Competition and collaboration: How an innovative project based alliance structure allowed competitors to span boundaries effectively together in a post-disaster city reconstruction environment

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Introduction

Global Risks Reports' produced by the World Economic Forum have highlighted a vast list of risks that challenge mankind. These reports refer to water and food crises, terrorist attacks, cybercrime, financial crises, extreme weather events and earthquakes, among others (van der Vegt, Essens, Wahlström, & George, 2015). Typically, following major disasters, global media beam pictures of devastated cities into our homes and often highlight the human tragedies as well as the collective efforts of affected communities, organisations and individuals collaborating to solve pressing problems in the immediate aftermath of these disasters. These events which can take natural or man-made forms (Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008) can have a devastating long-term bearing on the infrastructure, social cohesion and economic performance of the impacted cities. Therefore, once the film crews and cameras have gone, the ongoing ability to overcome and in some cases thrive following such events has a close association with how effectively recovery organisations involved with a city rebuild can collaborate across organisational boundaries. This can take many form including for example temporary, emergent inter-organisational collaboration (Beck & Plowman, 2014). What is evident is that any post-disaster response faces competing challenges of (a) problems of resource availability, (b) stakeholder expectations around reconstruction, (c) protecting the local economy, already impacted by the disaster and (d) a dynamic social, political and geographic landscape (Walker, de Vries, & Nilakant, 2017);

Large organisations' tasked with completing complex post-disaster reconstruction projects crucially need to employ innovative and often unique solutions. Furthermore, as a recovery programme's life-cycle can, in many cases, extend many years beyond the immediate event these capabilities need to be sustained throughout the rebuild programme. Evidence would suggest, however, that there are structural and operational constraints that are inherent to both large organisations (Puranam, Alexy, & Reitzig, 2014) and post-disaster recovery work recovery scenarios (Baker, 2009; Nilakant, Walker, Van Heughten, Bairs, & de Vries, 2014). Therefore structures and strategies are required that allow their people to: firstly employ decisive and innovative practices to solving immediate problems; secondly collaborate with rebuild partners who have often been competitors in the past; and thirdly sustain those collaborative behaviours throughout the full recovery programme.

This paper focuses on the 2011-2017 infrastructure recover programme following the New Zealand earthquakes that devastated the city of Christchurch. It reports on a resilient 'designed for purpose' alliance organisation called SCIRT (Stronger Christchurch Infrastructural Rebuild Team), which bought together eight organisations the Christchurch City Council, Canterbury Earthquake Recover Authority, New Zealand Transport Authority (all with distinct rebuild agendas), and five of the largest New Zealand construction companies and their sub-contractors (atypically accustom to a competitive environment). The alliance was tasked with a challenging five year re-construction programme to repair the cities horizontal infrastructure based on a deliberate structure that fostered a combination of competition and collaboration. The study's findings are based on qualitative data collected during the rebuild programme from individual interviews with eighteen senior SCIRT executives, five focus group

discussions comprising of forty-one staff; the review of documents such as engagement surveys, exit interview summaries, and other management reports; and twelve interviews with senior SCIRT executives on the completion of the programme. The paper outlines how deliberate structure, systems and boundary spanners were developed to allow SCIRT to undertake the mammoth task of managing over 600 large horizontal infrastructure projects, which was beyond the capabilities of any single organisation and which fostered a culture of competition and collaboration in sustaining high performance in the five year window. The report concurs that there was a need for a unique business model innovative and resilient enough to undertake such a large five year rebuild task within an environment of many unknowns regarding: several years of ongoing seismic actively, and the level and type of damage caused by the once-in-a-ten thousand year event for the city of Christchurch. Therefore this paper outlines the competitive and collaborative approach employed by SCIRT to effectively deal with the complexities for a city post-disaster rebuild.

Literature

The existing literature on disaster management has considered numerous issues such as: how quickly organisations can respond to the immediate dangers (Yan, Jinsong, Xiaofeng, & Ye, 2009); how large organisations deal with crises and natural disasters (McEntire, Fuller, Johnston, & Weber, 2002; Pearson & Clair, 1998); the composition of and importance to organisations and society of resilience under challenging conditions (Biggs, Hall, & Stoeckl, 2014; Krueger & Brazeal, 1994; Norris et al., 2008); existing pre-crisis organisations going through the post-crisis phase (Nilakant et al., 2014); and public project management perspectives (van Offenbeek & Vos, 2015). Yet the concept of competition and collaboration within a 'designed for purpose' alliance has been given little consideration in the literature in respect to highlighting positive outcomes during post-disaster recovery.

In considering the sustainability of competition and collaboration in terms of alliance structures and natural disasters, we can firstly consider the resilience of the inter-organisational organisational structures. To date resilience has been defined in a variety of ways (Norris et al., 2008; Zhou, Wang, Wan, & Jia, 2010). Vogus and Sutcliffe (2007) define resilience "as the maintenance of positive adjustment under challenging conditions such that the organisation emerges from those conditions strengthened and more resourceful" (p. 3418). In a similar vein, (Norris et al., 2008) define resilience as "a process linking a set of adaptive capacities to a positive trajectory of functioning and adaptation after a disturbance" (p. 130). Such a positive trajectory certainly needed to be sustained by SCIRT for the duration of the five year rebuild programme, the sustained linkage of inter-organisational adaptive capabilities has strong implication for our study. Secondly, a useful definition of alliances proposed by Sheth and Parvatiyar (1992) is "A business alliance is an ongoing, formal, business relationship between two or more independent organizations to achieve common goals" (p. 72). Street and Cameron (2007) add a further dimension of "mutually compatible goals that would be difficult for each to accomplish alone" (p. 241), which holds relevance for the large reconstruction programme required to rebuild Christchurch's infrastructure. Furthermore, with the current attention placed on the client–contractor relationship (Brensen & Marshall, 2000) and the importance of boundary spanning (Lee & Sawang, 2015; Patru, Lauche, van Kranenburg, & Ziggers, 2015), alliance structures have grown in prominence. This paper has therefore has been written with the view to inform the gap in the literature on competition and collaboration within alliances structures in post-disaster rebuild programme management.

Methodology

On-going seismic activity after February, 2011, made the post-disaster environment in Christchurch very uncertain and quite volatile. Since we were studying a single case phenomenon that was unchartered and highly dynamic, an emergent, inductive and open-ended methodology was considered

appropriate. Grounded theory method (Glaser & Strauss, 1967) was chosen because it is inductive, comparative, interactive and systematic (Charmaz, 2008, 2014). There are different methodological strategies for generating grounded theory (Bryant & Charmaz, 2007; Charmaz, 2008; Glaser, 1992, 1998; Strauss & Corbin, 1998). They do, however, share common features such as minimising preconceived ideas, collecting and analysing data simultaneously, being open to varied explanations, and focusing on data analysis to construct middle-range theories (Charmaz, 2008). All involve coding data, writing theoretical memos during data collection, constant comparisons, theoretical sampling and theoretical saturation. The present study is based on the approach of Charmaz (Charmaz, 1990, 2002, 2014) for data collection and analysis. To summarise, we undertook a case study (Stake, 2000; Yin, 2003) and employed 'grounded' techniques of theoretical sampling, inductive coding, memoing and constant comparison (Charmaz, 2008; Urquhart, 2013).

Data for this paper was collected through: (a) individual interviews with eighteen senior SCIRT executives, including a board member; (b) five focus group discussions comprising of forty-one staff; (c) review of documents such as engagement surveys, management reports; and (d) twelve interviews with senior SCIRT executives on the completion of the five year infrastructure reconstruction programme. All interviews, including focus group discussions, were recorded and transcribed. Transcribed data was coded using NVivo. The codes and themes were discussed between multiple researchers to ensure consistency and validity. The study was approved by the Human Ethics committee of the researcher's home university. Both the codes and the reflective memos were used to identify specific themes that are discussed in the full paper.

Finding: Competition and Collaboration

Instilling a collaborative culture: The Board and Senior Leadership within SCIRT placed a great emphasis on building a cohesive culture of high performance and collaboration through a unique and pervasive SCIRT identity. *"Creating an environment or a culture where 100 different organisations are working towards the same vision"*. They have been very intentional in working towards a ubiquitous culture, as in: *"Well, delivery team is a part of SCIRT, and we say the subcontractors are a part of SCIRT. When they are working on SCIRT jobs they are SCIRT"*. Centring this collaborative culture was, the noble purpose – A resilient infrastructure that gives people security and confidence in the future of Christchurch. This is embedded in what SCIRT stood for and they looked to staff buy-in, throughout the alliance. To reinforce this mission there is a constant retelling of the stories of SCIRT's rationale, values and systems to ensure there is a solid SCIRT identity.

"One is the fact the noble purpose as we call it. Anyone I've spoken to and asked the question why did you want to join SCIRT, if it isn't the first response, it is certainly the second response, because they want to help fix Christchurch essentially. So, with that common objective that sets us up for a pretty good culture."

Secondly there was a culture of collaboration through trust, where people were open to sharing with others and delivering on their obligations. This trust culture was embedded in developing relationships that were very supportive and solution oriented. Boundary spanners and informal channels ran between functional team leaders and their home organisations, and therefore collaboration and sharing was expected across of functional elements of the organisation.

"So you can go chat to any other designer from other teams and they are always willing to help you, which is really cool. You learn a lot just because you are looking outside your own organisation and their skill sets."

This collaborative culture was built on a logic of sharing and enabling boundary spanners, especially for the delivery teams (construction teams undertaking the city repairs) usually accustom to direct

competition. Sharing improved outcomes (in line with the noble purpose) but was also inextricable linked to the competitive pain/gain measures.

Pain and Gain: Under this system, the delivery teams from the five construction companies competed for a share of the contracts – approximately 600 re-build projects over a five year period. Initially all five contractors had an equal percentage. But this was contingent on meeting timeframes and delivering at cost, and therefore could be changed. This allocation model had a 'pain and gain' performance-based incentive, aimed at creating collaboration within a competitive environment. Each delivery team was paid what the 'actual cost' for completion of an allocated project. The difference between the estimated cost and actual cost, which could be either positive or negative, went into a collective pool of 'pain or gain'. This was shared equally among all the delivery teams. This system encouraged simultaneous collaboration and competition because:

"If four contractors are making gains and one is making a loss, then that goes into a pot and we share in what's in the pot. So, there is a strong element of collaboration, lessons learnt and how to do things safer, and how to avoid risks. That stuff is all shared."

Initially, delivery teams frequently worked in the pain zone. However, ongoing experience with the model and greater understanding of the difficulties with the assets under repair brought better estimations, along with greater efficiencies within delivery teams, which produced performance gains:

"Say this is pain, we will go into a period of pain. We will work out how to do things better, and in some cases our estimates haven't been good enough. We will work out the estimates better, and we will move into a period of gain. And then we will realise that we're being too soft on the estimates, or whatever. It will come back again and it will go like this until eventually, it's [General Manager's] assertion, and most people's belief, that at the end of the five years the sum of pain and gain will be zero."

Because each team had their own, significantly different, delivery models, and differing levels of capability, the 'pain and gain' system offered large incentives for the teams to collaborate. By sharing insights and working together they could improve the collective capability of the alliance, and gain overall efficiencies that benefited them all.

In this short paper we have outlines two of the key drivers of competition and collaboration within SCIRT inter-organisational design. The full paper with further discuss the boundary spanners, practices and governance structures in detail, and link to the leadership intentionality in creating the 'fit for purpose' SCIRT design and inter-organisational continuous learning ethos. Furthermore, a full paper will outline the high performance outcomes SCIRT accrued and the benefits participants gained from this temporary collaboration.

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