locus of Control**	7.0		6		7
Post EQ:					
No. of staff	25.5		300 FTE		115 FTE
Resilience Score***	7.08		7.0		4.92
Owner/Manager:					
Age	50-59		50-59		30-39
Gender	M		M		F

*full time equivalent

**1=Low, 7=High (see Chapter 3)

***Average resilience score 1=Low, 8=High across 13 indicators

Table 19 - Summary of Organisation Characteristics

5. Conclusion

These three collaborations were all entered into to address some aspect of environmental change. The first two collaborations addressed issues relevant to each companies sector. The third collaboration addressed environmental change effecting the wider business environment rather than the organisation itself. The most remarkable collaboration came from Organisation J which had the situational awareness to see past their current high volume of work, accurately assess the core strengths of their business, and then the courage to reach out to strangers to address concerns over their long term future. The resulting alliance secured the long term contract work needed to continue their current business model and allowed them the capacity to also consider other opportunities for product diversification in the new environment.

Organisation H illustrates the proactive nature of individuals and organisations in the post-disaster period where they simply got on with what needed to be done – in this case taking over the operations of a sister company. Their collaboration with NP also illustrates the synergies found by businesses that were able to assist others, creating situations with mutual benefit – giving a hand up to another while ensuring that it was beneficial and not detrimental to its own operations.

Chapter Seven - Organisational Responses Part Three: Collaborations – Evolving

1. Introduction

Many organisations that initially used a collaborative strategy to address their resource needs, later realised that there were potential long term advantages to this model. This chapter provides details of collaborations whose initial purpose, to replace eroded resources, evolved into new longer term strategies. These strategies became attractive to these organisations as their situational awareness of the risks and opportunities of the post-disaster environment grew. These organisations' journeys reflect that the four quadrant model has a temporal element, with organisations potentially proceeding through stages as both circumstances and understandings change (Figure 28). The newly introduced arrows to the original four quadrant model indicate that over time, organisational strategy may evolve as each strategic issue is addressed in turn. Resilient organisations, who are able to see the opportunities in the crisis, will end in Quadrant 4 but may start that journey in any other quadrant.



Figure 28 - Stage Transitions in Post Disaster Strategy

2. Resource Needs Evolving to Longer Term Strategic View

2.1.Collaboration 7 - Retail

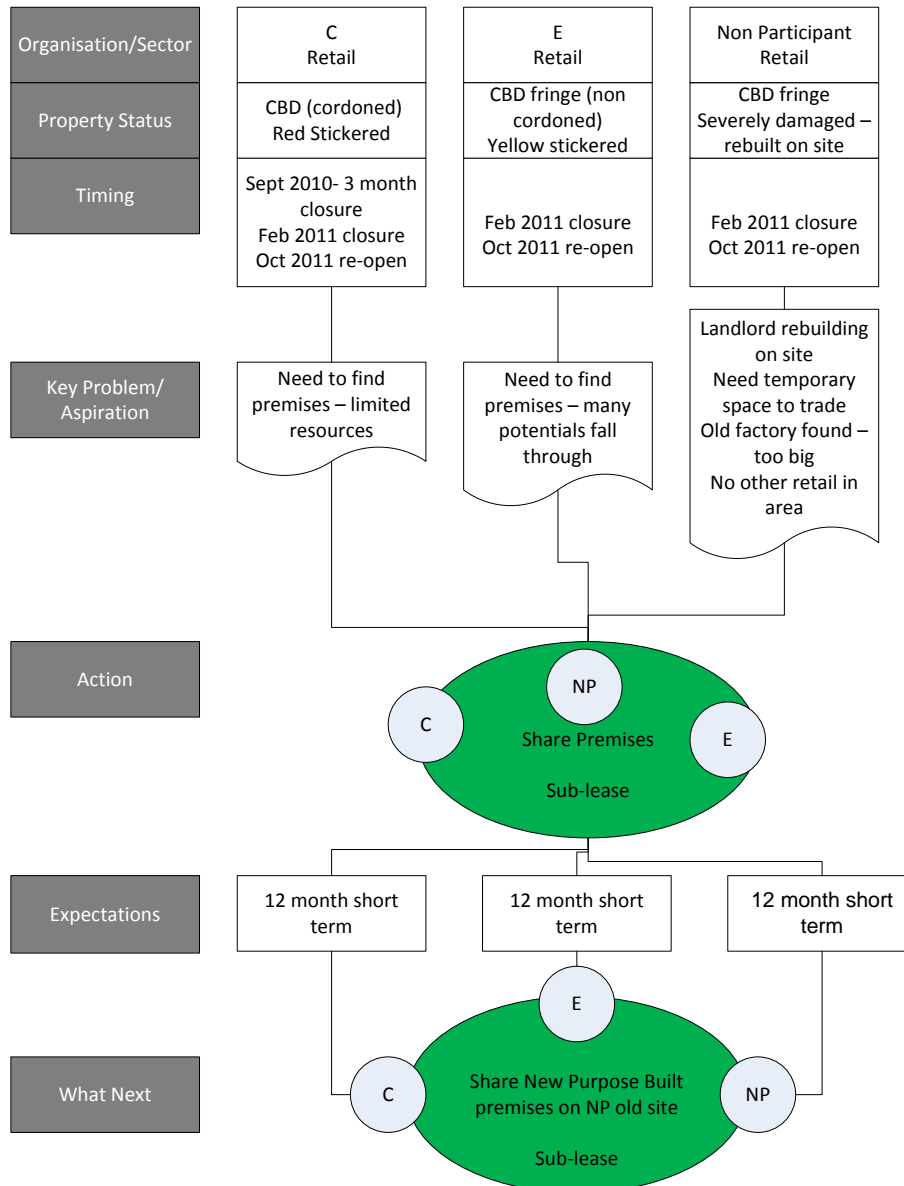


Figure 29 – Collaboration 7: Retail - Organisation C, E and NP

This collaboration between three specialist retailers commenced as a short-term solution to the problem of finding temporary premises. All three organisations lost their premises in the February 2011 earthquake. Organisation NP decided quickly after the earthquakes, in conjunction with their landlord, to rebuild on their current site. With an estimated build time of 12 months, they required temporary premises in the meantime. The only available premises were too large and the owners of NP approached the owners of E, who they knew socially enquiring if they would like to share. At this

time, E had been looking for permanent alternative premises. E thought that both the location and idea of sharing representing a tangible viable option to allow business resumption. E had been looking for conventional alternative premises for many months with no success. Organisation C joined the arrangement four weeks later. C's premises suffered significant damage in the first earthquake in September 2010. A substantial re-fit occurred immediately after and the business had re-opened in December 2010. As part of that re-fit a significant financial input was made to improving the store. The February 2011 earthquake destroyed the store with the partial collapse of walls and some injuries to those inside. After spending some time coming to terms with the event and assisting both his family and severely impacted community, C began searching for alternative premises to reopen his business. By August 2011, little progress on re-opening had been made.

"No, no one was talking to me. We didn't know where to turn to, we had no idea"

(Owner - Organisation C)

As a relative newcomer, having only purchased the long running business in May 2010, C did not feel well connected to the Canterbury business community and was struggling to find a viable option for re-opening. C had a "heart to heart with a mate" who he knew through involvement with a local charity. This 'mate' was well connected and introduced C to NP, which led to an offer to come and share these temporary premises. His belief is that NP perceived this as beneficial in terms of creating a larger draw-card for customers as well as giving a 'hand-up' in line with the mutual support context of the time. There was no formal agreement between the parties with simply a verbal agreement over paying a share of the rent for the premises.

As part of the on-going relationship that developed as the organisations shared these temporary premises, the idea of continuing the arrangement in a new permanent form evolved. Both C and E still required a permanent home and NP was awaiting their purpose built premises to complete. The three businesses all identified as New Zealand owned in a market dominated by large Australian businesses and saw advantages in the continued co-location giving a stronger identity.

"Well the three business owners basically started talking and the relationship was good, customer response was good and we thought, How can three New Zealand owned businesses go to bat against the big Australian owned businesses like Harveys?"

(Owner - Organisation C)

NP negotiated with the developer of their in progress site and their new building was enlarged with C and E becoming sub tenants for a ten year term in the new premises. This new permanent site is entirely open plan with shared back-room facilities and some co-marketing. The three organisations

all offer high cost items that are traditionally ‘shopped-around’ for and believe that customers attracted to the store by one of the retailers are likely to also browse the offerings of the others. Any marketing campaign by either of the companies assists the others in attracting these ‘browsers’ to the store. They believe this helps to attract customers with the broader offering under one roof matching the generally broader offerings of many of their competitors.

For organisation C, this has enabled survival and the hope of rebuilding his business. It has also provided enormous support through this new connection to two other successful business managers, effectively re-bonding him to the business community (Gordon, 2004). Organisation C describes the two years post-earthquake as very stressful and, financially very challenging. Apparent in the discussion with C’s owner was a strong sense of desperation with regard to rebuilding his business. Organisation E did not have that sense of desperation in their descriptions with two other stores in provincial centres fully operating. It appears that E could have sustained itself until replacement premises could be built, but it felt that co-location was a better option in terms of the benefits in attracting custom.

Both C and E describe trading conditions as challenging. Resource issues have been significant with C having to recruit from Asia in order to obtain the specialised skills to replace staff that were reluctantly let go a year after the disaster. C retained staff on full pay for over a year before the lack of trade and poor financial condition led to their exit. As he explains:

“Yeah, I retained all of the staff members for a minimum of a year and as business slowed or didn’t return back to normal we were then faced with basically culling people so we culled all of our staff. At one point it went just me working for the company and for about 30 weeks I did seven days straight. I don’t think I was doing anything less than about 90 hours a week. I can’t remember having grey hair before the quake and now I’ve got a lot of it and I’m only 34 and I don’t think that’s right”.

(Owner – Organisation C)

Organisation E has had a high degree of staff turnover as its commission based sales staff have been attracted by more lucrative opportunities associated with the surge in the construction sectors.

Variability in demand has also been a significant issue with little demand for their products initially and then fierce competition trying to capitalise on an upsurge in demand as the rebuild commenced. Both organisations also commented that the nature of the clientele has changed with a previous emphasis on individual consumers now replaced with an increased number of commercial customers.

Organisation C lost their customer database in the earthquake. There was no backup copy of the database, and the severe damage to the area of the building it was located, meant it was irretrievable. This has harmed their ability to reach out to prior customers and market their new location and products.

At the time of interview, the three companies had committed to the collaboration for ten years and were beginning to investigate other areas in which to potentially collaborate. Areas identified included sharing information on potential tenders and synergies in providing a 'one-stop' shop to commercial developers. From an initial purpose of simply solving short term accommodation needs the organisations have created a new business model which delivers both immediate benefits of attracting browsing custom, as well as offering the potential for further combined efforts. The benefit of observing and working with other business owners has been appreciated by both C and E, while all have retained the independence they also value.

"I guess for myself it's seeing how somebody else operates. When you're in your own roof you probably don't get to see that quite the same, but obviously to see how XXX as the GM of XXXX runs and operates XXXX, there's things that you get to see that perhaps you wouldn't have"

(Manager - Organisation E).

2.2.Collaboration 8 – Retail

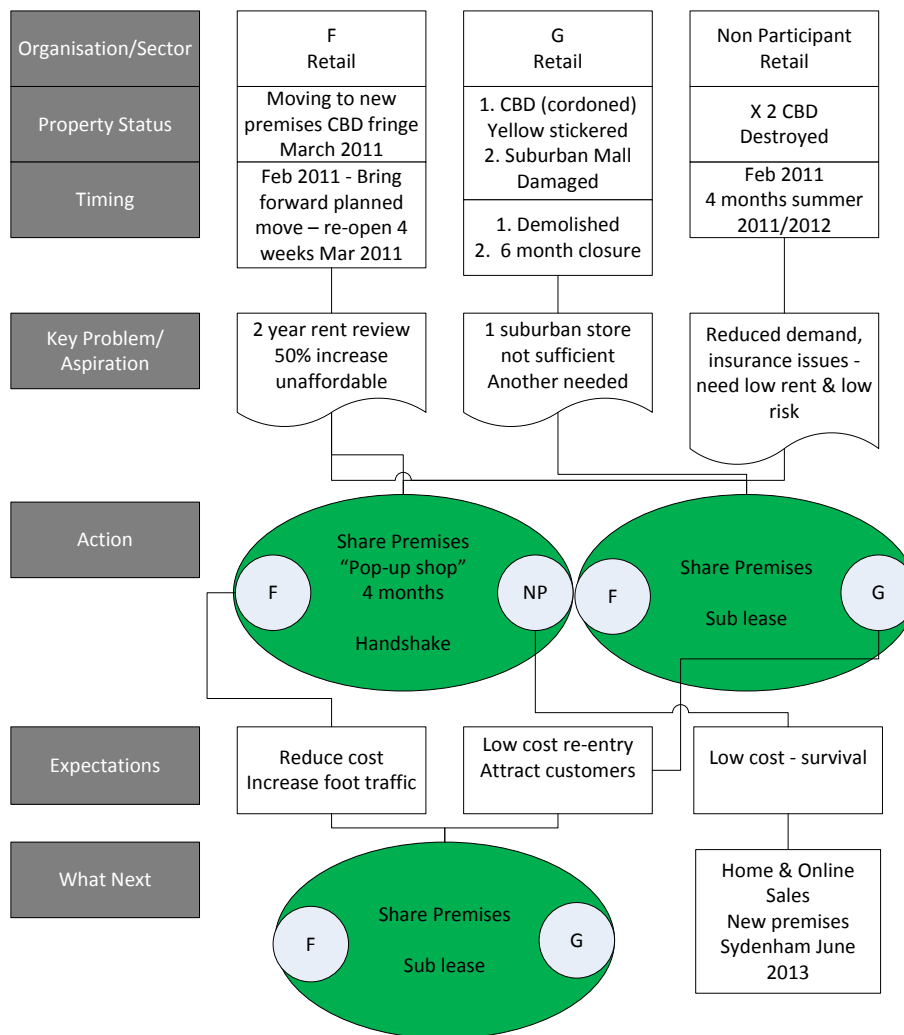


Figure 30 – Collaboration 8: Retail Organisation F, G and NP

Organisation F suffered only minimal disruption from the earthquakes. Having outgrown their CBD fringe premises, they had signed a lease agreement for new and larger premises, still in a CBD fringe location, with a planned move date of March 2011. Their move was brought forward with a three and a half week period of closure while stock was retrieved from their damaged shop and fit-out of the new store completed. Demand for their products fluctuated with an initial surge followed by a steep decline before rebuilding to pre-disaster levels with a self-assessed return to pre-earthquake trading within the first year following the disaster. F extended a helping hand for four months during this period to a specialist retailer offering completely different products, who had lost their two CBD premises. As a seasonal business, F usually reduced stock levels over the summer period and closed completely for 6 weeks. Introduced by the owner's daughter's friend, F allowed NP to share premises with a pop-up shop rent free for this slow season.

The threat to F's viability came 18 months post-disaster when notification of the two year rent review occurred. The shortage of supply and demand for CBD fringe property resulted in a 50% increase in rent.

Organisation G was a business acquaintance of F. G operated two stores, one in the CBD and one in a suburban mall. F had mentioned to G in the early days post disaster that "if you need some space, you know, come and see me". G's central city store was badly damaged and behind the CBD cordon, while the suburban mall was closed for approximately six months due to liquefaction damage and required strengthening work. G is one of only two employers in this study who made staff redundant in the immediate aftermath of the earthquakes. After re-opening the suburban mall store in September 2011, G traded for 10 months with just the one store with a focus on clearing the stock in hand. G then decided that they needed to regrow to two in order to rebuild for both themselves and their customers – "to bring value back to the name". This period of trading was challenging with ongoing rumours regarding the safety of the repaired mall, and cluttered and unattractive offerings in their operational store as they sought to clear the stock retrieved from the closed CBD store. At this time, the CBD store was being demolished and the central city was still in demolition phase. After a 10 month period looking and being dissatisfied at the few options and locations available to open a new store, they decided to approach F and see if that initial offer was still open.

With the impending 50% increase in rent and attracted by the synergies between their two products, F & G agreed to share premises. Similarly to Collaboration 7, there are no dividing walls in the space and backroom facilities are shared. They entered into a formal legal arrangement with regard to what each could sell to ensure that synergy rather than competition was predominant. This arrangement greatly reduced both the financial and energy set-up cost for G, as well as reducing the perceived risk with F already having established that the location was successful for the product offering. The co-location commenced in June 2012.

F & G describe themselves as "like-minded people" who are both in this sector due to a passion for the products rather than the profit. They both enjoy having another to bounce ideas off and have worked through operational issues as they have occurred. As G explains:

"It's funny, it's like moving into someone's flat, you know, so we had to tread warily and it took a while for him to adjust and for us to adjust, and we got this line down the middle, so we're moving stuff and claiming areas, but we're working through it, and we work through it a lot and are both up at the counter and you begin to realise what standards we have for each other as far as, it's good – we bounce off each other, you know, might see how to a

display one way or vice versa, and just vary it up, yeah. Its all good, it's another few heads going for the ideas of doing things, advertising or stock buying, yeah".

(Owner – Organisation G)

For G, the collaboration enabled them to get their second store back into operation in an extremely cost effective and lower risk way. For F, the collaboration enabled them to stay on the same site removing the difficulty and disruption that would have been involved in moving to a more affordable location. The bonus from the arrangements is a new friendship, cover for absences and greater attraction of customers. Similarly to Collaboration 7, they each feel that they benefit from any promotion or marketing by either organisation drawing custom to the store.

With regard to the future and whether this model will prove to be a long term move, G stated:

"I've actually given up on expectations. I don't have so many expectations now. I'm pretty much day by day, or six months in front, and much further than that – look, I'd like to think – yeah, we're certainly here for three years, we certainly are. I would say at this stage we're just here for that, get in, let's do it, and then at point for rent review then look at where things are. (Owner F) may want to divide the wall up here and try and make it more two shops, if he wants to sell out, because otherwise it could be a bit hard".

(Owner – Organisation G)

F also talked about possibly making a more permanent division within the store which would return the operations to more conventional separate spaces but at the same time remaining together as it seems to work well. Both owners are focused on building back up their clientele, recovering – rather than looking to the longer term future. Marketing efforts are focused on advertising their location to prior customers and the potential new custom of rebuild workers.

2.3.Collaboration 9 – Information & Communications Technology (ICT)

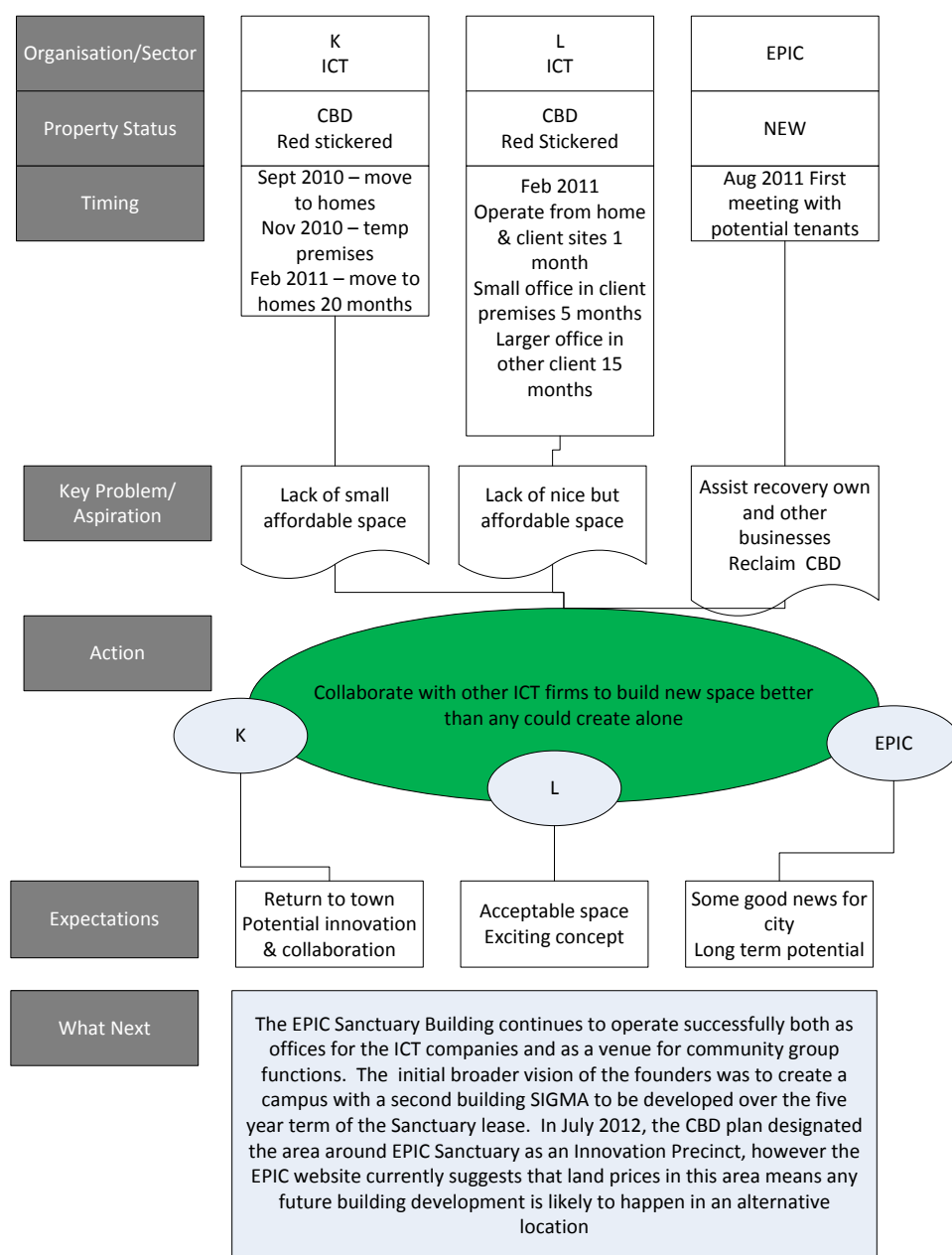


Figure 31 - Collaboration 9: ICT Organisations K, L and EPIC

▪ EPIC Sanctuary

The Enterprise Precinct and Innovation Campus (EPIC) Sanctuary is a purpose-built office complex in the Central Business District (Figure 32). It provides shared meeting areas, kitchen and bathrooms and individual offices for 17 companies in the Information and Communications Technology sectors. These small companies were all struggling to find suitable and affordable premises following the

earthquakes. The building design aims to encourage collaboration and joint working between the companies creating what is described as a “community of hi-tech entrepreneurs” (EPIC Christchurch, 2014). The Sanctuary building was envisaged as simply the start of a wider innovation campus. The building was completed in September 2012 and was one of the first signs of new life in the devastated CBD.



Figure 32 - Epic Sanctuary Completed Building

Sanctuary’s design and further plans were based upon the well-known idea of clustering, first becoming popular in the 1990’s (Waite & Williams, 2009) and exemplified by Silicon Valley in America. Research indicates that geographic proximity promotes more efficient transmission of knowledge which is believed to promote innovation (Breschi & Malerba, 2005), as well as promoting linkages with non-clustered but complementary organisations (Waite & Williams, 2009). An example of this is the visit to the premises by senior staff from Google – elevating the profile of these very small companies to an important player in their market. The design of private and public space is intended to promote or facilitate the knowledge sharing, collaboration and innovation processes (Khare, 2012) while preserving the independence found to be an important characteristic in a study of New Zealand SMEs (Battisti & Peter, 2011).

The Sanctuary building was intended to be run as a commercial but not for profit operation with the buildings owned by a trust and tenants signing regular commercial leases at approximate market rates

– although the establishment of ‘market rate’ in a devastated city for an entirely new concept built as basic accommodation was somewhat uncertain.

The idea for EPIC arose at a government-sponsored industry awards function soon after the February 2011 earthquakes. Co-founders attending this event in their roles as ICT business owners discussed their problems in having lost their premises in the earthquakes and the difficulties of finding alternatives. On further discussion with others at the event, they realised this was a common problem with over 40 small companies in the room having similar difficulties. These small companies, many of whom were young companies, had primarily occupied lower quality office space in older buildings, which had suffered the most damage in the earthquakes, and any new construction was unaffordable.

The idea commenced with the two ICT CEOs thinking:

“... so why don’t we pull together and go and convert an old warehouse and then get a bunch of us altogether”.

They discussed this idea with other companies and found significant support for the idea. Over time and discussions, this idea of simply creating some useable space grew to a grander vision of not just solving the accommodation problem but seeing the inherent opportunity:

“we came up with a vision of, you know, creating a world class innovation and enterprise campus, out of the rubble, and, um – and then also the second part of it was being a first entrant back into the city, two crates, some energy and some spark and try and give people some positive thought about what was happening cos at the time it was just “all negative”, you know”

The next steps were to hold a public meeting of the organisations interested in being part of the development. Interested organisations were asked for their signatures on a largely symbolic document called a Memorandum of Understanding. This gave some indication of commitment, which could then be taken to landowners or developers to get the project up and running. The proposal together with the level of tenant support was taken to the Christchurch City Council and submitted at a full council meeting. This resulted in the grant of a central city land area, already empty prior to the earthquakes on a rent-free basis for five years.

Having secured the land, the founders then needed to finalise the funding model, building design and costs, with minimising cost and maximising building strength key aims. With no commercial developer involved, the funding model was challenging. A major bank provided the necessary loan to

cover building costs at a concessionary rate¹⁰. The repayments for this loan are funded by tenant rent payments. Further funding was required to enable rents to be maintained at pre-earthquake levels. After lengthy negotiation, this funding was provided by national government with 1.8 million dollars in grants given by the Ministry of Science and Innovation and New Zealand Trade and Enterprise. Funding support, by way of underwriting both rents and insurance excesses, was provided by the Canterbury Business Recovery Trust and a prominent local businessperson. Significant amounts of time were also expended on a pro bono basis by professional service firms. The result is a rental rate comparable to the average being paid by the tenants pre-earthquake, but with the subsidies through free land and government grants needed to achieve this.

One of the most remarkable parts of this case is the conversion by two ‘ordinary’ businessmen of an idea into a reality. Following the earthquakes, many citizens had ideas but few acted upon them. From the perspective of the founders, two key enablers of the project were the overwhelming support from all sectors, and the existence of two founders. The wholehearted support from all approached by the project provided tremendous motivational support for the founders who were committing huge amounts of time and energy, to the detriment of the recovery of their own organisations. While there was a broad swathe of support for the project, there were still a number of obstacles to be overcome. Having two prime movers behind the project enabled one to step up when another was struggling. As one interviewee describes:

“nah neither of us could have done it on our own, no chance, it’s just too hard, you would’ve given up, yeah, we had a repetitive cycle of one of us falling over and the other one stepping up and the other one pop back a week or two later and, you know, it just kept on happening”

Prior research by Weick (1993) identified that the presence of a partner can be significant. His analysis of the Mann Gulch fire disaster suggested that having a partner in crisis times is a significant advantage, providing ideas, enabling access to more information and enabling independent decision-making.

Another crucial enabler of the project's successful completion was its timing. The project was initiated prior to any formal recovery plans being drawn up and at a time where the authorities and communities were looking for some good news. The community and the government were open to innovation and ideas and were not as constrained by normal processes. One cost that went with that timing related to the extremely heightened risk perceptions of the time. Research has shown that

¹⁰ Many of the major banking institutions in Christchurch provided some kind of philanthropic support to help Canterbury businesses in their recovery

earthquake experience significantly increases risk perception, although this increase declines rapidly (Lindell & Perry, 2000). Constructed in the immediate aftermath of two damaging earthquakes, the building was designed to be 130% of new building code to counter fears that people would not feel safe in re-occupying the city centre as well as improving the ability to obtain commercial insurance cover.

One final enabler, in the later stages of the project, was the involvement and backing of a well-connected and respected local businessperson who carried a certain amount of mana¹¹ or influence. While the founders were known within their industry as successful business owners, this may have assisted in the credibility of the initiative, particularly outside of the region where the co-founders were not known.

Sponsorship, concessional lending rates and mentoring provided by a major corporate bank were also essential to the project's success. There was no prior relationship between the corporate bank and the founders. However, the benefits of social capital are in evidence in much of the other professional support received on the project coming from existing connections or connections of those connections.

While the project had the support of politicians, fulfilling the civil service requirements was more problematic. Getting through the necessary bureaucratic processes took a significant length of time and severely tested the founders resolve to continue with the project. Their advice for any future project would be to avoid government funding if possible. While Christchurch at this time was still enduring aftershocks and was a long way away from any notion of business-as-usual processes, the civil service officers responsible for implementation of the funding arrangements were located in Wellington. Their distance from the events and the ongoing impacts potentially resulted in a rather quicker return to business-as-usual thinking and processes with an emphasis on accountability, rather than the adaptability more prevalent in the immediate response phase. The Wellington location was a significant advantage in relation to other government initiatives enacted during the response phase of the disaster.

One other delaying factor to completion of the project was changing requirements by building inspectors at the local government level with the interviewee stating that a simple handrail on a entranceway had be to changed four times to meet four different inspectors requirements for final consent.

¹¹ Mana is a Maori word commonly used in New Zealand to denote a person with authority, control, prestige or power

As of July 2014, EPIC Sanctuary continues bringing life to one small area of a still largely dead CBD. Its plans for private development of further phases have not yet progressed. Instead, the government has taken the lead of further developing the area around EPIC which has been designated in the Central City Plan as an innovation precinct (Central City Development Unit, 2012).

Many regard EPIC Sanctuary as an enormous success. Individual business owners interviewed for this study appreciate not only the provision of much needed accommodation but the contacts, camaraderie and potential collaborations that have emerged through the shared space model. Many tenants could have pursued other options for replacement accommodation but delayed their own organisations' recovery journey because of the unique and attractive environment promised by EPIC.

“The Christchurch earthquakes were a terrible event and a lot of people are still suffering from it, but EPIC is shaping up to be a stunning silver lining”. (Epic Tenant)

As well as benefiting businesses, the complex has also played a broader role in the community providing a venue for events ranging from the launch of a new community housing initiative to a meeting space for the Ministry of Awesome; a new non-profit venture aiming to assist people in converting Christchurch improvement ideas into reality (Epic Innovation, 2014).

EPIC Sanctuary has consent for a five-year period – this is in relation to its land agreement with local government rather than any issue with construction durability. It is unclear at this time whether an extension to that consent will be granted

▪ Organisation K and L

Organisations K and L are both participants in the Enterprise Precinct and Innovation Campus.

Organisation K is a small company, with 5.6 full time equivalent employees established in 2004. It is yet to make a profit although the business was growing successfully prior to a slowdown in government spending resulting from the global financial crisis. Organisation L is a larger company with 11.9 full time equivalent employees operating for 16 years.

Both organisations lost premises in the earthquakes and endured a series of moves from residential homes to temporary “shabby” space while attempting to find suitable permanent premises. Organisation K required very small offices, while Organisation L were accustomed to “nice” premises and wished to return to B or C grade office space. During this period of operation both organisations suffered significantly with regard to staff morale and turnover and a sense of being on hold rather than

being able to resume normal functioning. EPIC offered a potential solution at a time when there seemed few options with the added carrot of the vision of the hub concept.

Both organisations were amongst the first sign-ups to the concept. As part of its survival strategy, Organisation K restructured with one staff member working remotely from Australia and administrative functions being outsourced resulting in a need for reduced office size. K was able to negotiate an amendment to their needs with the EPIC trust. K's larger unit was sub-let and they instead entered into a sharing arrangement with another small company to share a smaller unit unit within the complex.

Significant delays to the completion of EPIC once again delayed the companies return to some kind of new normal. It is only approximately two months after moving into EPIC that Organisation L feels that the company begun to return to its pre EQ state, particularly with regard to being able to attract and house replacement staff.

L is enjoying being part of EPIC with any earlier doubts about the common facilities now dispelled by the benefits the respondent sees of interacting and learning with and from their fellow tenants. There are some slight compromises required as part of the group membership with regard to what money is spent on, in terms of the facilities and functions, but that is just a minor issue compared to the benefits he sees of the interactions. The interactions have brought at least three projects to the business and the respondent also sees the huge advantage of being able to take on projects that may previously have been too large, knowing that he has the relationship with neighbours to allow the work to be spread.

The only blot on the landscape is the uncertain future of the precinct with a five year expiry date. K is enjoying the nice facilities and simply having an office again, although noted that there is a downside to being in the somewhat depressing environment of the CBD.

“one of the things that - you know, I was really looking forward to getting back in the city and one aspect that I hadn't really thought of, which has affected me I guess more than the others, from what I can pick – I mean, anecdotally from the other staff – is actually being in a train wreck of an area, I mean I don't know if you've looked in Manchester Street where Epic is but, you know, look out – our office looks out over the Odeon Theatre or it's, you know, the rubble and the fences and actually being right in amongst it, working there every day of the week is quite interesting really, it's not quite what I anticipated, you know, it's hard not to think, “Oh god, you know, how long is it gonna be like this for”

(Owner – Organisation K)

This respondent suffered significant damage to the family home and has children who have been greatly traumatised by the events. The pressures of dealing with business and family issues both in terms of their financial and psychological impacts have been immense and were clearly evident in discussion.

The benefits of the EPIC environment were mentioned in terms of the presentations/events that the facility is used for. For example, although the layout of the space was not entirely ideal, K was able to hold a one day conference without extra cost. EPIC has not led to any new initiatives or customers for the business. According to the owner, it has done what it set out to do, which is to provide an affordable and attractive home for small IT companies, allowing him to regain some focus on business growth and 'normal' operations.

For both organisations, joining EPIC has led not only to their ability to resume focus on improving their business but also a sense of being part of something bigger. As K explains:

“feeling like you’re part of something exciting and new and, you know, and the fact that a lot of activity goes on, in terms of functions and all sorts of stuff goes on all the time and so it’s been really great, it’s given the company a lift I think”

(Owner – Organisation K)

L believes the innovative vibe of the precinct assists in attracting and retaining staff as well as offering both management and staff opportunities to learn from others.

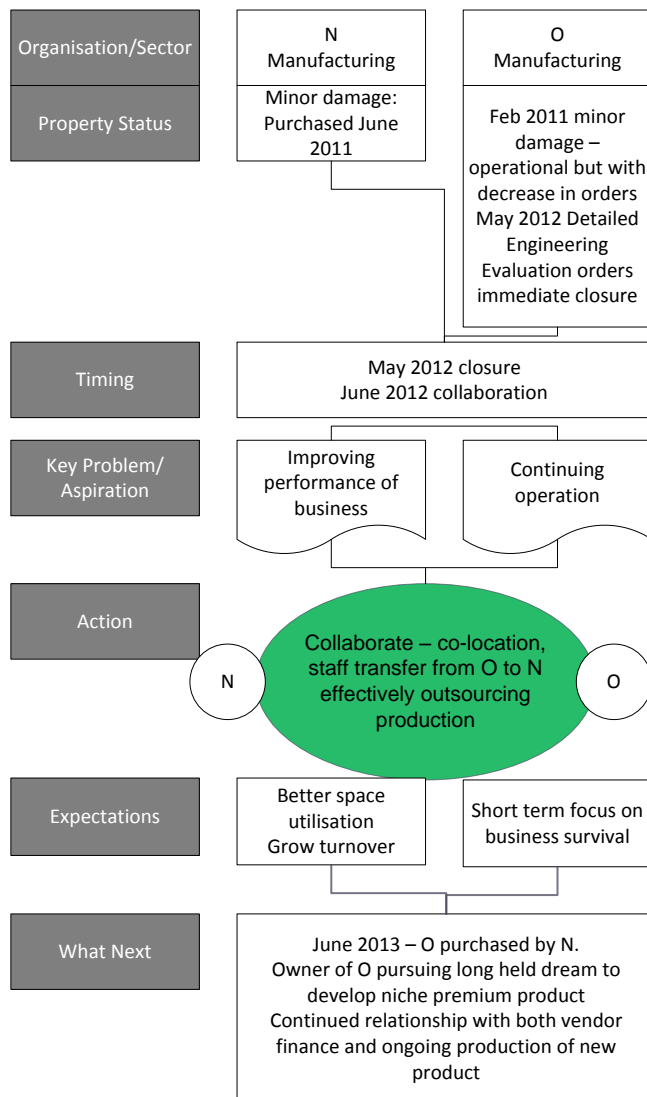
Both K and L have made changes to their organisations following the earthquakes with efficiencies gained through remote working arrangements and from lessons learned regarding what the essential revenue generating tasks are. For K this was largely driven by the need to achieve profitability. For L, the revenue streams changed enormously after the earthquake with a great change from fixed infrastructure to cloud services, along with the cessation of a number of regular customers. L also describes the impact of other businesses focus on recovery:

“Our revenue was good for about three months after the quake because we had enough in the engine to go on. But then when it dropped off, because everyone kind of exhausted their IT budgets”

(Owner – Organisation L)

Both are happy with their choice to collaborate, rather than go-it-alone. However, concerns over future affordability with an increase in central city rents, along with the initial five year only term of the EPIC facilities are causing some uncertainty over future strategy.

2.4.Collaboration 10– manufacturing



■ Organisation O

This is a very long established family business which manufactures and sells to retailers and intermediaries. Located in a semi industrial suburb, the organisation came through the earthquakes relatively undamaged, although with declining turnover due to the closure of two of their key retail outlets, and an overall slowdown in orders. As one intermediary put it post February, “but we just don’t want to bother you”. Business was continuing with some help provided by Recover Canterbury

to help with this slowdown. The Earthquake Support Subsidy was utilised for the initial shut down period following the February 2011 quake.

At the beginning of the following year (2012), media reports began to detail the effect of earthquake engineering evaluations on other organisations and the respondent raised concerns that this may be a problem for O to his advisory board. In May 2012, an engineering report revealed that their premises were only 5% of building code and needed to be closed immediately. The respondent considered various options. He looked at other premises, however anything affordable usually had not yet received a Detailed Engineering Investigation and he was concerned that they would encounter exactly the same issue. Newer premises, where these concerns were of less relevance, were twice the price of his current premises (leased from family). Closure was considered but dismissed for two reasons. Firstly, he was concerned about continuation of supply and customer retention – living off business interruption insurance while rebuilding for 12 months may lead to a longer term problem with customer loss. Secondly, the initial noises made by his insurance company with regards to the insurance coverage were concerning, with the insurance company expressing scepticism over whether the building problems were solely earthquake related. Collaborating with another company had always been on his list of options. To him this seemed a straightforward logical thing to do - partly influenced by seeing a collaborative model on a trip to visit Italian furniture manufacturers many years ago. He had previously shared this idea with others but had been dismissed by what he describes as a very conservative non trusting industry.

Organisation N was chosen as the first choice for collaboration for three reasons. Firstly he felt that as a newcomer to the industry, the owner of N may be more amenable to the idea. Owner N fit the description used by Kuhn to describe individuals that prompt revolutionary changes; young and new to the field and therefore not heavily invested in the ‘traditional’ way of doing things (Gersick, 1991; Kuhn, 1970). Secondly, he had seen some media coverage suggesting that N had spare capacity and thirdly, simply because he felt that N’s owner was likeable and seemed on first appearances to have some similar values. The only prior relationship was a casual acquaintance at the industry association events.

After discussions with his advisory board, the respondent approached Organisation N and floated the idea and within three days commenced moving in. Initially the key aspects of the agreement were recorded as bullet points and the actual move was done on simply a handshake. Some legal advice on the kind of things to consider in an agreement was obtained and the two owners then just expanded upon those bullet points. The owners decided that the best way to make the arrangement work was for N to hire all staff and lease all of O’s equipment – in effect outsourcing the production. The staff were advised of the plan explained in the terms that they were moving and that they would be hired at

the same terms and conditions (which was a big ‘give’ by N as these were more generous than his existing staff) and that they would be made redundant from O. The respondent worked hard to ensure that his staff had a viable future and that they were looked after and it was very apparent that he felt very hurt by the negativity and lack of support from some of the staff in that period. He has rationalised since that the staff were fearful which created anger which was pointed towards him but felt that given that he was mortgaging his house to make this work, they could have been more understanding. All except two of the staff transferred over to Organisation O and in the longer term this has proved to be successful, albeit with a period of uncertainty and discomfort.

The move and settling in was hugely disruptive for both businesses with full resumption of production taking at least a month while the workshop was set up correctly. For the respondent this was a period of sheer hard work and determination to overcome the set up obstacles in a very short space of time. Assistance was obtained from Recover Canterbury for marketing and legal advice.

The new business model that resulted left the respondent as the sales, marketing, administration and accounting person and proved somewhat unsatisfactory with long hours, and low profitability. The respondent has a young family with whom he was spending no time and the business was “all consuming” with constant phone calls even when he tried to take a break. Prior to the earthquakes, a business plan was being developed for a new brand which would be manufactured by the organisation and was really the passion of the respondent. These plans effectively got put on hold post-earthquake. Much soul searching regarding the future led to the realisation that “I hate Organisation O” which was taking all his time leaving nothing for the new venture or his family. The proposal was mooted approximately 7 months after the collaboration commenced to sell the business entirely to Organisation N, after discussion with his business mentor. This decision was a difficult and emotional one but also lifted what felt like a huge millstone from the respondent. It was a difficult process to agree a sales price with what was now a friend and colleague but this was resolved to a reasonable level of satisfaction and the respondent exited the business in June 2013. There is an on-going relationship with some financing left in for an 18 month period and a manufacturing agreement for the now to be developed new company.

The respondent is now pursuing his dream and passion of a new company while also getting to spend more time with his young family. As he puts it:

“I like the earthquake, I liked what we’ve been through, (because) without it I probably wouldn’t be where I am now”.

(Owner, Organisation O)

■ Organisation N

Organisation N, a small manufacturer, was purchased in June 2011 – post earthquake by its current owner. The prior owner who had owned the business for only two years had other business interests in different locations and had found that the business sold to him as a ‘hands-off - will run itself’ investment required far more time and energy than was available. The current owner who was looking for any kind of business saw potential and while he had no experience in the manufacture process believed the business required some management, not technical input, to flourish.

The organisation suffered very few effects from the earthquakes. Their premises were undamaged and insurance covered repairs to some damaged equipment and were accomplished quickly. Some of the main avenues of sales were closed, however the manager was able to replace these with new channels very quickly. Business as usual was ticking along with the new owner having instituted new processes and sales channels and the business positioning itself to try and expand into the Australian market.

The owner was approached by Organisation O’s owner following a meeting of the industry association. There was no other relationship with the two owners, other than as members of the same trade group.

“and so I knew XXX of that, you know, he was a competitor but one day after meeting at the trade group he said, look can I catch up with you for a coffee, so we went and had a coffee and I thought it was weird at the time because it was – yeah, an unusual sort of thing, request”

(Owner – Organisation N)

Organisation N saw the potential offered by Organisation O’s predicament with it achieving one of the key current aims to gain more utilisation of the space and machinery and a greater turnover to support those overheads. The two seemed to ‘click’ in terms of feeling they were able to work together in an open and honest way. After a very quick process of deciding how the collaboration could work and drafting out Heads of Agreement, the collaborative venture commenced.

The form of collaboration was largely driven by the operational functioning of the businesses. The idea of simply sharing the premises and equipment was believed not to be possible in terms of staff time allocation and cost splitting and so the idea of Organisation N effectively manufacturing for Organisation O, along with co-locating was born. What this meant was that effectively Organisation O became a one man band with its operations outsourced to Organisation N.

Trust is mentioned repeatedly as a key factor in making this relationship work, along with the sharing of some key values and keeping communication channels open.

“he relied on me and I relied on him a fair bit through that period”

(Owner – Organisation N)

The two owners had weekly meetings as well as co-located offices in order to resolve issues as they arose. Issues did arise with the accounting in the initial stages and this was raised as a slight problem that had not yet been resolved.

The collaboration was working successfully from this organisations perspective, with the aims of getting greater turnover to meet its fixed costs being largely achieved although the bedding down process took some time. The new arrangements were only really still settling down when Organisation O made its own decision to get out of the business to pursue a related dream. Organisation N after due consideration agreed to purchase Organisation O financed by further loans and some vendor financing.

At the time of interview, it was too early to say if this new business, which has more than doubled its employee numbers, will be a success. Early indications are positive with good feedback from customers who are now offered a wider range of product and potential for further brand enhancement and efficiencies still to be realised. The relationship between the two business owners is on-going with the manufacturing of the owner of Organisation O’s new venture still to be done by Organisation N.

While this owner has had to deal with residential issues and mentioned briefly the time that this takes, he also appears to be overcoming any distractions. He has achieved the enormous task of improving the existing operations, managing the relocation of the other organisation and the ongoing collaborative process. More recently, he has managed the purchase and assimilation of the second business with little expression or indication of any toll that this may take. Residential issues and earthquake effects such as damage in transit were mentioned as things simply taking up some time rather than as the distractions or the emotional aspects common in other interviews.

2.5.Collaboration Summary - Evolving

Collaborating to obtain needed resources was the most prevalent in this study with seven collaborations and 15 organisations. The eight organisations discussed in this chapter have moved

beyond simply obtaining the necessary premises to enable survival, to exploring how this offers opportunities for improvement of their businesses. Had the organisations pursued their alternative options of leasing alternative premises alone, it is unlikely that these opportunities for long term strategic benefit would have occurred. Table 20 illustrates that two of the collaborations (8 and 9) were created with legal agreements from commencement and two (7 and 10) followed a more evolving process with a focus on achieving the necessary tasks then followed by a legal formalisation. Comparison of the commencement dates illustrates the longevity of the disaster impacts with these collaborations commencing between 8 and 17 months after the most damaging February 2011 event.

Collaboration	7	8	9	10
Sector	Retail	Retail	ICT	Manufacturing
Longevity	Ongoing	Ongoing	Ongoing	Partly ongoing
Form	12 month informal Legal contract	Legal contract	Legal contract	Handshake then legal contract
Commenced	October 2011	June 2012	September 2012	June 2012
Pre-existing relationship	No	Acquaintances	No	No
Other Actions Considered	Continue search for new premises	Relocate/continue search for new premises	Continue search for new premises	Closure/New premises/New markets

Table 20 - Resources Eroded/Growing awareness of environmental differences Summary

Both Collaboration Seven and Eight have created a new post-disaster strategy which has much in common with an emerging organisational strategy described as co-opetition (Bengtsson, Eriksson, & Wincent, 2010; Gnyawali & Madhavan, 2001). Co-opetition is a strategy of “simultaneous co-operation and competition” (Bengtsson et al., 2010, p. 194). For these businesses, the co-operation draws customers into attractive and convenient premises through marketing by any one of the organisations, while the competition element exists in the different (but potentially complementary) product offerings within that shared environment. The views of organisations in collaboration seven regarding how their small New Zealand companies can compete with larger Australian organisations also mirrors work in the area of co-opetition. Research into co-opetition suggests that this strategy may be an effective means to improve their competitive position with a third firm (Bengtsson et al., 2010; Bonel & Rocco, 2007).

Collaboration 9 delayed the resumption of ‘normal’ functioning for the two organisations; however, this was acceptable given the promise of future strategic benefits which have occurred to differing degrees for each organisation. Collaboration 10 can be viewed as both a success and failure. The

business model swiftly created to ensure the survival of Organisation O could be viewed as unsustainable as it created long hours and low profitability for its owner. However, it did enable survival and ultimately options in terms of maintaining the asset value of the operation, as well as enabling continued employment. For Organisation N, it enabled the achievement of one of his strategic objectives, to gain better productive use of his assets in a way he had not previously considered.

EPIC is the 2nd large place based collaboration considered in this study. Similarly to Re:Start this initiative involved public funding, a greater number of stakeholders and a significant public benefit in both its use as a community venue, but also as a beacon of hope for the future. Table 21 considers how the EPIC journey relates to each of the elements identified in the Model of effective Post-disaster collaboration.

Framework Element	EPIC
Context	Initiated at a time where culture of bottom up innovation and adaptation still strong but sufficiently after first disaster for participants to have gained situational awareness as to limited options. Longevity of project from inception to completion resulted in changing context.
Membership	Based on industry affiliation. Entirely voluntary. Attracted by potential to create something greater than anyone could alone. Some degree of interdependence in terms of ensuring industry perpetuation in region. Wide range of prior locations and accommodation quality.
Leadership	Respected as successful in industry giving some legitimacy in an industry with many younger organisations. Clear collaborative capabilities.
Structure	Evolving with little initial risk to participants.
Process	Evolving with initial tenant support used to convince local authorities to grant land free and that support used to attract funding and professional consultancy support. Consultative with key stakeholders throughout but decisions driven by founders rather than consensus.

Table 21 - Key collaboration elements: EPIC

A review of the Framework elements in relation to individual business collaborations takes place in Chapter 8.

3. Organisation Characteristics

The organisations involved in these evolving collaborations are all relatively long established small enterprises as illustrated in Table 22. Despite the advantages thought to be conferred by multiple locations, two of the organisations with this attribute still found collaboration to be a necessary means to restore function and offer future potential. Entrepreneurial Orientation scores range from a low of 3 for the long established family manufacturer to a high of 5.2 for the new owners of a longstanding retail business. Locus of Control attempting to measure the degree to which the respondents believe their actions determine outcomes range from four to seven, indicating a belief in their ability to control events.

Collaboration	6		7		8		9	
Sector	Retail		Retail		ICT		Manufacturing	
Organisation:	C	E	F	G	K	L	N	O
No. of staff pre EQ*	6	10.5	2.5	12	5.6	11.9	4.2	9.5
Age (months)	480	180	72	264	90	192	144	744
Current Ownership(mnths)	36	72	72	264	90	192	24	720
Sole/Chain	Sole	Branch	Sole	Branch	Sole	Sole	Sole	Sole
Entrepreneurial **	5.2	4.8	3.9	4.4	4.2	3.7	4.3	3.0
Locus of Control**	6	7	4	5	6	4	6	6
Post EQ:								
No. of staff	3	10.5	3.0	6.5	4.6	8.9	13.2	1.5
Resilience Score***	6.69	6.08	6.23	5.0	5.31	4.62	4.38	5.08
Owner/Manager: Age	30-39	40-49	40-49	50-59	40-49	30-39	30-39	40-49
Gender	M	M	M	M	M	M	M	M

*full time equivalent

**1=Low, 7=High (see Chapter 3)

***Average resilience score 1=Low, 8=High across 13 indicators

Table 22- Summary of organisation characteristics

4. Conclusion

Organisations who participated in these collaborations had the vision to explore how this strategy could fulfil not only their need for premises, but also offer the potential for other strategic advantages. For one, this understanding evolved through a trial period in temporary premises, for others, the potential benefits of this approach to securing resources were identified before commencement. One of the most striking things apparent in discussions with all respondents in this category was the

rapidness with which they embraced and implement this new idea. For the majority of the organisations, there was very little analysis or reflection on the advantages or disadvantages of the proposal. However for many, the idea was only born after a fruitless search for the more conventional alternative premises. The concluding chapter of this section will discuss the decision making processes along with other key themes from this and the preceding two chapters.

Chapter Eight - Organisational Responses Part Four: – Discussion and Theory Building

1. Introduction

The prior three chapters set out the detail of the collaborations that are the central focus of this research, categorising them by their purpose of either adapting to resource needs, environmental change or a combination of both issues. This contributed to answering the key research question with regard to the nature of the collaborations that occurred with a variety of approaches and goals identified.

This chapter moves from the more micro level consideration of organisations, collaborations and quadrants to consider overarching themes, bringing together these individual stories, with the addition of added detail on organisations journeys as needed. Firstly the overall efficacy of the collaborations and the question of whether they made a difference is discussed. Key themes that emerged including the nature of post disaster organisational impacts, post-disaster strategic choices and decision making are outlined. Finally, the process of collaboration is reviewed against the framework for effective collaboration and revisions to that framework suggested.

2. Efficacy of collaborations

2.1.Individual Businesses

One of the important purposes of this research is to understand whether collaboration is an effective disaster recovery strategy – does it make a difference? Overwhelmingly the answer from this study is yes. With the exception of one sold business (Organisation O), all of the collaborating organisations have continued to operate and the Outcomes section (Chapters 12 & 13) will discuss that the majority are optimistic regarding the future. Six of the collaborations were ongoing at the time of interviews, and the remaining four served as necessary stepping stones on the journey of recovery.

Four of the collaborations discussed in Chapter 7(Collaborations 7,8,9,10) have entered into arrangements that may offer significant long term benefits. These collaborations have moved beyond a transactional stage that sought to solve immediate problems, more towards Austin's description of

integrative (Figure 5) where the interaction levels and scope of activities are intensive and strategic value to the organisations significant (Austin, 2000). These kinds of collaboration are theorised to be likely to result in greater knowledge generation through the repeated and intensive interactions and this was reflected in comments from Collaborators in 7, 8 and 9 who referred to the benefits of observing and learning from their partners.

Collaborations which did not endure may have offered fewer benefits and remained at a more transactional level. However, they still served a valuable purpose in assisting those organisations in recovery, allowing customer retention and an important sense of purposefulness for both owners and employees. Purposefulness or a sense of actively participating in recovery is a hugely important contributor to psychosocial recovery (Mooney et al., 2011).

2.2.EPIC and Re:Start

Recovery from a major disaster is long and complex (F. Powell et al., 2011; Vallance, 2011). The efficacy of any one individual recovery initiative is intertwined with all of the interrelated strands of physical, social and economic recovery. The impacts of the EPIC and Re: START initiatives go beyond the simple provision of suitable space for the businesses involved and need to be viewed from this wider recovery perspective. These two privately led initiatives demonstrate the wisdom of citizen-led recovery whereby the affected groups were allowed to mobilise their own capacities (Paton, Johnston, Mamula-Seadon, & Kenney, 2014), initially unhindered by the central planning or bureaucratic processes that may characterise some other areas of the cities recovery. The initiatives were successful, not only in terms of providing temporary space for businesses but in relation to overall community perceptions of recovery possibilities.

▪ Project Aims

Both projects achieved their aims of providing innovative and attractive spaces for retailers and ICT companies displaced by the earthquakes. The aims were achieved in a timely fashion and both precincts have had high levels of praise from both the tenants and the wider public.

▪ Psychological Impacts

The creation of something new, innovative and attractive provided a glimpse of a positive future at a time when little rebuilding had occurred and the region was still enduring ongoing trauma with continuing large aftershocks. The high visitor numbers to the Re:START area in the initial opening period indicated a public desire to revisit the central city and to celebrate a small piece of normality. The promotion of early wins suggested by Vallance (2011), as a way of seeing a way forward through

what can otherwise be seen as an "intractable mess", is supported by the Natural Hazards Centre (2001). These early wins help to create a positive tone which then aids the possibility of both future investment and innovation. Quick wins such as these introduce a new element to the institutional frameworks, or rules of the game in terms of how things can be done in the complex and uncertain environment. The subtle shift in the mental models of the citizenry towards a more positive, can-do attitude, or a shared narrative of successful projects (Johnson, Elliott, & Drake, 2013) can be helpful in promoting other initiatives that support general recovery.

▪ **Business and Employee Retention**

There are many influences on whether businesses remain in the disaster zone, or choose to migrate outside of the affected area. Research in progress in Christchurch indicates that business decisions to stay or relocate are significantly influenced by their embeddedness within a community, most particularly for those with families and children (Stevenson, 2014). The ability to work in the new, exciting, and fit-for-purpose spaces provided by EPIC and Re:START provides a positive for staying and could potentially tip the balance for those who may have wavered. This was particularly significant for a number of ICT companies whose businesses could quite effectively work from any urban city with the promise of the new and different space helping to support their emotional ties to the city. Two very young retail organisations in Re:START suggested that their businesses would not have recommenced or begun if it were not for the existence of Re:START which offered what they perceived as the right vibe for their niche businesses.

▪ **Cultural**

Re:START has provided a venue for displaying art, street performers, musicians and other performing arts in a city greatly lacking in cultural venues following the earthquakes. EPIC has provided a venue for industry events, speakers and hosts meetings for the Ministry of Awesome¹². All of these give the organisations and individuals involved a sense of purpose and normalcy allowing them to resume art, performance, seminars and meetings while also giving the community a sense of involvement and engagement with the partly publicly funded spaces.

▪ **Hand Up Not Hand Out**

The New Zealand context is somewhat different than many other countries facing the immense task of recovery from disaster in that we have extremely high levels of insurance penetration (C. Brown et al.,

¹² The Ministry of Awesome is "an enabler, do-er and champion of and for awesome. They connect awesome ideas with the resources to turn them into reality -- people, funding, mentors, government entry points and enthusiasm, all with the aim of rippling awesome through our community to strengthen, encourage and inspire".

2013; King et al., 2014). This is very significant for long term outcomes with research showing that the sourcing of financing for re-construction is a significant factor in reducing loss (Natural Hazards Centre, 2001). Government, both local and national clearly has a role to play in supporting business recovery (Atkinson & Sapat, 2014). However, in a strongly market driven economy with high levels of insurance, the form this takes may be somewhat different from many other nations.

While, in the long term, high levels of insurance coverage for loss may greatly assist business recovery, in the short term, there are significant delays not only in assessing and settling damage claims but also in being able to convert that capital into functioning equipment and space. The support of the government in assisting and funding or enabling funding of these two projects was a sensible hand up, rather than hand out that helped to bridge the gap between short and longer-term needs of business. The small and relatively hands-off involvement of the government is in keeping with the prevailing political ideology that the “state is to deliver policy and goods and services only where market failure demonstrably exists” (United Nations Economic and Social Commission for Asia and the Pacific, 2012). Research into government aid in other disaster stricken cities also suggests that direct financial investment by government may not be a good thing, with those investments often poorly implemented (Gotham & Greenberg, 2009).

■ Conclusion

These projects have both provided significant benefits not only for the key stakeholders, but also for the overall recovery of the region. They have both created small areas of vitality in a largely vacant city centre as well as showing the world of new possibilities that exist following a disaster of this scale. Given the small amount of public funding involved in the creation of these two projects, the benefits listed here seem well worth that cost.

3. Post Disaster Organisational Impacts

The stories of these organisations illustrate the wide-ranging and long-lasting impacts of the disaster on their operations. A disaster causes direct damage to the built environment which may cause indirect impacts on organisations through dependencies on the infrastructure, and interrelated effects of population and demand changes in their environment. Most discussion in the extant literature implies that these impacts occur in the short term period spanning response and early recovery. Although writers do note that the recovery process is iterative and disjointed (Berke et al., 1993; Quarantelli, 1999), much of the conceptualisation of business recovery still implies a shock, followed by an immediate period of readjustment ending either in success or failure. In line with this somewhat straight line conceptualisation of recovery is the common myth that length of closure is

correlated with likelihood of recovery. This idea, often used in material promoting pre-event disaster mitigation is not founded in any empirical research (Gosling & Hiles, 2009) but has become part of the standard approach to assessing recovery in terms of re-opening, rather than long term viability. The stories of these Canterbury businesses illustrate the far reaching and long lasting indirect impacts including rental increases two years post-disaster, building closures 14 months later, and a complete lack of commercial premises supply more than 24 months later.

3.1.Longevity of Effects

Figure 33 illustrates the time-frames within which organisations in this study closed, re-opened, or entered into collaborative arrangements.

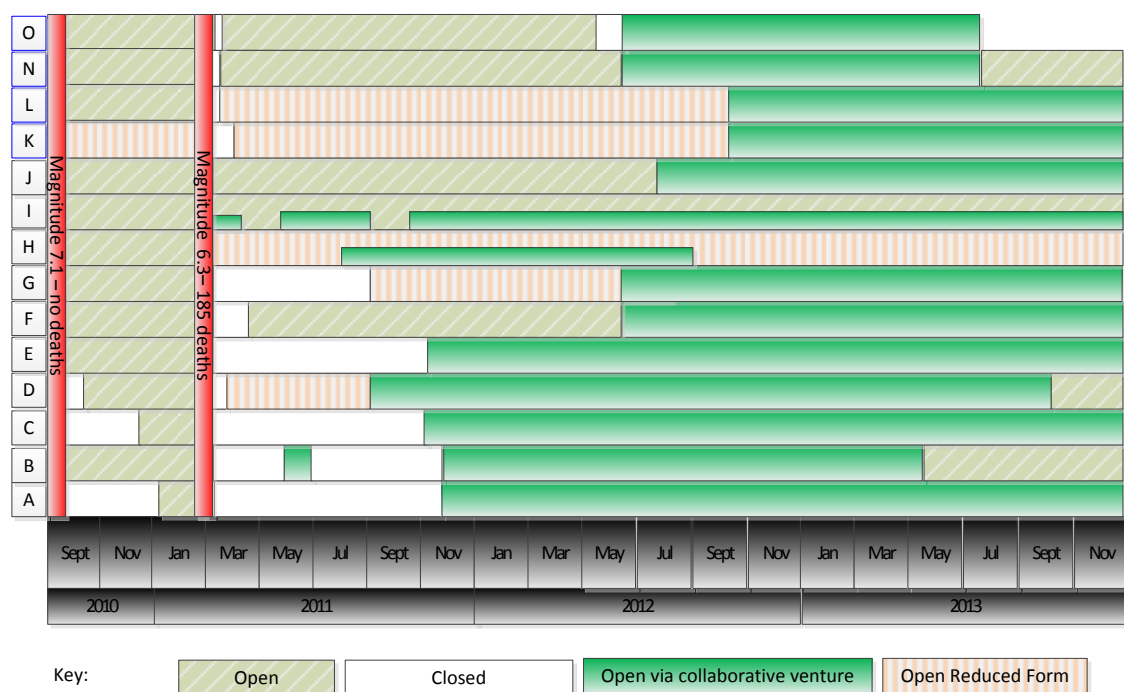


Figure 33 - Timing of closure periods and collaborations

The graph illustrates that with the exception of one organisation (K), the February 2011 earthquake was the core event generating the direct impacts. The longevity of impacts resulting from this event is a factor of the high degree of damage caused by that event, the decision to completely restrict access to the central city core while demolition and make safe work was carried out, and the ongoing seismicity. The ongoing seismicity with major events occurring in both June and December 2011, contributed to a greatly increased perception of risk which may have delayed some re-investment and rebuilding decisions. The complete closure of the Central Business District and high levels of

demolition, rather than repair, created a much greater need for alternative options in contrast to many other disasters where repair or rebuilding on existing sites is the most common recovery strategy.

Most organisations have found that everything relating to repairs and rebuilding has taken longer than thought despite good planning. Respondents described delays, in many cases of up to six months, from planned completion dates.

There is little recent detailed study encompassing longevity of closure after disaster. One study which does consider this was carried out in New Orleans after the devastation of Hurricane Katrina. This survey conducted by telephone reported re-opening rates of 26% after four months, 39% after ten months and 66% after 24 months (Lam et al., 2009). These results suggest that the perceptions of the longevity of disruption in Canterbury may be more influenced by desire to recover rather than realistic notions of the recovery process. The following quote, from Organisation C illustrates the unrealistic expectations and the role of media in their creation.

I saw photos of Japan and they're half built already and they were much worse than what we were, you know, damage-wise and yet they've got buildings going up all over the place and yet we're still looking like, you know, a tip around here

(Owner - Organisation C)

3.2.Variety of Effects

Organisations in this study described a great number of indirect effects occurring more than two years after the most damaging event. The three common themes in their stories relate to demand changes, disruption due to infrastructure repair and distraction.

▪ Supply and Demand Changes

While organisations in this study described few issues with the supply of inputs, variability in demand, as well as changes in the structure of the demand affected many. For example, retailers in this study involved in home refurbishment products, are now finding a different market with a big lift in the commercial market relative to individual customers. Their businesses are very conscious of capturing market share in the residential and commercial rebuild as well as expressing concern as to what occurs when this is complete. These retailers also suffered a significant slump in demand for their products immediately following the disaster. For retailers offering discretionary leisure products, demand which initially surged then suffered a great slump with the occurrence of the third earthquake dampening demand for leisure products. Manufacturers suffered from the closure of retail channels at the same time as needing to counter perceptions from customers outside the region

that they were badly affected. For ICT companies, the nature of services desired by customers changed as companies reviewed the future resilience of their systems and in many cases looked to cloud based solutions.

Unsung heroes emerge in both the waste and security service sectors (Organisations J and I) who worked 24 hour shifts in the initial response phase to assist with search and rescue and sanitation and hygiene issues. These companies, not commonly thought of as essential parts of a response effort needed to manage this period of intense demand while considering their own plans for long term recovery.

▪ **Neighbourhood Effects**

Many organisations in this study were impacted long after the initial disaster by changes in their surrounding areas. Effects included a second period of closure due to a detailed inspection of neighbouring buildings, rental increases due to the inflow of re-located businesses into the area, and traffic congestion issues from locations previously offering superb access to the rest of the city. Neighbourhood effects can also be positive with an increased demand due to the popularity of an area and attraction of a new and different clientele replacing some that may have been lost. Indirect effects are noted as hugely significant for the tourism industry (Orchiston, Seville, & Vargo, 2014), but are also relevant to many other sectors.

▪ **Infrastructure Damage**

Although the recovery of businesses was greatly assisted by the quick restoration of essential services, the ongoing disruption caused by the necessary repairs to underground pipes and roads is having a major effect on companies who travel as part of their work. One of the respondents (N) describes a 30% increase in damage to goods in transit due to the poor road conditions. Another respondent (J) suggested that they have to spend an extra two hours per day to get to their jobs due to the changed traffic patterns, repairs and resulting congestion. Major repairs resulting in closures and a loss of on-street parking are an issue particularly for retailers, despite the high level of effort invested by repair teams in maximising access to affected businesses.

▪ **Diverted Focus**

For many organisations, the enormous impact on the overall region resulted in a significant loss of productivity due to the diverted focus of both owners and employees. The disruptions of repeated re-locations, the frustrations of making new space workable, and the personal and residential issues requiring attention have meant that all involved have been diverted from a focus on business

efficiency and growth. The repeated re-locations required immense amounts of time and effort to make workable. For example, the manufacturers in collaboration 10 stated that it was four weeks until operations resumed a normal pattern after their co-location. For four of the organisations (C,D,K,N), the personal issues were highly evident in their interviews, despite a lack of questions on this topic. For other individuals, these issues (while no less severe in terms of impacts) seem more compartmentalised and were presented more as issues relating to time-management rather than the emotive and clearly stressful stories evidenced by others. The following quotes from a selection of the organisations illustrate the issues being dealt with while trying to recover the organisation:

“I mean, we had three staff in the red – two in the red zone and one in a lovely old house on Hereford St, I think it was. So, all suffered a lot of damage, as did my house. You know, we’ve got \$350,000 worth of damage and still sitting waiting for something to happen. I’ve been hugely impacted. My daughter is – her bedroom was very badly damaged, you know, bricks through the roof and the wall ripped open and you know, she’s been on antidepressants, she sleeps in our dining room still, three years on, on the ground floor- - - because all the bedrooms are upstairs. She was thirteen when it happened, so she’s sixteen now. So, she’s had huge dislocation in her life which flows through to the family, and you know, the house is freezing in winter and we’ve even had, just in the last three weeks, more repairs done to try to insulate the house for this winter, courtesy of Southern Response”

(Owner – Organisation K)

“I mean we could spend five years me talking about that, and I guess that affects you as a business owner in that you’ve got, in my situation where I’m going through a reasonably hectic time at work and then you have to deal with all that BS outside of it and that just creates another whole issue and it affects your life and everything that you do in your life. You know, like today I’ve had to spend half an hour talking to Southern Response about why they haven’t paid our temporary accommodation invoice from our land agent”.

(Owner-Organisation N)

“When I’m 80 or 90 or whatever – whenever on my deathbed and somebody has turned around to me and said “if you could go back and not witness it, would you?” I’d say, “no”, because we saw things that many people, 99 percent of the population on this planet will never ever get to see. We saw buildings crumble in front of us, we saw concrete rubbish bins fly six stories high in the air and then come down and just shatter on the ground, we saw facades of buildings fall over with people still in the inside of them”

(Owner - Organisation C)

“I think five of them had lost houses so, you know, they were dealing with other things as well”

(Manager - Organisation D)

The complicated nature of the residential recovery in Canterbury is commonly presented as an issue of community well-being but is also a significant factor in impacting organisations ability to recover and thrive.

3.3.Summary – The Journey of Recovery

The end result of the long lasting impact of indirect disaster effects is, for many organisations, a journey towards recovery that is not a straight line but is characterised by ups and downs as illustrated in Figure 34. For organisations such as our manufacturers who lose premises 14 months later, the downward drop may be huge. For others affected by demand surges or traffic congestion these curves may be a great deal shallower. The purpose of Figure 34 is to illustrate that the lingering impacts on organisations’ environments leave few organisations unaffected. The path to recovery for each organisation may be impacted, long after the initial disaster event, by the ongoing indirect effects. The conceptualisation of recovery– represented by the dotted line of a straight line path from some impact state to recovery would more correctly be represented by the solid black line of gains and losses in the short to medium term.

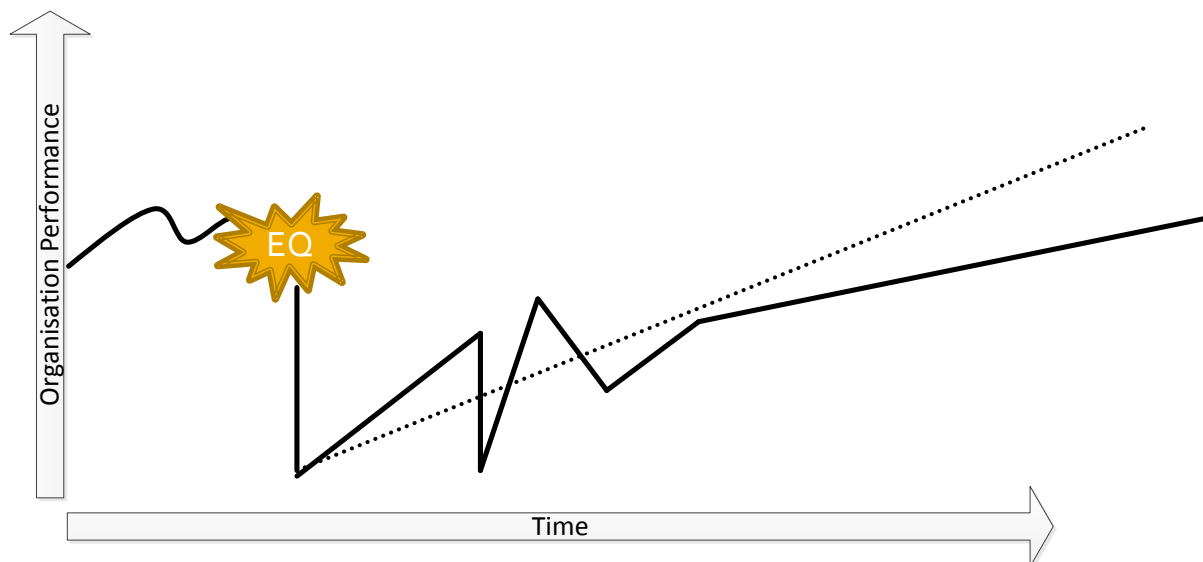


Figure 34 - Recovery Trajectories

4. Post Disaster Strategic Choices – Decision Making

Research on organisational resilience; the question of how some organisations are able to survive and thrive during and after crises suggest that resilience stems from both planning prior to a crisis, and the capacity to adapt following the event (McManus et al., 2008; Seville et al., 2008; Stephenson, 2010). In the context of this study, adaptive capacity can be viewed as the ability of these organisations to make the ‘right’ decisions following each of the damaging earthquakes. Rather than a formal structured strategy making process, creating a post-disaster strategy to adapt to the resource and environmental constraints is an emergent and iterative process which may involve the use of some traditional strategic management decision tools but which are also adapted and reconfigured to suit the environment. This is in line with strategic management research suggesting logical incrementalism or adaption as an alternative to classical formal process based strategy making (Jarratt & Stiles, 2010). There are a number of key influences in this decision making process. Firstly, the organisation’s goals – which for many of the small and medium enterprises are more directly the owner’s goals. Secondly, the decision team’s ability to understand the situation they faced. Thirdly, and clearly evident in the stories of many organisations, their ability to reach out and discuss and share their issues with networks in order to conceive of solutions.

Assuming a starting point of “now what” which is the question posed to respondents, the following decision tree (Figure 35) shows a representative process for those organisations who lost their premises

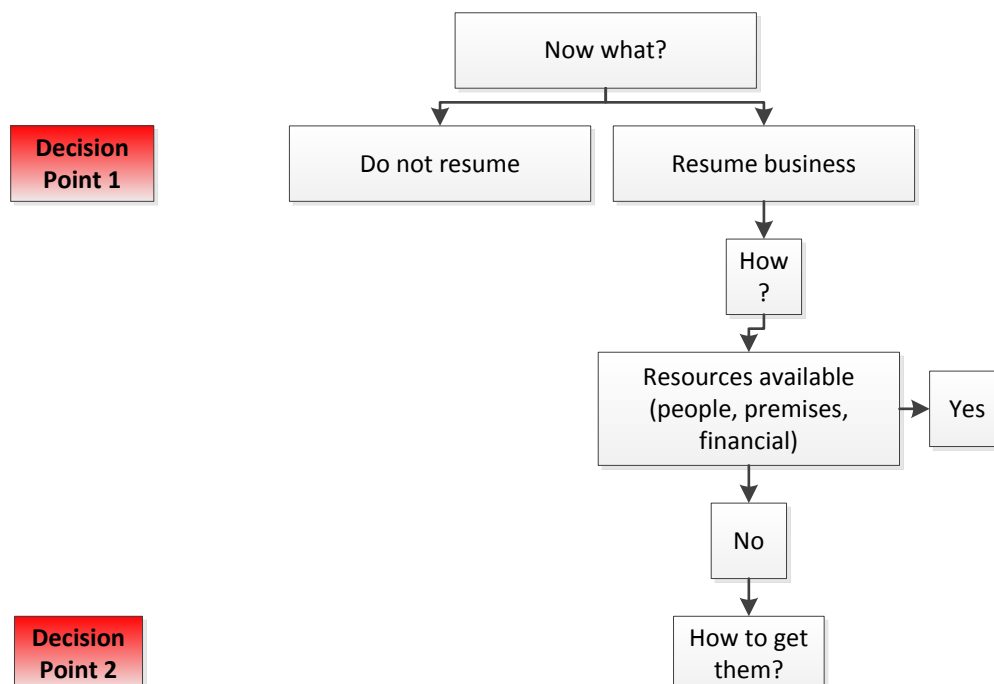


Figure 35 - Initial Decision Making Post-Disaster

4.1.Decision Point One

The first decision point (1) was whether to strive to resume the business. For the majority of the respondents in this section, this first key decision point was passed very quickly with few appearing to give any real serious consideration to not attempting swift resumption. Work on decision making biases may be relevant in understanding the quick dismissal of this first major option in the process of recovery.

▪ The Role of Bias

The field of strategic management recognises a number of cognitive biases or ways of thinking that can significantly influence an organisations choice of actions (Hill et al., 2007). Ones that are clearly relevant to post-disaster decision making include escalating commitment, framing and anchoring effects and the status quo bias.

Escalating Commitment

This is the practice of continuing to invest money in a venture to recoup sunk costs when better investments are available (Arkes & Blumer, 1985). This is also known as loss aversion whereby any potential loss is viewed as a more significant decision making influence than a gain (Kahneman & Tversky, 1984). Effectively, this is a strong force for Christchurch business owners relating not only to financial investments (some of which would be insured losses), but also to the psychological commitment they have invested in creating and building their own businesses. For these owners, the risks of resumption are given less regard than the perceived loss that would occur if business did not resume (E. George et al., 2006). Saumelson and Zeckhauser (1988) also discuss how the avoidance of regrets influences this escalating commitment. Individuals fear regretting a decision, even if it seemed the wisest given all available information at the time of the decision. The following quote from Organisation G illustrates the notion of concern about potentially later regretting choices:

I think if we'd walked from it (the business), we'd look back and think, "mm, that was...", yeah, "I don't know why we did that".

(Owner – Organisation G)

Framing and anchoring effects

How the problem is expressed unduly influences the outcome. For Christchurch businesses, framing the problem as 'what shall I do now?' leaves many options, framing the problem as 'How do I get my business back open', narrows the choices. The context discussed in Chapter Four strongly

encouraged the framing of getting back open and getting Christchurch back on its feet. As argued by Chamlee-Wright and Storr (2011), the collective narratives, such as ‘we are resilient Cantabrians’, can shape recovery decisions. All of the respondents in this study mentioned some concept of the common good of Canterbury, rather than the pure self-interest assumed by standard business literature (Khozein, Karlberg, & Freeman, 2013). A study of Christchurch residents who did re-locate from the region talks of a high degree of guilt (Adams-Hutcheson, 2014). The following quote from a social media blog highlights the very high level of emotion attached to initial decisions to leave or rebuild:

*Angry of Ilam #34: The people who left didn't care and consider the economic/social trauma they will cause to others. They put their own lives ahead of the community. Fight or flight? They ran. They don't care that their children's teacher is about to lose her job at the end of the year because of falling rolls, they are safe in their new home (...) they have a better life (...) and they can't wait to tell everyone about it (...) **they are making victims out of others, the very stalwarts, true Cantabrians who had the fortitude to stay.***

as quoted in Adams-Hutcheson (2014, p. 172)

Status-Quo Bias

Status Quo Bias is suggested by Samuelson & Zeckhauser (1988) as pervasive in all decision making in that the status quo is often chosen in preference to alternatives due to a combination of factors. Firstly, demands from other parts of an organisation or group may exert pressure – this relates to the issues discussed in framing and anchoring effects in considering the potential pressure to conform to the model of a strong survivor that will get through the events. Social or Institutional norms also play a part here with conforming being “the path of least resistance” (Samuelson & Zeckhauser, 1988, p. 38). As set out in Chapter Four, there was a strong sense of shared identity and will to recover established in Canterbury which influenced business decision making. For many respondents, part of this pressure was self-imposed with statements such as:

“I mean the main reason we did it was the fact that we had all of these Christchurch staff who needed to be paid - - - - and to have to make people redundant or not pay people for that week just really wasn't an option for me”

(Manager - Organisation H)

“you know, there's good people here and staff, what were they going to do?”

(Owner - Organisation B)

Secondly, decision makers may not realise there is potential for choice. This is also evident in some respondents stories where the need to re-open is put as a given, rather than a decision point. Thirdly, any switch from the status quo position involves transition costs which include both financial and mental energy costs. Related to transition costs is the relative uncertainty of any other choice versus the perceived certainty of resuming the status quo. Fourthly, contributing to the status quo bias is the concept of cognitive dissonance – the idea that an individual will find it difficult to hold two conflicting stances simultaneously. In many small and medium enterprises, the identity of the owner is closely tied with that of the organisation. For a business owner accustomed to a view of themselves as a capable hardworking entrepreneur making good decisions, alternative solutions such as withdrawal may create a conflicting idea of a victim or casualty that are not congruent with individuals self-image (Samuelson & Zeckhauser, 1988).

▪ Decision Point One Summary

Due to the high levels of insurance, there is potential that some of these organisations may have been financially better off by walking away from their businesses, either permanently or in the short to medium term. Organisations which did in fact choose this option will be discussed in Chapter 10. The approach of the majority of respondents was that exiting the business was simply not an option. Their business is part of “who I am” and initial decisions to attempt resumption were made without great consideration of financial measures. This is contrary to the notion that post-disaster recovery decisions are made in “the pursuit of maximum economic benefit” (Z. Liu, Xu, & Han, 2013, p. 816). The Transaction cost economics approach to explaining organisational change suggests that due to the costs (time and anxiety) of alternative solution generation, people may choose satisfactory rather than optimal alternatives (H. Aldrich & Ruef, 2006). For these respondents, their goals and beliefs, together with the influence of decision biases discussed above seem to have led to little consideration of exiting as a serious potential option. This is in line with studies of decision making in naturalistic environments which support the idea that satisfactory, rather than optimal solutions are the norm (Berkhout, 2012; G. Klein, 1993; Orasanu & Connolly, 1993).

An alternative explanation for the lack of consideration of alternatives to business resumption is offered in work conducted by Staw, Sandelands & Dutton (1981). Their research into organisation responses to adversity states that the threat posed by the disaster may result in rigid responses whereby cognition and the ability to receive new information will be limited and responses likely to be rigid and congruent with established patterns; in effect, non-adaptive. This is supported by psychology research which finds that people suffering disaster related anxiety are more likely to act hastily (Helton & Head, 2012). However, this does not fit with the later decisions made by these organisations where new and highly adaptive decisions are made as a result of an increased degree of

situational awareness. This suggests that time may be a panacea for an initial rigid response. This results potentially from a transition from a feeling of loss of control to a greater situational awareness, emphasising resource, rather than control loss (E. George et al., 2006). Alternatively the decision to resume business did not represent ‘rigid’ responses but were simply appropriate decisions given the combination of contextual factors and individual goals.

4.2.Decision Point Two

Having determined that the goal is to re-open their business, organisations now faced the problem of how to achieve this. For the organisations discussed in Part Two whose core resources were intact, this decision was largely around protecting and sustaining resources rather than obtaining them. For the majority of organisations, however, the focus was on the means of obtaining the resources necessary to operate. This was primarily premises but also equipment for two organisations, as well as access for some to cordoned premises to retrieve equipment.

The majority of collaborators reached the point of entering into collaboration only after exhausting the more conventional mode of finding standard alternative premises to lease as illustrated in Figure 36 whereby organisations found themselves back at the ‘now what’ point. Another way to conceptualise this process is found in work considering revolutionary change (Gersick, 1991). From this perspective, organisations followed conventional frameworks of how business is done, pursuing standard options for leasing premises through real estate agents, websites and contacts. Alternative ideas were not considered in the initial stages of information gathering - as Kuhn states, options “that will not fit the box are often not seen at all” (1970, p. 24). The realisation that more radical change was required, occurred only over time as organisations came to understand that their ability to obtain resources using conventional means were limited (Gersick, 1991). The earthquake events can be conceptualised as a prompt for revolutionary change, but only as organisations situational awareness of the impacts grows over the months and potentially years following the events. As Gersick (1991) explains, extreme changes in the environment may create a need for revolutionary change but do not cause it to actually happen. There needs to be sufficient failure of standard procedures to create a receptivity to new ideas (Gersick, 1991). Work on revolutionary change also highlights the importance of emotion in generating motivation to accept change. Having committed strongly at Decision Point One to re-opening their businesses, organisations were heavily emotionally invested in achieving that outcome – increasing the likelihood of acceptance of new or ‘revolutionary’ methods to achieve this.

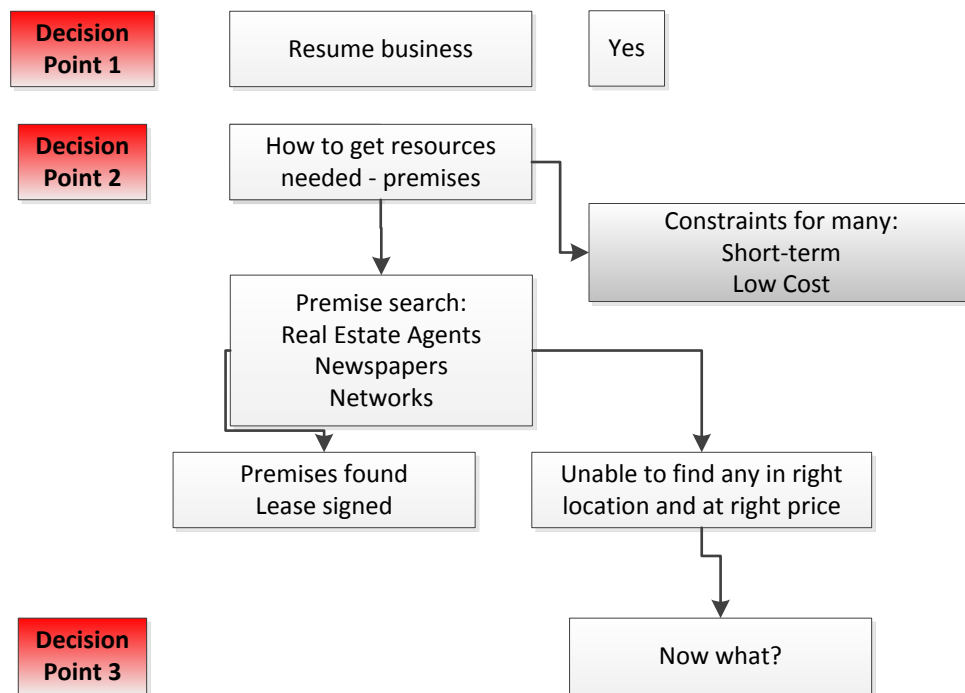


Figure 36 - Decision Sequence Two

Figure 36 illustrates a simplified view of the point (Decision Point 3) at which collaboration seems to have entered awareness as an option. While all of the respondents speak retrospectively about collaboration as a logical, straightforward response to their strategic needs, this only entered awareness after standard conventional options of re-location were substantively investigated and found problematic. At the same time as standard re-location options were being assessed, media and commentary from recovery bodies published stories about collaborations and launched new initiatives such as the Collaborate Canterbury website which may have aided the recognition of collaboration as a potential option through the recognised processes of diffusion or imitation (March, 2006). As George et al., states, “potential loss shifts attention toward novel solutions” (2006, p. 349). All of the collaborating organisations shared their problems and issues with others and it was through these discussions that potential solutions emerged. Contrary to strategic management theory which suggests that partners should be intensively investigated before collaboration, these organisations identified and made agreements with their partners very rapidly.

4.3. Decision Making Summary

According to work by Berkhout (2012), examining research on organisational adaptation to climate change, organisational adaptation can be viewed from three perspectives, each of which contribute to the understanding of these organisations choices. Firstly, a functionalist approach which focuses on an organisation changing to ensure that it can continue to meet its core functional goals, for example,

the production and sale of its products. This is clearly evident in these organisations' stories, with the added element that goals, particularly for smaller enterprises, are driven by individual rather than organisational identities. Secondly, a utility maximising approach drawing more from economic theory suggests an organisation will make the necessary changes to ensure the greatest benefits with least costs. Decisions to collaborate can be viewed from this perspective as utility maximising in terms of achieving key functional goals of re-opening while reducing the costs and perceived risks of doing so. The third perspective, described as an institutional view, places greater weight on the role of context in influencing both the readiness to, and directions for change. This is the general social and cultural framing in which these organisations were making decisions and which strongly influenced the emotive element to decision making, potentially outweighing the utility maximisation. Understanding the decisions made by organisations in this study requires an appreciation of the contribution and potential tensions of all three of these perspectives.

5. The process of collaboration – framework refinement

In chapter 2, I presented a model for effective collaboration drawn from existing literature on collaboration in a variety of contexts which is reproduced here as Figure 37.

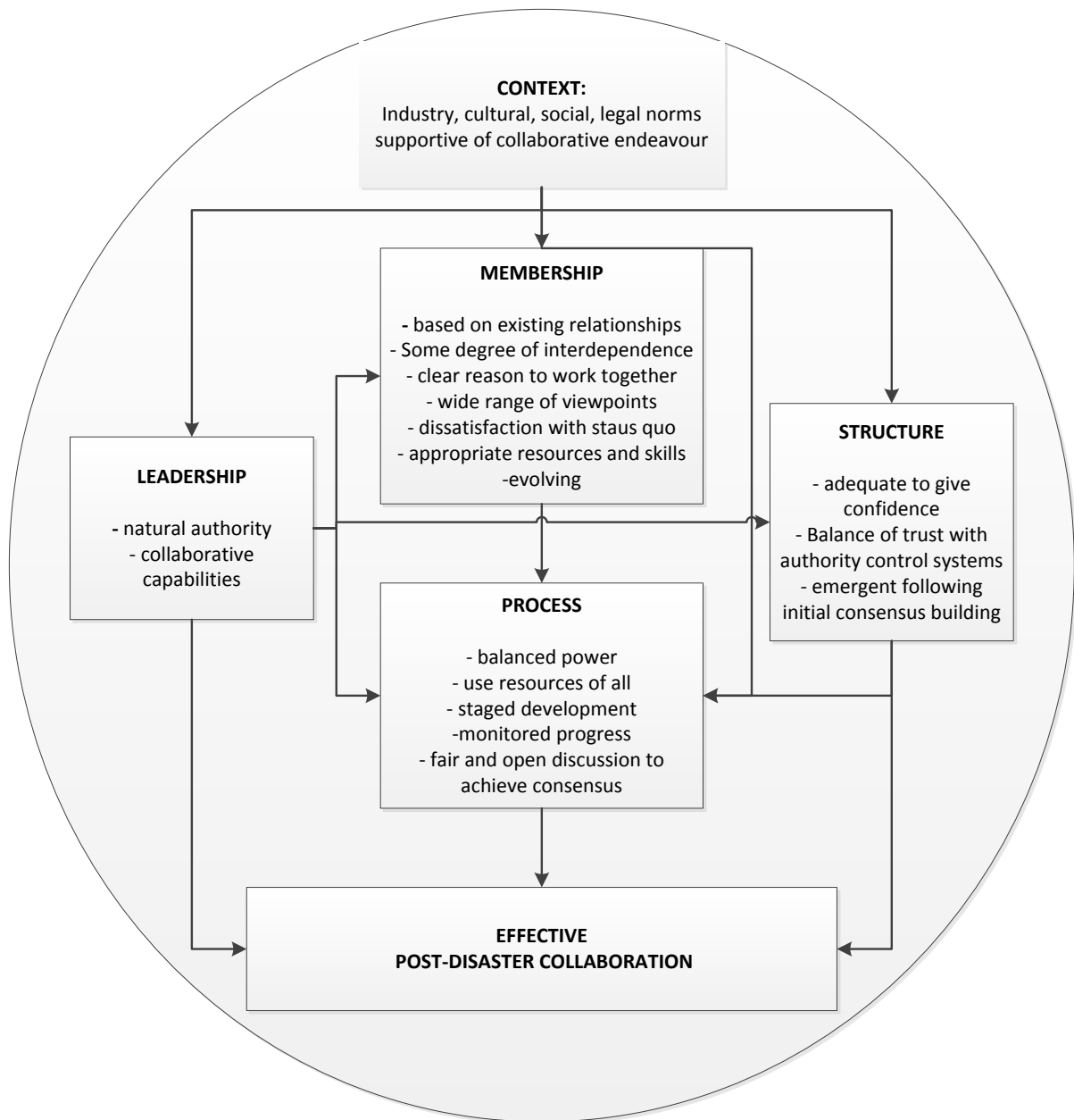


Figure 37 - Framework for Effective Post-Disaster Collaboration

This section considers each aspect of this model in turn considering its applicability to the Collaborations in this study. EPIC and Re:Start are discussed separately as their nature as multi-party place based collaborations leads to several points of difference from the remainder of the business to business collaborations in this study.

5.1.EPIC and Re:START

These two cases provide support for the proposed framework for effective post-disaster collaboration. The differences between the two cases also illustrate that those conditions should be viewed as broad

prescriptions with the means to fulfilling them potentially differing. Table 23 lists the key similarities and differences from each case.

	EPIC	Re:START
Context	High level of support, but declining level of institutional flexibility	Highly supportive institutional Larger number of project sceptics
Membership	Broad and incremental Primarily based on industry affiliation Champions at later stages Weak pre-existing relationships	Strong pre-existing relationships Champions Power differentials
Leadership	Emergent, respected as successful business owner	Established referent organisation
Structure	Evolving and driven by practicalities	Evolving and driven by practicalities
Process	Staged and open to input More Engineered Government funded Escalating commitment to build trust	More Emergent through informal discussions High levels of consensus building Charitable funding

Table 23- Key similarities and differences for each case

▪ Context

The importance of context in our proposed framework is evident in these two cases, with both capitalising on the initial period of mutual support, and citizen rather than government led recovery. The cases also illustrate that context is time specific with the progress through recovery potentially having significant impacts on whether a context supportive of collaboration exists. Re:START encountered fewer hurdles than EPIC, with part of the reason for this relating to that changing context over time. For EPIC, the supportive community feedback was a key motivating factor in spurring on their voluntary efforts. For Re:START some negative community feedback was received but the larger initiating group provided the support to overcome this.

▪ Membership

A disaster creates many of the conditions proposed as important with regard to who joins in a collaborative effort. The widespread destruction creates a clear dissatisfaction with the status quo and a clear notion of interdependence with regard to recovery of the overall region. Both initiatives provided a clear reason to work together by understanding the needs of affected businesses and creating a vision that was better than any party could create alone. Membership of the core organising groups evolved as the projects developed, with attention paid to obtaining the support of those influential within each domain. The appropriate resources and skills were obtained through the differing networks that each member brought to the groups.

With regard to the importance of trust, our framework suggests that members of a collaborative initiative should ideally have existing relationships. This is because trust, which takes time to form, will already be established. Re:START followed this conventional wisdom in that there were pre-existing relationships between the members and history of working together and building trust both with the core members and external bodies such as the local authority. EPIC is a little different with an antecedent relationship between the two co-founders but much lesser relationships with other parties to the initiative. Here the influence of process factors can be seen with the staged model of EPICs development assisting in the development of trust with the initial memorandum of understanding providing the symbolic backing of 40 other businesses. These businesses were able to show their support for the project but without having to commit – reducing the perceived risks and need for immediate trust. In fact, many of the initial supporters did drop out having found other quicker methods to achieve their aims of functional and fit for purpose premises. As the project developed, champions with status within the business community helped to grow trust.

Also of significance are the different sectors of the projects. The majority of EPIC tenants were managing to operate in at least a reduced form from temporary premises and their ability to take the risk of investing energy into the EPIC idea was therefore enhanced by their at least minimum functioning level. This represented an enormous challenge for Re:START in that the majority of its tenants are customer facing retail businesses. The degree of trust needed by them in the project founders and implementers was much greater given their business resumption was at stake. This is potentially significant in considering the greater prior relationships and influence in the domain of the Re:START founders relative to the EPIC founders. Also relevant to the disaster context is the element of desperation – the idea that in a post disaster setting where few options seem available, business owners may see no other option but to take the risk of joining a group without the prior trust building activities. Prior research suggests that working relationships between organisations need to exist before a disaster in order to assist in effective recovery (Olshansky, Johnson, & Topping, 2006; Vallance, 2012). The success of EPIC suggests that there are ways to overcome the impediment of weak pre-existing relationships given a supportive context and attention to process. Prior social relations may ‘often’ (Granovetter, 1985) be a necessary condition for trust, but not always.

▪ Leadership

These two cases also support the proposition that who convenes and leads the collaboration and how they do it is important. However, it is not necessarily obvious as to who those leaders may be.

Re:START was a clear example of a person (manager of the CCBA) already working in a collaborative style with many of the stakeholders and with a clear legitimacy in the domain. EPIC

was somewhat different in that its founders were well known within their own small community but with no responsibility for any of the issues previously affecting that domain. The legitimacy of the founders was based solely on their creation and management of successful companies and their involvement in sectoral events. Gray suggests that “existing power distribution” amongst the members of the domain will effect legitimacy (B. Gray, 1985, p. 923). This is relevant in considering this sector where the founders companies were relatively long established and viewed as successful in a sector with many smaller and younger companies still in the establishment stages. Their actions illustrate that there is potential for emerging and not just established groups and leaders in the post disaster environment. These examples also illustrate that while the disaster may have destroyed much physical property, existing power distributions remain relatively unchanged.

▪ **Structure**

Structure was largely a function of practicalities and funding requirements. Both initiatives followed conventional leasing arrangements creating a legal contract between a newly established trust and participating tenants. This structure allowed the participating tenants their continued independence with a simple contractual agreement, and gave funders the conventional means of testing the viability of the projects.

▪ **Process**

In keeping with the proposed framework, both projects emerged from extensive discussions, achieving consensus through an open consultative approach. Development was staged with a clear emphasis on the consensus building, drawing in further stakeholders and members as the project ideas evolved prior to any official organisation and structuring. Re:START built an extensive and broad consensus with regard to the benefit of attempting a joint solution, however, for some organisations this was still delivered to them as an engineered solution. The EPIC founders also discussed the concept widely but refined the concept in a more isolated fashion before presenting the solution to organisations.

▪ **Epic and Re:Start Summary**

These two cases illustrate that collaboration can be a highly effective means to achieving recovery from disaster with impacts that flow beyond their initial aims. Both collaborations set out with an initial goal of providing temporary facilities for business but they illustrate that there is tremendous benefit in keeping sight of core design principles with regard to attractive, innovative spaces that are attractive to both businesses and customers. These collaborations have assisted 67 businesses in

their journeys to recovery, as well as having a substantial effect on community perceptions of recovery.

The key similarities and differences between the projects illustrate the inter-related nature of the components in the proposed framework for effective post-disaster collaboration. Weakness in one area can be countered by strengths in another. Trust, generally seen as central to collaborative endeavour can be purposefully created not only by prior relationships but also by careful attention to staged process and other safeguards. The need for trust in a post-disaster setting is also a function of the degree of perceived risk. Organisations managing to maintain a minimal level of post-disaster functioning may be more willing to take a chance on a new idea from a previously little known source. Leaders must have some legitimacy and capability; however, those fulfilling the criteria may come from unexpected places. These unexpected leaders clearly can be successful but may also have to work somewhat harder at establishing credibility, particularly in terms of government perceptions. Context is extremely important as an enabling feature. Both initiatives were created in the immediate aftermath of the disaster where an enabling culture of mutual support and adaptive response prevailed in both citizen and government actions. This context can assist in overcoming weaknesses in either membership or leadership.

This examination also illustrates the benefits that come from taking a trans-disciplinary approach, which links existing bodies of knowledge, in this instance, with regard to collaborative processes with research on disaster and recovery. The proposed framework of conditions for effective post-disaster collaboration drawn from a variety of domains is found to be highly relevant in understanding the success of these two projects.

5.2.Individual Business Collaborations

▪ Context

As outlined in Chapter Four, contextual factors both in regard to the pre-existing environment and the responses by both government and citizens to the disaster were hugely significant in enabling and ‘normalising’ collaborative recovery efforts. It is also important to note that context is not a given. As Alonso and Bressan (2014) note in relation to micro business collaborative efforts, a culture of collaboration can actively be developed with the assistance of mediators and authorities. Active efforts in both pre, and post disaster actions and policies can assist in creating an enabling context.

▪ **Membership**

Research from both the disaster recovery perspective (Buckland & Rahman, 1999; Olshansky et al., 2006; Shaw & Goda, 2004; Vallance, 2012) and the resilience field (Bhandari, 2014; Johnson et al., 2013; Ritchie, 2007) suggests that relationships prior to a disaster event are necessary to provide the grease for the wheels of post-disaster collaboration. One of the seminal works in the area of social relations and trust stated that “social relations may indeed often be a necessary condition” (Granovetter, 1985, p. 491). Much of the collaboration literature puts trust at the top of the list of key factors enabling collaborative ventures to emerge. This trust can only be built over time and through repeated interactions.

Contrary to this work, this study found many successful collaborations were built upon no pre-existing relationships. Table 24 summarises the antecedent relationships to the collaborative efforts.

Collaboration	Pre-existing relationship	Nature of relationship
1	No	None – introduced by staff member
2	No	Knew of via business association membership
3	Yes - medium	Prior partner in business
4	No	Cold Call
5	Yes - strong	Service Agreements and other Joint Venture
6	Yes - weak	Co-marketing agreement
7	No	Introduced by mutual friend
8	No	Knew of each other via industry events
9	No	Knew of each other via industry events
10	No	Knew of each other via industry events

Table 24 - Pre-existing relationship summary

Explanations of how these collaborations can function effectively without the pre-existing foundations of trust building come from work into swift trust (Meyerson, Weick, & Kramer, 1996). Swift trust where individuals act in a trusting manner despite a prior lack of relationship building is assisted by the following factors that are relevant in the context of this study:

- Roles are clear with people interacting less as individuals and more as their role e.g. business owner
- Expectations of good will may be based on stereotypical assumptions based on membership of a social category. This is also supported by economic experiments suggesting that shared group identity increases expectations of altruistic action (Morita & Servatka, 2013)

- All are comparably vulnerable and therefore dependent upon each other – to trust seems the only viable option.
- Motivation to achieve goals is high and in the interests of task achievement, trust is given to avoid time wasted on uncertainty or monitoring.

Meyerson et al. (1996) also state that context is extremely important in influencing the development of swift trust. This is congruent with our argument in Chapter Four that the combination of pre-existing environment and post-disaster policy responses created this enabling context in Canterbury. A final important point is that swift trust arises in situations that are about “doing”, rather than relating. Collaborators in Canterbury, focused on resuming or continuing their business operations had a clear focus on the achievement of these objectives – the ‘doing’, rather than the relationship between individuals.

Beck and Plowman (2013, p. 2) point out that most work focusing on collaboration, upon which our model is drawn, examines “enduring and engineered” collaborations. This categorisation is also used by Adobor (2006) who proposed that the nature and dynamics of the collaboration are dependent upon how it is initiated. The collaborations examined in this study have little in common with the concept of engineered and more in common with Beck and Plowman’s work on temporary and emergent efforts, Meyerson et al.’s (1996) description of temporary groups, and Tatham and Kovacs’s (2010) examination of hastily formed networks in the humanitarian logistics arena. All of these works suggest that context is extremely important in creating the conditions for these collaborations to succeed. Conditions noted by Beck and Plowman as enabling effective emergent collaboration in the Colombia Space Shuttle disaster include the disaster context which created a large and very visible problem, the existence of a collective identity, which in this case was developed in the initial few weeks of interactions between response organisations and the creation of a superordinate goal. The collective identity issue links back to work on social capital raising the question of whether social capital (however weak) existed at the macro scale, simply due to a shared identity as a business owner impacted by a major disaster. Social capital is more commonly discussed at the level of individuals and organisations, rather than a city, however the notions of collective identity evident in both Meyerson et al.’s, and Beck & Plowman may relate to the potential for social capital at a more macro scale.

This study adds to this growing body of work (Beck & Plowman, 2013; Coles & Zhuang, 2013; Meyerson et al., 1996; Tatham & Kovács, 2010) which suggests that a lack of pre-existing relationships can be overcome and effective collaboration achieved in particular contexts. A major disaster with long-lasting effects creates many of the conditions theorised to enable swift trust.

Related to the lack of pre-existing relationships is the issue of how the collaborators were identified. If the necessity for a prior relationship is removed from the effective collaboration framework, an addition needs to be made to suggest how an organisation goes about identifying potential partners. All of the collaborating companies were open in discussing and sharing their problems both with employees, with friends and with business acquaintances. Greene (2014) states that openness is an essential factor in creating a resilient system. This seems true in the case of these stories whereby organisations had to be actively exchanging information with their wider environment in order for collaboration to emerge as a potential solution.

Another issue with work on collaboration and trust, is the question of size and scale. Many, (but not all), of the collaborations in this study were agreed upon by two individual owners with obligations to act only in what they perceive their organisations best interests to be. Few had shareholders or boards to report to and logically this may simplify matters, effectively meaning fewer people need to trust. The complexity of a collaboration in terms of number of participants, and the complexity of their roles in representing their own or others interests, needs to be considered when assessing the importance of many of the aspects in the model of effective collaboration.

▪ Leadership

The inclusion of leadership in the model of effective collaboration is based on multiple collaborating parties. However, this is still relevant with regard to business to business collaborations, for somewhat different reasons. A collaboration between two parties does not require a leader – it requires the skills and mind-sets to work with another. One respondent described the collaboration process as like a marriage and another as similar to a flat sharing arrangement with all parties needing to be clear and upfront and discuss any issues as they arise, as well as being flexible and tolerant. As Bradach (1998, p. 1) stated with regard to company-franchise relationships;

“... (its) like a marriage. You agree to enter the relationship, there are some basic rules, but there are a whole lot of things you have to work out as you go”

The resulting collaborative arrangements, while agreed between two business owners, then impact on, and could be impacted by, the employees of both organisations. Leadership becomes important at the operational stage in terms of gaining the support of team members from both organisations who are adapting to an enormous change. While this study did not obtain data from employees, sufficient comment was made by owners to suggest that the majority invested significant time and effort in ‘selling the idea’ to their teams and obtaining their support in making the collaborative efforts work. Leadership skills including the awareness of the need to gain support and the ability to do so, were

highly important in ensuring that collaborative arrangements were operationalised successfully. This is especially relevant given the impacts of the disaster on employees who were coping with a period of significant uncertainty in both their professional and private lives.

▪ Structure

In line with the model, a variety of structures, both formal and informal were used by collaborating organisations, particularly in the earlier stages of their establishment. Structure was in many cases an evolving matter, with initial operationalization often occurring before formal structure was established. As Organisation C states with regard to their collaboration, “we had bigger and better things to worry about”. Of the three collaborations which initially operated on an entirely informal basis, one has ceased (by mutual agreement) and two have created legal documentation after 12 months of collaborating. All of the enduring collaborations now have formal legal agreements in place.

▪ Process

The evolving nature of legal structures and agreements reflects the staged development recommended in the framework with practical matters dealt with prior to formal structuring considerations. The concept that power should be balanced is not reflected in business to business collaborations. In many instances, a clear advantage was held by one collaborator with regard to already having secured access to needed resources. Collaboration 7 is a clear example of power differentials with one retailer (NP) having already secured alternative premises, but who ‘carved out a space’ within them for Organisation E and later C. While there were clear benefits for all in this arrangement, Organisations E and C who were not trading had a much greater vested interest in success. There are a number of potential reasons why this was a not an issue for businesses in this study. Firstly, is both the pre-disaster egalitarian culture as well as the post-disaster culture of mutual assistance, described by one respondent as “a full on amount of goodwill everywhere” (Organisation M). Secondly, all of the organisations with potentially greater power were viewed as legitimately being more powerful – due to their size and success. They were acknowledged as the bigger players. Lastly, none of the more powerful organisations in this study seem to have used that power for anything other than mutual benefit. Organisation I established criteria of fairness and equity in their coordination of their sector as part of the response effort. Organisation NP described above allocated space to Organisation E and C at a rental rate far below what could have been asked given the supply/demand imbalance at that time.

The openness of communication suggested by the model was clearly evident in these organisational stories with many mentioning the benefits of being in the same physical space and being able to

simply discuss any issues as they arose. This was also noted as a weakness by one organisation whose collaboration did not endure. In that collaboration, the layout and organisational structure restricted casual interactions between senior staff. As a result some issues were not raised and the respondent felt that a more formal means for discussions should have been implemented

Using the resources of all parties in the collaboration is perhaps more relevant to collaborations involving a greater number of parties. The collaborators in this study had to use all of their resources to operationalise agreements. This is also an evolving area with some of the ongoing collaborations having potential for greater alignment and efficiencies if resources were aligned.

▪ **Other Enablers**

In addition to the enabling context, one other factor noted as significant by some organisations was the role played by trusted advisors. Two organisations (N,O) noted the assistance of an advisory board in making rapid and radical decisions. This is in line with prior research by Eisenhardt (1989b) which revealed the usefulness of a trusted advisor in enabling effective and rapid decision making. For organisations who contacted Recover Canterbury, it is possible that those discussions also functioned as advice from a trusted advisor, and if nothing else, at least offered an “energizing reassurance” (Gersick, 1991, p. 28). For other organisations, their accountants were a key professional involved in discussing collaborative arrangements.

▪ **Barriers or obstacles to collaboration**

Very few organisations encountered any barriers to initiating collaborative arrangements. Ongoing earthquakes and issues related to obtaining insurance cover did result in some delays, but this was unrelated to the collaborative process. Organisations which required landlord approval had no issues whatsoever. Organisations spoke of needing to “give a little” with compromise needed on both sides but suggested that there was no difficulty in having this occur. Only one organisation (N) encountered difficulties in selling the idea to their staff with the exit of one staff member unwilling to work in the new form.

The absence of identified barriers or obstacles is quite amazing given the prior lack of collaborative arrangements of these types amongst Canterbury businesses, yet again, supporting the importance of the culture and disaster context in enabling innovative and creative ways for business to survive.

5.3.A revised model

This discussion reveals two areas of the model that require review when considering its applicability to individual business collaborations in the disaster context. In relation to membership, the need for collaborators to have pre-existing relationships is brought into question by 7 of the 10 collaborations who were able to develop trust through means other than prior ties. Discussion of swift trust and its enablers show links to other aspects of the model as illustrated in Figure 38.

Enablers of Swift Trust	Place in Effective Collaboration Model
Interactions governed by roles, not personalities	Context – post disaster social norms Process - balanced power
Shared group identity	Context – post disaster social norms
All comparably vulnerable and dependent upon others	Membership - interdependence
High motivation	Membership – clear reason to work together - Dissatisfaction with status quo

Figure 38 - Swift Trust Enablers in Framework

Similarly to our findings discussed in relation to the EPIC and Re:Start collaborations, this examination of individual business collaborations supports the interrelated nature of the model's components. Pre-existing relationships may not be necessary for these smaller collaborations due to the presence of many of the enabling factors of swift trust, already contained within other model components.

Regarding pre-existing relationships as optional within this model, runs counter to much of the established literature on trust and collaborative working. However, this research and consideration of how it fits with work on swift trust indicate that other elements contained within this model assist in creating the trust necessary to work collaboratively. As also found in relation to Epic and Re:Start, weaknesses in one area can be countered by strengths in another. The model should not be viewed as prescribing but as guiding organisations entering into collaborations.

6. Conclusion

The preceding three chapters in this section have detailed the adaptive and often innovative actions of businesses which used collaborative strategies to enable their adaption to their post-disaster circumstances. For many, their high motivation to resume was influenced not just by fulfilment of their personal goals, but also a sense of duty to their employees and communities. Despite their lack

of prior collaborative experience or in many cases, existing relationships with fellow collaborators, these organisations were able to successfully work with others to achieve mutual aims.

These organisations' stories illustrated the many different ways to identify potential collaborators, agree key details, operationalise arrangements and deal with issues of legality and structure. They also illustrate the long lived and varied nature of post-earthquake impacts. Consideration of the decision making processes which led organisations to collaborative action show the importance of considering post-disaster decision making and adaptability when seeking to understand differing business recovery trajectories.

Finally, analysis of these organisations' journeys helps to improve the proposed framework for effective collaboration and make clear that there may be differences in the importance of factors such as leadership and pre-existing relationships in different contexts.

Chapter Nine - Organisational Responses: Non Trading and Resuming via non-collaborative strategies

1. Introduction

This chapter examines two other paths taken by organisations responding to the impacts of the earthquakes. The first section examines organisations who resumed through non-collaborative strategies and the second, organisations who had not resumed trading as at the date of interview. While the main focus of this thesis is on the use of collaborative strategies to recover from disaster, contrast and comparison with other paths provides insight into the complexity of post-disaster decision making. Collaboration was presented by many participants in this study as a logical and straightforward response. Comparing the experiences of organisations which did not use collaborative strategies adds insight into why this strategy was straightforward to some, and failed to register as an option for others.

Finally, the framework for effective post-disaster collaboration developed over the preceding sections is tested against non-collaborating organisations, highlighting the importance of particular model components.

2. Resuming Business through Non Collaborative Strategies

Many Canterbury businesses, outside of the worst affected central business district areas were able to resume trade after a short period of closure at their existing sites. The initial choices for these organisations were somewhat simpler given their mostly intact resources. However, the impact of changes to their environment have been significant with these three organisations' stories illustrating both the negatives of badly damaged neighbourhoods and supply and demand imbalances, and the positives emerging from post-earthquake efforts to create attractive new spaces.

2.1.Organisation CTC: Specialist Manufacturer/Retailer

CTC has been in operation for over 110 years, the last four under current ownership. It has 9 employees and is located on the fringe of the Central Business District in a mixed retail/light-industrial area. It suffered minimal damage in both the September and February earthquakes with

operational premises and quick repairs to damaged contents funded by insurance. The organisation was extremely well prepared, with more than one of every type of machine needed to do business and a mind-set of always “keeping plenty of money in the bank for unexpected”. Predominant throughout their story are many examples demonstrating resilience principles.

Business resumed within a week of the February earthquake with a variety of measures taken to ensure sustained performance. The wellbeing and ability of staff to attend work were paramount during this period with the owner purchasing storage containers for water which he filled at his rural property each night and delivered to staff in the morning. The owner also brought in lunch from his operational supermarket each day to ensure food was available. Although an engineering inspection had cleared the building, a temporary tea room was rapidly created on the ground floor to cater for staff who felt uneasy in the regular 2nd floor tea-room.

One of the key effects on the business was the lack of business coming in,

“The main thing that happened was – the phone stopped ringing, the emails stopped. Everything closed down. Mainly through, I think, poor media coverage - unprofessional media coverage. People outside of Christchurch seemed to think that every business in Christchurch was closed and wrecked.”

(Owner, Organisation CTC)

To counter this, the owner had his administration staff that had little else to do, ring all of their key customers to assure them they were still in business. Actions in this immediate post-earthquake period were very much about sustaining the performance of the business focusing particularly on staff well-being and customer retention.

Business resumed normal operations with the efforts to communicate to customers effective in restoring the flow of orders. However the staff still felt uneasy in their old and dated building and there was significant disruption to parking and roads caused by the extensive damage in their local area. Additionally, they were advised on insurance renewal date that the insurance excess was rising from \$2500 to \$12000 and a new \$50,000 back-up machine on order from America could not be insured due a 12 month stand down period in place for any new policies in the region. These factors, which were threatening the sustained performance of the organisation, caused the owner to consider relocation of the business, which led to a realisation of the new opportunities in the changed environment (Figure 39).

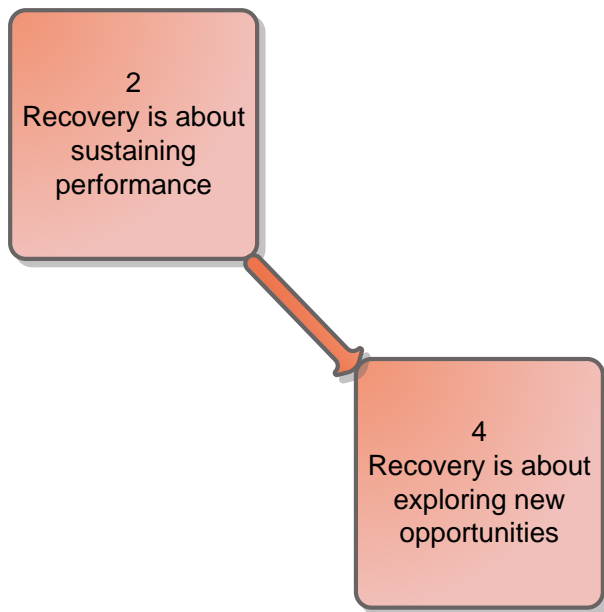


Figure 39 - CTC Recovery Transition

After investigating moving to other premises in Christchurch and finding a complete lack of availability, the idea of moving to an existing building on their rural property arose. Having operated a city showroom for close to 110 years, this idea represented an enormous change for the business. The owners conducted extensive analysis over a holiday period to understand the profitability of different customer sectors. This analysis revealed that walk in customers to their showroom was a very minor part of their profitability. Their landlord was totally amenable to their assigning the lease of their current premises and they found a new tenant very easily. The new tenant was extremely grateful to them as they were desperate for affordable premises with their own destroyed. The staff were invited to a barbecue at the owner's home over the Christmas period and advised of the plan. Those staff who lived in Christchurch were offered an extra \$40 per week to compensate for the extra fuel costs required to travel to the rural location. Two out of the 9 staff were unwilling to make the move.

The new premises have been nicely fitted out with noise separation and air conditioning and appear very professional. Although initially concerned at customer reactions, the owner has found customers completely accepting with their relocation entirely in keeping with what many of their other suppliers were doing. Business is booming with operating costs lowered, insurance cover easily obtained at more reasonable rates and turnover increasing. For this business, the earthquake has brought positive results,

“Yeah, in fact if anything, the earthquake was very good to us, it gave us the opportunity to move out here. The earthquake made it – psychologically told our customers that it’s okay to move because everything in there, even they were moving”.

(Owner, Organisation CTC)

CTC had little interaction with other organisations impacted by the earthquakes. They did sell raw materials to competitors suffering from supply chain disruptions post-quake, but they were not approached nor would they have been willing to work with another organisation to assist in recovery. The respondent stated that it would be too disruptive to the tight ship he ran, as well as causing confidentiality issues.

2.2.Organisation CTA – Retail

CTA is a small speciality retail store operating for two years on the fringe of the central business district. The business is family owned and operated and was created to both provide employment for one member of the family and follow the passions of another. The organisation is described as a loved baby rather than a means to financial gain. At the time of the February earthquake the business was financially stable and achieving its aims of providing a reasonable but not large income for one of the partners who was full-time and sufficient for the other partner who had multiple endeavours.

The September earthquake caused a small disruption with a drop in foot-traffic which improved by November. Their premises were undamaged in the February earthquake but were within the CBD cordoned area until September 2011. As of September 2013, insurance claims relating to both contents and business interruption have not been settled and changing information requirements regarding accounting information have left the owner pessimistic about the sum that will ultimately be recovered.

The day after Feb 22, a decision was made to open/reopen a store in Wellington. The respondent lived in a central city apartment which was unsafe, his mother’s house was unliveable and in contrast to many other respondents, there seemed a very quick acknowledgement that there was going to be a lengthy period of disruption in Christchurch. The idea of a Wellington store was not new and some of the groundwork had previously been done with regard to premises and location but without any decision to press the go button. The family were in Wellington the next day, and worked 20 hour days to open the new store 5 days later. The one non-family employee of the Christchurch store was paid for several months through both the Earthquake Support Subsidy and the organisation’s own funds until she was able to obtain other employment.

The family worked in this Wellington store for 5-6 months before hiring a manager and returning to Christchurch, “*because it was home*”. They could see that the CBD was still going to be out of action for some time and set about looking for a new suburban location. The respondent applied to be part of Re:Start but was turned down. They considered the idea of moving in with another organisation but did not know anybody who might be suitable. The process of finding new premises took over a year with low quality and high rental rates. This was a difficult period not only because of the fruitless search for premises, but the lack of purposefulness to the day. The respondent notes that “*both of us had issues with depression*”, during this period. They finally found their current suburban premises although at double their previous rent, with a bigger floor space than needed, and for a much longer lease than was desired.

Since re-opening, the store has not been performing as well as the prior CBD location although the owner regards it as early days with regard to assessing seasonal fluctuations. They have not regained many of their prior customers, and he notes that those they have retained seem not be spending as much. The gap between the new higher operating cost and turnover which is comparable with pre earthquake levels is currently being met by the investment of further owner equity. The respondent noted that if it were not a family business,

“there would be no question; I would walk away from it”.

(Owner, Organisation CTA)

2.3.Organisation CTB - Retail

CTB is a new retail operation which opened in the Re:Start Mall in October 2011. The idea for a new business was created by the closure of another business (NTE), which is discussed in the next section. The owner of CTB had managed NTE, located in the central retail area, for over 18 years. While still being paid under business interruption insurance by the owners of NTE, the respondent devised the idea of a new business in response to the question of what she was going to do next and also with the idea that this enterprise could provide employment for the other prior NTE employee who she wished to look after. Lacking the capital to embark on the venture herself, she found a business partner who was the wife of a previous colleague.

The respondent was very well connected, as a member of the Central City Business Association executive committee and received an email asking for expressions of interest in the Restart concept at the same time as conceiving of the plan to open her own business. The creation of the Re:Start concept was an integral part of her business plan with it creating the right ‘vibe’ for her concept. She

created a plan for a very low cost business creation based on a pre-Christmas opening date which she expected would provide immediate cash-flow.

The Re:Start store has proved very successful with the respondent trading at greater levels than NTE prior to the earthquakes and from a far smaller space. The respondent observes that retail patterns of highs and lows are very similar to those of pre-earthquake time. She demonstrates some clear business and strategic sense with efforts currently underway to establish quantitatively the nature of their clientele – locals or tourists. The difficulties now facing the business are largely to do with the uncertain longevity of the Restart Mall. The respondent has extensive networks in the developers and business community and seems extremely well informed as to developer's plans and hold-ups but despite this, she describes

“So I don't know, it's hard making decisions when – I mean it's hard for any small business in any situation but in this specific environment it's hard because you're starting from scratch, the whole city's starting from scratch”.

(Owner, Organisation CTB)

Given her extensive connections, one can only imagine how hard it is for those less well connected. The respondent and her business partner have decided that their long term home will be in a new development being created by a developer who is a long term colleague on the CCBA. What happens in between is the hard decision, with consideration being given to relocating to a character retail precinct built in an industrial suburb post-earthquake as a two year stop gap measure. The ideal would be the continuation of Restart, however as of November 2012, the Restart leases have been renewed only until March 2014.

Follow-up research conducted in 2014 indicates that the organisation opened a small stall type location in a suburban mall temporarily which then ceased when the continued operation of Re:Start in its relocated form was confirmed.

The organisation was unable to get insurance when it first opened in Restart with this cover having only been obtained recently after insurance companies ceased their stand down period from each event. This stand down period was a blanket denial of any new coverage in the impacted region for a minimum period of 21 days following each event of Magnitude 5 or greater (C. Brown et al., 2013). The rent in the Restart is described as market rent - \$600 a square metre, although this is for a small space. This compares with \$70 per square metre for Organisation NTE. Insurance difficulties and rental rates illustrate the challenge and risk faced by both existing businesses and entrepreneurs in the post-disaster environment. The success of this new business is attributed by the owner partly to the

attractive and successful area that Re:Start has become, as well as to core retail fundamentals of attractive, well priced products, and low cost business model.

CTB was born from the ashes of an organisation which chose to exit Christchurch. While smaller than its predecessor which employed 3.5 FTE, CTB has provided employment for 2.5 FTE and assisted in bringing life to the Central Business District through its participation in the Re:Start precinct.

2.4.Organisation CTD - Construction

CTD is a sole trader project manager/consulting firm in a specialist construction area. Previously a long-standing firm with 28FTE, operations shrunk to one after liquidation in 2010 of the operating arm of the company following a period of rapid expansion. CTD operated from offices on the fringe of the Central Business District which suffered only minor damage and were outside of the cordoned area.

As of February 2011, business was proceeding hesitantly. Contracts were obtained primarily outside of Christchurch and were interspersed with periods of little work. Six months after the February earthquake, uncertainty over the future of both his premises and his business led to the transfer of operations to his residential home.

Being based at home has clear benefits with flexibility and a more relaxed lifestyle, however, the respondent also said that he was not doing much to promote himself and felt embarrassed at the gulf between what he imagines callers think and the reality of him at home. The move to his home has meant that *“it doesn’t take much to stay alive in this format”*. Prior to the earthquakes, he believed that official premises were a necessary part of maintaining credibility. The dislocation and ‘norming’ of home working that occurred immediately post-earthquake gave him the confidence to take this cost-cutting measure.

The rebuild may offer some opportunities for his company to grow again – however, there is fierce competition from others for the work and the respondent is currently unsure just which direction to go – rebuilding, ‘pottering along’ as is, or seeking alternative paid employment. Opportunities to play a part in the rebuild are tempting; however, it was highly evident that CTD’s owner has lost a great deal of confidence due to the prior business failure. The belief in himself identified as a key factor needed to start a business in adverse times has been lost (Bullough & Renko).

2.5.Summary

Each of these organisations has followed a very different path to business resumption and similarly to collaborating organisations, this has taken place over years rather than months. Three of the four organisations (CTC,CTB,CTD), suffered little impact on their own organisational resources; but significant effects from changes in the post-disaster environment (Table 25).

Organisation	Resource Impact	Environment Impact	Resumption Strategy
CTC	Low	High - neighbourhood disruption	Continue operations. Relocate to rural to counter neighbourhood effects.
CTA	High	High – loss of CBD	Establish store outside of region. Re-establish Christchurch store 16 months later in suburban location.
CTB	n/a	High – loss of CBD and creation of Re:Start	Create new enterprise to replace ceased business
CTD	Low	Low – national contracts	Continue operations. Move to home office assisted by normalisation of home working

Table 25 - Non collaborative resumption summary

These organisations also illustrate some of the opportunities that exist in this changed environment, for those with the courage, awareness and ability to capitalise on them. CTC has found a new model for their business, throwing off a 110 year tradition of showroom premises and discovering greater profitability and pleasanter working conditions. CTA have expanded to two stores due to the impetus of post-earthquake needs. CTB has been created, capitalising on the exit of a similar business and the creation of the Re:Start precinct. CTD have opportunities to rebuild the business with the huge amount of construction required, but do not appear to have the combination of motivation and courage to capitalise on this.

3. Non Operational

Survivor bias is noted as an issue in many studies of recovery following disasters (Corey & Deitch, 2011; Schrank et al., 2012). This study sought to include the experiences of organisations which were not trading during the data collection period in order to contrast their experiences, characteristics and

decision processes with those of organisations who had by virtue of being operational, partly recovered.

3.1.Organisation NTA – Hospitality

NTA is a family hospitality business opened only three years prior to the quakes. The business had an extremely loyal customer base, described by the respondents as like family. As at February 2011, the family members who had been working extremely long hours to establish the business were looking to step back a little and employ further staff and possibly expand. NTA was located in a badly damaged historic area of the CBD. Their building performed well in the September earthquake but was closed for approximately two weeks due to surrounding damage. Normal business resumed, however some on-going disruption was experienced due to road repairs and closures. Again in February, their building performed well but was affected by the collapse of others around and partially onto it.

One of the partners in the family business was in close contact with other local business owners in the months following February with a group effort to gain access to retrieve stock and belongings, and a real effort to help some of the smaller neighbouring businesses who were not insured.

“he – they – the lanes had a little group, business group, but they all got together so they all had their emails and they were busy emailing each other, seeing – making sure – first of all, just make sure everybody’s got out, everybody was all right, and then it was, to get the plan, to be able to get in - - -“

(Co-Owner, Organisation NTA)

For many months, there was assumptions that while it would take a long time; the business would be able to reopen on the same site. The close network of business owners assisted both in information gathering as well as providing a ready forum for advice regarding insurance, staffing and administration issues. NTA had a huge emotional connection with the site, with the fit out having been done by hand over the course of a year by one of the partners and a solid network of business owners who were not just neighbours but friends.

“he always had hoped that we might be able to start-up again really, didn’t he, which – I, I just don’t think he wanted to let go..... Well he fought – he fought for it until the very end and the time when the building-, when the landlord said that it’s all coming down”

(Co-Owner, Organisation NTA)

In the meanwhile, the rest of the family participants in the business obtained temporary employment, travelled overseas and started families – all still with the assumption that the business would resume at some future point. Many approaches were received from prior customers or contacts suggesting alternative premises/locations but none of these appealed and there was really little impetus to reopen anywhere other than back in their original premises.

“We didn’t want just any old café”

(Co-owner, Organisation NTA)

After a fight, insurance for stock, contents and 12 months of business interruption was received. Many of the family were happy enough in their temporary jobs and plans, and the builder of the original premises was still wading through the bureaucracy assuming that the old premises would be able to be strengthened.

At the beginning of 2012, they were approached by a previous customer who suggested that a new destination precinct being developed in a suburban location would be perfect for re-establishing NTA. They went and had a look, and saw potential to recreate something similar to what they had, in terms of character and a community and signed up as a tenant, with a rental rate the same as their prior premise. At this point, they were still intending to reopen in their CBD location and signed up on the basis that they may have two venues. In May 2012, they received news that their CBD premises were to be demolished. This process was very poorly handled with communication coming more from their contacts within the area rather than formal notifications. They were not given the opportunity to remove and reuse materials including native timbers from the premises. The strong emotional commitment to the building and location made this a very sad event; however, this was helped by having the new location and new project to get stuck into.

This business is similar to Organisation A in that they were not actively looking for alternative premises, were advised by other people (networks), and inspired or encouraged by what the particular premises had to offer. Large delays in the completion of the new precinct mean that at the time of the interview, the new venue was still not open (it opened March 2014). The respondents were very relaxed about this with temporary work and other commitments still sustaining them.

The owners are hoping to thrive quickly with the many lessons learnt from the original start up still retained in recent memory. Their confidence has also been boosted through temporary employment in other venues where they have realised what good things their business does. In addition, they have a very strong network which has eased many aspects of the new build. The benefits and potential perils of social capital are very much in evidence in their story. Through the encouragement and assistance

of their customers and neighbours, the re-opening in new premises has been made easier but their strong ties to the community of businesses in their old location may also have served to delay their acceptance of the loss of the old way. Their new premises are significantly larger than previously which is in line with their pre earthquake aspirations for the business, but also representing a significantly greater risk in the unknown suburban environment.

As to the future, there is some desire to ultimately return to the CBD but it is clear that there would have to be a particular character to any potential premises and the respondents expressed some doubt over whether character and an affordable rent will be possible.

“It’ll have to be the right place again..... but then again, rents are gonna be so exorbitant that – as we were just saying the other day, we don’t know how anybody’s going to afford to do, you know, to pay that rent”

(Co-Owner, Organisation NTA)

3.2.Organisation NTB1 and NTB2 – Hospitality

Organisation NTB had two hospitality outlets prior to the earthquakes, both located in the CBD. NTB1 was owned by the respondent and one silent partner and operated (also with a manager) by the respondent while NTB2 was run by a manager with the respondent being one of five owners who met monthly to oversee the business. NTB1 was being readied for sale with the respondent planning to use those sale proceeds to create a new venue more in keeping with the hands-off nature of NTB2.

NTB1 was severely water damaged by a MM 4.9 aftershock on December 26, 2010, which caused the sprinkler system to activate. Full insurance cover was held including business interruption. Prior to the February earthquake this claim was proceeding with the expectation that fully repaired premises would be reopened in March 2011. The February earthquake changed this as well as leading to the closure of NTB2.

Insurance claims for both premises went well. As both venues had been performing extremely well in the year prior to the earthquakes, settlements were described as ‘generous’. Staff were retained on full pay until June with six weeks of assistance obtained through the Earthquake Support Subsidy. As of June, the expectation was that they would be back into both premises within three to six months.

“We never thought it would be closed for two years or a year. I would have thought three to six months and we would be back in..... then after a while we sort of stopped worrying about when NTB was going to open. My business partner went on to build xxx and some of the NTB staff are still employed here. So he and his xxxx rebuilt xxxx and xxxxx”

(Co-owner – Organisation NTB)

The respondent was continuing his studies during this time – as NTB1 had never been a full time occupation although it did provide his full time wage. There was no stress at this point with regard to where the next pay packet was coming from with the business interruption insurance claim successfully settled. His business partner rebuilt two other hospitality venues and with the respondent focusing on studying and the partner on other ventures, there was no great impetus to move along with plans for NTB1 or 2.

With none of the investors really focused on NTB, the respondent continued to complete his studies. The respondent had budgeted to use his personal reserves to complete a last year of study with a view that there would need to be either a job obtained at the end of it; or a business reopened. By pure chance, an opportunity arose for a full time position that perfectly suited his aspirations and experience and he took this job.

In the meanwhile, the investors had begun to resume some focus on plans for NTB1 and NTB2 but were unable to find a suitable building in the right location. With the investors all having other interests and jobs there was not huge financial pressure and a view that the right location was essential for the long term success of the reopened organisations. This process was also hampered by the Liquor Licensing debates on-going through this time which put the process somewhat on hold while it is resolved as to which areas are allowed to be open beyond 1am.

As of September 2013, there has been a renewed focus by the investors in getting back open. The respondent's partner has now relinquished the day to day management of his other two relocated venues to concentrate on a goal of 5 venues in 5 years for the group. The capital to rebuild NTB1 and NTB2 remains – and is ready simply for what will now be the full time focus, not of the respondent, but his prior silent partner.

In contrast to many of the other organisations in this study, there seemed little emotional attachment to the businesses. Contrary to NTA, NTB is the means to fund other dreams, rather than being the dream itself. This interview was also remarkable for the complete absence of any mention of residential or other issues relating to functioning in the disaster zone. Also notable, was the very strong networks within the industry with much mention of discussion with other hospitality operators.

Asked whether collaboration was at any point considered, the respondent noted that “we have our group already” in reference to the 5 partners involved.

3.3.Organisation NTC – Services

NTC is a very small enterprise located on the edge of the CBD. The business was temporarily closed for approximately two weeks following the September quake and turnover had not recovered to pre quake levels at the time of the February earthquake. Following February, their premises were moderately damaged and cordoned until June. During this time, their landlord insisted that rent was still payable by them, as although the building was inaccessible due to the cordon, it was green stickered. The respondent utilised the earthquake support subsidy to retain her one employee. When this ended, in the interests of providing certainty, this employee was let go with the respondent having to borrow money to pay out her full holiday entitlement. The respondent expressed a keen desire to do the best she could for the employee however the employee did not see it that way and was apparently quite disgruntled. The employee set up her own business from a garage and then contacted prior clients of the business by phone and told them that the respondent was no longer in business.

“I don’t think she realised what I had to deal with, like I had no money to my name and I was having to pull money out of like my personal savings, borrow money from my partner, my mum, just to pay her out her holiday pay, make sure she was okay and all this sort of business”

(Owner – Organisation NTC)

When the cordon lifted in this area in June 2011, the respondent commenced the clean-up of significant liquefaction along with replacement of the fit out. With little income other than that provided by visiting loyal clientele in their homes, a landlord charging full rent despite the period of closure and poor insurance cover, the respondent saw little choice but to resume trading to try and earn some income to meet the mounting debts.

Trading was poor with previous loyal clientele ringing to explain that they were not comfortable either with visiting town or with the perceived safety of the premises, which although green stickered, she perceived to be on a noticeable lean.

“Yeah. I had a lot of clients ring me to say that I’m sorry I can’t come to you anymore because you’re in town, I just can’t cope. Because a lot of my business was town people. So after that – oh, that’s right. My building was on a really big lean so I had customers ringing

to say that they actually feel unsafe in there. Like I'd be standing and my trolley would start walking off into the distance"

(Owner – Organisation NTC)

The respondent reached out for help to her insurance broker, Work and Income New Zealand (WINZ) who manage the social welfare system and Recover Canterbury but ultimately was told there was nothing anyone could do. Her insurance claim provided little with a \$2,500 excess applied separately to each claim and business interruption calculated only on the three months prior to February where turnover was much lower than usual due to the effects and perceptions following the September earthquake. She did not have a lawyer or accountant but did speak with various helplines including Recover Canterbury. Her view was that everyone tried to help but she was told there was just nothing that could be done. She commented that she felt bullied and patronised by her overseas based landlord who met with her in Christchurch but was unable to do anything¹³.

She continued to trade at a loss until the end of December 2012, when with a sense of relief, she exited the business. In her words, she has pretty much lost everything and has only recently (Sept 2013) finished paying off the debt for rent to her landlord.

The respondent is now working in a collaborative fashion common to this industry where she rents space on a day by day basis in other suburban premises. Initially this was with the assumption that she would reopen her own premises again. Over the course of the year, the obvious lack of affordable space and doubling of insurance premiums have changed her perception of the viability of this plan and her business is unlikely to resume.

3.4.Organisation NTD – Hospitality

NTD is a hospitality outlet located in the CBD with three full time and three part time employees. The business was established 7 years ago replacing a similar outlet on the same site. This is a family business with a husband and wife team also employing other relatives in the business. Pre-earthquake the business was very successful with strong financials and thoughts turning to expansion. The business also boomed in the period between September and February with business so good, they *"could not keep up with it"*.

¹³ Permission was sought from this respondent to pass her information to a colleague from the School of Law. She indicated in conversations with that colleague that steps were now underway to rectify potential unfair dealings with her landlord

Their premises suffered moderate damage in the February earthquake and were within the CBD cordon until May 2011 when they were allowed access to clean up. The respondent utilised the Earthquake Support Subsidy immediately afterwards to retain staff but was one of few organisations in this study who did not support staff beyond that minimum, despite his view at that time that the organisation would re-open within months. He justified that decision as being protective of the business as follows:

“we cut our ties with staff as quickly as we could. We had to protect the business”.

(Owner, Organisation NTD)

Work commenced on repair of the building in May 2011 with the owner assuming that re-opening could occur within months and cash-flow needs supported by insurance payments. A further inspection following the June 2011 earthquake revealed the damage to be worse than first thought and all work on the building was halted. A new engineers report revealed a high level of risk and a further four months later, the demolition decision was taken. Actual demolition occurred around March 2012.

Following confirmation that the premises were to be demolished, the respondent commenced a search for alternative premises with a view to potentially trading in a new location and eventually reopening at the old site. This was a frustrating search as many landlords did not wish to have his particular type of business, perhaps due to its high failure rate. A lot of potential locations were currently used for retail purposes and he believed the consent process to change use to hospitality was also a deterrent. Where suitable premises were identified, they would often find that these were already under offer. All throughout this period, the respondent continued “on and off” to investigate new premises with no success.

Meanwhile business interruption was in place, providing an income, although he stated that this was less than normal trading would have provided. The respondent reached a very low point during this time, with no sense of purpose from work and a reduced income.

“The last few months from November until January, it got really low. It was getting very depressing. Hitting quite a low point in my life. Wondering where the end is. Trying to look for the start, but not seeing it”

(Owner – Organisation NTD)

He stated that obtaining other employment was not an option as this would invalidate the insurance payments. During this period, the capital received from insurance was spent. When the business interruption payments ceased, this was the prompt for action. Still unable to secure new premises for their restaurant, the respondent sought and found other paid employment in hospitality – still intending this to be a short term move until the restaurant re-opened.

After the fruitless search, and still in contact with his landlord, he signed an Agreement to Lease on the same site at premises currently under construction. The new business will be the same but larger and potentially run by his wife's son who has also been working temporarily in hospitality during this time. The plans for the re-opening are firm although a little vague – he has signed an agreement to lease and agreed fit-out aspects with the landlord but he has not yet accurately costed the fit-out or obtained the necessary bank loan to proceed. His intention is to remain in paid employment up until or potentially beyond the expected point of reopening which is a little “airy-fairy – about mid 2014”. He also has dreams of a further restaurant a year following this re-start.

Follow-up research in 2014 indicates that his venue did re-open on the rebuilt site in September 2014.

3.5.Organisation NTE - Retail

This specialist retailer was part of a long-established chain operating in Auckland, Wellington and Christchurch. The respondent managed the Christchurch store as well as providing some support functions for both Auckland and Wellington.

Located in the core CBD retail area, the store had built up a loyal customer base with attention to great customer service and interactions with the customers being a key part of the business. Another key part of the businesses profitability was its location on the 2nd floor of a building at a rental of only \$70 per square metre. Prior to the earthquakes, business was stable although potentially on the decline with the overall decline of the CBD retail area and the disruption caused by the resulting redevelopment having some effect on the business together with a lack of focus and interest from the owners. The owners had been considering the sale of the three stores prior to the earthquakes as family matters became more of a focus for them.

The store was closed for a short period following both the September and Boxing Day earthquakes – all at the time a manageable disruption that was covered by insurance. The February quake resulted in the complete closure with access completely forbidden. The computer system for the whole business was in the Christchurch store and the owner, together with their landlord, fought until August to gain access – with access eventually gained only through their contact with a store customer

working the cordon access points who went the extra mile for them to enable access with demolition crews.

All of the staff were paid full wages up until the time that the premises were demolished (August 2011) and the owner decided not to rebuild in Christchurch. The explanation was that it was just easier to move on with the potential sale of the Auckland and Wellington stores without the burden of the Christchurch uncertainties.

“she had indicated to me fairly early that, like before it was demolished, that she was having these thoughts about not reopening because she thought it might be easier to sell Auckland and Wellington as a going concern without the Christchurch business”

(Manager – Organisation NTE)

The owners took care of their staff extremely well with the part-time staff retained until demolition and the decision not to rebuild in August 2011. At this time the two full-time staff were retained with business interruption cover utilised to pay their wages – on the basis that it was kept entirely confidential that there were no plans to reopen the store. The owners did not use the Earthquake Support Subsidy; with the explanation from the respondent that they felt that insurance would cover costs.

During this decision making time, the Restart development was being publicised and expressions of interest sought from tenants. The respondent faced with what to do now and wishing to provide employment for her friend and colleague of many years decided to open her own similar but different store – Organisation CTB.

3.6.Summary

Of the six organisations discussed in this section, two have since re-opened (NTA and NTD), two still intend to re-open (NTB1 & NTB2), one continues to exist outside of Christchurch (NTE) and one has ceased permanently (NTC). Periods of closure for those who have later re-opened are extremely long as illustrated in Figure 40.

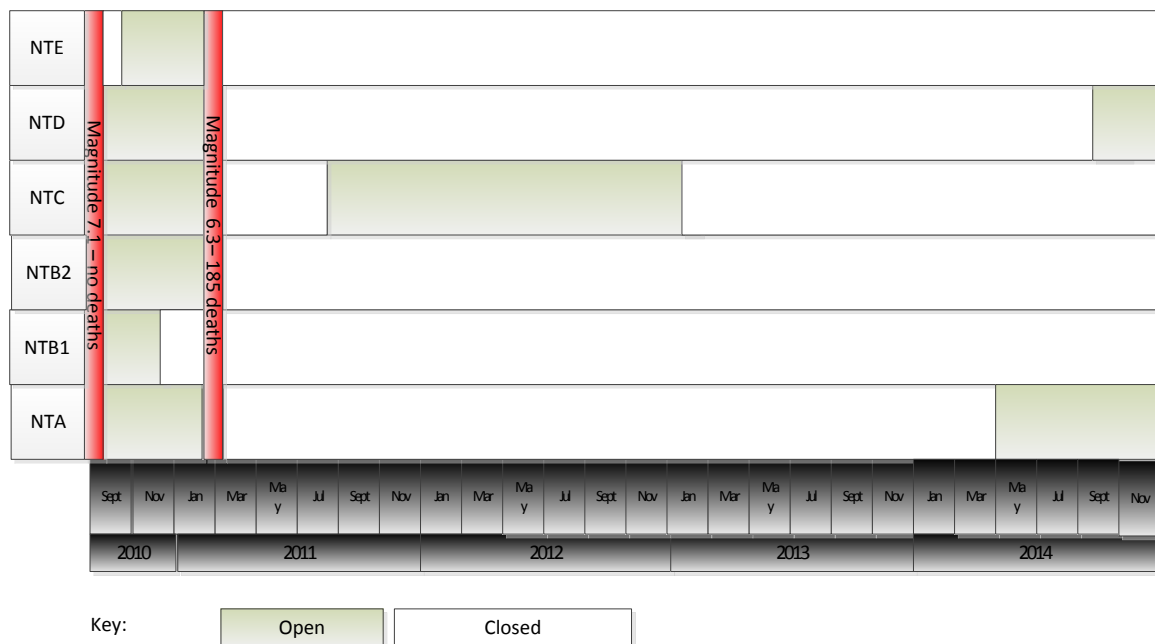


Figure 40 - Non Traders Closure periods

Consideration of re-opening rates and business cessations following disaster are generally of great interest in assessing the impacts of an event. These organisations illustrate that there is a great deal of nuance behind any official statistics or surveys of business re-opening. Only one (NTC) of these six businesses can be considered a 'victim' of the disaster. Two (NTB1, NTB2) of the organisations yet to re-open have deliberately and happily chosen that course of action. One (NTA) which did re-open was only willing to do so when the right space was available with other employment happily bridging the gap. One (NTE) that exited Christchurch took this action as a deliberate choice, lacking the energy or motivation to resume. In line with suggestions for business as usual measurements, post-disaster measures need to distinguish between closure or failure (Headd, 2003).

These extremely long periods of closure demonstrate the need to conduct more longitudinal research on disaster impact and over a greater time period than has perhaps been previously considered. Research in the aftermath of Hurricane Katrina considered re-opening rates up to two years later finding that re-opening rates at four months were 25%, rising to 65% two years later (Lam et al., 2009). Four months after the disaster, 59% of their respondents indicated that they were undecided about re-opening indicating that similarly to the organisations in this study, a significant amount of time is required to make decisions in the post-disaster environment.

One key area of difference was observed between the organisations discussed in Section 2 and 3, relating to resource impact. Five of the six non-traders lost premises and all had very specific needs with regards to suitable premises. Location was extremely important for the retail and hospitality

organisations and the need for tailored and expensive fit-out relevant for the hospitality. Table 26 summarises the key impact for collaborators, continued and ceased traders.

Main Impact	Collaborators	Continued Traders	Ceased Traders
Lost Premises/equipment	11	1	5
Neighbourhood disruption/change to area	1	1	1
Demand for new facilities	1		
No direct impacts	1	1	

Table 26 - Key impact for each category of respondent

In contrast, of the organisations who resumed through non-collaborative means, two were able to continue at existing premises. While they did later re-locate in response to the difficult environment, their existence was not initially threatened. One opted to hasten an existing plan to open a store in a location outside of Christchurch and the last benefited from its fit with the Re:Start concept.

4. Organisation Characteristics

All of the organisations discussed in this chapter are micro or small businesses ranging from one employee to ten (Table 27). The organisations have been in operation in their current ownership from just under a year to 17 years. Ignoring the youngest and oldest companies, the majority were around three years old. Four out of the ten owners were female. Further comparison of organisation characteristics considering whether there were any significant differences between collaborators, non-collaborators and ceased traders takes place in Chapter 11.

Organisation	NTA	NTB1	NTB2	NTD	NTC	NTE	CTA	CTB	CTC	CTD
Sector	Hospitality				Service	Retail			Manuf	Const
No. of staff pre EQ*	6.5	9	10.5	4.5	2	3.5	2.5		9	1
Age (months)	35	192	36	84	38	204	48		1320	792
Sole/Chain	Sole	Sole	Sole	Sole	Sole	Chain	Chain(2)		Sole	Sole
Current owner duration (mnths)	35	144	36	84	38	204	48		36	11
Entrepreneurial Orient **	3.8	4.1	4.1	3.0	4.7		4.3		6.1	2.8
Locus of Control**	7	4	4	6	5		3		7	5
Owner/Manager:										
Age	30/39	40/49	40/49	30/39	20/29	30/39	30/39	40/49	60-69	50/59
Gender	F	M	M	M	F	F	M	F	M	M
Post EQ***:										
No of staff							2.2	2.5	8.5	1

*full time equivalent employees

**1=Low, 7=High (see Chapter 3)

***as at interview date (2013)

Table 27 - Summary of Organisational and Respondent Characteristics

5. Discussion

5.1.The importance of networks

Networks have long been identified as important to the performance of organisations in ‘normal’ times (Hansen & Hamilton, 2011; Watson, 2007) and in enhancing resilience and post-disaster recovery (D. Aldrich, 2012; Stevenson et al., 2013). The one ‘victim’ (NTC) identified in this research provides a marked contrast with collaborating organisations who I identified as being open and active in discussing their issues with staff, friends and business acquaintances. This organisation’s story is of a closed environment with little or no interaction with any others outside of family with regard to business decisions.

As discussed in Chapter 9, work on theories of revolutionary change and punctuated equilibriums state that extreme shifts in the external environment create a need for change but do not by themselves result in it (Gersick, 1991). NTC failed to either recognise or conceptualise alternatives to make the changes necessary given the enormous change in their operating environment. The respondent did

reach out for help to support organisations, however it did not appear that other options were recognised, potentially relating to her lack of business expertise but also due to the pressure being applied by her landlord. Discussions with a greater network of people may have benefited this organisation in assisting the conceptualisation of more radical solutions to the issues facing the organisation.

The benefits of networks are also evident in the story of CTA who searched for over a year for suitable Christchurch premises, and who did consider collaboration as a possible solution, but who lacked the networks to discuss this idea more widely and identify potential partners. The willingness to reach out and discuss issues along with the networks to discuss them with are both essential. CTD, suffering guilt and embarrassment about the failure of an earlier business, seems currently unable to do the reaching out which would assist him with decisions on the future direction for his business.

NTA resumed trading three years after the disaster, in part, urged by the encouragement and assistance of their prior clientele, which they described as ‘part of the family’. They described significant motivational affects from this support from a wide variety of acquaintances. Identification of their new premises came from a prior customer. CTB was born from the death of NTE, in part due to the encouragement and support from a wide network of Christchurch businesspeople. In contrast, NTD, which despite a much stronger motivation to re-open quickly, took over three and a half years to re-open. Its owner describes his journey as solely a family affair, making staff redundant as soon as possible and taking no action to communicate with or utilise the resources and connections that may have been available had he reached out to his strong network of prior loyal custom. In contrast to NTD and NTC, NTA treated recovery in line with Marshall & Schrank’s (2014, p. 598) description of recovery as “a partnership effort in concert with the community, the owner’s family, and its customers and suppliers”.

5.2.Situational Awareness and Decision Making under Uncertainty

The enormous difficulties of decision making in the post-disaster setting are also illustrated by the situations of both NTA and NTD who both spent a very long period assuming that their existing premises would be saved. Both had a very strong attachment to their localities and took a long time to come to the understanding that those localities would change enormously. While this long period of realisation is understandable in the way they recount information flows, it is in contrast to many of the collaborating and resuming organisations who were faced with similar situations but were able to appreciate the need for other premises at a much earlier stage of recovery. The strong attachments to specific locations and the delays in receiving accurate information contributed to a longer period of

time coming to terms and working through grief and acceptance, a necessary step to allow a new focus on rebuilding (Centers for Disease Control and Prevention (CDC), 2005).

5.3.Motivation

Four of the six non-operational organisations were happy with regard to their long period of closure. Only one of the non-operational organisations expressed unhappiness with their inability to resume sooner. This is in stark contrast to collaborating organisations, the majority of whom were also insured for up to 13 months business interruption but whose stories illustrate a very strong drive and motivation to get the business back up and running – in many cases referencing this not just to their own needs and desires but to the overall recovery of Christchurch.

6. Review of collaboration model

This section considers how these organisations' journeys relate to the model of, and antecedents to collaboration refined in the previous chapter, considering whether this comparison with alternate recovery trajectories negates or supports any factors. For each of the organisations in this chapter, key elements ruling out collaboration as a potential or appropriate strategy are found.

6.1.Antecedents

In the prior chapter, I identified that in order to identify potential collaborators, organisations needed to be open and exchanging information with the external networks of either the owners or the organisation staff. Many of the organisations in this chapter seemed to lack this reaching out and sharing with networks. CTA suggested that sharing premises with others was a strategy considered but they lacked the networks to know who might be possible. CTC were not interested but nor did they feel a need to reach out to others relying on their own business acumen to proceed. CTD, having lost confidence, has withdrawn from his potential networks. Both NTC and NTD fought alone, relying only on their own families for discussions on business issues. NTB, which did make frequent mention of discussions with others, used this to assess the operating environment due to their already collaborative arrangements. NTA benefited extensively from its networks both in terms of initial information gathering and in identifying and being motivated to proceed with alternative premises.

6.2. Effective collaboration

Apparent in these organisations' stories is the lack of two specific elements needed for effective collaboration. First are the collaborative capabilities which are a key element to the Leadership Component. CTC, who was clearly in a position to offer a 'hand-up' to others, suggested that working with others would be too disruptive. NTD was fiercely independent stating in response to questions about potentially collaborating that:

"Because, okay, I was in a partnership with my wife. That was it, there would have been no more partners. I don't believe in making money for someone else. Because quite honestly what we had to offer would have increased whatever they had. I didn't feel like improving someone else's business. My own, yes, but someone else's no."

(Owner, Organisation NTD)

The second element clearly missing from some organisations relates to the membership aspect of the model. Firstly, is the dissatisfaction with the status quo which relates to ensuring the appropriate members in a collaborative endeavour. NTA, NTB and NTE all expressed satisfaction with their non-trading status with other means of generating income and a long term view to re-opening. They lacked the dissatisfaction and therefore the motivation to consider alternatives such as collaborating with others. Secondly are the relationships aspect discussed above under antecedents whereby organisations did not have the existing relationships upon which to base joint efforts. Figure 41 summarises these exit points from the framework for effective collaboration for each of the continued and ceased traders.

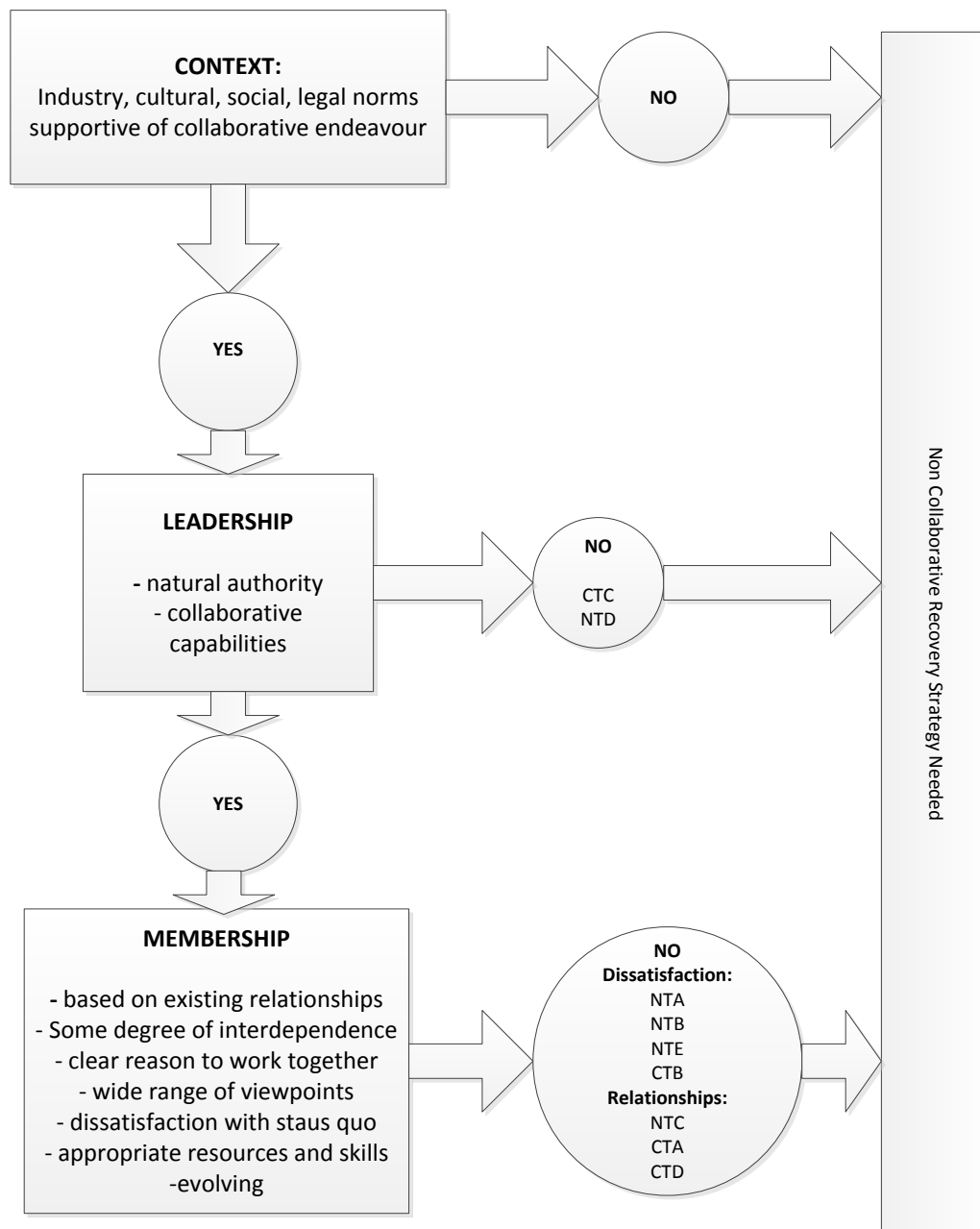


Figure 41 - Points of exit from potential collaborative options

7. Conclusion

Consideration of other paths to business resumption and the experiences of non-trading organisations confirm that the long time periods for recovery do not apply only to collaborating organisations. They also show that immediate impacts on resources, particularly loss of premises, dominate short term recovery, while long term recovery requires more adaptation to changes in their operating environments. Both the continued and non-operational traders illustrate the opportunities that exist

when traditional models of operation are disrupted to such an extent that ideas of more radical change are able to flourish.

Consideration of the non-traders choices indicates that it is important to understand that temporary cessation may be a valid choice and may lead to better long term outcomes. As one of the few qualitative studies to include non-trading organisations, these stories are important and point to further questions to be asked in future studies. In particular, there is a need to further refine our idea of business closure to understand how much is by choice, and how much are true ‘victims’.

Unsurprisingly, the importance of networks in both enhancing situational awareness and in generating potential solutions is highlighted. Further support is provided for the framework for effective collaboration and it’s antecedents with analysis (Figure 41) showing key missing elements that meant collaboration was not a viable solution for organisations in this chapter.

Chapter Ten – Organisational Characteristics

1. Introduction

This chapter will set out the characteristics of the organisations in this study prior to the earthquake sequence as well as contrasting those characteristics where possible with statistics from the entire Canterbury region. While this study aims to generate insight rather than generalisation, the intention of this section is to explore in more depth than the prior chapters what kinds of organisations entered into collaborations and whether the organisation characteristics influenced this choice of recovery strategy or the outcomes of the recovery process. Characteristics have been selected based both on what prior literature considered as potentially important in terms of recovery status and those that have emerged from interviews in this study. Organisational characteristics matter with each organisation having a unique configuration and set of knowledge and history that create “the jumping-off place for the transition” to the post-earthquake environment (Gersick, 1991).

2. Organisational Size

Organisational size has been considered in prior disaster recovery studies with a hypothesis that smaller firms will find it more difficult to recover due to their comparative lack of resources (Alesch et al., 2001; Chang & Falit-Baiamonte, 2002; Dahlhamer & Tierney, 1998; Kroll et al., 1991). For example, a business with multiple locations or multiple shareholders upon which to call for funds seems logically more likely to find recovery easier. However, there is an alternative view that suggests that some of the disadvantages that come from a lack of resources might be outweighed by the advantages of agility that small size can bring (Sullivan-Taylor & Branicki, 2011; Vargo & Seville, 2011). Smaller organisations have less organisational inertia and bureaucracy to overcome and may be more readily able to adapt key operations or products to suit the post disaster environment. A recent study of 541 Canterbury organisations surveyed in 2013 found no correlation between size and either impact or recovery status (C. Brown et al., 2014).

In this study, organisational size is defined using employee numbers as this is the method most commonly used by government departments and in official statistics to define business size in New Zealand (Ministry of Economic Development, 2011). Participants in this study include businesses in all size categories (Table 28). This provides some ability to contrast and compare the experiences of different size firms in line with the objectives of this study to offer the greatest insights rather than

generalisations. Compared with the demographic make-up of businesses in the Canterbury region, sole proprietors are under-represented and larger organisation over-represented. This may reflect that the recovery experience for many sole proprietor firms is potentially quite different than that of any larger firm with two key differences being the potential to not need ‘official’ premises and the ability to swiftly amend operations.

Size is based on employee numbers prior to the earthquake event which most affected the organisation. For the majority of participants this was the February 22, 2011 event.

Size by no of employees	Collaborators	Non Trading	Continued Trading	Study Total %	Canterbury % of total
0	1	0	1	8.70	63.54
1-5	2	3	1	26.09	22.38
6-9	3	2	1	26.09	5.67
10-19	4	1	0	21.74	4.76
20-49	1	0	0	4.35	2.46
50-99	1	0	0	4.35	0.68
100+	2	0	0	8.70	0.50

Table 28 - Size of organisations prior to earthquake impacts

3. Organisation Age

Longevity of existence was proposed by Dahlhamer & Tierney (1998) as a potential influencing factor on recovery outcomes. This is in line with the “liability of newness” concept which is demonstrated by New Zealand statistics showing that of those companies born in 2005, only 42% are still in existence as at 2010 (Statistics New Zealand, 2011b). Similarly to size, there is a contrasting view that newness may be an advantage with regards to the potential to quickly adapt and change. Also similarly to size, the 2013 survey by Brown et al., (2014) found no correlation between organisation age and recovery status.

Age	Collaborators	Non Trading	Continued Traders	TOTAL
Less than 1 year old	1	0	0	1
1-5 years	1	3	1	5
6-10 years	2	1	0	3
11-20 years	3	2	0	5
21-30 years	3	0	0	3
31 + years	4	0	2	6

Table 29 - Age of participating organisations

The majority of organisations who participated in collaborations are long established with only two younger than six years old – one of which was established only one month prior to the February 2011 earthquake. As of 2010, 47.3% of SMEs across New Zealand were less than six years old (Ministry of Economic Development, 2011). The organisations that were not trading at the date of study were somewhat younger with an average age of 6 years. Ignoring the youngest (one month) and oldest (62 years), the average age of the collaboration organisations is 22 years. However, the time under current ownership is less with an average length of time in current ownership for the collaborating organisations of 11 years. Overall, collaborating organisations are older than both the non-trading organisations, and the New Zealand average organisational age.

4. Motivation/Goals/Commitment

Organisational age discussed in Section 3 has been considered in many of the earlier studies of disaster recovery as a potential explanation for some differentials in outcomes with older organisations more likely to survive a crisis event. Questions exist about how being old may give an advantage – is it the potentially greater resources, both physical and psychological that those organisations may have (Covin & Slevin, 1989) or is it actually a result of motivation and commitment i.e. those organisations who survive longest in part do so because of their strong motivation and commitment. Literature on family business, which in many ways also relates strongly to small owner operated businesses, suggests that commitment which they describe as a key human capital will increase the probability of survival (Stafford et al., 2013). Hansen and Hamilton (2011, p. 279) state that “one common finding is that owner-manager motivation has a strong bearing on growth” which can be surmised to also relate to survival in a disaster scenario. You have to survive to have the opportunity to grow.

Collins & Porras (2005, p. x) believe that “great (and enduring) organisations think of themselves” differently than lesser performers. They discuss this in terms of large organisations with as they put it, “the elusive, supremely important” but very fuzzy notions of vision, values, mission and purpose. For the predominantly smaller organisations operating in Canterbury, who for the most part are unlikely to have formal vision and value statements, these terms translate more to goals, commitment and motivation.

Another aspect to this discussion is the idea that many small firms exist not just for profit maximisation purposes.

“For many small –firm owner-managers, success can be measured in their capacity to sustain a lifestyle business that has been established to provide a measure of independence with an acceptable income at a ‘comfort-level’ of activity” (Beaver, 2003, p. 115).

For such firms, success does not necessarily equal growth or high profitability. As Beaver (2003, p. 119) suggests, success can mean “performance that falls substantially below the optimal level attainable”. In reality this means trade-off decisions are made with regard to the potential of the organisation versus the owners investment of either time or further resources (Hansen & Hamilton, 2011; Wiklund, Davidsson, & Delmar, 2003). This applies to both small firms and family owned firms where multiple individual goals need to be in congruence with organisational progress (H. Aldrich & Cliff, 2003; Stafford, Duncan, Dane, & Winter, 1999). Business Aspirations in this regard may be different to motivation/goals/commitment. Goals and commitment refer to the level of engagement felt by the owner with regards to the believed goal and therefore the level of commitment is separate to the level of the goal. Put another way, an owner can set the bar for successful performance very low (sufficient income to maintain a relaxed lifestyle) and still have a very high degree of commitment towards achieving that goal.

Also relevant to this discussion is the issue of who has the motivation and commitment? For a small business where the owner is very ‘hands-on’, it is the motivation, commitment and adaptability of that person which drives the business recovery. For a larger organisation with multiple stakeholders (which could include family businesses), there is a much more complex mix of personal versus organisational commitment and adaptability. It must also be recognised that personal goals and adaptability also need to be viewed in context of their family and the community in which the family and organisation are embedded (Stafford et al., 2013).

Changing long held goals – adapting to the new post-disaster environment may prove very difficult for some. While recovery may not be the right objective given the enormous changes in the environment (Xiao & Nilawar, 2013), the required complete shift in goals may be problematic.

Having established that goals (what the business aspires to achieve) and motivation (how committed to that goal are the owner or owners), the tricky task is to attempt to measure these concepts.

4.1.Goals

Respondents were asked a number of questions in an attempt to get a sense of the goals of the business before the earthquakes. As well as directly enquiring about the aspirations for the business, questions (and follow-up discussions) also related to how the business operated, what the key success factors were and how the respondent rated pre-earthquake performance. Responses were grouped into the following eight categories (Table 30).

Goal	Collaborators	Non Trading	Continued Trading	Total
Perpetuation with profitability	2	2	3	7
Limited growth – local market domination	4	0	0	4
Limited growth – larger premises	1	1		2
Growth through export	2	0	0	2
Growth – new stores	2	1	0	3
Growth – new brand development	1	0	0	1
Prepare for sale	0	2	0	2
Establish Profitability	2	0	0	2

Table 30 - Pre-earthquake summary of organisational goals

Responses from 13 of the 23 organisations reflect the discussion of maintaining a comfort level of activity with aspirations for the smaller businesses ranging from simply maintaining employment:

“We’re not in the business to make a million dollars, we’re effectively here – I mean, as I said before, initially we opened the shop because mum and dad needed a job”

(Owner – Organisation CTA).

to the slightly more ambitious of dominating the local market:

“To build it up to be one of the leading XXX in Christchurch”

(Owner – Organisation F).

and expanding slightly into larger capacity premises:

“Pre quake, we were actually in a phase of growth. I was under negotiations to take over the space next door and grow the premises”

(Owner – Organisation NTD).

Within those 13 organisations, four are larger organisations who perceive there to be limited opportunities for growth due to the nature of their markets and their position in them. These organisations talked about goals more as given by the external context rather than as organisationally or individually driven.

Six organisations had somewhat larger goals with ambitions to break into new markets with two exploring export potential, three considering expanding by increasing the number of outlets and one developing a completely new brand.

Two of the younger organisations were still seeking to establish their businesses on solid, profitable bases while the remaining two organisations were being prepared for sale due to the owners wishes to exit.

Looking at the type of businesses within each category, all of the organisations who continued to trade through strategies other than collaboration had very limited goals of simply perpetuating. Amongst the collaborating organisations there is a mix of perpetuation or limited growth (7) and larger goals (5) along with two organisations still in the start-up phase.

The business owners stated goals were reviewed in light of the broader view of the business. This broader view was obtained both through the interview, the background research and the knowledge gained by being a local in these markets. This review aimed to avoid the problem of “intentions devoid of behaviour” (Venkatraman, 1989). All of the business goals appeared to be realistic and congruent with the performance descriptions given.

It is important in any assessment of outcomes to consider these goals. As Stewart, Watson, Carland & Carland (1998, p. 190) explain “performance should be assessed in light of the owner’s aspirations for the venture”.

4.2.Motivation

When considering small businesses, which are the majority in this study, Stewart et al. (1998) identify clear links between an owner's psychological characteristics and the performance of their business. A study of five organisations by Radford, Addison & Ahmed (2013) identified that "passionate owners" were a key aspect of these organisations recovery journey. A definition of passion is "an intense enthusiasm", an extremely difficult thing to measure in the space of one interview given that different personality types may express this in rather different ways. However, a significant advantage of smaller studies where all interviews are carried out by the primary researcher is the ability to see the non-verbal and to recall the tone, language and emotions involved. Constant case comparison starting with the two extremes of the most clearly passionate to the least passionate has been used to produce the ranking below (Figure 42). This is of course entirely subjective but is based upon my perceptions of their motivation to achieve their goals, their enthusiasm or passion based both on what they said, what they did not say and how they said it. This continuum excludes the organisations who were being readied for sale as it is not possible to rate their motivation for a goal that has been completely removed as an option.

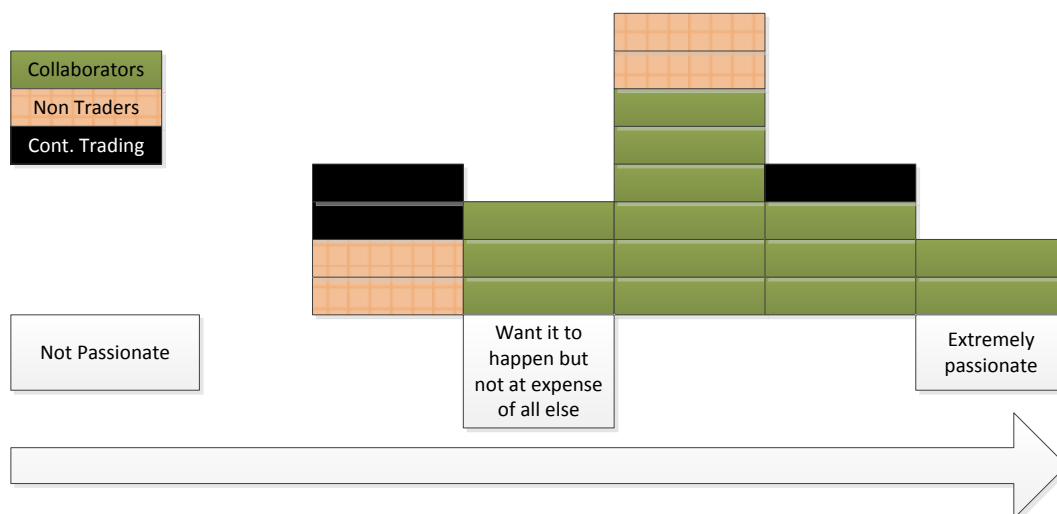


Figure 42 - Subjective assessment of respondents' motivations to achieve organisational goals

Based on this subjective rating, the collaborating organisations are rated on a comparative basis as demonstrating far greater passion or motivation for the achievement of the stated goals than the non-trading and continued trading organisations.

5. Strategic Posture

An entrepreneurial strategic posture is believed to be particularly helpful when the operating environment is classified as difficult or hostile (Covin & Slevin, 1989). While the hostile environment envisaged by the authors is somewhat different from a post-disaster environment, some aspects, particularly the notion that risk taking behaviour is needed to succeed are relevant. Covin & Slevin's (Covin & Slevin, 1989) work together with that of Miller (1983) led to a large body of work examining, refining and debating the concept of entrepreneurial strategic posture and effective measurement of the concept (Casillas & Moreno, 2008; Covin & Wales, 2012; Lumpkin & Dess, 1996; Ng & Kee, 2013; Runyan et al., 2012). Many aspects of an entrepreneurial orientation relate to aspects of organisational resilience – most particularly with regard to attributes that lead to adaptability such as innovation, pro-activeness and risk taking.

Given the idea that entrepreneurial orientation may be a beneficial attribute when faced with an uncertain and hostile post-disaster environment, an attempt was made in this study to consider the orientation of the participants. The measure selected was the Miller, Covin and Slevin scale as discussed in the methodology section. This scale is commonly used to present correlations with other aspects of organisations actions or performance, but here is used to assess relativity between the participants – to examine the question of whether there is any key difference apparent using this measurement in the characteristics of the collaborating and other organisations.

	Non Trading	Continued Traders	Collaborators
Average	3.93	4.41	4.39
Min	3	2.78	3
Max	4.67	6.11	5.89

Table 31 - Entrepreneurial Orientation Results

The results shown in Table 31 demonstrate a slight difference between the categories with the non-traders, having a lower average score than those who collaborated and resumed. While this sample size is clearly too small to draw firm conclusions, this is an area that would be worthwhile to consider in larger studies.

Having previously noted that many aspects of entrepreneurial orientation relate to resilience constructs, Figure 43 compares the resilience and entrepreneurial orientation for each numbered organisation based on normalising both to a percentage score. Each number on the radar represents an organisation with 14 of the collaborating and 2 of the continued organisations having provided data

for each measurement. The similarity of the two scores for many organisations supports the suggestion of some overlap between the entrepreneurial and resilience constructs.

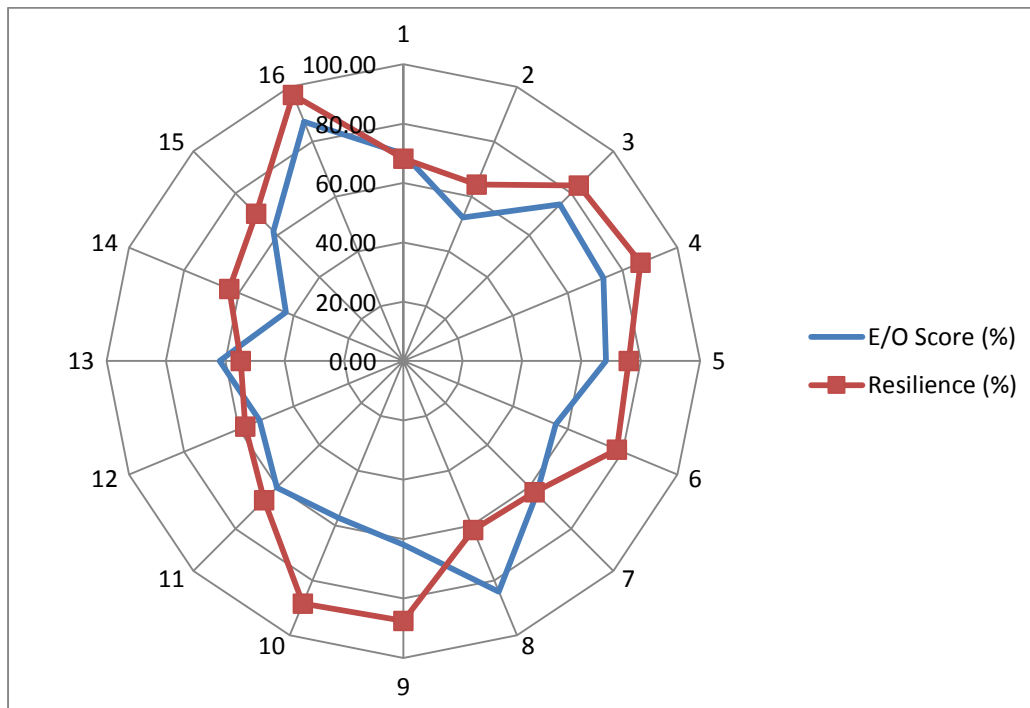


Figure 43 - Radar Diagram illustrating EO and Resilience scores

6. Pre Earthquake Financial Position

Financial position has been viewed as a potentially key factor in both the disaster literature (Dahlhamer & Tierney, 1998; Dietch & Corey, 2011; Durkin, 1984; Kroll et al., 1991; Webb et al., 1999a, 1999b; Zhang et al., 2009), the resilience literature (Asgary et al., 2012; Brewton, Danes, Stafford, & Haynes, 2010; Gittell, Cameron, Lim, & Rivas, 2006; Gunasekaran et al., 2011; Nguyen & Corotis, 2012) as well as work attempting to predict the success or failure of organisations in “normal times” (Altman, 1984; Zmijewski, 1984). Organisations were asked about both their pre-earthquake financial position as well as changes in their asset and debt levels. For the many small businesses, this question did not encompass their personal financial situation but in many cases their personal financials held more of the answers than their businesses.

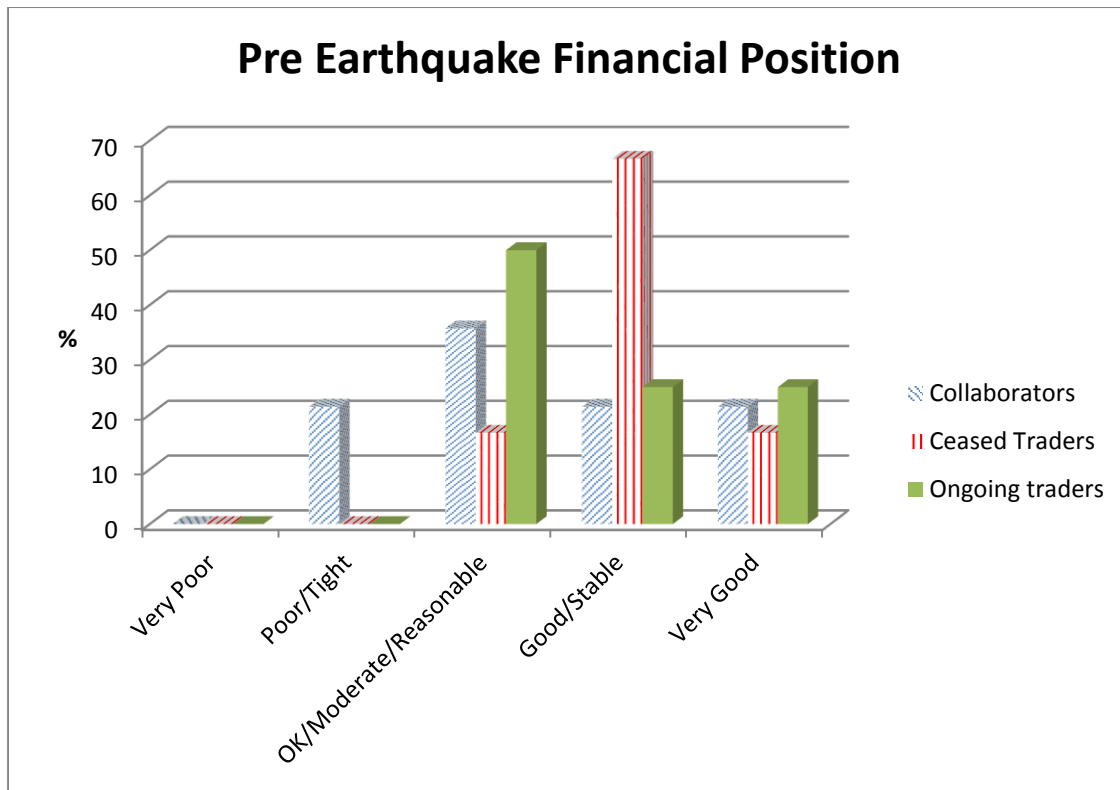


Figure 44 - Pre Earthquake Self-Assessed Financial Position

All of the businesses who were not trading described their pre earthquake financial position as moderate or better while three of the collaborating organisations were poor or tight. It should be noted that for one of these organisations, they were good prior to the September 2010 earthquake but had drained their cash reserves prior to February while refitting their damaged premises. This was the only organisation in the study that suffered in the September event. One of the key difficulties with measuring pre earthquake financial position is the biases of the respondents who are being asked two years later about what may easily seem to be the ‘good’ times prior to the earthquake, leading to a possible tendency to inflate. However, this was balanced in part by a number of other questions about their business pre-earthquake – trying to get a flavour of the overall operation and potential sustainability of it. Based on these discussions as well as discussions that resulted from questions about debt levels, the participant’s assessments of their position seem accurate.

Overall, collaborators had slightly weaker financial positions than the other organisations. This is congruent with the higher level of motivation to resume trading relative to ceased traders.

7. Nature of Business - Sector

The nature of the business is relevant for many reasons. Firstly, studies have shown that different industry sectors are affected by disasters in different ways (Chang & Falit-Baiamonte, 2002; Hiete & Merz, 2009; Kachali, 2013; Wasileski et al., 2011). The reasons for sectorial differences relate to the differential resource and environment impacts as well as the differing requirements of each sector with regard to resuming.

The organisations considered in this study are not representative of the sectoral make-up of Canterbury, with only eight out of 19 possible sectors included. Given that the participant selection process outlined in Chapter 3 was to identify all of the collaborations possible, it is clear from that review that this reflects collaboration being a strategy only used by particular sectors. The only sector where it was clear that collaboration did occur that is not represented in this study is Education and Training.

The industry sector in many cases gives some insight as to what may be the key needs for operation. For the eight retail businesses included in this study, some outlet, either physical or virtual is needed to interact with their customers. For manufacturing, both a physical place and in most cases, plant and equipment – much of which is expensive and specialised is required. Clearly the difficulties associated with obtaining these needs may be a key part of why these sectors found collaboration to be a suitable solution to recovery.

8. Building Ownership

All of the organisations in this study leased their premises. This is the norm in New Zealand, with ownership generally a separate industry of developers and owners.

It has been proposed that leasing rather than owning may be a disabling factor due to the lack of control over access, repairs and pre-event mitigation steps (Chang & Falit-Baiamonte, 2002; Dahlhamer & Tierney, 1998; Wasileski et al., 2011). As discussed in Chapter 4, access to premises and communications regarding the safety and cordon status of properties were made with landlords rather than the tenants. This left tenants at the mercy of whether landlords passed that information on, or whether they were able through their own efforts, to either gain information or access through other avenues.

However, due to the degree of damage and resulting placards and cordons, the leasing of premises for many organisations in Christchurch was actually helpful. This is because for those whose premises were unable to be used, they were able to leave the issues of inspection, access and insurance settlements to others and move on with considering their options for alternatives. While the legal situation was in many cases unclear (T. Collins, 2013), the majority of landlords took a pragmatic approach in releasing tenants from their lease obligations, or in maintaining their leases but ceasing rent demands from the date of the disaster. Brown et al.,(2014) found that organisations who rented premises were more recovered than organisations that owned their premises.

9. Firm Ownership

21 of the organisations were limited liability companies, partnerships or individual proprietorships. The importance of this is that decision making and authority rested solely within the affected company. Two of the collaborating organisations were branches of regional chains giving them additional decision support and resources outside of the disaster zone.

10.Pre Disaster Preparation

Even in the Christchurch scenario of a sudden onset disaster, there are many activities that organisations can undertake prior to an event to mitigate the damage caused and the disruption to operations. Traditional advice from emergency authorities includes issues such as ensuring provision of first aid kits, having and practicing evacuation plans, reviewing building strength and safety, securing fixtures and contents, ensuring that IT systems and important documents are copied and stored safely. In the management world, many of these activities would be undertaken as part of a business continuity planning process which would consider risks to business operations, methods to mitigate these and options for alternative methods of ensuring the continuity of key activities in the event of a disaster.

While all of these activities seem logically to be beneficial, the literature is rather mixed on the actual efficacy of preparedness efforts (Chang & Falit-Baiamonte, 2002; Corey & Deitch, 2011; Webb et al., 1999b; Xiao & Peacock, 2014; Zhang et al., 2009). Some authors have theorised that this may be more to do with the overall poor level of pre-event preparation – the idea that there is a certain minimum level of preparedness needed to have an effect (Webb et al., 1999b). The perpetual issue of survivor bias in disaster research is also pertinent with little comparison able to be done looking at levels of preparedness between businesses that continue and businesses that cease trading.

An idea that emerges from this research is that many businesses have undertaken activities that are very useful post-disaster but they do not recognise as preparedness measures. Studies that report low levels of business preparedness may under-report the less formal but still useful activities undertaken by organisations. This is also congruent with the growing body of knowledge about organisational resilience which, rather than specific lists of preparatory activities, looks more holistically at an organisations planning and adaptive ability. This point is also particularly relevant to understanding smaller businesses preparatory efforts which may consist of thinking, discussing and planning type activities that are verbal and do not become a formal document.

Participants in this study were asked “What sort of preparations for a crisis did you have prior to the quakes?” The most common response was in the negative until substantial prompts were offered with regard to what kinds of activities constituted preparation. First aid supplies were kept by all as this is a legal requirement in all New Zealand businesses under the Health and Safety in Employment Regulations. Several of the businesses had thought, but not documented, ideas as to how they would operate if their premises were disabled, particularly after the September 2010 earthquake but prior to February. Other preparatory efforts that were recognised only when prompted included IT and other records copies, staff and supplier contact lists and alternatives for meeting customer orders.

Eight of the 23 organisations did not have their IT backed up and stored off-site. Some avoided serious business disruption only by invoking desperate measures to regain access to their damaged premises.

“then my focus was all about trying to get back into there. Not necessarily for the purposes of trade because it was fairly obvious to most of us that that wasn’t going to be happening in the short term, but desperately trying to get our hard drive out because - - -No, we had no backup and we weren’t online”

(Manager - Organisation NTE)

“Yeah, we did get some new computers, but we were able to access our premises, albeit with the threat of being locked up from the Police, but come hell or high water we were going to get the server out of there, whether it was midnight or what, and we did”

(Manager – Organisation J)

One company, ironically in the ICT sector, had offsite backups for crucial information but had failed to ensure that other data, not recognised in their plans as being essential was secure. Similarly, another organisation had transferred some but not all of their data to the internet:

“Yeah, we had Cloud based data storage for everything except for all of our customer database, our sales database, so we lost everything. We lost 40 years of information”

(Owner - Organisation C)

Only one of the organisations had a formal Business Continuity Plan. This was an organisation that was a branch of a national group. The group had prior experience of a major disaster with a fire in one of their premises and took the Continuity Planning process quite seriously. This organisation reported that the plan was very helpful and enabled fairly seamless service to be delivered to their clients. Somewhat surprisingly, the largest organisation in the study which also operates in a semi-critical industry does not have a Business Continuity Plan.

All except for two organisations had staff contact information stored in multiple accessible formats. For those two organisations, this inability to easily contact staff was a major issue:

“No, we didn’t have anything. It was a bit of a scramble the next day to try and find out who was in the city, who was working, find all their phone numbers, find out where they were”

(Manager - Organisation H)

Along with insurance which will be discussed next, these were the only preparatory efforts mentioned by respondents.

11. Insurance Cover

22 out of 23 respondents had some insurance coverage and this was often their first response when asked about preparatory measures. Figure 45 shows the types of coverage held by the three categories of respondents.

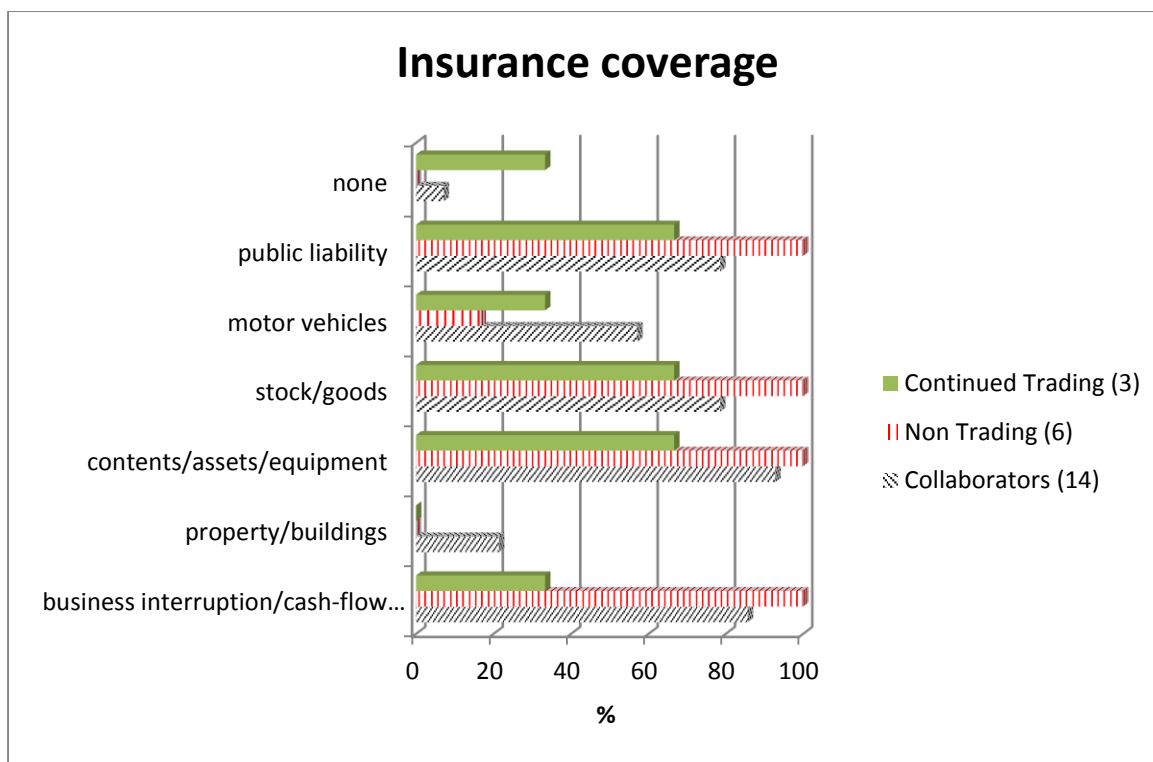


Figure 45 - Type of Insurance cover

The highest levels of coverage were held by the non-trading organisations, with all respondents having business interruption, contents, stock and public liability insurances. This high degree of insurance cover is in line with the Canterbury context which was discussed in Chapter 4. One organisation, which was a branch of a national chain, had no insurance on its Christchurch city central stores although it did on other locations. This organisation had over a million dollars' worth of stock in their two city centre stores. They were able to retrieve the majority of this stock through some rather desperate efforts:

“We went in with engineers, yep, who made the building safe by sticking a yellow sticker on over the top of the red sticker while we were in the building and then they pulled the yellow sticker off and out we went and then it became a red stickered building again. It was interesting but we weren't quibbling because we had a million dollars of stock in there so got it out”

(Manager – Organisation H)

While insurance seemed to be put as their key preparatory measure, the actual outcomes of the insurance claims process have been lesser than expected for some, and the timeframes for actual financial receipt long.

12.Locus of Control

Powell & Harding (2009) introduce the idea in their study of recovery from the 2007 Gisborne earthquake, that Locus of Control may be correlated with businesses likelihood of taking pre-event actions to prepare for a crisis. Their rationale was that people who tend to view outcomes as within their control are more likely to perceive the investment of effort to be worthwhile. An external locus of control refers to a personality trait whereby you are more likely to believe that you have no or little control over what happens and this is dependent upon external variables. An internal locus of control whereby you believe you have influence over what happens is linked with characteristics of transformational leadership by Howell & Avolio (1993).

A simplified question regarding Locus of Control was included within this study simply as an exploratory investigation given that the established instruments to measure this concept are lengthy. The concept is relevant in considering whether certain personality types (internal orientations) are more likely to get back up and fight for their business survival following a disaster. There are also clear links with the concept of self-efficacy or our belief in our ability to success in any given situation.

There was little difference in the mean scores across organisation categories

	Non Traders	Continued Traders	Collaborators
Mean	5.2	5	5.6
Min	4	3	4
Max	7	7	7

Again, the limited numbers in this study, particularly with regard to non-trading organisations do not allow any conclusions from this exploration; however this would be an interesting variable to include in a larger study looking at ceased vs continued traders.

13.Organisational Resilience Attributes

The concept of organisational resilience captures the idea that people and the groups of people that form organisations have certain skills, knowledge, mind-sets, attitudes, behaviours and personal attributes that contribute to whether an organisation is ultimately successful. In line with the resource based view of the firm, the unique combination of these attributes can create a ‘resource’ that is difficult to imitate and can be a source of significant competitive advantage (Ng & Kee, 2013; Sullivan-Taylor & Branicki, 2011). While resilience seeks specifically to detail the traits that help in

adverse and uncertain situations (Lee et al., 2013), many of these are supported by the business literature as beneficial in business as usual (Mitroff, 2005) with the resilience perspective drawing upon many of the best practice recommendations from the world of organisational behaviour, general management and crisis management.

One of the key potential reasons why these kinds of attributes have been little considered in disaster recovery research is the difficulty of measuring 'soft' organisational attributes, particularly given their ever evolving nature. The 13 indicator model presented in Chapter 2 and associated measurement tools provide a measure of potential, rather than absolute. Resilience is not a static property of an organisation but a fluid, ever changing potential. The resilience of an organisation based on these indicators is a pre-event organisational characteristic which is a crucial part of the complex mixture of cause and effects that result in differing levels of recovery success. As has been discussed in preceding chapters, there is clear evidence of many of the resilience indicators in the collaborators stories and an absence of many of these in a small number of the non-traders.

While pre-event resilience was unable to be measured, this study did include a measure of post-event resilience. Collaborating and continued traders were asked to complete the short form benchmark resilience tool which gives a measure against each of these thirteen indicators (Whitman et al., 2013). This was completed by all collaborators, but only two of the continued traders, due to time constraints.

Overall results are presented in Figure 46 together with a comparison drawn from a benchmarking study of organisations in Auckland (using the long form benchmark resilience tool), in order to give some comparison of where these organisations sit relative to others (Stephenson, 2010; Stephenson et al., 2010).

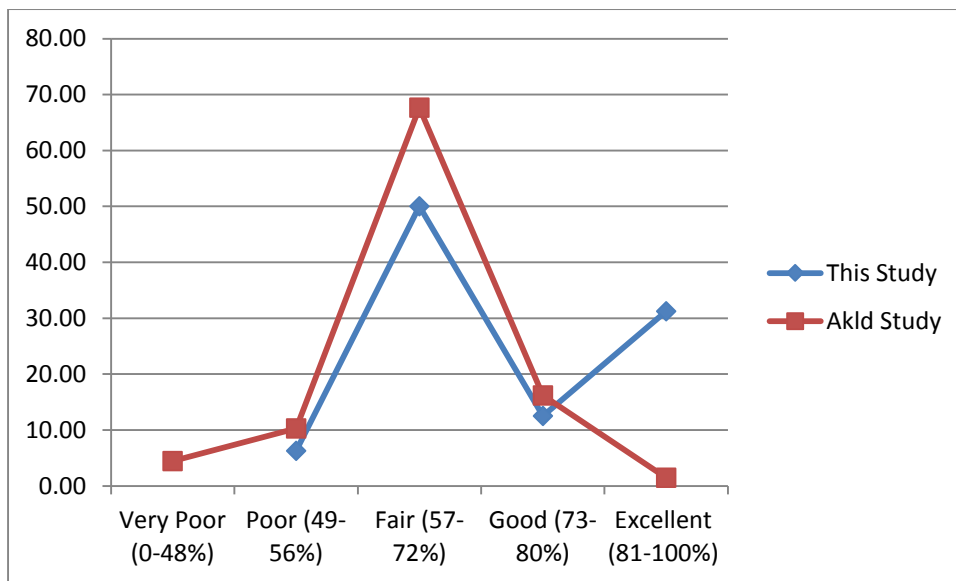


Figure 46 - Organisational Resilience Scores (post-earthquake) relative to original Auckland study

It is clearly evident that while many organisations are in the middle ground with fair resilience scores in line with the Auckland results, there is a significantly higher number of respondents with excellent resilience. Those scores give an indication of resilience as at the date of the interview and are therefore based on the learning and adaptation that has occurred post disaster. The next section will discuss evidence of resilience attributes displayed during that process.

13.1. Leadership & Culture

▪ Leadership

Research in progress suggests that leadership is the most significant indicator due to the flow on effects a 'great' leader has on other organisational attributes. This can be clearly seen in the collaborating organisations, whereby organisational leaders had to be both aware of potential recovery strategies and capable of enacting these. One aspect relating to leadership which was noted in Chapter 11 was that the level of business experience of the leaders of non-trading organisations was lesser than that of collaborating and continuing traders. However, it must be noted that as this project undertook interviews with only one member of each organisation, who was in the majority of cases the leader, there is a significant bias in this study's view of their role.

▪ Staff Engagement

Similar to leadership, the single perspective on each organisation limits the conclusions to be drawn. Notwithstanding this, there were elements of many organisations stories which suggested that their

employees were heavily invested in assisting with recovery. Organisation B identified its collaborative partner through a staff member. Organisation O's owner describes the intense efforts he made to engage and explain the necessity for collaboration to his team – although with mixed success. Both Organisations I and J spoke of long hours and intense effort by their entire teams, despite their home circumstances in order to assist with response efforts. Organisation K set up operations in the lounge of a staff member.

▪ **Decision Making**

There was little evidence of staff engagement in the decision making process. Respondents described their post-disaster decision making as a top-down process with staff informed and contributing but largely after rather than during the decision event. The ability to make decisions quickly was noted as significant in comparing ceased and collaborating traders.

▪ **Situational Awareness**

The ability to assess and understand the immense changes in the environment was clearly very important for a large number of organisations in this study. Examples include Organisation J who impressed with its ability to understand the long term impacts on their customer base at a time when business was booming with response and relocation work. Organisation I was aware of the need to enter into collaborative arrangements in both the response period and in the construction of new facilities in order to retain their status as the leader in their industry. NTB1 and NTB2 were aware of the long term upheaval in the city and the hazards of attempting to re-establish operations in an environment of great uncertainty. In contrast to these stories, NTC resumed operations in its original format before ultimately ceasing.

▪ **Innovation & Creativity**

Given the lack of collaborative endeavours in the existing business environment, many of the strategies can be regarded as innovative or creative. Although many collaborators spoke in hindsight of their collaborative endeavours being a logical and straightforward response to the disaster, analysis in Chapters 6-9 indicated that for most, collaboration only entered their horizon once more conventional options had been examined and found problematic.

13.2. Networks

▪ Effective Partnerships

Chapter 10 highlighted the difference networks made in the stories of continued, non and collaborating traders. While many of the collaborators did not have pre-existing relationships with their collaborators, they utilised their networks to identify these partners. This is in line with the concept of the strength of weak ties as discussed by Granovetter (1973) who highlighted the value of wider connectivity that comes through the diversity of connections held by those outside of your close networks. Solutions were generated by organisations openly discussed their issues with others. Unsurprisingly in a study focused on collaboration, effective partnerships are one of the key factors which made a difference for these organisations. For the one new business in this study, her extensive contacts within the central city business world assisted in establishing her business and assessing future options.

▪ Internal Resources

Human resource issues were identified by only one ICT organisation as having a significant impact on their recovery. Other organisations spoke of the efforts they went to with regard to ensuring their staff wellbeing and ability to continue to contribute to the organisations. For example, CTC rapidly built a new tea room in order to reassure nervous staff. M frequently sent staff home after significant aftershocks and I ensured that its' large team had portaloos and shower facilities. Financial resource issues were evident in many collaborating organisations, however, it is noted in Section 6 that this may have served to increase their motivation to resume trading. The relationship of financial reserves to resilience is not straightforward as greater reserves may serve to reduce the potential realisation of innovative resumption strategies.

▪ Leveraging Knowledge

Other than Organisation L, which had difficulty in attracting new staff to replace voluntary leavers, respondents made no comments to suggest there were difficulties in filling key roles during the recovery period. It is unclear whether this is because of staff versatility or a lack of need for that versatility. With regard to critical information, C lost its valuable database of prior customers, and two other organisations re-entered unsafe premises in order to obtain computer servers. 8 out of 23 organisations had no off-site computer back-ups. Two organisations did not have up to date staff contact lists that were accessible post-disaster.

▪ **Breaking Silos**

Only two organisations within this study are large enough to potentially have division between different areas of the business. Both of these organisations (H & I), commented that post-disaster efforts had been beneficial in breaking down these barriers with both organisations having staff fulfil roles in other divisions. Both organisations believed this had been beneficial and may lead to future improvements in operations. From an external viewpoint, all of the collaborating organisations are now more connected to broader business networks and in some cases, to communities.

13.3. Change Readiness

▪ **Unity of Purpose**

Organisational goals discussed in Section 4.1 revealed that organisations were quite clear as to their aspirations and their role or fit within their individual industries. Contributing to the overall recovery of Canterbury was also a clear theme in many interviews. The two larger organisations (H & I) which are more likely to suffer from unclear priorities seemed extremely clear on their priorities in the immediate aftermath of the earthquake with both resuming operation within days. For Organisation D, their business continuity plan set out a clear course of action to complete current work which worked well.

▪ **Proactive Posture**

NTC who ceased trading after making no modification to their pre-earthquake business is an example of an organisation (for many complicated reasons) failing to proactively respond to changes in their environment. In contrast, CTC addressed issues in their neighbourhood before they impacted significantly on operations and devised a creative solution to address these. CTC also responded to warning signals of staff unhappiness in creating ground floor tea room space. From these two extremes, are many examples, particularly discussed in Chapter eight of organisations who showed awareness, particularly in relation to the evolving external environment and adopted collaborative strategies which offered benefits perceived as useful in that environment. The ability to recognise options for proactive adaptation is clearly linked to the organisations' Situational Awareness.

▪ **Planning Strategies**

Only one organisation (D) had any formal crisis planning, however others made mention of having considered options following the September 2010 initial earthquake, through a less formal but still important planning process. Many organisations significantly reviewed both goals, timeframes for

achievement and operational methods as part of their process of adaptation. Strategic planning, be it formalised or simply as thinking and discussing was evident, most particularly in the collaborators whose strategies evolved from short term resource needs to long term growth.

▪ **Stress Testing Plans**

None of the organisations in this study had held any simulations or scenarios other than fire evacuation drills. It is possible that prior practice may have assisted organisations, particularly those who were slow to conceive of alternatives for operation. However, the unprecedented scale of the event, and particularly the long-term loss of access to the Central Business District, required the innovation and adaptation that may not easily have been conceived of pre-event.

13.4. What made a difference?

With the exception of the stress testing of plans, all of the resilience indicators play a role in these organisations journeys. It is difficult to extract the cause and effect mechanisms in their interrelated nature. The indicators that appear to have made the most difference are effective partnerships, situational awareness, proactive posture and unity of purpose, all of which were driven by effective leaders. The clear sense of purpose of the leaders drove the search for knowledge and options through their initiation of conversations with others. These conversations both grew knowledge and generated ideas for proactivity. Collaboration became a viable strategy through the actions of individuals sharing and discussing their problems, and importantly, listening to others thoughts.

14. Owner characteristics

One of the research questions asked if there are particular characteristics of owners/managers or organisations that made them more likely to collaborate. This is in recognition of the key role played by individuals in smaller businesses where their own, rather than the organisations characteristics may be significant. Individual characteristics have been found to also be significant in decision making about collaborative efforts in larger public sector collaborations (Esteve, Boyne, Sierra, & Ysa, 2012) with older managers less likely, and higher educated managers more likely to enter into collaboration.

14.1. Owner/Manager Age

This study found that non-traders were on average younger than collaborators, who were younger than the continued traders (Figure 47). This may indicate an inclination for the older and more experienced traders to be more likely to pursue tried and tested conventional means for recovery.

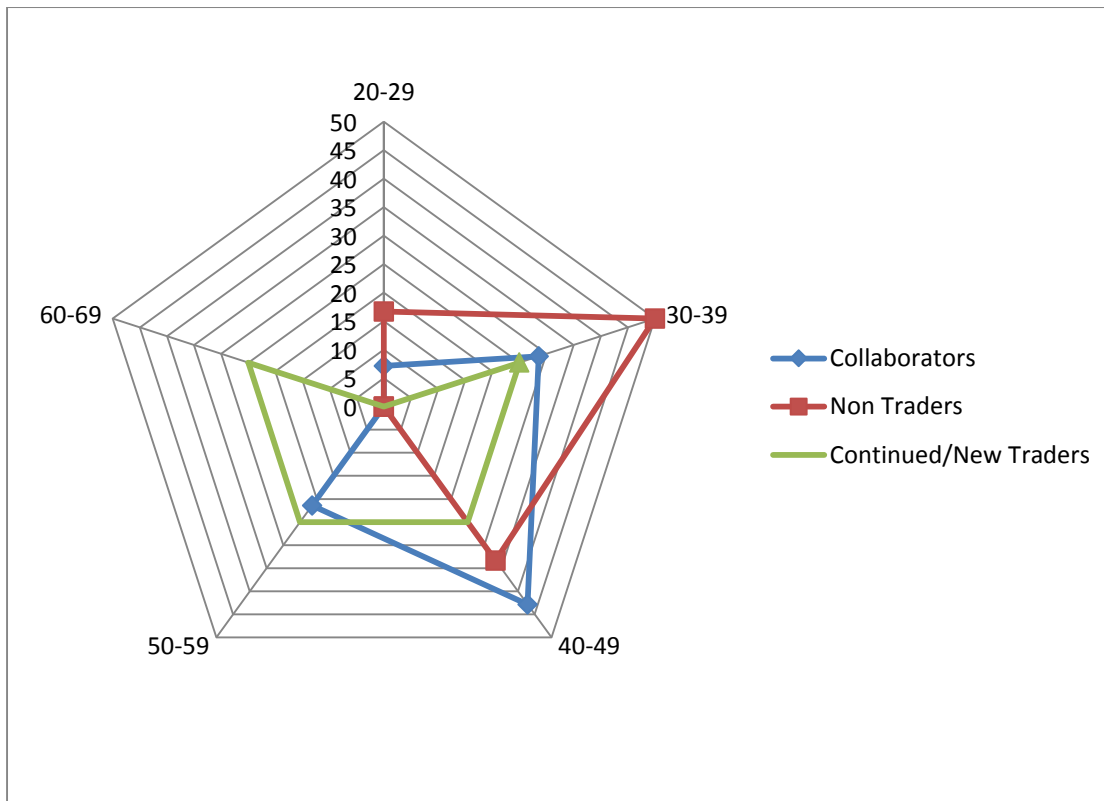


Figure 47 - Age of participating managers or owners

14.2. Prior Experience

One other area noted as clearly different between the three categories of organisations was in the prior experience of the respondents. All of the non-trading organisations had a background of full time employment with the current organisation, operating for less than three years as a first-time business owner. Only three of the collaborating organisations had less than three years business ownership experience. A lack of experience has been clearly linked to a greater likelihood of business failure (Dyke, Fischer, & Reuber, 1992; Shepherd, 2003)

14.3. Gender

A study of business survival in normal times found that women owned businesses were less likely to survive (Haynes et al., 2011). Only three of the participating organisations were owned by females in this study. One of those businesses started only one month prior to the earthquakes, one is a new business created post-earthquake by the manager of a family business which chose not to resume trade and one is a non-trading business that will not resume. There is insufficient variation in the participants to draw any conclusions regarding the impact of gender; however, this may be an

interesting characteristic to include in any future studies in considering whether the motivations and decision making processes of male, female and family owned businesses differ post-disaster.

15.Summary

This chapter set out to examine the characteristics of organisations in this study with the aim of understanding whether particular characteristics of the organisation or individual owner were different between collaborators, continued or non-traders. Characteristics were selected based both on what prior literature considered as potentially important in terms of recovery status and those that have emerged from interviews in this study. A summary of the findings is presented in Table 32.

Characteristics considered in prior business recovery studies	
Size	Collaboration occurred between micro, SME and large organisations. Both limited liability sole outlets and subunits of larger organisations collaborated.
Age	Organisations that collaborated are on average older than the average New Zealand firm.
Sector	Sector or industry is highly relevant in understanding why collaboration was a potential resumption strategy.
Financial Resources	Overall, collaborators had slightly weaker financial positions than ceased or ongoing traders. Non-trading organisations were not struggling financially pre-earthquake.
Ownership Status	Leasing, rather than owning your premises was not a disadvantage for most in this context.
Pre-Disaster Preparation	The level of pre-disaster preparation was generally low and had little impact on post-disaster choices. Non-Traders had the highest levels of insurance cover.
Emergent Characteristics	
Owner Age	The owner/managers of non-trading organisations were younger than collaborators. Continued traders were older than both collaborators and non-traders.
Owner Experience	Non-Trading owners had less business ownership experience.
Goals	Goals of the organisations were generally quite limited with profitable perpetuation and limited growth predominant.
Motivation	Collaborators were more highly motivated to achieve the organisational goals than continued or non-traders.
Entrepreneurial Orientation	Non-traders scored lower on measures of entrepreneurial orientation than collaborators or continued traders.

Table 32 - Summary of organisational characteristics findings

Overall, the demographic characteristics of organisations or owners have little explanatory value. This is consistent with Brown et al.'s (2014) overall conclusions which suggest that recovery trajectories may be better explained by consideration of other organisational properties and actions.

This study found Resilience attributes to have more significance in understanding the recovery of these organisations.

The adaptive actions enacted by both collaborating and continued traders clearly demonstrate behaviours identified by the resilience literature relating to leadership, situational awareness, decision making and networks. Motivation and goals noted in 15.2 provided a clear Unity of Purpose, which was then operationalised for collaborators through leadership, situational awareness, the use of their networks and ability to make decisions in the uncertain environment. For three of the non-traders, their lesser motivation for immediate resumption represented a resilient response whereby delayed re-opening was perceived as an acceptable decision. The remaining two non-trading organisations did not demonstrate these resilient behaviours with a failure to utilise networks to inform situational awareness and decision making.

Chapter Eleven - Outcomes Part One: Economic and Operating Environment

1. Introduction

The impacts of the Canterbury earthquake events have been enormous for all in the region. This chapter is the first of two considering outcomes for participating organisations and the overall region. One of the key questions of this thesis is whether collaboration is an effective disaster recovery strategy for organisations. This cannot be fully answered without consideration of the outcomes of this approach. Firstly, outcomes for the region's business environment are summarised. Secondly, outcomes for participating organisations are discussed with a focus on traditional economic measures. Lastly, discussion covers how the enormous changes that have occurred for both the organisations and region as a whole make measurement of outcomes problematic. The second chapter in this section takes an alternative view to measuring outcomes, influenced by positive organisational psychology, to examine the positives that have emerged for these organisations.

2. Outcomes for Region

Three years after the disaster, the region of Canterbury, and most particularly the badly damaged central city area is often referred to as a 'transitional city' (Barber, 2013). This refers to a city still in a constant state of change with a new and more settled normal still many years away. Impacts of the disaster continue to affect daily life with a significant amount of repair and rebuilding, particularly of commercial property yet to begin. This section will detail some of the effects on the region's business environment.

2.1. Population Changes

As of the 2013 census, the Canterbury population has risen 3.37% to 539,436. This is a slightly lower growth rate than the overall New Zealand population increase of 5.32%, but follows two years of population decline immediately following the disaster (Pearson, 2013). Within the overall increase, there has been significant changes to the population composition with an increase in the median age to 39.9 compared to a New Zealand average of 38 (Statistics New Zealand, 2013b). This supports anecdotal evidence of flight from the disaster zone by families with children, with those population

losses having later been replaced by those attracted by the economic opportunities associated with the rebuild.

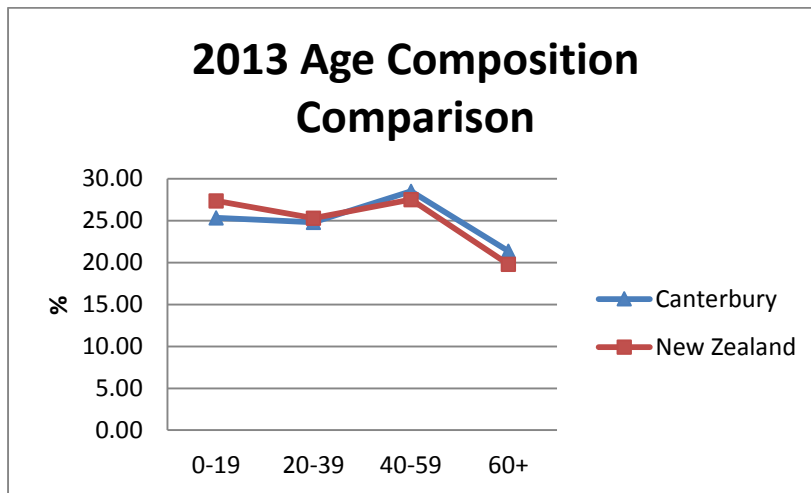


Figure 48 - Canterbury v New Zealand Age of Population as %

Source: Statistics New Zealand, 2013a

Figure 48 illustrates that this is not in line with the overall New Zealand demographic trends (Statistics New Zealand, 2013a). As well as a somewhat older population, the new Christchurch has more males than previously as illustrated in Figure 49 showing the male population growing almost double that of the female population since 2006 (Statistics New Zealand, 2013a).

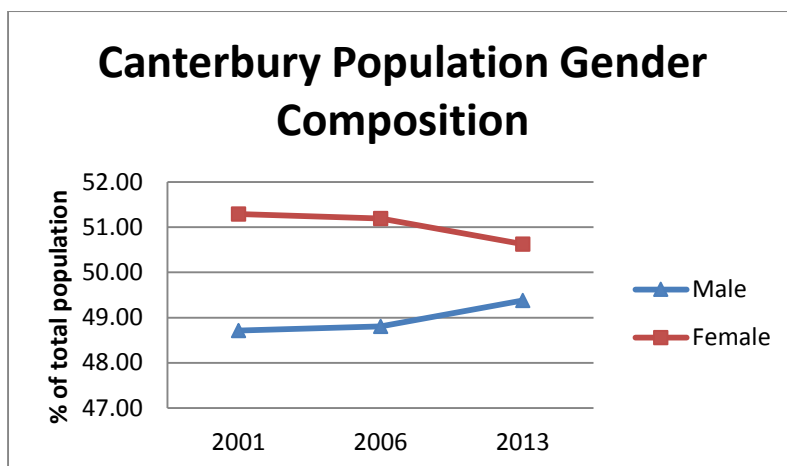


Figure 49 - Population Gender Composition

Source: Statistics New Zealand, 2013a

2.2. Business Demographics

The number of businesses operating in Christchurch has risen only very slightly since 2010 with 64,778 geographic units, rising to 64,849 in 2013. However, this is in line with declining enterprise growth since 2010 for the overall New Zealand economy (Statistics New Zealand, 2014a).

While business numbers may be static, the number employed within those businesses has increased. Compared with the overall employee count of New Zealand, the effect of the disaster can be clearly seen (Table 33) with an initial dip in growth relative to the overall economy and more recently a rapid growth as the rebuild gets fully underway.

Year (to February)	Canterbury	New Zealand
2011	.06%	.57%
2012	.53%	.86%
2013	2.49%	.58%

Table 33- Growth rates of employee counts

Source: Statistics New Zealand, 2014a

Business death rates following the earthquakes have not noticeably been impacted by the disaster as illustrated in Table 34 (Statistics New Zealand, 2014b). However, this hides significant sectoral winners and losers and also does not take into account the long potential lag with regard to official recording of the final closure of companies.

Death Rates as % of prior year enterprise numbers		
Year	NZ	Canterbury
2007	11.02	10.21
2008	10.60	10.08
2009	10.50	10.03
2010	10.68	10.27
2011	9.51	9.54
2012	9.26	9.90
2013	8.92	8.64
2014	7.91	7.74

Table 34 - Business Death Rates

Source: Statistics New Zealand. 2014b

2.3.Sectoral Demographic Changes

Significant changes in the number of enterprises by sector can be seen (Table 35) as a result of the earthquakes with increases in the number of businesses operating in construction and decreases in hospitality (Accommodation and Food). Other sectors with significantly different expansion or contraction relative to the rest of New Zealand include Mining, Electricity, Gas, Water and Waste Services, Retail Trade, Information, Media and Telecommunications, Public Administration and Safety (Statistics New Zealand, 2013b).

% change in geographic units by Sector: 2010 to 2013			
Sector – by ANZIC code	Canterbury	All of New Zealand (EXCL Canterbury)	Variance
A Agriculture, Forestry and Fishing	-5.87	-7.1	1.23
B Mining	18.84	12.18	6.66
C Manufacturing	-3.63	-3.98	0.35
D Electricity, Gas, Water and Waste Services	10.00	3.38	6.62
E Construction	19.57	-5.75	25.32
F Wholesale Trade	-4.64	-1.42	-3.22
G Retail Trade	-6.47	0.81	-7.28
H Accommodation and Food Services	-10.71	3.48	-14.19
I Transport, Postal and Warehousing	-6.47	-1.5	-4.97
J Information Media and Telecommunications	-8.68	1.84	-10.52
K Financial and Insurance Services	-1.27	-2.8	1.53
L Rental, Hiring and Real Estate Services	2.09	3.35	-1.26
M Professional, Scientific and Technical Services	4.05	4.28	-0.23

N Administrative and Support Services	1.25	6.22	-4.97
O Public Administration and Safety	-8.07	-2.57	-5.50
P Education and Training	1.62	3.36	-1.74
Q Health Care and Social Assistance	-2.31	1.43	-3.74
R Arts and Recreation Services	-5.33	-0.97	-4.36
S Other Services	-3.30	0.92	-4.22

Table 35 - Percentage change in geographic units by sector 2010-2013

Source: Statistics New Zealand, 2013b

Table 35 considers the expansion and contraction of the number of businesses within each sector. The number of employees within each sector illustrating the expansion and contraction of employment numbers within existing businesses is shown in Table 36.

% change in employee numbers 2010-13			
Sector	Canterbury	NZ excl Canty	Variance
A Agriculture, Forestry and Fishing	6.59	1.82	4.78
B Mining	22.73	9.68	13.04
C Manufacturing	-3.34	-2.73	-0.61
D Electricity, Gas, Water and Waste Services	3.01	13.85	-10.83
E Construction	67.36	0.05	67.31
F Wholesale Trade	-0.07	3.51	-3.59
G Retail Trade	2.07	0.00	2.07
H Accommodation and Food Services	-10.17	3.33	-13.51
I Transport, Postal and Warehousing	-0.93	1.06	-1.99
J Information Media and Telecommunications	-27.59	-10.94	-16.65
K Financial and Insurance Services	-10.96	5.06	-16.02
L Rental, Hiring and Real Estate Services	4.73	6.57	-1.85
M Professional, Scientific and Technical Services	9.01	11.58	-2.57
N Administrative and Support Services	18.08	5.65	12.43
O Public Administration and Safety	-3.77	3.23	-7.00
P Education and Training	-3.77	-2.09	-1.67
Q Health Care and Social Assistance	-0.61	3.82	-4.43
R Arts and Recreation Services	-18.50	-1.47	-17.03
S Other Services	-4.28	-0.86	-3.42

Table 36 - Percentage change in employee numbers by sector

Source: Statistics New Zealand, 2013b

While the number of companies involved in construction has jumped 19.5% in Canterbury, the number employed within these companies has increased 67%. The loss of arts and recreation facilities within the disaster zone is reflected in the 17% reduction in employment in this sector, although organisation numbers have not reduced comparably reflecting that many of these facilities are owned by large organisations. Results that are not so clearly expected include the reduction in Information, Media and Telecommunications (1250 employees) and Financial and Insurance Services employment (580 employees). Examining the sub categories of these sectors reveals that the highest contributing sub sectors to these job losses were publishing, motion picture and sound recording, and telecommunications. Within the Finance and Insurance category, finance lost 820 employees while insurance gained 380.

The overall picture is of great changes in the sectoral makeup of businesses and employment in the Canterbury region which has corresponding impacts of demand preferences, culture, educational needs and social cohesiveness.

2.4.Spatial Shifts

Similarly to the areas affected by Hurricane Katrina (Xiao & Nilawar, 2013), three years post-disaster Christchurch is regarded by many (Burdon, 2014; Stylianou, 2014) as a doughnut – a metaphor used to describe thriving development in a ring around an empty middle (The Economist, 2002). This trend commenced early in 2012 with relocation from the core into previously vacant or hastily built new space in existing semi industrial areas of the city. Figure 50 illustrates the new economic hotspots of the city as at early 2012, lying at this stage primarily to the West of the now economically cold inner city and eastern suburbs (Canterbury Development Corporation, 2012).

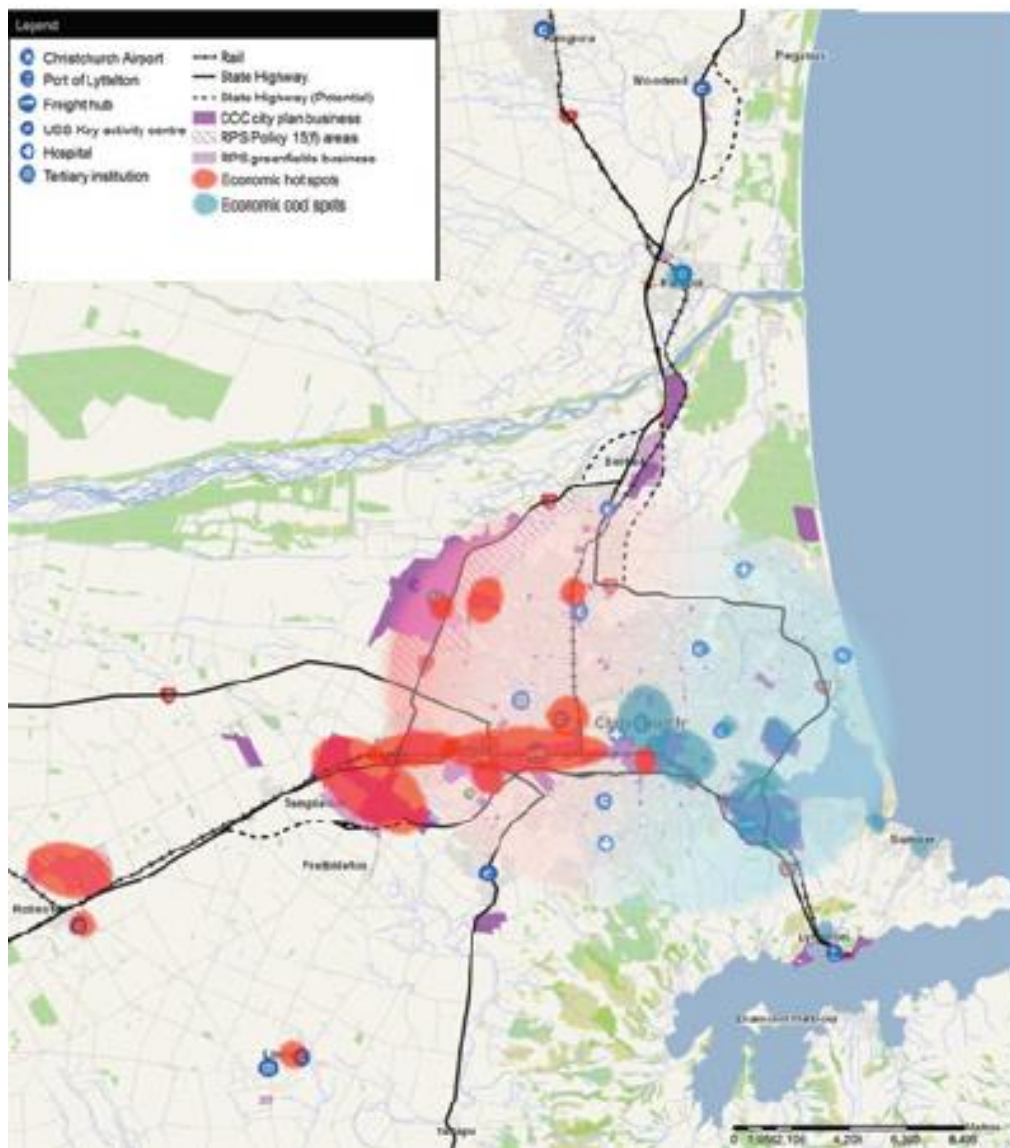


Figure 50 - Economic heatmap Christchurch 2012

Source: Canterbury Development Corporation, 2012

Since this map was produced, areas just on the fringes of the CBD which are outside of the boundaries of the centrally planned new core have developed rapidly, with a large number of mixed use office and retail space completed or nearing completion. Similarly to the process described in relation to recovery from Hurricane Katrina (Xiao & Nilawar, 2013), this influx is placing significant pressure particularly on transportation with the roading network not designed to cope with volumes in new locations. This pattern of development is also causing widespread concern with regards to the future population of the rebuilt city centre with many organisations having taken long term leases in their new locations.

2.5. Physical Rebuilding

As of December 2014, horizontal infrastructure repairs are 57% complete, residential repairs managed by the EQC scheme are 92% complete, and repairs or cash settlements managed by private insurers 72% complete (Canterbury Earthquake Recovery Authority, 2014b; Insurance Council of New Zealand 2014). Progress on the inner city is rather less advanced with some new buildings completed and occupied but many more still in the very initial stages of construction.

2.6. Summary

Post-disaster, Christchurch has experienced spatial, sectoral and population changes which all interact to create a different business environment than existed previously. As rebuilding and repair work is still on-going, there is still a significant transition period until any kind of settled 'normal' is achieved. The outcomes for individual businesses have to be assessed in the context of this period of great change within their environment.

3. Self-Assessment of Recovery Status

Organisations were asked to assess their own recovery status at two time intervals post-event, as well as their expectations for the future at four and seven years post-earthquake. This recognised that recovery or a failure to recover is a process not an event (Marshall & Schrank, 2014; Ropega, 2011). A business that fails to re-open following the event did not fail in the event but in the process of assessing and deciding what actions are available and desirable in the weeks and months post-event.

3.1. One year post-earthquake

The majority of organisations suffered the worst disruption following the February 22, 2011 earthquake. However for the minority who suffered from the 4 September 2010 earthquake, the one year measure is taken from their self-assessed point of maximum damage.

One year post-quake (business that existed pre-quake only)			
	CTD		
	NTC		
	CTA		
	O		
	L		
	K		
	H		
NTD	G	CTC	
NTE	E	N	
NTB2	D	J	
NTB1	C	F	
NTA	B	A	I
Ceased (5)	Survived (12)	Returned to pre EQ state (5)	Thriving (1)

Figure 51 - Self Assessed Recovery Status - one year after most damaging event

Figure 51 illustrates that the majority of the organisations in this study rated themselves as surviving only one year after the event. Given the contextual factors outlined in Chapter 4, particularly the on-going seismicity at this point, this seems unsurprising. The factors that explain the more rapid recovery of the five organisations who had returned to their pre earthquake state are varied. For two the lack of damage to their premises and their rapid communication of their functionality to their client base are key enablers. For another three, the existence of the collaborative relationship which provided them with acceptable and affordable premises seems most important. For the remaining organisation in this category, good leadership and a very resilient organisational culture seem most relevant. The one organisation that reports itself as thriving one year after the earthquakes suffered little disruption to its premises or equipment and a rapid upsurge in demand due to its industry.

3.2. Two years post-earthquake

Two years post-quake (business that existed pre-quake only)			
	CTD		
NTD	O		
NTE	K	CTA	CTC
NTC	G	L	N
NTB2	D	J	I
NTB1	C	H	E
NTA	B	F	A
Ceased (6)	Survived (7)	Returned to pre EQ state(5)	Thriving (5)

Figure 52 - Self Assessed Recovery Status two years following damaging event

Two years post-earthquake (February 2013 for the majority of respondents), and clear progression can be seen along the continuum towards thriving. Again the contextual factors are of some importance here with the on-going aftershocks having lessened and the last quake above MM6 having occurred in December 2011. Given the desired progression from left to right, it is perhaps more useful to consider why seven organisations remain only at survival stage and whether there is something unique about them? The seven organisations still at survival stage entered into collaborations somewhat out of desperation with a perception of no other options available. Their key rationale to entering into the collaborations was pure survival, although with some experiencing later benefits. At this point, only two years on, most of these organisations were only just settling in to either permanent new premises/methods of operation or existing in a temporary short term form awaiting a more permanent future. Survival for them was a necessary short-term holding pattern in order to position them for sustainable long term growth in the new normal. There appears to be no difference between the collaborators and the non-collaborators two years post-quake.

3.3.Expectations for the future – four years

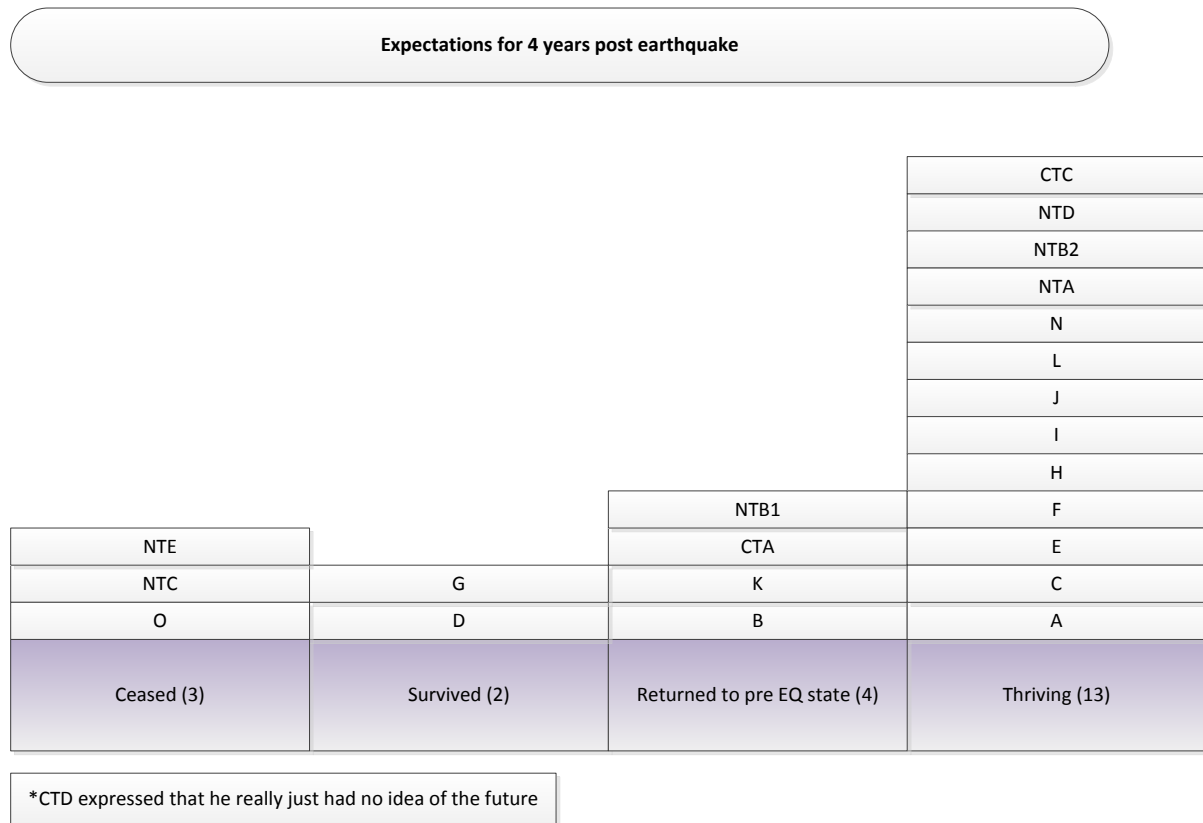


Figure 53 - Expectations for the future four years after event

Optimism is a necessary trait both for leaders and entrepreneurs and is clearly evident in the majority of the respondent's expectations for the period four years post-earthquake. In some cases, this optimism as expressed by the respondents was something of a blind faith – “the rebuild will take care of it”, with little actual evidence to support future growth. In other cases, businesses have entered alliances illustrating clear and insightful strategic moves to ensure their ability to capture some of this rebuild boom. Also evident here is the return of businesses who have been non-operational for a great length of time but with clear plans to re-open and to thrive quickly.

3.4.Expectations for the future – Seven years

Expectations for 7 years post earthquake			
			CTC
			NTD
			NTB2
			NTA
			N
			L
			K
			J
			I
			H
			F
			E
			C
NTE			B
NTC	G	NTB1	A
O	D	CTA	
Ceased (3)	Survived (2)	Returned to pre EQ state (2)	Thriving (15)

Figure 54 - Expectations for the future 7 years after event

There is little difference between the medium and long term expectations, with only two organisations progressing from a pre EQ state to thriving. G and D's very limited optimism may relate to the declining sector for one, and the challenging and extremely competitive environment of the other.

3.5.How does this compare?

Some comparison is needed of these organisations with the population in order to assess whether these results are in any way different, and to aid in understanding the success or otherwise of collaboration as an effective disaster recovery strategy.

▪ One year post-earthquake

It is difficult to obtain measures to enable comparison. One study that does enable some comparison was completed by Colmar Brunton on behalf of the Inland Revenue Department – the New Zealand tax authority (Inland Revenue Department, 2012, 2013). This study also asked for self-assessment and including responses which map approximately to those in this survey – see Table 37.

This Survey	Inland Revenue
Ceased	Not Trading
Survived	Surviving – your business is focussed on doing what it takes just to survive
Returned to pre EQ state	Recovering – your business has passed the survival stage, but it is still focussed on minimising the impact of the earthquakes
Thriving	Recovered – your business is as strong, or stronger than before the earthquakes

Table 37- Mapping of Inland Revenue and this study response options

Clearly, there is some differences particularly in the latter two stages where this study's 'returned to pre EQ State' seems a little higher aspiration than their Recovering. However, given the dearth of appropriate comparative statistics, this comparison seems useful.

Their study, conducted by phone utilised taxpayer records to ensure a representative sample of organisations in terms of their size and debt history status. The study focused on SMEs defined here as those with 20 or fewer employees. From 1161 responses, they found 383 organisations were not affected by the earthquakes leaving 778 who gave the following self-assessment:

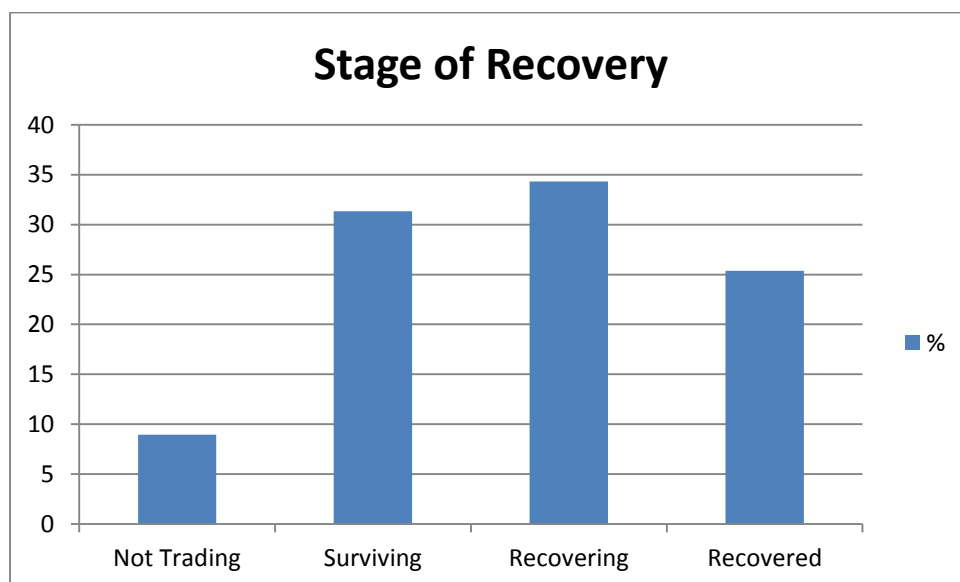


Figure 55 - IRD Results of SME Recovery Stage 1 year post-disaster

Considering just those organisations in this study who were involved in collaborations as a mechanism to assist recovery, this compares as follows:

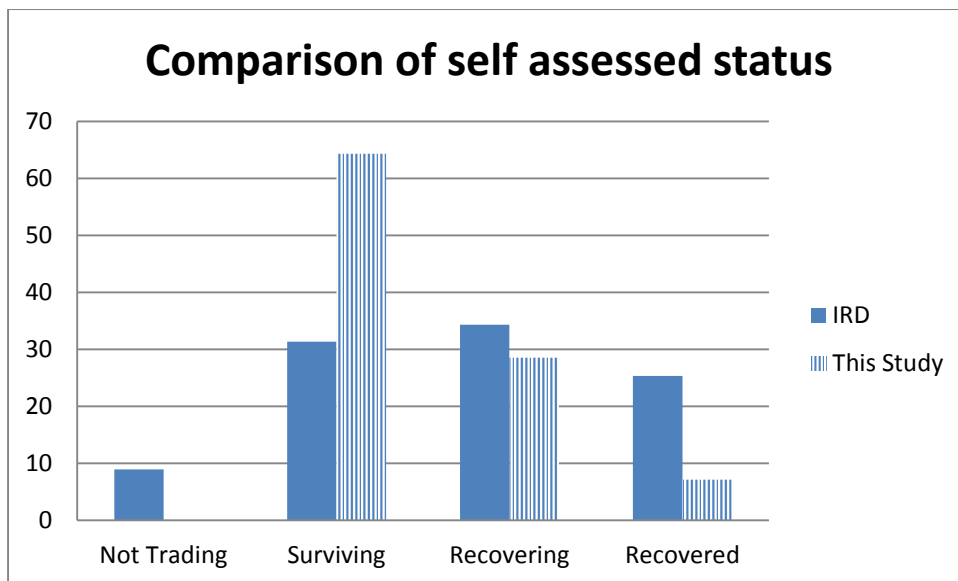


Figure 56 - Comparison of IRD and this study Stage of Recovery

Clearly, these collaborating organisations are to some extent worse off than a representative sample of the SME population with a far greater number simply surviving. However, the very fact that they are still trading is a better result than the general population. While they may not have moved far along the recovery trajectory, at the very least, the collaboration may have given them the opportunity to do so.

▪ Two years post-earthquake

Unfortunately, the Inland Revenue funded survey did not collect the same data in 2013, instead carrying out qualitative only data collection. Their stated intention is to follow up on the original one year results in 2014 (Inland Revenue Department, 2013). The 2013 study which used key informant interviews has resulted in the addition of two new stages of recovery to their model. These two stages are described as Stagnation and Booming. Stagnation, which is better than surviving but not yet able to move towards recovery, could be considered comparative to our 7 organisations in year two who are categorised as still just surviving. Those organisations are somewhat in limbo having either entered into collaboration as a short term move to enable trading or are yet to settle in after the great disruption of relocation and organisation of collaborative arrangements. Booming is equivalent to Thriving and the Inland Revenue research expresses concern as to the sustainability of this state.

As part of a project to construct a model of the Economics of Resilient Infrastructure, Resilient Organisations carried out a survey of 541 Canterbury organisations between July and December 2013 (Seville, Stevenson, Brown, Giovinazzi, & Vargo, 2014). This equates to approximately two and a

half years after the event. Excluding the 12% of organisations who reported no impact from the earthquakes, their findings are shown in Figure 57.

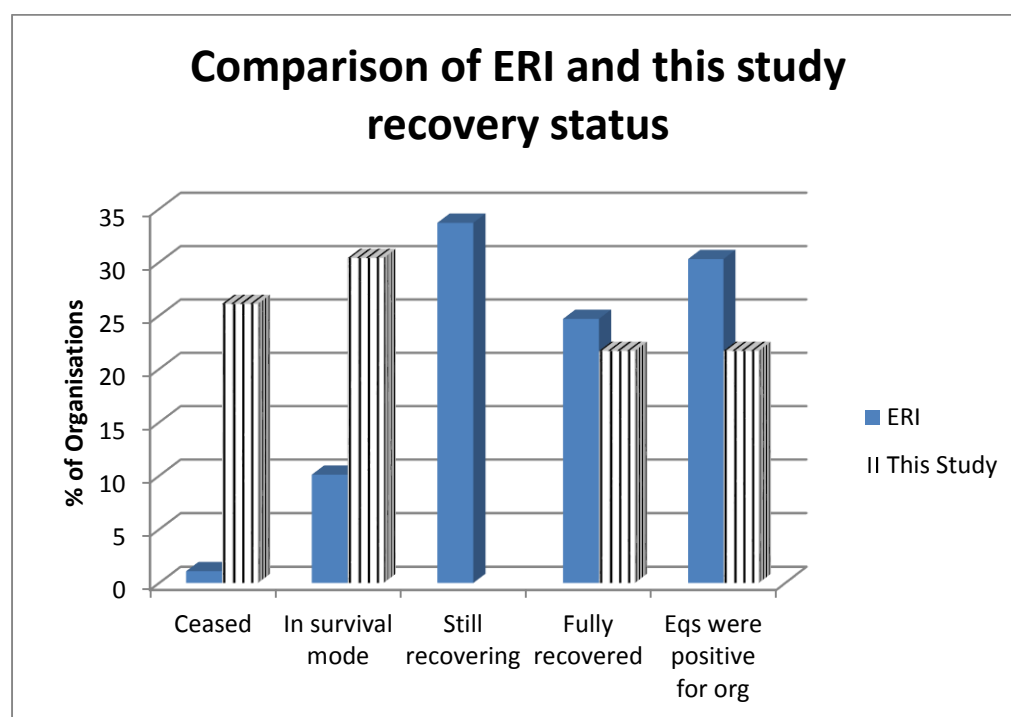


Figure 57 - Comparison of ERI survey of business recovery status

In line with our findings, this survey found that a large number of impacted organisations (43.8%) are still recovering or surviving (encompassing those in survival mode and those still recovering). This compares to 30.4% of organisations in this study who identified as in survival mode. Fewer organisations in this study were thriving, with 21.7% compared to the EERI finding of 30.3% who stated that the earthquakes were positive for the organisation – although whether this equates to thriving is potentially a matter of interpretation. 21.7% of organisations in this study who had returned to their pre earthquake state is comparable with the EERI finding of 24.7% who identified as fully recovered.

▪ International comparisons

One and a half years after the 1994 Northridge earthquake, Tierney (Tierney, 1997a) found that 52.5% of organisations had returned to pre earthquake state, 24.4% were better off and 23.1 were worse off. Ignoring ceased traders, which were not part of the Northridge study, many organisations in this study were less recovered as at two years post-event with 41.2% worse off but a similar percentage better off.

Six to eight months after Hurricane Katrina devastated the Greater New Orleans area, Corey & Deitch (2011) found from a survey of 183 businesses that 38.3% were better off, 25% were about the same and 33.3% were worse off than their pre disaster position. These results are less graduated than the Canterbury surveys results but appear significantly better.

▪ Self-Assessed Recovery Status Summary

Overall, collaborating organisations performance is in line with the ERI survey findings although with fewer thriving. This may relate to the degree of impact which has not been taken into account in these results. As discussed by Brown et al (2014), some understanding of the amount of challenge faced by organisations with regard to the degree of impact is helpful in understanding how far they have had to travel for their recovery relative to other organisations.

4. Employment numbers

Organisations form a crucial part of the recovery process, not only providing normality in the provision of goods and services to their communities, but also through providing employment in the local area. Employment numbers are therefore one part of the question as to whether collaboration can be judged to be a success. Employment numbers are also a potential contributor to organisational recovery due to the improved morale within organisations able to retain and enlist the support of employees for recovery efforts (Gittell et al., 2006). The Earthquake Support Subsidy discussed in Chapter 4 was utilised and appreciated by a majority of the organisations in this study.

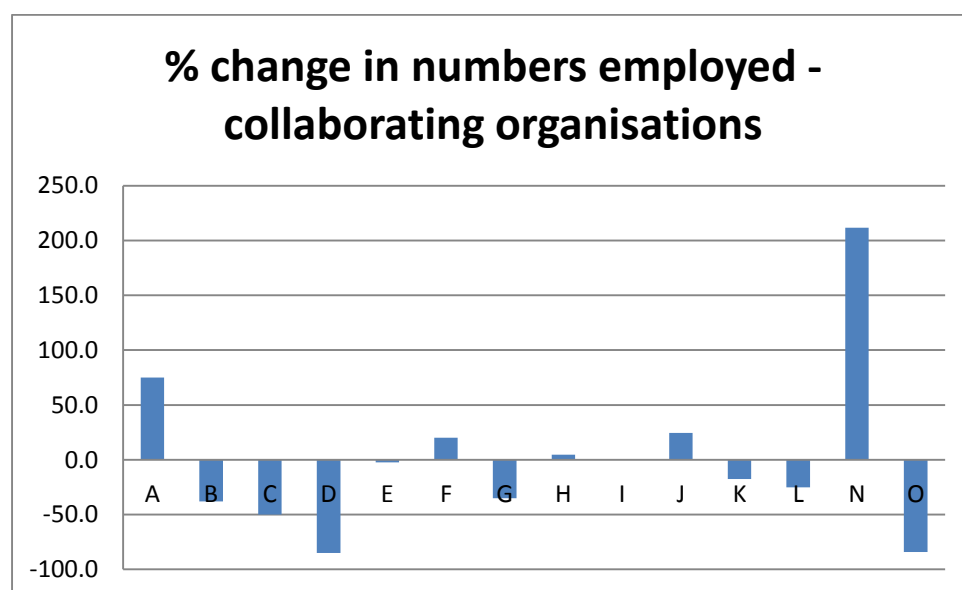


Figure 58 - % change in numbers employed by collaborating organisations as at interview date

As illustrated in Figure 58 only four out of the 14 organisations grew their staff numbers, while ten had reduced employees at the time of interviewing. Full time employees reduced while part-time and casual increased slightly. Overall, from these organisations, 53 full-time positions ceased over the recovery period. The reasons for these reductions in employee numbers are varied. The largest loss of employment was in Organisation D who lost the use of their specialised equipment following the February earthquake. While their collaboration enabled the continuation of some managerial and administrative staff and the retention of their company name, brand and customers, it led to the redundancy of 44 production staff. Organisation O's reduction, and Organisation N's increase is somewhat misleading as it relates to the structuring of their collaboration which led to the transfer of the majority of their employees to Organisation N. Ignoring these three outliers, the average change in numbers employed by the remaining 11 organisations was a reduction of just .31%.

It is also interesting to consider the longitudinal framing of these employment changes with many of these organisations showing great care and concern for their employees' well-being over a far greater time period than legally required. Table 38 illustrates the length of time staff were retained for those organisations who did initially retrench and this is also discussed in more depth in the next chapter.

Organisation	Timing of staff retrenchment
A, B, E, F, H, I, J, L, N, O, NTB2, CTC, CTD	No redundancies
G, NTA, NTC, NTD	April 2011
NTB1, CTA	June 2011
D	July 2011
NTE	September 2011 – part-timers February 2012 – full-timers
C	February 2012
K	Early 2012

Table 38 - Timing of Staff Retrenchment

For some organisations, staff loss was caused by voluntary leavers seeking to exit the Christchurch environment:

“Because a lot of our staff had young families so over the course of like every earthquake – February lost two, June we lost a couple more, December we lost another two, so every earthquake there were attrition of staff, so we lost 50/60 percent of our staff to the earthquake where they’ll just move on”.- (Owner - Organisation L)

The difficulties of attracting replacement employees and being able to offer an attractive working environment led to delays in full recovery but also beneficial adjustments to achieve more with fewer employees.

5. Financials

Respondents were asked to discuss financial outcomes estimating a percentage plus or minus at the time of interview (24-28 months post earthquake) relative to pre earthquake performance. Some of the organisations were quite clear on their financial performance, others somewhat vaguer especially where they had recently moved. In general, the figures reported represent the months immediately preceding the interview rather than the financial year. The percentage measure utilised also failed to capture the great fluctuations in the preceding two years which was discussed with the respondents

5.1. Turnover

Turnover was used to give an indication of the reduction or potential growth in trade. For many of the organisations, turnover was nil for a significant length of time post February 2011 although the majority did have business interruption insurance which has not been included as turnover.

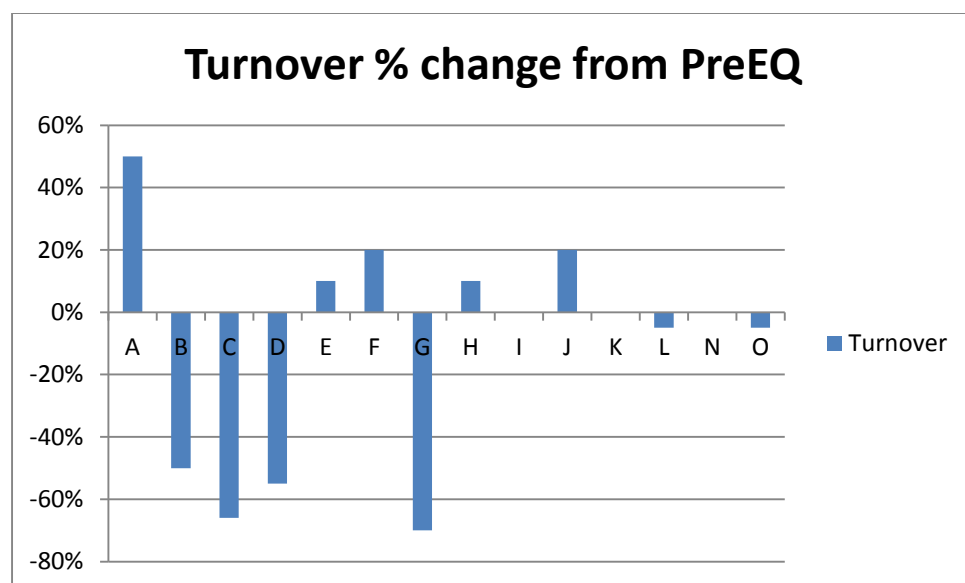


Figure 59 - % change in turnover from pre-earthquake (24-28 months post-quake)

Organisations that have grown their turnover include A which had only been in operation for one month prior to the earthquakes but who managed through securing suitable premises to grow their business in line with their pre-event aspirations. E has benefited from rebuild purchasing starting to

grow their business, but only within the three months prior to interview. F who had arranged a move to larger premises prior to the earthquakes have grown their turnover but to a lesser extent than they were expecting with their move. H had taken what they perceived as a risky move in opening a new store format in a new area, but have found that move hugely successful compensating for the complete loss of turnover from their two other outlets. J has benefited from the amount of movement of businesses within the city.

“Yeah. It’s now better than pre-earthquake. For us that would be probably obviously partly from being back in here, but really probably end of December/January perhaps there seemed to be that first wave of rebuild customer coming through, the ones that took early pay outs and were able to get into a section quickly or something like that, so that started to sort of drive the business”.

(Manager - Organisation E)

The reductions in turnover which are clearly quite severe in many cases are indicators of reduced capacity for those who have taken short term premises or entered into short term arrangements for manufacture simply to maintain their business existence. For these businesses, most notably B, C, D & G, these reductions in turnover reflect the holding pattern they were or are in at the time of interview.

“Oh, here just died big time, you know, town would have turned over about 1400, 1.4 million, whereas here – our first – we’ve been open since June, say June to June I would say \$300,000”

(Owner - Organisation G)

5.2.Earnings before Interest and Tax (EBIT)

Overall, EBIT proved a very difficult concept to get organisations to quantify although many interesting points emerged from the resultant discussions. Many of the organisations were unclear as to their earnings performance in the face of the rapidly changing environment with the majority able to indicate the expected direction but many very unclear (or unwilling) to estimate a percentage. Only four out of the 14 businesses indicated a rise (albeit quite small) in EBIT with the majority quoting a decline due to many factors; reduced volume, increased rates for permanent premises, increased insurance and reduced productivity caused by the on-going road damage and delays. The reduced staff numbers reflect in many cases the efficiencies necessary to sustain the lower turnover and also for some organisations, efficiencies in operations that have been achieved.

An important part of considering EBIT is the enormous rises in rents and insurances post-earthquake as well as the significant upheavals and uncertainties that many of these organisations are still facing. Organisation J sums up some of the challenges of maintaining profitability in the face of uncertain and changing circumstances:

“Up and then down. Up because our rent was cut in half, I was only renting land, I owned the buildings after the quake, so our previous landlord was getting insurance pay out for loss of rents so he couldn’t charge me anything for 18 months, and that went straight to the bottom line. Also when you’re working in temporary premises your outgoings like power and that are so much less. So you have those issues plus I cut back on advertising because we were having trouble keeping up, so that went straight to the bottom line. But as you come out of that phase and get into the next phase you’re starting to look at your cost of occupation going back up and when we go back into the new building it’s going to rocket. So that’s part of what all the planning is now about what’s going to happen in six months’ time. I know what all the costs are going to be when we go into the new building. I’ve got to put a plan in place to make sure I can cover them. So it’s been a bit of a ride really in that area”.

(Manager - Organisation J)

Other research indicates that organisations who did manage to snap up available space to re-locate to immediately after the earthquakes benefited from lesser rents, with one study finding “the average business is currently paying less for its present location” (Kemp et al., 2013, p. 51).

5.3.How is recovery being funded?

▪ Debt – business

Organisations were asked about changes in their debt levels from pre-quake. For the many small businesses, this question did not encompass their personal financial situation but in some cases their personal financials held more of the answers than their businesses.

Three of the collaborating organisations have greatly increased their business debt – two utilising supplier credit and one with loans and equity swaps with an investor. For one of these companies this does reflect a higher stock level in new premises and is relatively business as usual. For the remaining two the debt is clearly a major concern going forward:

“I guess I haven’t really spoken about this before but I’m constantly thinking in the back of my head, ‘My insurance company’s not coming to the party, I’m not even getting a response from Cerno who were McLarens Young, how am I going to pay for it?’ And so once again I was back on hands and knees to my main supplier and so, yeah, like effectively we’ve robbed Peter to pay Paul for this and we’re now in debt for about quarter of a million dollars to our main supplier, trying to figure out how we now pay them back”.

(Owner - Organisation C)

■ **Personal Resources**

Questions about debt give only part of the story with some of the smaller businesses finances inextricably intertwined with the owner’s personal situations. While some of the businesses may have avoided taking on extra debt, conversations clearly touched upon the utilisation of personal savings and loan facilities to replace business earnings.

“I lived off savings for – well, I still kind of am in part since September. So, you know, it’s been three years now but - - -. we’d done well putting money aside for ourselves earlier and we were fortunate I suppose that we had had that forethought to have a rainy day account if you like”. (

Owner - Organisation CTA)

“Because I don’t think she realised what I had to deal with, like I had no money to my name and I was having to pull money out of like my personal savings, borrow money from my partner, my mum, just to pay her out her holiday pay, make sure she was okay and all this sort of business”.

(Owner - Organisation NTC)

“we chucked back a lot of money into it so we drew down on the house to put the money in”

(Owner - Organisation O)

■ **Existing cash flow**

Many of the organisations were able to utilise existing cash flow to navigate the post-recovery period. One had a hugely successful year prior to the quake and had significant cash reserves as a result and the other from operations at their other Christchurch store which had opened only one day prior to the earthquake.

Two organisations (D, I) were part of larger national or international operations and the costs of recovery were not accounted for at a local level.

- **Government or NGO assistance**

The Earthquake Support Subsidy was utilised by many of the organisations giving a much appreciated boost to immediate cash-flow. While many of the company's business interruption policies covered staff wages, the funds from this was received long after staff needed paying.

As well as providing a much appreciated sounding board to 12 of the organisations in this study, Recover Canterbury through various avenues provided small amounts of monetary assistance to four of the collaborating organisations to provide professional advice and marketing.

- **Insurance**

For many companies there has been a long and protracted period of negotiation before insurance funds have been received leading to significant cash flow issues for many organisations who have continued trading or re-opened before the receipt of funds. Interestingly, some of the happiest insurance stories come from the organisations that had not re-opened as at the date of interview. Four of the six non traders expressed complete satisfaction with the insurance settlements, which had flow-on impacts on their motivation to resume. At the complete other end of the spectrum are the two other non traders; one of whom was very dissatisfied and pressured to resume due to poor insurance cover and the other who stated that they were unable to work while receiving business interruption payments and that this lack of purposefulness led to depression. A number of collaborating organisations refer to the insurance settlement process as difficult and contentious and negotiated settlements being less than expected.

5.4.Assets

With regards to their asset position, for many there is a perception of significant loss in terms of having a saleable asset – for those still in temporary arrangements or still working to re-establish business as usual. While this was difficult to quantify, the perception was that prior to the disaster, their business was a saleable asset with established turnover and profitability, whereas now, the amount of uncertainty would result in a significantly lower potential asking price. This is a very key influencing factor in their post-quake decision making.

5.5.Financials – Conclusions

In many ways, the financial measures reflect that many of these organisations are significantly different entities post-quake. At the date of interview, many had not yet settled into any kind of business as usual model with significant uncertainties over earnings. This reflects that the business environment is still very volatile, compounded by the uncertainty over the reoccupation of the city centre. It is also important when considering financial results to be reminded that for many SME's personal goals such as independence, balance and achievement are more important than economic results (Walker & Brown, 2004; Wang, Walker, & Redmond, 2007).

6. Impact on business aspirations

It is clear from interview discussions with the respondents, that there has been a significant opportunity cost in relation to growing and improving many of the businesses.

“Yeah, we're not growing at the moment, we don't have the resources. We obviously had to write a lot off the bottom line in terms of the fit-out of our two central city stores”

(Manager - Organisation H)

With the focus on rebuilding and on dealing with issues in their own personal recovery, there has been a significant distraction from business growth and opportunity. This is particularly notable in some of the more struggling entities:

“We've just really been put on hold for two years”

(Owner - Organisation B)

“Yeah, you know, for me it's just getting the business up and going again, getting people back used to, you know who we are again and we're doing. Yeah, we've got another year of that before people really sort of start really getting a good traffic flow coming through”

(Owner - Organisation G).

If it were not for the disaster that impacted these businesses so greatly, they would have otherwise been pursuing plans to improve, grow or in other ways develop their businesses. Instead, for many, up to two years has been invested in surviving and recovering with organisations focused on regaining what they had. For many organisations, residential and community issues also consumed the energy

of both owners and staff. In order to try and assess the impact on businesses, their pre-quake aspirations are compared with their aspirations as at the date of interview.

When considering the pre-earthquake aspirations of each participating organisation, it became apparent that some organisational context was required to fully understand those aspirations. After initially considering organisational age and size, the business lifecycle model was chosen as adding more value in both situating the organisations in a particular context and as a useful tool to assess changes between the pre and post-earthquake aspirations. Work on examining the progression and development of organisations has identified that there are predictable patterns of development although with hugely varying timeframes. A multitude of models have been proposed, although with many similarities (Dodge & Robbins, 1992; Ven & Poole, 1995; Whetten, 1987). Quinn & Cameron (1983) have created a lifecycle model that integrates characteristics from nine prior models. Their model is as follows:

Birth	Early Growth	Later Growth	Maturity or Stability
Resource gathering	Informal communications	Formalisation of rules	Elaboration of structure
Idea generation	& structure	Stable structure	Decentralisation
Little planning or coordination	Sense of collectivity	Emphasis on efficiency &	Domain expansion
Formation of a niche	Long hours spent	Maintenance	Adaption
	Sense of Mission	Conservatism	Renewal
	Innovation continues	Institutionalised	
	High Commitment	procedures	

Table 39 - Business Lifecycle model adapted from Quinn and Cameron

As discussed by Whetten (1987), missing from this and many of the models are the concepts of decline or death – stages that not all organisations will encounter but that are clearly needed in order to accurately classify organisations in this study. The commonly used titles for the lifecycle stages which will be used for our categorisation are Birth, Early Growth, Later Growth and Maturity or Stability, along with the addition of decline and death.

Studies from the area of small business which are highly relevant in the context of Christchurch businesses, suggest that progression backwards through these development stages is possible for many reasons and especially where there is environmental uncertainty and change (Kazanjan & Drazin, 1989; R. Quinn & Cameron, 1983; Whetten, 1987).

Categorisations are of course an oversimplification of a complex world and there is much valid criticism of the stage model of growth with regard to the lack of evidence base, the lack of agreement on the number of stages and the lack of clarity over when transition occurs (Hansen & Hamilton, 2011). The aim of categorisation is to provide insight and generate greater understanding and the model, despite its flaws, seems useful in this regard.

Life-Cycle Stage	Pre-Event			Post Event (approx 2 years)		
	Collaborators	Non-Traders	Continued Traders	Collaborators	Non-Traders	Continued Traders
Birth	1	0	1	0	4	1
Early Growth	2	1	1	5	0	1
Later Growth	3	3	0	3	0	0
Stability/Maturity	7	2	1	6	0	1
Decline	1	0	0	0	0	0
Death	0	0	0	0	2	0

Table 40 - Life Cycle Stage Pre and Post Event

Table 40 illustrates the categorisation of participating organisations position into these lifecycle stages both prior to the event and as at the date of interview. Categorisation was arrived at based on specific interview questions as well as a general review of interview transcripts where answers were unclear

11 of the participating organisations have unchanged positions post-earthquake. All of the continued trader's positions remain unchanged along with 8 collaborators. Lifecycle stage appears to have no significance with regards to either their choice to collaborate or any change in their business goals and aspirations. However, many of these organisations did note that progress toward their aspirations has been greatly slowed.

12 of the participating organisations have changed positions post-earthquake. All of the organisations who were not trading at the date of this study are in this category, with two ceasing permanently and four having to return to the formation stage given the long amount of time not trading. NTB-2 and NTD were still very much at what Torbert (1974) describes as the fantasies stage with rather grand plans to re-establish business but little concrete progress, whereas NTA is currently completing a fit-out and has clear detailed plans to resume trading in a largely unchanged format. Entering into collaborative arrangements was a key enabler in what may be termed the positive progress of A, G and N. A was able to continue its start-up trajectory thanks to the existence of the Restart retail precinct. G was able to reverse a declining business by teaming with another retail organisation offering complementary products and benefit both from the lower costs and cross-selling potential but also from the relationship and new sounding board offered by working closely with another person. N was able to respond to emergent opportunities that evolved through collaborating with a direct competitor in order to expand the existing business and enter the consolidation/stability phase earlier than might have been otherwise.

H, L & O's potential backwards progression is rather more complicated. H did enter into a post-earthquake collaboration however this is unrelated to its step back through the cycle. This reflects their uninsured status and their need to re-emphasise core operations and temporarily abandon expansion efforts as they recoup their large financial loss. For L, the move back to early growth is a positive and relates to their early adaptation to rapidly changing demands in their market. The recognition that these changes were needed before the company entered a decline stage was partly enabled by their being able to re-focus their attention on the core business having secured appropriate premises through participating in collaboration. For O, the change is also a positive one with the old longstanding company potentially entering decline now being absorbed into another and rejuvenated.

7. Community Wellbeing

Wellbeing issues that were apparent in interviews with participants in this study included:

- Lesser financial resources
- Greater social connectedness
- Lesser leisure time
- Greater uncertainty
- Ongoing higher stress

The majority of these issues were reflected in the Community Wellbeing Index which attempts to measure community wellbeing and recovery (Canterbury Earthquake Recovery Authority, 2013). Results of that June 2013 survey showed high levels of on-going stress, improvements in a sense of community, issues with affordability of premises (in this case housing but also transferable to the commercial sector), and small decreases in participation rates in sports and volunteering. 45% of respondents in the wellbeing survey faced additional financial burdens as a result of the earthquakes.

8. Discussion

8.1. Comparing Apples with Pears

Many of the businesses in this study are clearly different entities than what existed before. They have had major changes to their location, their operating costs, staffing levels and in some cases clientele. They can be viewed as successful adapters to the totally changing environment presented by Canterbury post-earthquake. It is therefore difficult to measure their success by comparing their pre earthquake performance to their post. Financial outcomes approximately two years after the disaster are still very unclear with some organisations having taken on substantial debit to fund recovery, and

others needing to re-grow turnover. The optimism with regard to the future expressed by the majority of organisations suggests that they do now feel the promise of some stability. There appears to have been little prior study on post-disaster adaptation by organisations. Complementary to the increasing focus on research into organisational resilience, greater acknowledgement is needed of the role of adaptive measures and their role in creating something new in studies of disaster outcomes.

8.2.Individual Owners

One perspective on success is that these organisations are successful simply because they are still fighting. Some may only just be surviving but at least they are still in the battle and not just a casualty on the side-lines. The majority of these firms are owner operated – previous studies have shown that insider ownership is negatively correlated with bankruptcy (S. Locke & Wellalage, 2012) providing the greatest possible motivation to avoid failure. The possibilities to achieve their aspirations still exist and while for some this may be coming at some significant personal costs, there is also the point to consider that being part of the effort to recover has potential beneficial psychological impacts (Eyre, 2004). These beneficial impacts – that these owners are doing something is also noticeable when contrasted with the story of two of the ceased traders in this study.

8.3.Employees

From the perspective of individual employees, these organisations have been successful in terms of either providing continued employment where they too are participating in the effort to recover or where they have been let go, they have at least been able to move on with their life. The majority were treated well in terms of on-going employment in the immediate recovery period. Some have taken the opportunity to leave the region and others were not let go until suitable employment was found. For those employers who were able to comment on where they staff went to, the majority were happy in the new areas they had pursued. The overall number employed by these businesses reduced by 53.

9. Conclusion

Conducted approximately two years after the most damaging of the sequence of earthquakes, this research focuses on the short-term recovery period where many organisations have only very recently established definitive future plans. For organisations which chose to collaborate, this enabled their survival at a time when they perceived few other options. For others, a wait and see approach is hoped to lead to success as their businesses commence the journey to recovery over three years later.

As expressed in their expectations for the future, the majority of continued, restarting and collaborating organisations have a belief that they are now positioned to thrive as recovery progresses. The majority have already shown a willingness to adapt and change in light of the changing environment surrounding them. However, the success of their efforts, particularly with regard to the flow through to financial outcomes is still in the uncertain category for the majority. While outcomes are an important part of any assessment of the efficacy of post-disaster actions, it is clear that it is complex to assess them. The following chapter adds to this complexity in considering non-financial impacts of recovery strategies.

Chapter Twelve - Outcomes Part Two: Non-Financial Measures

1. Introduction

Organisational recovery is about much more than economic performance. Organisations do not exist for purely economic reasons, nor are their benefits to communities purely economic. In smaller organisations, that comprise the majority form in many economies, the success of their business is a much more complex interplay between the owner's aspirations, their perceived satisfaction and happiness and the financial rewards that in part, enable those objectives (W. Stewart et al., 1998). Financial performance alone gives a very limited view of individual and community thriving. Organisations that are resilient aim to not simply survive through crises and disasters but to prosper or thrive (Resilient Organisations, 2014). What it means to prosper or thrive is defined by societal concepts of success and individual goals and values. Relevant goals and values include work/life balance, core beliefs regarding moral behaviours, relations both within and external to the organisation as well as economic performance.

This chapter presents a nuanced view of the recovery process, focusing not on the economic, but on the role of positive human experiences in the recovery journey for the 24 businesses in this study. In the midst of the suffering and difficulty caused by disaster there are many 'phenomena that are unexpectedly positive' (K. Cameron, Dutton, & Quinn, 2003a, p. 4). In line with the positive organisational scholarship tradition (K. Cameron, Dutton, & Quinn, 2003b), I argue that it is important that these positives be documented and that there are many learning opportunities from them. By embracing the complexity that lies beneath the official headline measures of recovery, we see the importance of the human dimensions of recovery and the role positive emotions have in creating the potential for a thriving environment. I believe both the primarily economic outcomes discussed in the prior chapter and these more human focused outcomes need to be considered in tandem when evaluating the efficacy of post-disaster strategies.

2. Theoretical Background

2.1.Organisational Recovery from Disaster

Powell (1991, p. 271) suggests that organisations whose survival is threatened by catastrophic events often tend to resist change; relying on their existing resources and routines to try and cope, rather than adapting using the “radical, frame-breaking changes” needed. An alternative view is that “disturbance has the potential to create opportunity for doing new things, for innovation and for development” (Folke, 2006, p. 253). The need to replace destroyed equipment, stock or premises also brings with it the potential for better and improved use of technology and equipment potentially increasing productivity and performance (Albala-Bertrand, 1993; Stevenson et al., 2013). Kendra & Wachtendorf (2006) identify the potential for improvisational and adaptive responses to disaster suggesting that disasters commonly create ‘collective innovations’. These are new structures, groups, processes or actions resulting usually from the actions of many, rather than any individual alone.

Many of the empirical studies examining recovery from both the qualitative and quantitative viewpoints make no mention of any positives. They appear to treat recovery as a linear process from an initial state of disruption to a status of recovered, not recovered or partly recovered (Adams, 2012; Asgary et al., 2012; Corey & Deitch, 2011; Schrank et al., 2012; Tierney, 1997a). This is generally thought of in financial terms as “worse off”, “better off”, or “about the same (Tierney, 2006, p. 285). Disaster Researchers acknowledge that recovery from disaster requires adaptation and not just a return to what was before (Alesch et al., 2001; Chang, 2010; Manyena et al., 2011). This is congruent with more recent definitions of recovery, which consider it the achievement of some kind of new normal or stable state, rather than a return to what was before. (C. Liu et al., 2012; Ministry of Civil Defence and Emergency Management, 2012; Quarantelli, 1999; Stevenson, Seville, et al., 2011), The massive disruption to the physical structures, social and economic routines and individual physical and psychological wellbeing cannot be undone. Recovery must encompass change because it is simply not possible to put back all of those pieces as they were before.

If it is accepted that achieving recovery involves change, then it becomes apparent that measurement of that state is problematic. If one cannot compare with what was before, then how instead is recovery to be measured? There seems to be general agreement on the need to adapt to new circumstances, however, research then continues to assess recovery primarily as a comparison with what was before. This is where a more multifaceted approach to measuring business wellbeing may be beneficial. If we are to make an assessment that does not compare with what was before but

consider what is now, then inclusion of both the positives and negatives of that new state are needed to give a more meaningful understanding of disaster outcomes.

2.2.Positive Organisational Scholarship

The study of organisational behaviour, in common with many other disciplines, has tended to focus on what is wrong, what needs improving and what problems need solving (Luthans, 2002). The positive organisational scholarship (POS) tradition does not seek to invalidate the usefulness of that approach but to complement it with a consideration of what is positive or good (K. Cameron et al., 2003a). POS is concerned with identifying not just positive outcomes but processes, contexts and relationships between variables based on sound research and linked to existing theory (K. Cameron et al., 2003a; Donaldson & Ko, 2010). POS seeks to contribute balance in ensuring that both the positive and the negative are considered with much to be learned from both (Luthans & Youssef, 2007; T. A. Wright, 2003).

One of the primary areas considered by scholars focusing on the positives of organisations' contexts, processes and outcomes is that of change management (Cooperrider, Whitney, & Stavros, 2008; Karp, 2004; Watkins, Mohr, & Kelly, 2011). Positive emotions have been clearly linked to contributing to successful change initiatives (Avey, Wernsing, & Luthans, 2008; Judge, Thoresen, Pucik, & Welbourne, 1999). As adaptation to the new circumstances following a disaster is clearly an issue of change, this work is highly relevant in considering the post-disaster recovery period. Challenging though it may be in the aftermath of a disaster, considerations of how hope, optimism and self-belief can be encouraged and built are highly relevant in enabling the adaptive changes needed for organisations to prosper.

POS is highly relevant in considering the importance of framing discourse on recovery in both academic and public circles. As argued by McEvoy, Funfgeld and Bosomworth (2013) (2013, p. 1) framing of the issues "can have an important influence on agenda setting, on the subsequent adaptation pathways and on eventual adaptation outcomes". Frames "influence opinions by stressing specific values, facts, and other considerations, endowing them with greater apparent relevance to the issue than they might appear to have under an alternative frame" (Nelson et al., 1997, p. 569). Utilising the principles of POS in the study of disaster recovery gives recognition to the potential for opportunities and positive outcomes which can influence the framing within which we approach the multitude of issues that arise post-disaster.

Despite the apparent benefits of assessing business recovery using multiple criteria including those positive impacts, there does not appear to be any existing studies utilising this approach.

This chapter explains the positive impacts experienced by organisations recovering from Canterbury earthquakes of 2010-2011. Key themes including the importance of framing, the timing of recovery and the enablers of these positives are discussed. In conclusion it is suggested that acknowledging, measuring and celebrating the positive impacts that may follow a disaster is an important and neglected area.

3. Positives and Silver Linings

Post-earthquake adaptation has created new business models, new networks and resulted in many innovations that would not have been possible without the disruptive change. Table 41 shows the sector and size of organizations in this study and summarises the positives they experienced.

Organisation	Sector	No of Employees (pre-disaster)	New conception of space & place	Org Learning	Support Networks	New Business Models	Build Back Better	Positive Exits	Positive Caring
I	Service	300							
J	Service	20.5							
NTC	Service	2							
CTD	Service	1							
H	Retail/Wholesale	110							
CTB	Retail	n/a							
E	Retail	10.5							
G	Retail	10							
C	Retail	6							
NTE	Retail	3.5							
F	Retail	2.5							
CTA	Retail	2.5							
A	Retail	1							
O	Manufacture/Wholesale	9.5							
N	Manufacture/Wholesale	4							
CTC	Manufacture/Retail	9							
D	Manufacture	53							
L	ICT	12							
K	ICT	6							
B	Hospitality	10.5							

NTB1	Hospitality	10.5	
NTB2	Hospitality	9	
NTA	Hospitality	6.5	
NTD	Hospitality	4.5	

Table 41 - Organisation Sector, Size and Positives Experienced in Recovery

3.1.New conceptions of space and place

Organisation CTC, which for decades had occupied showroom premises on the fringes of the city centre suddenly realised that they did not need a showroom and did not need the high cost central location. They have successfully relocated to rural premises, business is booming and they feel they have a lovely environment and a much greater balance between work and life. This company had significant advantages in that they suffered little primary damage and had greater time to evaluate, and to consider the options when effected by secondary disruptions relating to road and local infrastructure repair. They were able to take the time to review their capabilities and their customer's behaviour while also acting decisively once analysis was complete.

A number of retail organisations, all of whom had lost premises due to earthquake damage, have co-located into one shared open-place space. Their organisations remain independent and they have defined areas of the building but share bathroom and kitchen facilities. Their products are complementary with a small degree of competitiveness, for example, new kitchens and new lounge suites. While at the date of interview the organisations retained separate sales staff, there is potential for further development of synergies between the businesses. Key benefits of the co-location model were the ability to access premises that were not suitable for one business alone, and the shared marketing and attraction of foot traffic. All of the respondents agreed that the idea would just have been too different, too outside of the norm without the earthquakes upheaval of the normal way of doing things. Ideas that seem so obvious with the benefit of hindsight often fail to register without the loosening of the norms and rules of how we do things.

One organisation, forced to have staff work in their own homes for over a year post earthquake, used that experience to challenge their pre-existing mind-sets regarding co-location of employees. Having previously thought co-location essential, they have now enabled remote working with a resultant benefit in client service and overhead costs:

“I mean, we worked remotely for two years anyway, so I thought, “Well what the hell, we might as well keep trying”, and so she works for us from Sydney and you know, , so in fact, we now have coverage until five” (Owner - Organisation L).

3.2.Organisational Development and Learning

Other organisations spoke of the benefit of the disaster in terms of organisational development and learning:

“- - - you know, if you wanted to engineer one (team building exercise) you'd be hard push to find a better one.....- - - so in many ways it has kind of brought together, certainly at the management and administration level and to some extent, you know the operator level, a lot of those people understand better what everybody else does”.

(Manager - Organisation I)

Another organisation ran the operations of its sister company for a week. The sister company was the warehousing arm necessary for its own operation, however, the staff of that company had significant family commitments requiring their attention. Emerging from that experience is a breaking down of silos between the two operations as well as ideas for improvements to future processes between the two companies.

The dialogue that occurred between the different areas of each of these businesses is a potentially powerful enabler of future change and innovation, which may improve these companies performance. Provided these lessons are captured into institutional memory and procedures, the breaking down of organisational silos and team building that occurred contributes significantly to building the adaptive capacity of an organisation, increasing its resilience in the future.

3.3.Support Networks

At a personal level, many of the respondents, particularly those now in co-located premises, found a great benefit in the camaraderie of having another businessperson in close proximity. Small business can be a lonely place and having peers, much like the colleagues that may exist in larger organisations, to throw ideas around with, especially in the high stress post-disaster environment has been beneficial both for their business strategy and operation but also for their personal satisfaction. Social support has long been acknowledged as an important enabler of psychological thriving (Carver, 1998; O'Leary, 1998).

These positive encounters can be hugely beneficial with Fredrickson (2003, p. 163) suggesting that this positivity can “reverberate through other organisational members and across interpersonal transactions”. A community full of sad, struggling and negatively orientated individuals further

perpetuates negativity. In contrast, supportive encounters with positive individuals are likely to generate positive outlooks in those with whom they interact. Positive support networks are clearly linked to resilience both of the individual (Carver, 1998; Luthans, 2002) and organisations (McManus et al., 2008; O'Leary, 1998).

3.4.New business models

Many organisations' adaptive efforts have resulted in new business models. These include the retail co-locations discussed above which have both implications for the use of space, but also for marketing, and future operations. Organisation J fearing a downturn in their business due to the loss of contracted buildings entered into an innovative partnership arrangement to obtain contracts on new buildings. Out of the closure of an old established retailer, a new business was created with a very low cost entry model and tailored to the new characteristics of the CBD. Organisation N previously focused on expanding to export markets, instead saw the value in increasing space and machinery utilisation as a means of fulfilling business goals. Finally, instead of just providing temporary, 'make-do' space, the EPIC creators envisaged a new and better way with the building design aiming to encourage collaboration and joint working between the companies.

“The Christchurch earthquakes were a terrible event and a lot of people are still suffering from it, but EPIC is shaping up to be a stunning silver lining”. (Epic Tenant)

3.5.Building Back Better

Re:Start, in the words of the Mayor at the time of the opening, provided “a small candle burning in the heart of the city” (Sachdeva, 2012). Described by The Lonely Planet travel guides as one of the reasons why Christchurch is still a place to visit, the area has evolved and expanded, with market stalls and food caravans as well as an ongoing series of events and promotional activities to attract custom. Re:Start is also credited by some with showing what is possible, breaking the mould of traditional retail development and assisting in creating a culture and norm of innovative thinking about the post-disaster possibilities.

3.6.Positive Exits

There is anecdotal evidence of the earthquake causing a re-evaluation for many Christchurch residents of their long established patterns of residence and employment and this is evident in the story of Organisation O. Ultimately, they have exited their business, a move made possible by their

collaborative relationship. The business owner explained this as a hugely successful outcome for him and his family, removing the burden from his shoulders of a long-standing family business and allowing him to pursue his related but different business dreams. As he puts it:

“I like the earthquake; I liked what we’ve been through, cos without it I probably wouldn’t be where I am now”.

(Owner - Organisation O)

Even for some of the organisations who are not currently trading (but are not demised), there were positives:

“I was studying anyway and our business interruption (insurance) was really quite good so I was able to study and get a wage for the next two years. So – the quake actually happened for me personally – it all worked out for the best. Yeah”.

(Co-owner - Organisation NTB)

3.7.Positive Caring

Many organisations went far beyond any statutory requirements with regard to staff retention and welfare. One hospitality organisation which was closed for an initial two months after Feb 2011, and then a further four months following a June 2011 earthquake retained all staff on full pay. A larger company forced to cease in-house production due to damage to machinery, paid production staff for a full five months before making them redundant. A retail business that ultimately chose to exit Christchurch paid full time staff for a full year. Another retailer who closed for 11 months, and was then forced to downsize once re-open, paid staff fully for a period of over a year until they were able to find other employment

“We ensured that we put everybody into a job before they stopped getting paid”.

(Owner - Organisation C)

The repercussions of these actions may in some cases be detrimental financially¹⁴ but also have positives in the self-esteem and self-belief of the managers making the decisions. Giving assistance to others and feeling pride in your actions in helping others is one of the emotions argued by Fredrickson

¹⁴ Many of these organisations wage payments were supported by business insurance; however, in most instances the level of insurance applicability was not clear-cut.

(2003) as beneficial in terms of boosting self-esteem, which then promotes the self-belief that other achievements are possible.

“I’m, you know, quite proud to say we never made anyone redundant and we paid them fully throughout the whole time”.

(Owner - Organisation B)

On the employee side, employer actions that are beyond the minimum necessary and that show concern for welfare and wellbeing may evoke gratitude, which also supports an on-going chain of kindness (Fredrickson, 2003).

Attention to wellbeing during the ongoing sequence of events was also apparent with organisations providing flexible working patterns and showing understanding of distraction and the invasion of home issues into work time.

“We frequently sent them home when we had bad shakes and that, we just said, “Comeback when you’re ready, yeah”.

(Owner - Organisation K)

Frederickson also writes about how the wider context of a community is influenced by positive behaviours. In Christchurch, these positive caring behaviours by many organisations, assisted in creating a ‘norm’ of helpfulness which is evident in stories of individual, organisational and community recovery. This is represented in Figure 60 illustrating that the care shown for employees creates positive caring behaviours that are reflected into the community and ultimately back into attitudes of the community towards business.

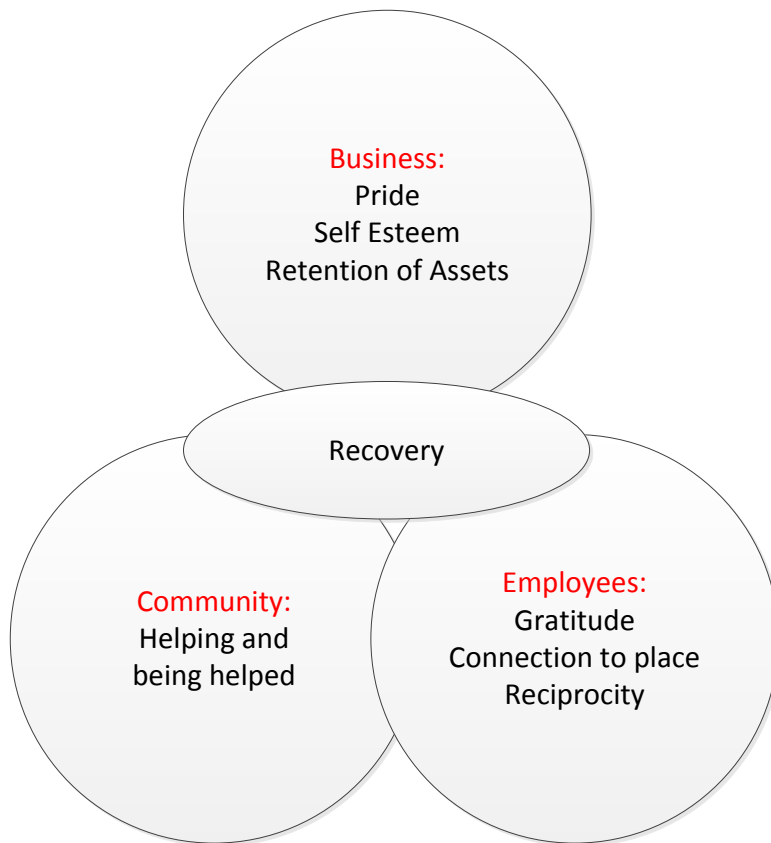


Figure 60 - Virtuous circle of positive caring

Other research indicates that virtuous behaviours such as these concerns for staff create better outcomes for organisations in terms of performance, innovation, customer retention, quality and staff turnover (K. Cameron, Bright, & Caza, 2004).

4. Discussion

4.1.The importance of framing

“If you have only one way of looking at the situation you are in, you have no freedom of choice about what to do. And if you have only one framework for understanding your experience, all of your experiences will reinforce the framework” (Shepard, 2010, p. 8).

Cognitive framing, is the process by which owners or managers attempt to make sense of the environment and construct a simplified view or perspective through which all other information is then filtered (Dunegan, 1993; E. George et al., 2006; S. Kaplan, 2008; R. E. Quinn, 2000). It is possible to acknowledge the opportunities inherent in the disaster recovery process without making light of the challenges and struggle faced by survivors. The common framing of a problem requiring fixing may lead individuals and communities to lose sight of the potentials – to focus on the negatives

and not capitalise on the positives. Ensuring that we acknowledge and celebrate the positives is important not just for the transformational potential identified by Frederickson (2003), but also for the endurance of much needed hope in the long recovery period.

By simply focusing on the positive rather than the negative, we can re-frame the way in which we see the world. A focus purely on economic measures of business recovery in reports by media, recovery authorities and researchers has the potential to influence the dominant framing emphasising just one part of what it means to thrive. Research has clearly established that small and medium sized business owners place greater value on factors such as personal satisfaction, pride and a flexible lifestyle (Walker & Brown, 2004), therefore reports on recovery must also discuss these issues.

Framing also offers one of many paradoxes in the earthquake recovery process. A narrow focused view by many of these business owners that they had to get their businesses re-opened, largely in their existing form, helped them in finding innovative solutions. However, at the same time, that narrow focused view with regard to perceived options after the disaster restricted others. Some business owners' waited for long periods for an engineering assessment of their building, only to learn one year later that their buildings were to be demolished. Owners that were able to alternate the scope of framing between the narrow and broad views were likely to be more successful in recovery.

The high levels of insurance provide a further paradox, assisting many in ensuring staff welfare, and a frame of optimism and possibility fuelled by assumptions regarding insurance pay-outs covering losses. For others, business continuity insurance created a kind of welfare dependency whereby they did not seek other productive employment, as they understood this would negate insurance coverage, while meanwhile the inaction and feelings of powerlessness created a negative emotional state.

4.2.Positive Exits

This research illustrates that business cessation rates are not necessarily an illustration of poor recovery or failure. Business decisions to exit may simply be a logical and positive adaptation to the circumstances and more fine-grained analysis is needed to understand just how many cessations are actually 'victims'. This is in line with research in business as usual by Headd (2003) which found that around a third of business ceasing to trade were successful at the time of exit.

4.3.Recovery Timing

Understanding the positives is also important when considering the long duration of recovery from a major disaster (Alexander, 2002). Few longitudinal studies of recovery exist but clearly the time

frame at which recovery is measured is important in terms of expectations of adequate performance. Studies on other interrelated areas of recovery such as housing have clearly shown that quicker achievement of statistical measures such as number of buildings does not necessarily lead to a satisfactory recovery (Olshansky, 2014) . Many of the positives described in this chapter create capabilities that position these organisations to prosper as overall community recovery proceeds. Returning to pre-earthquake financial performance sooner may not have left these organisations as well positioned for future performance especially if this involved losing skilled and motivated employees.

4.4.Enablers of positives

As discussed in Chapter 4, I argue that Government and community responses to the disaster significantly assisted in creating a long lasting climate of mutual assistance and collaboration. This provided what Walsh (1995, p. 291) describes as a “cognitive foundation for action”; put simply: ‘norming’ the concept of collaboration. Research has shown that when the fate of a ‘familiar other’, in this case the community of Christchurch is at stake, people tend to act with more collective rather than individualistic concerns, even if that may ultimately be explained by some as simply self-interest (Lemieux, 2014). This identifying as, and acting in the interests of the group called Cantabrians, may have assisted individuals in making sense of the situation, assisting in fighting the feelings described by Weick (1993) of having no sense of where they are or who can help in a crisis.

5. Conclusions

It is not surprising that economic measures are most commonly used to assess recovery as the methodologies and data necessary to assess these areas are well developed and already collected by statistical agencies. However, because they can be measured, there is a danger that they “tend to be treated as more real than those that cannot, even though the ones that cannot be measured may be the more important” (March, 2006, p. 204). Subjective measures that embrace rather than attempt to reduce the complexity of recovery may be more difficult to assess but are equally as important as economic measures (Danes, Loy, & Stafford, 2008; Sandig, Labadie, Saris, & Mayordomo, 2006; Stafford et al., 2013).

The framing of those seeking to recover from disasters is influenced by the measures used and reported by media and recovery authorities. Ensuring other measures are also calculated and reported may assist individuals in recognising their own positives and successes, contributing to their own sense of self-efficacy and hope.

Many areas of measurement of human endeavour have evolved from single point economically based data to multiple factors – the Balanced Scorecard approach for business performance management (R. Kaplan & Norton, 2001) and the proposed Social Progress Index (Social Progress Index, 2014) espoused by a number of leading economists. Similarly, to these initiatives, the recovery of businesses following a disaster needs to be assessed not purely on a financial basis.

This chapter has illustrated the positive outcomes, some of which will ultimately feed into financial measures but not all in a positive direction. For example, the care shown for staff impacted negatively on profitability for the initial post disaster period. To ignore the other side of that equation and the gain that occurred in terms of personal emotional satisfaction, reputational issues and stores of social capital would be a disservice to our overall assessment of what it means to thrive.

What constitutes a winner or a loser post-disaster and can one actually be both? If we embrace the complexity of disaster recovery then our scorecard will show a more balanced picture that allows us to celebrate and capitalise on the positives, while acknowledging and improving upon the negative. Recognising and celebrating the positives assists in maintaining the hope, optimism and sense of community needed for the long journey from disaster to recovery. If we continue to conceptualise successful recovery in financial terms, we perpetuate the idea of financial success as a goal, rather than as one part of the means to achieving thriving individuals and communities.

Chapter Thirteen - Synthesis, Limitations and Implications

1. Introduction

This thesis set out to examine the role of collaborative strategies in assisting organisations to recover from the Canterbury earthquake sequence. This was achieved firstly through an inductive process whereby themes emerged from interview, survey and document analysis. These themes were compared with existing theories derived from studies of disaster recovery, collaboration in ‘normal’ times and the broader areas of management, entrepreneurship and organisational behaviour.

Collaborations that were of interest in this study are those that had an overriding purpose of supporting organisational recovery from disaster. Collaborations that may be occurring as part of ‘business as usual’ or are entered into by existing strong businesses whose survival was not in doubt as a result of the disaster were excluded. Collaborating organisations were identified using publicly available online data and in discussion with informed commentators. An extensive analysis of the context in which recovery was occurring was undertaken using media and recovery authority reports, academic articles and discussions with informed commentators.

Collaboration was presented by many participants in this study as a logical and straightforward response. However, further analysis revealed that in the majority of cases, collaboration only entered awareness after other conventional strategies had failed. To assist in this analysis, two other paths taken by organisations impacted by the disaster are discussed, including those who had not resumed trading, and others who had resumed through non-collaborative strategies. The analysis of these organisations contributes in two areas. Firstly, it assists in confirming the importance of particular attitudes and attributes of collaborating organisations. Secondly, it gives insight into the experiences of organisations which are non-trading long after the disaster revealing that for the majority this was an acceptable outcome.

This chapter reviews the main findings of this thesis, firstly summarising the answers to the research questions and secondly considering other themes that have emerged. The implications of these findings, both for practice and future research, are then discussed.

2. What is the nature of the collaborations that occurred?

Two different kinds of collaboration were considered in this research. Firstly, the EPIC and Re:Start initiatives which were large place based collaborations which, although private initiatives, did require a level of governmental support. These initiatives supported the recovery of many organisations as well as the overall sense of community recovery. Secondly, individual business collaborations that were entirely privately managed and whose focus was the participant organisations' recovery. All of these collaborations fitted within a 2x2 matrix where it was suggested that the degree of resource and environmental impact determined the adaptive post-disaster strategy needed to recover from the disaster. In many cases, purpose evolved from initial needs to obtain resources to a growing awareness of environmental changes.

2.1.Epic and Re:Start

Both of these collaborations set out with an initial goal of providing temporary facilities for displaced retailers and small ICT companies. From this initial purpose, a broader vision of reclaiming the devastated central business district and creating something 'better' than temporary space emerged through both individuals' vision and the input of many into the projects. The processes of collaboration were similar in both cases with a staged development of the concept and the participation of those the projects aimed to assist. The specific formal arrangements were a function of practicalities and funding arrangements and were completed only as they became necessary. Key differences were identified in the leadership of the projects illustrating that there is potential for emerging and not just established groups and leaders in the post disaster environment.

The importance of context was evident in these two cases, with both capitalising on the initial period of mutual support, and citizen rather than government led recovery. The cases also illustrated that context is time specific with the progress through recovery potentially having significant impacts on whether a context supportive of collaboration exists. The sector of operation of the organisations involved was found to be highly relevant with their current trading status and perceptions of other avenues to recovery relevant to the degree of trust given. Both Epic and Re:Start were portrayed as successes for the city's recovery, rather than just the involved businesses.

2.2.Individual Business collaborations

The most common form of collaboration was the sharing of premises due to this being a very scarce resource. Other forms included the formation of strategic alliances and joint ventures. The

characteristics of organisations participating in these collaborations were quite varied with collaborators including micro, small, medium and large organisations. Collaborating organisations were on average older than the average New Zealand organisation. The sector of operation was found to be highly relevant in understanding why collaboration was a potential resumption strategy due to the specific location or fit-out needs. Collaborators were highly motivated to achieve their organisational goals and were operating in a context that was supportive of mutual help and innovation. The process of collaboration was an evolving one, often with actions preceding any formal agreements.

3. Were the collaborations successful?

3.1.Epic and Re:Start

EPIC and Re:Start assisted 67 businesses in their journey to recovery, as well as having a substantial effect on community perceptions of recovery. Both projects achieved their aims of providing innovative and attractive spaces for retailers and ICT companies displaced by the earthquakes. The aims were achieved in a timely fashion and both precincts have had high levels of praise from both the tenants and the wider public. Their success had broader implications with the creation of something new, innovative and attractive providing a glimpse of a positive future at a time when little rebuilding had occurred and the region was still enduring ongoing trauma with continuing large aftershocks. Re:START has provided a venue for displaying art, street performers, musicians and other performing arts in a city greatly lacking in cultural venues following the earthquakes. EPIC has provided a venue for industry events, speakers and hosts meetings for the Ministry of Awesome. All of these give the organisations and individuals involved a sense of purpose and normalcy allowing them to resume art, performance, seminars and meetings while also giving the community a sense of involvement and engagement with the partly publicly funded spaces.

3.2.Individual Business Collaborations

All of the respondents indicated that their collaborative efforts were viewed as successful. For some, this was a short term success achieving a time-limited aim on their journey to recovery. For others, success has meant both a short-term achievement and the promise of future success either through permanent co-location or new opportunities expected through joint ventures. For one, although collaboration ultimately contributed to his exit from a business, this, from his perspective, was a success. For another, their willingness to collaborate and do what was needed to assist in response efforts has cemented their position as the predominant player in their market as well as improving

organisational functioning and pride. Many of the collaborations allowed resumption of trade at a time when there seemed few other options available. While solving this need, many collaborators have discovered significant and unexpected benefits not just in terms of long term strategy but also with regard to wellbeing. Economic outcomes were less clear-cut with many organisations still in a transition stage but with optimistic outlooks for the future.

4. What were the key factors that helped or hindered their success or failure?

Literature from public policy, disaster recovery, strategic management and behavioural science was reviewed to develop a framework for effective collaboration. This framework which sets out the elements needed to successfully achieve collaboration in the post-disaster environment was reviewed in light of both the large multi-party collaborations and the individual business collaborations.

Key factors identified and refined in light of these organisations stories included the importance of people encompassing both membership and leadership, along with process and structure. Literature on swift trust (Meyerson et al., 1996) was found to be highly relevant for many of the collaborations. Key similarities and differences between the projects illustrate the inter-related nature of the components in the proposed framework with weakness in one area able to be countered by strengths in another. Overall, no one disciplinary perspective was sufficient to explain the process of collaboration that occurred.

Key differences between the large multi-party collaborative efforts and the individual businesses were identified. One of the most significant findings was that trust, generally seen as central to collaborative endeavour, can be purposefully created not only by prior relationships but also by careful attention to staged process and other safeguards. The need for trust in a post-disaster setting is also a function of the degree of perceived risk. Organisations managing to maintain a minimal level of post-disaster functioning may be more willing to take a chance on a new idea from a previously little known source. The importance of different model elements, most particularly leadership and pre-existing relationships, varies dependent upon the number and nature of parties involved in collaboration.

Finally, context is extremely important as an enabling feature. The existence of an enabling culture both with regard to government and citizen's attitudes can allow other obstacles or weaknesses in membership or leadership to be more easily overcome. This is consistent with the majority of existing collaboration theory (Adobor, 2006; Dyer & Singh, 1998; B. Gray, 1985; Wood & Gray, 1991).

5. Was there something different or unique about collaborating organisations?

This question initially sought to understand whether the emergence of collaboration as part of a recovery strategy was some function of particular organisational attributes. In light of the framework for effective collaboration which specifies the characteristics necessary for collaboration to proceed and succeed, this question becomes more about whether particular organisations are likely to fulfil those characteristics. Organisational attributes previously considered in recovery studies such as age, size and property status revealed only small differences when compared against other organisations. Surprisingly, both single enterprises and subunits of larger organisations utilised collaborative strategies – despite the advantages inferred by their multiple outlets or locations. Leasing property, which is the normal mode of operation in Canterbury, conferred advantages for all except one non trader. Collaborating organisations were on average slightly older than the average New Zealand firm.

Two main areas of difference were noted as significant. Firstly, one area of difference between organisations in this study who collaborated and those who did not relates to motivation. The respondent's motivation to resume was much stronger in collaborating than other organisations. This motivation was often discussed as relating not just to their own goal achievement but also the welfare of their staff and the broader region. Whether this is an organisational or an individual characteristic becomes blurred as an owner's passion infuses an organisation, or vice versa. In part, this strong motivation may relate to the organisational financial position with collaborators financial position slightly weaker than ceased or ongoing traders. Various biases including status quo, framing and escalating commitment were discussed as also contributing to this motivation. The importance of motivation can be related to the previously identified importance of compatible goals identified by many writers (Austin, 2000; Brouthers et al., 1995; Dyer & Singh, 1998; B. Gray, 1985; Nathan & Mitroff, 1991). This research illustrates the importance of considering the largely overlooked areas of goals and motivation in studies of business recovery from disaster. The second key area of note is the key resilience indicator of openness and networks of the collaborating organisations. Organisations had to be both open and discussing the issues confronting them, and have the networks with which to have those discussions in order for both collaboration to emerge as a possible solution and for potential collaborators to be identified. This finding contributes to debate on organisational resilience with regard to the importance not just of networks but of the openness and willingness to use those networks.

With regard to individual's characteristics, the owner/managers of collaborating organisations were older than non-traders but younger than continued traders. Collaborating owners had more business owner experience than non-trading businesses. Collaborating organisations displayed key resilience traits of effective leadership, situational awareness, use of networks and ability to make decisions.

6. Is collaboration an effective disaster recovery strategy

Disaster recovery at the macro scale aims to return an area to some kind of stable 'new normal'. Organisational recovery is an integral part of this process. Without organisations to provide employment, population loss from a disaster zone will be larger. Without purposeful endeavour, human wellbeing may suffer significantly as indicated by two of the non-traders in this study. Along with employment, organisations also provide many of the goods and services needed to contribute to a feeling of normal. Collaboration enabled either the resumption of trade, or enhanced the effectiveness of recovery journeys. As well as providing practical operational solutions for organisations, entering into a collaborative arrangement contributed a sense of purpose, achievement and broader social relationships. Collaboration is an effective disaster recovery strategy which in many cases provided benefits that extended far beyond its core purpose. This is in contrast to much of the strategic management literature which highlights the high failure rates of organisational alliances.

7. Emerging themes

Three themes regarding the overall nature of business recovery from disaster were noted as particularly significant and under-represented in existing literature.

7.1.Variety and Longevity of Disaster Impacts

This study found that changes in supply and demand patterns, ongoing disruptions within an organisation's neighbourhood and the diverted focus of both owners and staff had enormous and long-lasting impacts for organisations. For many organisations, these impacts were significant more than two years after the most damaging earthquake. A journey of recovery was proposed; conceptualised not as a straight line, but a long period of ups and downs as each individual organisation's path to recovery is impacted by the long lasting indirect effects of the disaster. This finding is important with regards to the management of expectations, and the framing of the recovery process in both public and official discussions.

7.2.Context

A context supportive of collaboration is a key component in the framework for effective collaboration. In Chapter 4 the building blocks of this context were set out with an argument that both the pre-existing context, the nature of the disaster and the specific recovery policies and community reactions to the disaster created an environment that enabled innovation, adaptation and collaboration. Understanding this context and the ways in which policy decisions helped to create and support it are an important step in understanding the decisions and recovery trajectories of both individual businesses and the overall community. Community recovery from disaster can be enhanced not just by the pre-existing social environment, but also by the actions taken post-event to encourage mutual support and collaboration. While many of the key factors identified as contributing to enabling business recovery are country or region specific, they highlight the many different ways and therefore many potential intervention points which can contribute to empowering business and organisations to lead their own recovery efforts.

7.3.Ceasing Trade as an adaptive action

Consideration of the non-traders choices indicates that it is important to understand that temporary cessation may be a valid choice and may lead to satisfactory outcomes. Only one of the non-trading organisations can be regarded as a 'victim' of the disaster.

8. Summary of Contribution

Figure 61 summarises the key contributions of this thesis and how they relate to each other.

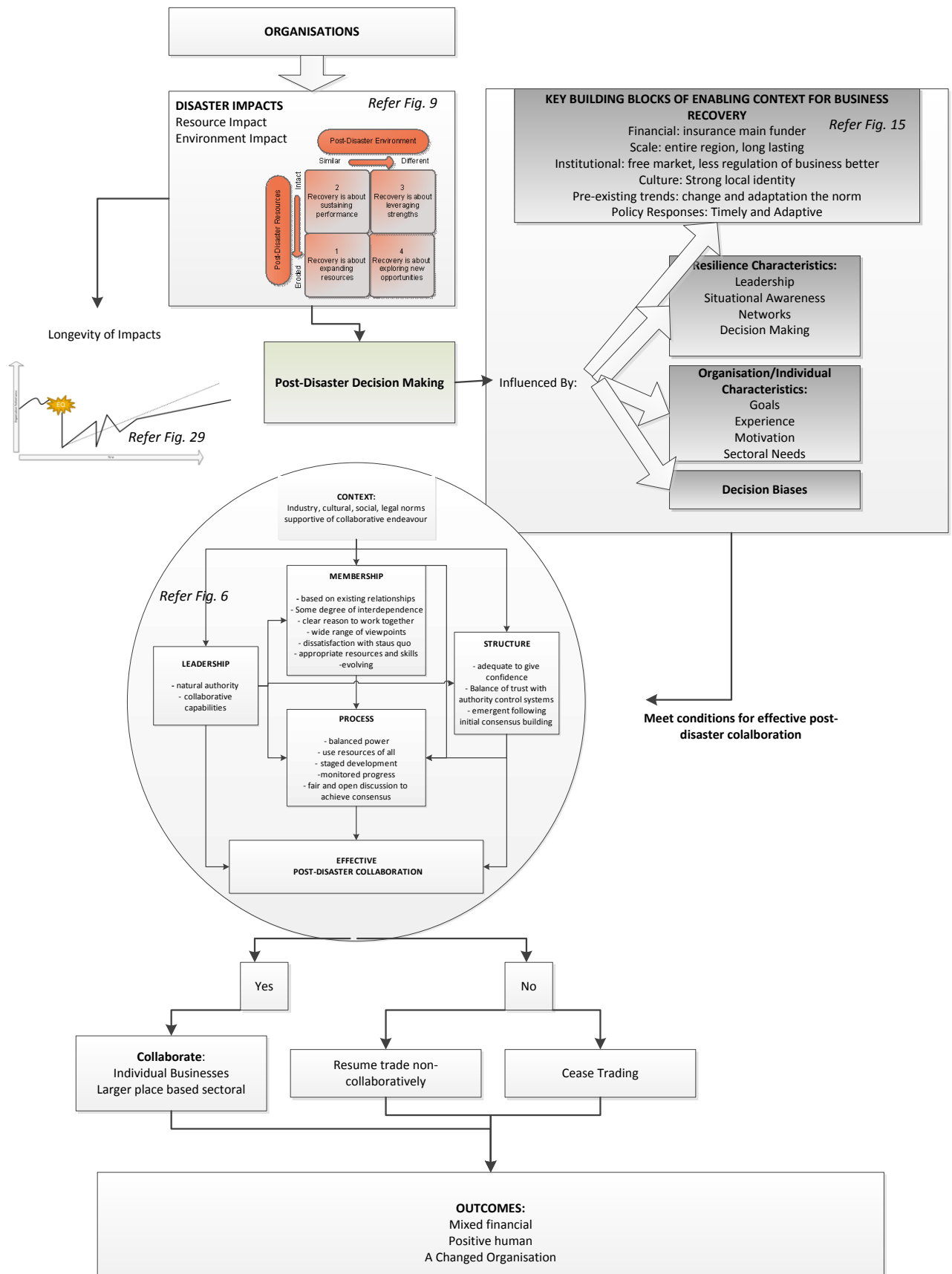


Figure 61 - Visual Summary of Thesis Contribution

A comprehensive model of disaster impacts was created (Figure 8). This then informed the refinement and application of a 2x2 matrix (Figure 62), which categorised the adaptive actions taken by organisations. This matrix was then extended to reflect the potential transitions occurring over the recovery period.

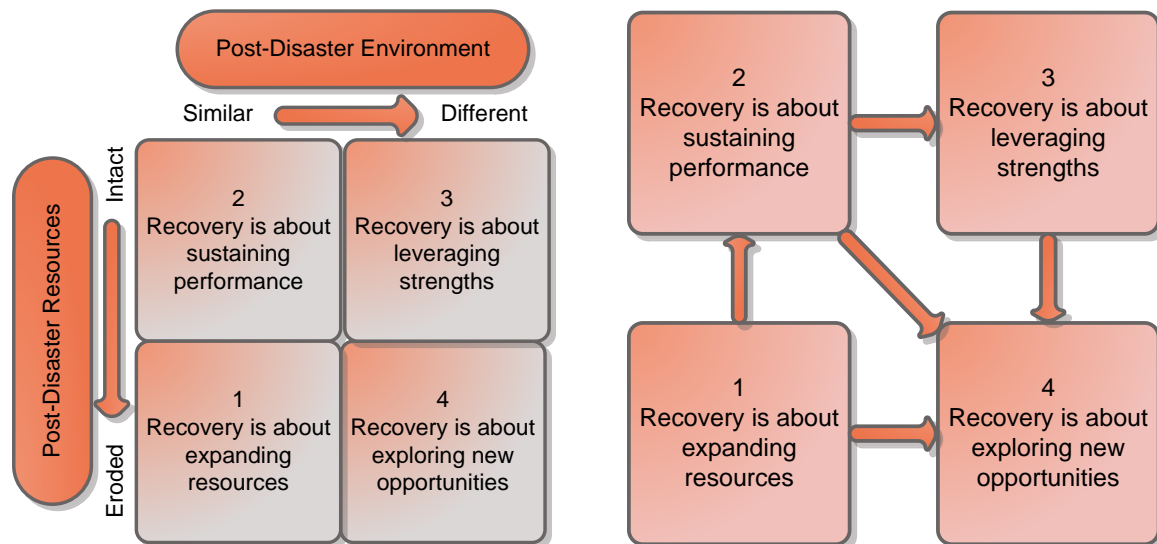


Figure 62 - Post Disaster Strategic Issues and Transitions

Existing literature on post-disaster recovery and resilience suggests a need for post-disaster adaptation, however there is little detailed study of implementation. This matrix provides a useful framing tool to enable organisations and their advisors to identify what is needed for recovery in both the immediate and medium term recovery period.

Leadership, situational awareness, networks and decision making factors were found to be important with regard to organisations' understanding of the evolving and challenging environment. Demographic characteristics of organisations added little to our understanding of recovery trajectories with motivation, experience and networks of more relevance. Impacts of the disaster in relation to both resources and environment were shown to be both varied and long-lasting.

The context within which organisations sought to recover was noted as extremely important and key buildings blocks that created an empowering environment that allowed businesses to make effective recovery decisions explained (Figure 63).

KEY BUILDING BLOCKS OF ENABLING CONTEXT FOR BUSINESS RECOVERY	
FINANCIAL Insurance main funder	Business decision making within own control once insurance claims agreed
SCALE Entire region effected by disruption Long Lasting	No prior experience and therefore little expectation of outside assistance Assisted in culture of "we are all in it together" enhancing collective cohesion which was maintained throughout sequence of events
INSTITUTIONAL CONDITIONS Free Market Less regulation of business better	Business accustomed to getting on with the job, free of government intervention or assistance
CULTURE Strong local identity	Strong sense of local pride and identity contributed to determination to do what is necessary to recover
PRE EXISTING TRENDS Change and adaptation the norm	Business accustomed to adapting and innovating to survive economic, sectoral and spatial changes
POLICY RESPONSES Timely and Adaptive	Hand up rather than Hand Out

Figure 63 - Key Building Blocks of Enabling Context

While much prior research has identified the importance of context, little consideration appears to have been given to how to create an enabling context. These findings highlight that context is able to be changed and suggest that policy in relation to both disaster preparation and response should be evaluated for its impact on the self-efficacy and adaptability of organisations. This model would provide a useful starting point for comparative studies of different countries and different types of disasters to create a broader understanding of the differing ways context can help or hinder business recovery.

While collaboration is identified as a guiding principle for recovery initiatives, little study has been carried out in the context of business recovery. A framework for effective post-disaster collaboration, which drew from a variety of disciplines and contexts, was devised and tested against the collaborations in this study (Figure 64)

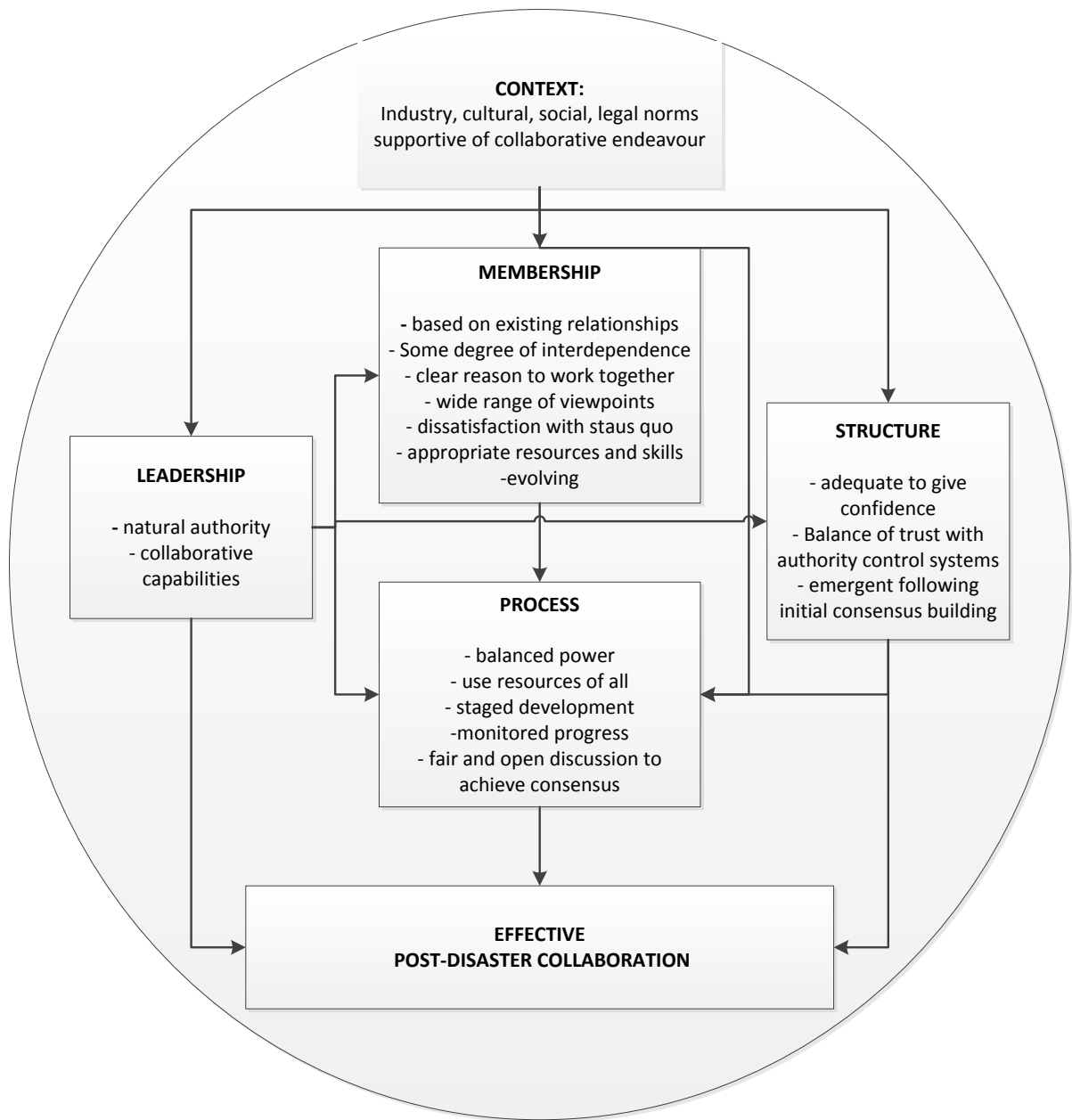


Figure 64 - Effective Post-Disaster Collaboration

This model was found to be useful but importantly, with weaknesses in any one element able to be countered by attention to other aspects. For example, trust, commonly seen as a necessary antecedent can actually be formed very quickly if the conditions for swift trust are met. This is an important finding with regards to post-disaster actions. It is not too late to make friends after a disaster has occurred. Creating opportunities for businesses to connect and network after the disaster event may still lead to collaborative endeavours, despite a lack of prior relationships.

Collaboration was found to be an effective post-disaster recovery strategy given the situation in which these organisations found themselves. However, this was not necessarily represented in financial

outcomes and it is argued that a holistic view that considers both economic and human thriving aspects of performance is needed.

9. Limitations

Every disaster is unique; many of the findings from this research may be context specific. Notwithstanding this, it is expected that some insight will be more widely applicable, most particularly to the developed world context. Wherever possible, within the limitations of confidentiality, detailed descriptions of the organisations and their contexts have been given to enhance the credibility of these findings and to allow readers to determine the applicability of the organisations experiences to other contexts. The case study method has known limitations, particularly with regard to the generalizability of the findings.

Interviewing representatives of organisations offers many potential biases, both in recall, the involvement of egos in considering whether good or bad decisions were made and in the process of being questioned (Baxter & Jack, 2008; Bryman & Bell, 2011). However, this is the only potential means to access the rich details of what occurred. Longitudinal effects may also be apparent with respondents having more information now about the pattern of recovery and shape of the new Christchurch. This may alter their perceptions of decisions made and processes encountered in the immediate aftermath of the disaster. Interviewing only one member of each organisation limits the ability to draw conclusions regarding some aspects of the decision making and the role of leaders versus organisational impetus.

10. Implications for practice

10.1. Connecting Organisations

Any actions that connect people in the aftermath of a disaster contributes to the sharing of problems and creates the potential for innovative solution generation. Attention is often paid to giving communities opportunities to interact. There is value in extending these initiatives to also focus on business communities and the intersection of business with their local environments. Efforts to promote networks and information sharing between businesses enhance both their operational and psychological resilience. The absence of these networks prior to a disaster does not make it impossible to create them in the unique post-disaster setting.

10.2. Creating enabling environments

Creating an enabling environment, which empowers individuals and organisations to lead their own recovery efforts, while providing the necessary support and co-ordination functions, is an incredibly complex task. While many of the policy responses in Canterbury are context specific, there is also great potential for these to be amended appropriately and used in other contexts where empowered individuals can contribute significantly to overall recovery.

10.3. Capturing and translating learning

Disasters create unique circumstances and often very few of those responsible for recovery guidance have experience in this context. The understandings that are evolving from this and other in depth studies of Canterbury organisations need to be translated into simple and straightforward advice that can be utilised by business support organisations in future crises. Collaboration, which has been a successful strategy for these organisations, may enter others' awareness sooner if these lessons can be captured.

10.4. Business as Usual

Innovation and creativity flourish when the 'normal' rules of the game are hugely disrupted. However, why do strategies, such as giving up a 110 year tradition of showroom premises or finding co-location as a means to compete with larger players, need a disaster to be discovered? Including disaster scenarios based on real events could be a very useful strategic planning aid that could assist in identifying 'out of the box' strategies such as collaboration. These kinds of scenario exercises also assist companies in developing their understanding of the core values and assets of their business, assisting in building their resilience.

11. Implications for future research

11.1. Research Approaches

This examination illustrates the benefits of taking a trans-disciplinary approach, which links existing bodies of knowledge, in this instance with regard to collaborative processes with research on disaster and recovery. The proposed framework of conditions for effective post-disaster collaboration, drawn from a variety of domains, is found to be highly relevant in understanding the success of these collaborations. One of the pioneers of business recovery research suggested a need to research

business recovery within the framing of organisation and management theory (Tierney, 2006). I suggest even more broadly that we should be exploring any and all disciplines seeking a productive synthesis from the intersecting, but seldom joined bodies of existing knowledge.

11.2. Survivor Bias

As one of the few qualitative studies to include non-trading organisations, these stories are important and point to further questions to be asked in future studies. In particular, there is a need to further refine our idea of business closure to understand how much is by choice, and how many are true ‘victims’. A greater understanding of how non-traders sustain themselves during long periods of closure may be helpful with regard to support policies. The growing use of digital technologies makes the prospect of identifying and tracing non traders possible, albeit a laborious process. Further qualitative study of non-traders or ceased businesses, alongside a broader effort to use new methods of tracking organisations to ensure their inclusion in quantitative studies would help to greatly enhance our understanding of business recovery.

11.3. Organisational characteristics not demographics

More explanatory value was found in ‘soft’ characteristics deriving from the resilience perspective. While these are difficult to measure relative to demographics, there is a need to begin incorporating some of these concepts into quantitative studies of recovery, if we are to progress our understanding of disaster impacts and recovery trajectories. Discussion in Chapter 10 of resilience attributes showed significant interdependencies and linkages between resilience indicators. Further research is needed to better conceptualise the connections and influences between these indicators, which will assist in directing organisations attention to the areas most likely to make a difference.

11.4. Comparative contexts

More research is needed to understand the successes or failures of policies enacted to support business recovery. This thesis contends that an enabling environment that encouraged self-determined adaptive actions existed in Canterbury. Understanding how this may be developed and considering whether policies successful in one country may be appropriate for others would help to create a wider body of knowledge for government and local authority officials with the immense task of responding promptly and effectively following a disaster.

11.5. Longitudinal Study

The difficulty in assessing outcomes for organisations in this study partly reflects that interviews occurred while businesses were at a relatively early stage of recovery. Longitudinal studies would be of value in enabling a deeper understanding of recovery trajectories and whether collaboration positions businesses for longer term success.

12. Conclusion

Contrary to much of the existing literature on collaboration, the organisations in this study made collaboration seem easy. Many, with no prior relationships, and with extremely rapid activation periods, have made collaboration a success due to their high motivation and ability to rapidly adapt. Many of these organisations were not simply profit-driven. They were the unsung ‘good-guys’ of the disaster recovery period with many fighting to resume, not just to satisfy their own goals, but to contribute to both their employees and community’s ability to recover. Acknowledging their importance, and better including organisations in disaster planning would be beneficial in supporting their key role within communities. Disasters need not always be disastrous. While the physical damage wrought may be largely unavoidable, resilient communities work together to rebuild and recover. Through that togetherness, improvements in personal and business wellbeing, physical environments and future disaster preparedness can be gained.

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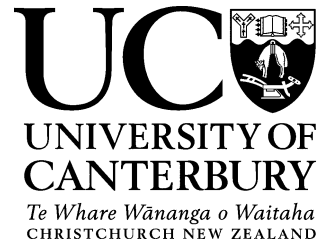
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Appendix 1 – Collaboration Interview Guide

Semi Structured Interview Guide

Collaborative Approaches to the Recovery of Organisations Post-Disaster



Thank you very much for taking the time to talk with me.

Firstly, can you tell me about your organisation before the earthquakes:

(this is the same as the survey you completed where I am going to focus firstly on your organisation pre quake)

1. What sort of preparations for a crisis did you have prior to the quakes? (prompts – securing of contents, evaluation of building, first aid and emergency supplies, BCP, staff contact lists, data storage, Business interruption cover and cover duration?)
2. How did your organisation generally operate pre quake – who made decisions and how?
3. In your type of business, what are the key factors of success?
4. How would you rate yourself on these prior to the quakes?
5. What were your aspirations for the business?
6. What did you do prior to operating this business?
7. How would you describe your pre-quake financial position?

Now, talking about the events of 2010/11:

8. What happened to your organisation in the quakes?

Prompts: which quake

Closed/relocated/re-opened (green/orange/red/other buildings)
Timeframes – how long closed
Staff retained?/Used ESS subsidy?
What happened to your old premises?

Now, looking at the collaborative arrangements you have entered into:

9. Can you tell me about the collaboration

Prompts: How did you get the idea of collaborating?
What was your relationship with the other collaborators?
What were your reasons for entering into the collaboration?
Have you previously entered into any collaborative arrangements?
Did you consider any alternative ideas – what, why?
What form has the relationship taken – trust based, contract, legal entity?
Were any external parties involved – CDC, Recover Canty, lawyers
How do you manage the collaboration on an ongoing basis?
What are your expectations for the future of the collaboration?
Is there anything about the collaborative arrangements that hasn't or isn't working?
What about from the staff's point of view?
Is there anything you would do differently with the benefit of hindsight?
Were there any particular obstacles to entering into the collaboration?
What have been the key benefits of collaboration for you and your organisation?
Is there any particular advice you would give to another organisation considering a collaborative relationship

Thinking about your organisation now:

10. How has it changed?

Prompts: customer/clientele
Method of operation
Decision making processes

11. What does the future hold for your organisation?

Prompts: stay put/relocate
Additional premises

Growth/stability

12. Is there anything or things that you believe either local or national government should or could have done to aid your business?

Lastly, it would be helpful to understand the financial impacts of the earthquakes.

Great care will be taken to ensure that any information you give is reported anonymously.

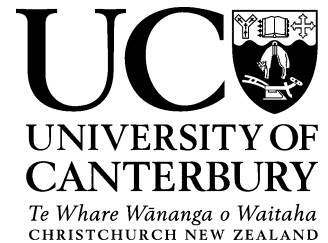
(If you are not able to provide figures, can you please estimate a percentage + or -

		Pre Earthquakes	Now
12.	Turnover (operating revenue/sales revenue)		
13.	EBIT (earnings before interest and tax) Operating Costs		
14.	Approximate Assets		
15.	Approximate Debt Level		

Final things:

- Any other collaborations that you know of? Any ceased businesses that you know of?
- Quake Studies Consent Form – the Ceismic project aims to capture the huge amount of data about what happened here in Canterbury for future use by both researchers and other interested parties. There are various levels of security whereby you can make your information (i.e. this transcript) available just to future researchers or to anyone.
- Would you like to receive a copy of the interview transcript?
- Would it be OK if I were to phone you at a later stage if any further questions arise?

Appendix 2 – Collaborators questionnaire



Questionnaire

Collaborative Approaches to the Recovery of Organisations Post-Disaster

Thinking about your organisation <u>BEFORE</u> the earthquakes:																
1.	Where was your organisation located?	Street: Area:														
2.	Including yourself, how many staff did you employ?	Fulltime _____ Part-time _____ Casual _____														
3.	What was your target market or customer?															
4.	How long has your organisation been in business?															
5.	How is the ownership of the organisation structured? <i>Please tick all that apply</i>	<table border="1"> <tr><td><input type="checkbox"/></td><td>Individual Proprietorship</td></tr> <tr><td><input type="checkbox"/></td><td>Limited Liability company</td></tr> <tr><td><input type="checkbox"/></td><td>Branch of a regional or national chain</td></tr> <tr><td><input type="checkbox"/></td><td>Franchise</td></tr> <tr><td><input type="checkbox"/></td><td>Charitable Trust</td></tr> <tr><td><input type="checkbox"/></td><td>Co-operative</td></tr> <tr><td><input type="checkbox"/></td><td>Partnership</td></tr> </table>	<input type="checkbox"/>	Individual Proprietorship	<input type="checkbox"/>	Limited Liability company	<input type="checkbox"/>	Branch of a regional or national chain	<input type="checkbox"/>	Franchise	<input type="checkbox"/>	Charitable Trust	<input type="checkbox"/>	Co-operative	<input type="checkbox"/>	Partnership
<input type="checkbox"/>	Individual Proprietorship															
<input type="checkbox"/>	Limited Liability company															
<input type="checkbox"/>	Branch of a regional or national chain															
<input type="checkbox"/>	Franchise															
<input type="checkbox"/>	Charitable Trust															
<input type="checkbox"/>	Co-operative															
<input type="checkbox"/>	Partnership															

			Incorporated Society or Association
			Other – Please Specify
6.	How long has the organisation been in current ownership?		
7.	Were your pre-earthquake premises owned or leased?		Owned
			Leased
8.	What type of insurances did you have (at the time of the earthquakes)? (please tick all that apply)		Business Interruption/Cash-flow Protection
			Property/Buildings
			Contents/Assets/Equipment
			Stock/Goods
			Motor Vehicles
			Public Liability
			None
			Other – please describe

9. Still thinking about your organisation **before** the earthquakes, could you please complete the following (please circle ONE):

In general, the top managers of my organisation favour:

A strong emphasis on the marketing of tried and true products and services	1	2	3	4	5	6	7	A strong emphasis on R&D, technological leadership, and innovations
--	---	---	---	---	---	---	---	---

How many new products or services has your firm marketed in the past 5 years?

No new lines of products or services	1	2	3	4	5	6	7	Very many new lines of products or services
Changes in products or services have been mostly of a minor nature	1	2	3	4	5	6	7	Changes in products or services have usually been quite dramatic

In dealing with its competitors, my firm:

Typically responds to actions which competitors initiate	1	2	3	4	5	6	7	Typically initiates actions which competitors then respond to
Is very seldom the first business to introduce new products/services, administrative techniques, operating	1	2	3	4	5	6	7	Is very often the first business to introduce new products/services, administrative techniques, operating

technologies etc.								technologies etc.
Typically seeks to avoid competitive clashes, preferring a 'live and let live' posture	1	2	3	4	5	6	7	Typically adopts a very competitive, 'undo the competitors' posture

In general, our organisation has:

A strong proclivity for low-risk projects (with normal and certain rates of return)	1	2	3	4	5	6	7	A strong proclivity for high-risk projects (with chances of very high returns)
---	---	---	---	---	---	---	---	--

In general, our organisation believes that

Owing to the nature of the environment, it is best to explore it gradually via timid, incremental behaviour	1	2	3	4	5	6	7	Owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firms objectives
---	---	---	---	---	---	---	---	---

When confronted with decision-making situations involving uncertainty, my firm

Typically adopts a cautious, 'wait and see' posture in order to minimise the probability of making costly decisions	1	2	3	4	5	6	7	Typically adopts a bold, aggressive posture in order to maximise the probability of exploiting potential opportunities
---	---	---	---	---	---	---	---	--

10. In general, I believe that

Outcomes are largely out of my control – they are determined by external forces	1	2	3	4	5	6	7	Outcomes are within my control – they are determined by my actions and efforts
---	---	---	---	---	---	---	---	--

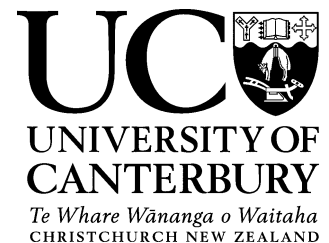
Thinking about your organisation <u>NOW</u> :																			
11.	Including yourself, how many staff do you employ?		Fulltime _____ Part-time _____ Casual _____																
12.	Where on this continuum would you place your organisation at the following points in time (please circle)? 1 year post quake <table border="1"> <tr> <td>Ceased Operation</td> <td>Survived</td> <td>Returned to pre EQ state</td> <td>Thriving</td> </tr> </table> 2 years post-quake <table border="1"> <tr> <td>Ceased Operation</td> <td>Survived</td> <td>Returned to pre EQ state</td> <td>Thriving</td> </tr> </table> Expectations for 4 years post-quake <table border="1"> <tr> <td>Ceased Operation</td> <td>Survived</td> <td>Returned to pre EQ state</td> <td>Thriving</td> </tr> </table> Expectations for 7 years post-quake <table border="1"> <tr> <td>Ceased Operation</td> <td>Survived</td> <td>Returned to pre EQ state</td> <td>Thriving</td> </tr> </table>			Ceased Operation	Survived	Returned to pre EQ state	Thriving	Ceased Operation	Survived	Returned to pre EQ state	Thriving	Ceased Operation	Survived	Returned to pre EQ state	Thriving	Ceased Operation	Survived	Returned to pre EQ state	Thriving
Ceased Operation	Survived	Returned to pre EQ state	Thriving																
Ceased Operation	Survived	Returned to pre EQ state	Thriving																
Ceased Operation	Survived	Returned to pre EQ state	Thriving																
Ceased Operation	Survived	Returned to pre EQ state	Thriving																

13.	To what extent do you agree or disagree with the following statements for your organisation?											
Please select a rating for all statements												
<div style="display: flex; justify-content: space-between; align-items: center;"> Strongly Disagree ← → Strongly Agree </div>												
There would be good leadership from within our organisation if we were struck by a crisis * <div style="display: flex; justify-content: space-around; width: 100%;"> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>												
People in our organisation are committed to working on a problem until it is resolved * <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>												
We proactively monitor our industry to have an early warning of emerging issues * <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>												
We can make tough decisions quickly * <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>												
We are known for our ability to use knowledge in novel ways * <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>												
We build relationships with others we might have to work with in a crisis * <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>												
If key people were unavailable, there are always others who could fill their role * <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>												
There are few barriers stopping us from working well with other organisations * <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>												
Our organisation maintains sufficient resources to absorb unexpected change * <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>												
We have clearly defined priorities for what is important during and after a crisis * <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>												
We have a focus on being able to respond to the unexpected * <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>												
Given our level of importance, I believe the way we plan for the unexpected is appropriate * <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>												
We believe emergency plans must be practised and tested to be effective * <div style="display: flex; justify-content: space-around; width: 100%;"> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> </div>												

A few questions about you:			
14.	What age bracket do you fall into?		20-29
			30-39
			40-49
			50-59
			60-69
			70-79
15.	Gender		Male
			Female
Please provide your contact details (this will be used solely to match questionnaire responses to interview information):			
Organisation Name:			
Contact name:			
Phone/Email:			

Thank you very much for your time

Appendix 3 – Collaborators Information and Consent Form



SUBJECT CONSENT FOR PARTICIPATION IN A RESEARCH PROJECT

Researcher:

Tracy Hatton,
PhD Researcher
Email: tracy.hatton@pg.canterbury.ac.nz
Phone: 021 160 7707

Supervisory Team:

Dr. John Vargo,
Associate Professor,
University of Canterbury
Email:
john.vargo@canterbury.ac.nz
Phone: 03 364 2627 x 6627

Dr. Venkataraman Nilakant
Associate Professor
University of Canterbury
Email:
Venkataraman.nilakant@canterbury.ac.nz
Phone: 03 364 2627 x 8621

Dr. Erica Seville
Adjunct Senior Fellow
University of Canterbury
Email:
Erica.seville@canterbury.ac.nz
Phone: 021 456 706

You are invited to participate as a subject in the research project Collaborative Approaches to the Recovery of Organisations Post-Disaster.

The aims of this project are to:

- Explore the nature of collaborative relationships entered into by surviving organisations and assess the value of this strategy for organisational recovery from disaster.
- Explore what factors influenced differences in organisational recovery status and how this informs the practice of disaster recovery.

The information you provide may also be used in a future project which will compare the characteristics of organisations that have continued trading with organisations that ceased trading after the earthquakes.

Your involvement in this project will entail your completion of a short questionnaire and participation in an interview to be arranged for a time and location of your convenience. Completion of both the questionnaire and interview is expected to take between 60 and 90 minutes. The interview will be recorded. You have the right to withdraw from the project,

including withdrawal of any information provided without penalty at any time prior to publication of the resulting thesis or journal publications. As a follow-up to this investigation, you will be given the opportunity to review a transcript of the interview. You will also be offered the opportunity to receive copies of a written case study of your organization as well as a summary of the overall findings of the project.

This study does require reflection on the effects of the earthquakes on your organisation which has the potential to cause some emotional distress. There are a number of free services accessible should this occur. The Quake Support and Counselling Services Helpline 0800 777 846 can offer practical support, information or advice on quake related issues, including counselling.

The results of the project may be published, but you may be assured of the complete confidentiality of data gathered in this investigation: the identity of participants will not be made public without their consent. To ensure anonymity and confidentiality, your organisation will be assigned a code and only the researcher and their supervisory team will know which code relates to each organisation. Care will be taken to ensure no information is provided in published reports that would enable identification. All data collected for this study will be kept in locked and secure facilities at the University of Canterbury and will be destroyed within ten years.

The project is being carried out as a requirement for a Doctorate in Philosophy by Tracy Hatton under the supervision of Dr. John Vargo, Dr. Venkataraman Nilakant and Dr. Erica Seville, who can be contacted by email or telephone as listed above. They will be happy to discuss any concerns you may have about participation in the project.

The project has been reviewed *and approved* by the University of Canterbury Human Ethics Committee.

Consent

I have read and understood the description of the above-named project. On this basis I agree to participate as a subject in the project, and I consent to publication of the results of the project with the understanding that anonymity will be preserved.

I understand also that I may at any time withdraw from the project, including withdrawal of any information I have provided.

I note that the project has been reviewed *and approved* by the University of Canterbury Human Ethics Committee.

Your signature below indicates that you have received a copy of this consent form for your own records and that you consent to participate in this study.

Signature of participant

Date

Name (printed)

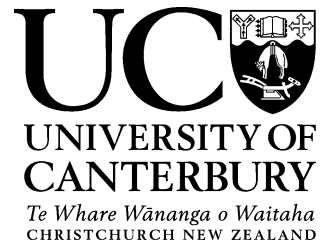
Appendix 4 – EPIC and Re: Start Interview Guide

Semi Structured Interview

Founders – Restart & Epic

1. How did the idea for the initiative arise?
2. Did you consider any alternative ideas?
3. Who were and what was your relationship with the other key players at the beginning?
4. What prompted you to put so much effort into turning that into a reality?
5. What were the first steps to turning the idea into reality?
6. What were the key things that helped it to actually happen?
7. What were the key things that were obstructive or hindered it?
8. Is there anything you would do differently with hindsight?
9. A lot of organisations – lawyers, accountants Octa, Timbercore helped and the website mentioned – at no cost. How did you get that to happen?
10. Has the original vision been realised?
11. Is the funding that you received from MSI and NZTE loan or grant?
12. How is the on-going process managed?
13. Any key advice you would give to someone in another community elsewhere embarking on a similar undertaking?
14. What have been the key benefits of the initiative –
firstly, for you?
Secondly, for your organisation?,
Thirdly, for Christchurch?
15. Is your business now any different e.g. customers, method of operation, decision making?
16. Is there anything or things that you believe either local or national government should or could have done to aid the initiative or the overall recovery?
17. What does the future hold?

Appendix 5 – Non Traders Interview Guide



Semi Structured Interview Guide

Non Trading Organisations Post-Disaster

Thank you very much for taking the time to talk with me.

Firstly, can you tell me about your organisation before the earthquakes:

1. What sort of preparations for a crisis did you have prior to the quakes? (prompts – securing of contents, evaluation of building, first aid and emergency supplies, BCP, staff contact lists, data storage, Business interruption cover and cover duration?)
2. How did your organisation generally operate pre quake – who made decisions and how?
3. In your type of business, what were the key factors of success?
4. How would you rate yourself on these prior to the quakes?
5. What were your aspirations for the business?
6. What did you do prior to operating this business?
7. How would you describe your pre-quake financial position?

Now, talking about the events of 2010/11:

8. What happened to your organisation in the quakes?

Prompts: which quake
 Closed/relocated/re-opened (green/orange/red/other buildings)
 Timeframes – how long closed
 Staff retained?/Used ESS subsidy?
 What happened to your old premises?

9. What happened next?

Prompts: alternatives considered/decision making process
 What were the key reasons for the decision to
 What happened to staff?
 How is non-trading being sustained (e.g. alternative income/employment?)

10. Did you talk to Recover Canterbury at any point? Why not/what happened?

11. Did you consider collaborating with any other businesses to share premises or work together in some way? If yes – what happened. If no – why not.

12. What does the future hold for you?

13. With the benefit of hindsight, is there anything you would do differently?

14. Is there anything or things that you believe either local or national government should or could have done to aid your business?

Final things:

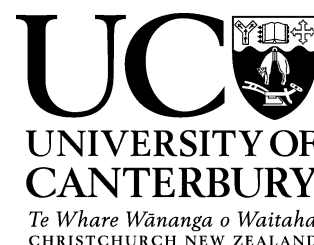
Any other non-trading organisations that you know of?

Quake Studies Consent Form – the Ceismic project aims to capture the huge amount of data about what happened here in Canterbury for future use by both researchers and other interested parties. There are various levels of security whereby you can make your information (i.e. this transcript) available just to future researchers or to anyone.

Would you like to receive a copy of the interview transcript?

Would it be OK if I were to phone you at a later stage if any further questions arise?

Appendix 6 – Non Traders Questionnaire



Questionnaire

Non Trading Organisations Post-Disaster

Thinking about your organisation <u>BEFORE</u> the earthquakes:									
1. Where was your organisation located? <i>(if multiple locations, please list all)</i>	<p>Street: _____</p> <p>Area: _____</p>								
2. Including yourself, how many staff did you employ?	<p>Fulltime: _____</p> <p>Part-time: _____</p> <p>Casual (Occasional or Temporary): _____</p>								
3. What was your target market or customer?									
4. How long had your organisation been in business?									
5. How was the ownership of the organisation structured? <i>Please tick all that apply</i>	<table border="1"> <tr> <td><input type="checkbox"/></td> <td>Individual Proprietorship</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Limited Liability company</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Branch of a regional or national chain</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Franchise</td> </tr> </table>	<input type="checkbox"/>	Individual Proprietorship	<input type="checkbox"/>	Limited Liability company	<input type="checkbox"/>	Branch of a regional or national chain	<input type="checkbox"/>	Franchise
<input type="checkbox"/>	Individual Proprietorship								
<input type="checkbox"/>	Limited Liability company								
<input type="checkbox"/>	Branch of a regional or national chain								
<input type="checkbox"/>	Franchise								

			Charitable Trust
			Co-operative
			Partnership
			Incorporated Society or Association
			Other – Please Specify
6.	How long had the organisation been in current ownership?		
7.	Were your pre-earthquake premises owned or leased?		Owned
			Leased
8.	What type of insurances did you have (at the time of the earthquakes)? (please tick all that apply)		Business Interruption/Cash-flow Protection: If yes, for how long: _____
			Property/Buildings
			Contents/Assets/Equipment
			Stock/Goods
			Motor Vehicles
			Public Liability
			None
			Other – please describe:

9. Still thinking about your organisation **before** the earthquakes, could you please complete the following (please circle ONE):

In general, the top managers of my organisation favoured:

A strong emphasis on the marketing of tried and true products and services	1	2	3	4	5	6	7	A strong emphasis on R&D, technological leadership, and innovations
--	---	---	---	---	---	---	---	---

How many new products or services had your firm marketed in the past 5 years?

No new lines of products or services	1	2	3	4	5	6	7	Very many new lines of products or services
Changes in products or	1	2	3	4	5	6	7	Changes in products or

services have been mostly of a minor nature								services have usually been quite dramatic
---	--	--	--	--	--	--	--	---

In dealing with its competitors, my firm:

Typically responded to actions which competitors initiate	1	2	3	4	5	6	7	Typically initiates actions which competitors then respond to
Was very seldom the first business to introduce new products/services, administrative techniques, operating technologies etc.	1	2	3	4	5	6	7	Is very often the first business to introduce new products/services, administrative techniques, operating technologies etc.
Typically sought to avoid competitive clashes, preferring a 'live and let live' posture	1	2	3	4	5	6	7	Typically adopts a very competitive, 'undo the competitors' posture

In general, our organisation had:

A strong proclivity for low-risk projects (with normal and certain rates of return)	1	2	3	4	5	6	7	A strong proclivity for high-risk projects (with chances of very high returns)
---	---	---	---	---	---	---	---	--

In general, our organisation believed that

Owing to the nature of the environment, it is best to explore it gradually via timid, incremental behaviour	1	2	3	4	5	6	7	Owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firms objectives
---	---	---	---	---	---	---	---	---

When confronted with decision-making situations involving uncertainty, my firm

Typically adopted a cautious, 'wait and see' posture in order to minimise the probability of making costly decisions	1	2	3	4	5	6	7	Typically adopts a bold, aggress posture in order to maximise the probability of exploiting potential opportunities
--	---	---	---	---	---	---	---	---

10. In general, I believe that

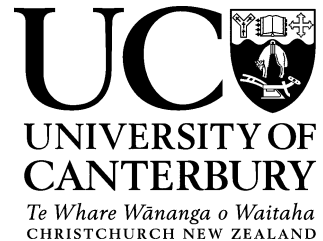
Outcomes are largely out of my control – they are determined by external forces	1	2	3	4	5	6	7	Outcomes are within my control – they are determined by my actions and efforts
---	---	---	---	---	---	---	---	--

Thinking about your organisation <u>NOW</u> :				
11.	Where on this continuum would you place your organisation at the following points in time (please circle)?			
	February 2012			
	Ceased Operation	Survived	Returned to pre EQ state	Thriving
	February 2013			
	Ceased Operation	Survived	Returned to pre EQ state	Thriving
	Expectations for February 2015			
	Ceased Operation	Survived	Returned to pre EQ state	Thriving
	Expectations for February 2018			
	Ceased Operation	Survived	Returned to pre EQ state	Thriving

A few questions about you:			
12.	What age bracket do you fall into?		Under 20
			20-29
			30-39
			40-49
			50-59
			60-69
			70-79
			80+
13.	Gender		Male
			Female
Please provide your contact details (this will be used solely to match questionnaire responses to interview information):			
Organisation Name:			
Contact name:			
Phone/Email:			

Thank you very much for your time

Appendix 7 – Non Traders Information and Consent Form



SUBJECT CONSENT FOR PARTICIPATION IN A RESEARCH

Researcher:

Tracy Hatton,
PhD Researcher
Email: tracy.hatton@pg.canterbury.ac.nz
Phone: 021 160 7707

Supervisory Team:

Dr. John Vargo,
Associate Professor,
University of Canterbury
Email:
john.vargo@canterbury.ac.nz
Phone: 03 364 2627 x 6627

Dr. Venkataraman Nilakant
Associate Professor
University of Canterbury
Email:
Venkataraman.nilakant@canterbury.ac.nz
Phone: 03 364 2627 x 8621

Dr. Erica Seville
Adjunct Senior Fellow
University of Canterbury
Email:
Erica.seville@canterbury.ac.nz
Phone: 021 456 706

You are invited to participate as a subject in a research project focusing on the Recovery of Organisations Post-Disaster.

The three key research aims of this project are to:

- Compare and contrast the characteristics of, and decisions made by trading and non –trading organisations.
- Explore the nature of collaborative relationships entered into by organisations and assess the value of this strategy for organisational recovery.
- Understand what factors influenced the differences in recovery status and how this informs the practice of disaster recovery.

Your involvement in this project will entail your completion of a short questionnaire and participation in an interview to be arranged for a time and location of your convenience. Completion of both the questionnaire and interview is expected to take approximately 60 minutes. The interview will be recorded. You have the right to withdraw from the project, including withdrawal of any information provided without penalty at any time prior to analysis of

the data in preparation for publication of the resulting thesis or journal publications. As a follow-up to this investigation, you will be given the opportunity to review a transcript of the interview.

This study does require reflection on the effects of the earthquakes on your organisation which has the potential to cause some emotional distress. There are a number of free services accessible should this occur. The Quake Support and Counselling Services Helpline 0800 777 846 can offer practical support, information or advice on quake related issues, including counselling.

The results of the project may be published, but you may be assured of the complete confidentiality of data gathered in this investigation: the identity of participants will not be made public without their consent. To ensure anonymity and confidentiality, your organisation will be assigned a code and only the researcher and their supervisory team will know which code relates to each organisation. Care will be taken to ensure no information is provided in published reports that would enable identification. All data collected for this study will be kept in locked and secure facilities at the University of Canterbury and will be destroyed within ten years.

The project is being carried out as a requirement for a Doctorate in Philosophy by Tracy Hatton under the supervision of Dr. John Vargo, Dr. Venkataraman Nilakant and Dr. Erica Seville, who can be contacted by email or telephone as listed above. They will be happy to discuss any concerns you may have about participation in the project.

The project has been reviewed *and approved* by the University of Canterbury Human Ethics Committee.

Consent

I have read and understood the description of the above-named project. On this basis I agree to participate as a subject in the project, and I consent to publication of the results of the project with the understanding that anonymity will be preserved.

I understand also that I may withdraw from the project, including withdrawal of any information I have provided, at any time prior to data analysis.

I note that the project has been reviewed *and approved* by the University of Canterbury Human Ethics Committee.

Your signature below indicates that you have received a copy of this consent form for your own records and that you consent to participate in this study.

Signature of participant

Date

Name (printed)