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The Role of Placemaking as a Tool for Resilience: Case Studies from Post-Earthquake Christchurch, New Zealand

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Abstract

In the aftermath of the 2010 and 2011 earthquakes in Christchurch, New Zealand, community-led temporary and adaptive urbanism filled a gap between the emergency response and recovery. In the space between response and recovery, the citizens of Christchurch showed their commitment to rethinking how they wanted to rebuild and then regenerate their city, leading to the embrace of collaborative processes, temporary and adaptive urbanism principles and a range of placemaking responses. In this chapter, the role of placemaking as a tool for post-disaster regeneration and resilience is considered by assessing three case study placemaking projects: the Re:START Mall, the Festival of Transitional Architecture (FESTA) and the placemaking programme at the Commons. Their development along with their success is considered within the context of the recovery of Christchurch and, in particular, how they align to the The Resilient Greater Christchurch Framework as it is set out in the Resilient Greater Christchurch Plan, in order to determine their role in building the resilience of Christchurch.

Keywords: placemaking, resilience, urban regeneration, adaptive urbanism, temporary urbanism, localism

1. Introduction

In an era of mass migration, growing iniquity, political tensions and climate change, modern cities are experiencing unprecedented challenges in the face of new or mounting pressures. As cities around the globe become more and more urbanised, the vulnerability of urban areas to these challenges is ever increasing. Add to this the uncertainty that comes when these challenges are also being faced in a post-disaster paradigm and we can begin to understand the complexity of moving from rebuilding to regenerating disaster-affected cities.

As outlined by the Intergovernmental Panel on Climate Change [1], it is anticipated that cities will continue to become increasingly prone to growing extremes in the frequency, duration and magnitude of natural disasters. Coupled with a plethora of additional socio-political pressures, the resilience of cities and the adaptive capacity of citizens to cope and manage in the face of crisis have become a central issue in urban planning discourse globally. How resilience is defined varies among

disciples. However, a commonality among definitions is that they most frequently link resilience to the ability of a person, community, environment or system to maintain essential functions despite adverse events and phenomena [2]. This notion of resilience is affirmed by Pelling and Moench [3, 4] who define it as the ability to recover both quickly and effectively from catastrophes.

The continually growing vulnerability of cities to disasters is putting particular pressures on local communities. A city is only as resilient as its people, and therefore valuing local communities is paramount to a successful recovery during crisis [5]. However, the often-technocratic responses of governments post-disaster have been criticised for being both inefficient and ill-equipped to foster the sense of community required between the response and recovery phases in cities that need rebuilding following a disaster [6].

Subsequently, the role of civic action during this period has become increasingly important, with temporary urbanism and community-led placemaking initiatives often filling this vacuum and creating community support for the more macro-scaled planning strategies as part of the rebuilding process. Unsurprisingly, these experiences became starkly evident in Christchurch, following the devastating earthquakes in 2010 and 2011.

Christchurch is New Zealand's second largest city, located on the east coast of the South Island in the Canterbury region (see **Figure 1**). The city is characterised by its flat alluvial landscape, surrounding hills and inland rivers and is known as New Zealand's 'garden city'. Christchurch has a rich history, with a number of different Māori rūnanga (indigenous governing groups) under the umbrella of the Ngāi Tahu iwi (wider indigenous tribe) living in the wider region before the arrival of Europeans.

Modern-day Christchurch emerged following the colonisation of New Zealand in 1840, initially planned as a small farming community on what once was a series of waterways and wetlands. The colonial and agricultural beginnings of what is now Greater Christchurch remain evident through the city's grid street layout, Victorian architecture (remnants left after the earthquake) and surrounding farmland. Since its origins, Christchurch continued to grow as a major New Zealand centre and the heart of the nation's South Island, with agricultural production and food processing still central to the city's economic base [7]. Until the earthquakes, the population of Christchurch had been steadily growing. However, by 2012 it had fallen by 20,000 people, not returning to its pre-earthquake level of 341,469 people until 2017 [8].

The first earthquake struck 40 km west of Christchurch City with a magnitude of 7.1 on September 4, 2010, causing predominantly localised damage to a small town called Darfield. The second and more devastating earthquake occurred the



Figure 1.
Location of New Zealand and Christchurch.

following year on February 22, 2011, within the Christchurch City Centre at a depth of just 5 kilometres and a magnitude of 6.3. The Christchurch earthquakes were some of the worst natural disasters experienced in New Zealand (see **Figure 2**), causing the destruction of 8000 households, damaging 90% of residential properties, killing 185 and injuring 7000. They also resulted in the demolition of 80% of the city’s central business district [7].

Following the 2011 earthquake, a national state of emergency was declared, and it became quickly evident that the structures established to respond to the first earthquake would not be adequate. The government declared that a new agency, the Canterbury Earthquake Recovery Authority (CERA), would be put in place to coordinate the recovery in an effort to remedy the inefficiencies experienced post 2010.

The newly formed CERA was tasked with coordinating recovery efforts with local strategic partners, such as Te Rūnanga o Ngāi Tahu, Environment Canterbury and Christchurch City Council, and wider stakeholder groups including community groups, public service departments, crown- and council-controlled agencies and the private sector. The organisation was to facilitate and coordinate a shared effort among these organisations which each had their own mandate and role in the rebuild and recovery with the goal of ensuring the rebuilding of a vibrant city that embraced its shared cultural and natural heritage.

Over time the authority was given more of a mandate over areas of the city not initially considered to be within its remit—the most significant of these was the central city. A decision was made that CERA would prepare a Christchurch Central Recovery Plan (CCRP) for the central business district in 2012 [9], a move

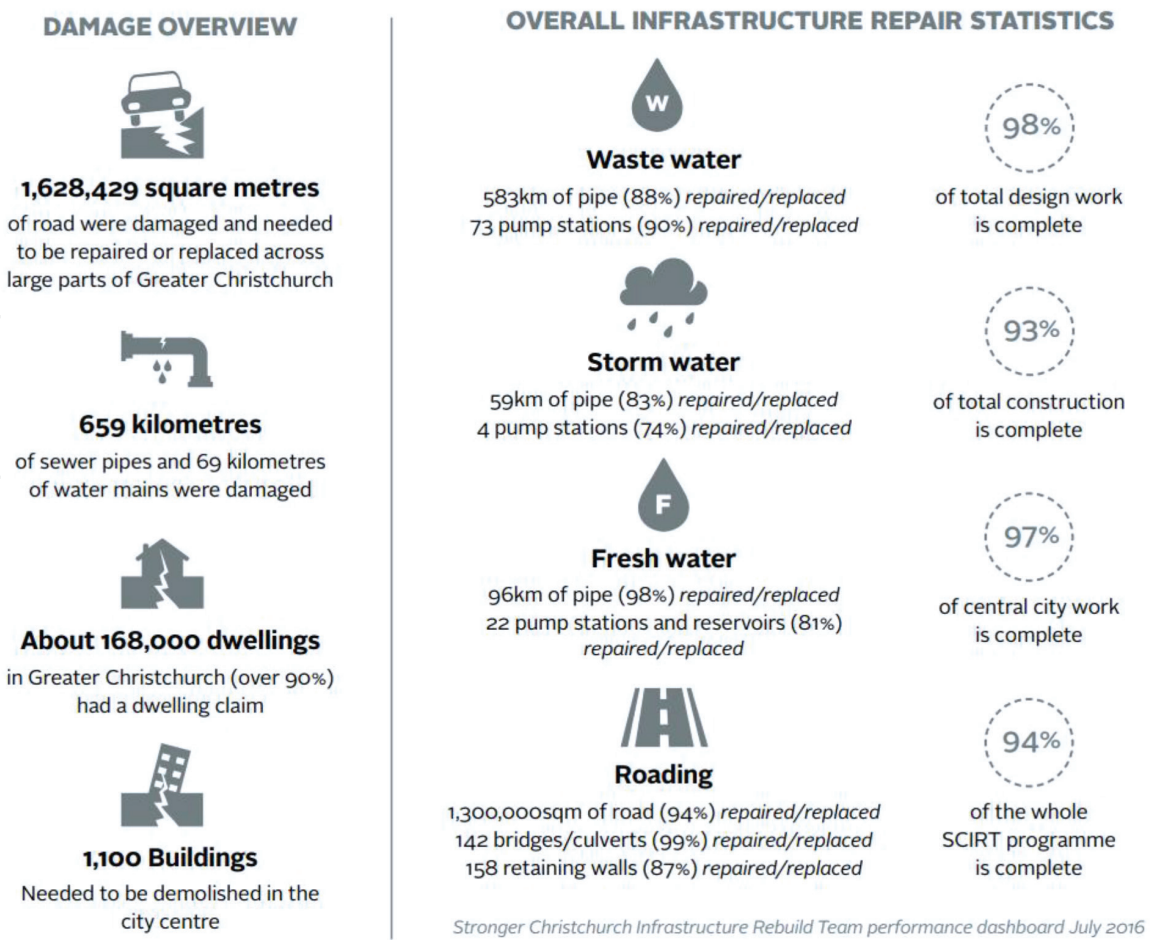


Figure 2.
Overview of the damage caused by the 2011 Christchurch earthquakes [7].

that was in large part a response to the ongoing co-ordination problems between CERA and local strategic partners. Christchurch City Council had commenced the *Share an Idea* campaign to consult with the public on the future of the central city and developed the Draft Central City Recovery Plan [10]. This work was subsequently absorbed by CERA to deliver the CCRP. The coordinated recovery effort was fraught with challenges, as clarity over who had what mandate, and who was responsible for funding which aspect, had to be negotiated between existing organisations. New structures and entities had to be created that were equipped to more effectively or more efficiently respond to a disaster of this scale. The establishment of new organisations to undertake the planning and delivery of the recovery created confusion over the role of the community and how its members could engage or participate. As the rebuild phase moved to a longer-term regeneration phase, there were further changes to the governance and management arrangements and distribution of responsibilities between agencies, the private sector and community. Ultimately, there were significant delays between what was being delivered as part of the official emergency response and the recovery phases of disaster management. In particular, there was a considerable time gap between the contracting of demolition occurred and the planning, designing, and ultimate delivery of government-led anchor projects. In response to this lag, Christchurch's citizens showed an enthusiastic and admirable commitment to regenerating their city, embracing collaborative projects and temporary urbanism initiatives within the vacuum created before a formal response became evident. This response from citizens initiated a significant phase in Christchurch's recovery efforts and has been a core component of the city's regeneration.

In essence, the grassroot response of citizens in Christchurch demonstrates the capacity of temporary urbanism and placemaking to effectively connect the community, provide a platform for citizen participation and build an ecosystem upon which a deeper understanding can emerge of varying views among the communities involved. Each of these is a fundamental aspect of the city's resilience. This chapter therefore investigates the response of Christchurch's citizens and the role that temporary urbanism and placemaking projects have played as a tool for the city's post-disaster regeneration. The impact of this on the resilience of Christchurch will be considered by assessing three case study projects: the Re:START Mall, the Festival of Transitional Architecture (FESTA) and the Commons. Each of these projects has been developed through grassroot initiatives to provide a physical place for connecting parts of the community, enabling a way for the community to participate in the city's recovery and acting as catalyst projects in understanding what the citizens wanted from their urban environment as they reimagined what the future of Christchurch could look like. The success of these projects and their contribution to enhancing Christchurch's resilience will be considered within local and international literature surrounding grassroot disaster recovery and the wider context of the city's regeneration, in particular the Resilient Greater Christchurch Plan [7].

2. The context of planning for resilience and temporary urbanism responses

A number of writers have researched specific issues related to urban, landscape and building design in the aftermath of the Canterbury earthquakes. Bennett et al. [11], for example, document and debate the recovery process after the Christchurch earthquakes. Swaffield [12] interrogates the kinds of places and cultures that have evolved in a rebuilt Christchurch as a result of the nexus between directive central government processes and spontaneous bottom-up community projects.

Wesener [13] has described in more detail the resulting transitional community-initiated open spaces in Christchurch. Jacques et al. [14] evaluated the performance of the Christchurch hospital system and developed a method which can predict the future performance of hospitals in terms of seismic preparedness strategies. However, a gap remains in the literature with respect to the potential contribution that urban design can make urban resilience planning, which this paper aims to address through a discussion of case study placemaking projects in post-earthquake Christchurch.

In order to investigate the development and success of the three case studies and their contribution to this, it is important to first understand the interconnections between temporary urbanism, placemaking and resilience. In this section, these core concepts and their role in disaster recovery will be drawn together by considering a range of international and local literature.

2.1 Resilience and urban regeneration post-disaster

The intersection of urban theory and resilience theory has been investigated by Godschalk [15] who discusses resilient cities in relation to both natural hazards and terrorism and Wu and Wu [16] who position classic urban design theory within resilience literature and posit areas of tension in future sustainable design practice around the dialectic of stasis and change.

Cities are complex systems and their resilience is tied to our human future. As Campanella [17] discusses, despite the growing prominence of natural disasters and humanity's continual ability to inflict havoc, since the early 1800s practically no city has been permanently lost. This is in spite of the unmatched catastrophes felt throughout Europe during the world wars, as well as the onslaught of natural disasters globally [18]. Evidently, despite profound devastation, cities are continually rebounding or in some case flourishing after crisis [17]. Not surprisingly therefore, the adaptive capacity of a city post-disaster and the factors contributing to this is an increasingly relevant field of research. Many authors attribute this adaptive capacity to resilience, a catchphrase that has become increasingly central in both academia and urban planning discourse [19]. Resilience is often defined as the ability of a system to return to a point of equilibrium after displacement or its capacity to adapt amidst adversity [20]. In the context of urban regeneration, resilience firstly infers the capacity of a city to absorb stresses and maintain basic functions during a disaster to offset the extent of devastation and ultimately the ability to bounce back and adapt from this devastation [6, 13].

There are many factors contributing to the resilience of cities; these are invariably unique from place to place [17]. Aldrich [20] breaks these into five core areas: citizens' psychological well-being, institutional and organisational restoration, economic and commercial productivity, infrastructural integrity and operational regularity. While immediate government response is undoubtedly essential, there are a number of complex and interacting elements that need to be employed during disaster relief to contribute to these spheres, extending far beyond reconstructing and repairing physical damage [6, 20]. This is because recovery is not only about services and the built form of a city but also is about a process of rebuilding communities [5]. As Campanella [17] and Aldrich [20] discuss, this is fundamental because social capital is a primary driver of resilience. Fostering a strong sense of civic engagement is therefore a core (and often overlooked) element to urban regeneration [20]. Subsequently, as Campanella [17] cautions, urban regeneration post-disaster can inherently conflict with a city's resilience. The top-down 'rebuild better' approach that has, in many cases, led to gentrification and displacement can undermine the communities pivotal to a city's resilience and therefore ironically its capacity to recover.

Christchurch exemplifies the power of social capital in post-disaster recovery and the need to facilitate a grassroots approach, with the community's resilience enormously tested in all spheres following the earthquakes. The loss of life, livelihoods and disruption of communities put a great strain on the city's social capital. There was unparalleled disruption to the industry, local business, institutions and infrastructure, all of which constricted local economic well-being; this included the relocation of 50,000 central city jobs and 6000 businesses [7]. Notwithstanding this, the response of citizens in coming together amidst adversity and their ability to convert dire situations and spaces into eccentric, inviting environments is a testament to the strength of the community, a factor that proved pivotal in the city's recovery.

2.2 Temporary and adaptive urbanism

Mannakkaram and Wilkinson's [6] discussion mirrors Christchurch's recovery experience, explaining that recovery is the least understood phase of disaster management and post-disaster responses are often slow and inefficient. As the response of many citizens globally has demonstrated, temporary urbanism has the potential to deliver genuine and effective recovery solutions within this vacuum created between a disaster and local evidence of a top-down bureaucratic response [13]. Equally, Wilson [21] and Wesener [13, 22] add that the ability of temporary urbanism to engage the community and generate social cohesion plays a fundamental role in fostering community resilience. With social capital understood as being paramount to a city's adaptive capacity, the role of temporary urbanism cannot be overlooked as a key component of disaster recovery. This can take a variety of forms, with post-disaster vacant sites or buildings providing spaces for events, performances and art. Not only does temporary urbanism provide the testing grounds for innovative solutions for regeneration initiatives, but it also encourages public participation, fosters community empowerment and facilitates positive interactions and experiences for communities in dire situations [13, 23, 24]. As Campanella [17] suggests, these elements are each vital to generate the social capital required for the efficient and effective recovery of a city.

Subsequently, a resilient city must foster and encourage community-led initiatives to increase the viability and effectiveness of temporary urbanism [13, 23]. However, this is a concept that has seen limited consideration in the literature and remains poorly understood [23]. Dionisio and Pawson [23] caution that the capacity of temporary urbanism to achieve this vital function is being narrowed and, in some cases, purposefully restricted in light of increasingly restrictive bureaucratic processes. In these cases, the top-down response to relief is arguably regressive, with inclusive grassroots responses required to heighten a city's ability to respond to disaster.

These broad themes experienced following disasters globally are indeed exemplified in Christchurch, where temporary urbanism played a core role in facilitating community cohesion and social capital following the earthquakes. The success of these projects has resulted in wider and longer-term benefits to the local community as a result of their contribution to placemaking within what was left of the city centre post-earthquakes.

2.3 Placemaking and sense of place

Placemaking is an overarching and broad initiative surrounding the recreation and activation of spaces into inviting and vibrant areas to re-establish a sense of

place and reconnect people with their environment [25]. As examples of placemaking in Christchurch demonstrate, the successful implementation of temporary urbanism can result in wider community-building initiatives, where the benefits, social capital and grassroots community support of regeneration is able to solidify. In this sense, where temporary urbanism initiatives reclaim space in disaster-struck cities, the outcome of this and its contribution to a broader placemaking narrative is where the ultimate benefits occur.

As Jacobs ([26], p. 448) famously notes, 'lively, diverse, intense cities contain the seeds of their own regeneration, with energy enough to carry over for problems and needs outside themselves'. The process of placemaking seeks to reinvigorate the vibrancy of the public realm and restore the pride and connection of communities to the places they live [27, 28]. Coaffee [19] discusses that the notion of placemaking has arisen to become a central signifier in planning discourse, particularly as discussions surrounding resilience narrow to focus on smaller spatial scales. Heath, Rabinovich and Barreto [27] add that when placemaking is successful, placemaking experiments can cement development outcomes in the regeneration of disaster-struck cities. With temporary urbanism and placemaking providing a grassroots testing ground for future initiatives, instead of an imposed top-down response, community support and ultimately a successful recovery are much more likely [17, 27]. In turn, when recovery plans are sanctioned or initiated by the local population, they are much more likely to be successful.

In Christchurch, the Transitional City Projects Fund administered by Christchurch City Council was originally signalled in the Draft Christchurch Central Recovery Plan and responded to the spontaneous emergence of community grassroots initiatives ([11], p. 342). The purpose of the fund was to encourage and enable community placemaking initiatives through financial and technical support. This included establishing contestable funding rounds, helping with public liability insurance where needed and assisting with navigating planning regulations. The Life in Vacant Spaces Trust (LiVS) was formed during this process to assist in brokering access to and lease agreements for post-earthquake vacant sites. As a result of this initiative, 1500 commercial sites and 12,000 residential sites were able to be converted into sites for transitional urbanism where 325 community events could be hosted since 2010 [29]. One hundred vacant sites have been activated more than 450 times, with over 150 creative projects. Seventy new businesses have been established and 25 new business models, products and services have emerged from pop-up spaces since the programme began. This has resulted in a net influx of artists, entrepreneurs and visitors to the city as well as a three-to-one return on investment for every ratepayer dollar spent [29].

In writing about the long-term impacts of temporary urbanism in Christchurch, Sherow [30] links placemaking and sense of place by describing the importance of collaboration in the work of the Life in Vacant Spaces Trust, noting that 'the most well-used sites have been the result of multi-team efforts' ([29], p. 317). Similarly, Oliver [31] considers the need for collaboration in a healthy arts ecology and laments that 'despite (the) enthusiastic community participation and extensive local, national and international media coverage' ([31], p. 350) in placemaking following the earthquakes, the significance of such projects in creating a sense of place and their 'long-term impact have been largely overlooked in the recovery plan' ([31], p. 350) for Christchurch. This highlights that, while the relationship between placemaking and sense of place is established, how these in turn relate to the policy and planning contexts of regeneration is less commonplace and would benefit from additional scrutiny.

3. A methodology for considering the case studies

In order to consider the role of placemaking as a tool for post-disaster regeneration and resilience in Christchurch, relevant case studies and a Framework to assess their success were chosen. Therefore, the methodology developed in this chapter is divided into two parts. First, an overview is provided of the three case study projects chosen for analysis as well as an explanation as to why they are useful projects to consider in terms of their role in the post-disaster regeneration and resilience of Christchurch. Second, a framework for resilience, known as The Resilient Greater Christchurch Framework, is introduced and used to critique these projects. Criticising the Framework itself is beyond the scope of this paper; instead, the aim is to understand how the case study projects have emerged, what they represent in terms of contemporary urban design and urban art practice and how they can contribute to ongoing community resilience in Christchurch through a different delineation of the public realm as the city is rebuilt.

Each of the case studies was chosen partly because of its being delivered and widely engaged with by the residents of and visitors to Christchurch and partly because it represents a different type of transitional activity with different participants and outcomes. They all contributed to a greater level of connection, participation and understanding to support the Christchurch rebuild. The first case study, the Re:START Mall, was a single iconic temporary structure that allowed for continued central city retail activity. The second case study, the Festival of Transitional Architecture (FESTA), is an annual/biennial event which attracts tens of thousands of people and invites the public to reimagine what sort of city Christchurch could be. The third case study, the Commons, is a particular piece of land that became a hub for placemaking experiments where a wide range of engaged community groups, individuals and transitional projects have operated since the earthquakes.

3.1 Part 1: The case studies

The first case study, the Re:START Mall (see **Figure 3**), was a temporary container mall located in Cashel Mall, the central city's main retail street. The mall was initially established in 2011 by the Restart the Heart Trust and financially supported by the Christchurch Earthquake Appeal Trust and Auckland Savings Bank (ASB). It consisted of a number of converted shipping containers on vacant lots adjacent to Ballantynes, the surviving and much-loved traditional Christchurch department store, and within the Retail Precinct (an area of the city designated for retail development in the Christchurch Central Recovery Plan).

The container mall housed over 50 businesses, as well as food trucks, markets, artworks and street performers over its lifespan. Originally, the project was developed to encourage not only residents but also local retailers, to return to their central city. The container mall became an iconic cornerstone of the city centre during the rebuild phases, attracting significant numbers of tourists and locals in a highly successful example of placemaking.

The idea of a temporary or transitional shopping area after an earthquake was not new. After the Napier earthquake in 1931, when almost all of central Napier was destroyed, a temporary business centre constructed out of lightweight materials including corrugated iron and dubbed 'Tin Town' helped to support local businesses and retailers [33].

The case study demonstrates both the economic value of temporary urbanism in supporting central city retail and as a visitor attraction for tourists and locals. Beyond the initial impact of bringing people into the city centre, the success of



Figure 3.
The Re:START Mall [32].



Figure 4.
(Left) The Boxed Quarter. (Right) An exemplar of Christchurch's laneway network (images supplied by authors).

the container mall inspired a broader urban design response, with the small-scale laneway and courtyard retail model with anchor tenants subsequently being used in several of the permanent retail developments. It also inspired the Boxed Quarter (see **Figure 4**), a modular architecture based on the idea of making the shipping container model permanent with modular walls, windows and floor plates that can be interchanged as required. Built up to four or five storeys with retail, businesses and residential units around laneways and courtyards, the Boxed Quarter is the successor to the container mall.

The container mall has become a tool for successful regeneration, reinforcing many of the findings discussed across the literature. Notably, the initiative's contribution to placemaking and its ability to draw both residents and visitors back into the CBD demonstrates the project's capacity to reconnect the community with their city and contribute to the social capital required for successful recovery, an idea that is gaining increasing traction in the literature [13, 17, 20, 22, 23]. Likewise, the development of permanent retail and civic structures within and adjacent to the mall demonstrates the capacity of grassroots placemaking to act as a testing ground to shape permanent regeneration solutions (mirroring the discussions of Campenalla [17] and Heath, Rabinovich and Barreto [27]).

The second case study is FESTA, the Festival of Transitional Architecture (see **Figure 5**). FESTA is a festival which celebrates urban creativity. It provides an opportunity for the community to reimagine Christchurch. During the festival a series of events, such as workshops, live performances and tours, occur alongside interactive installations and pop-up stalls. The festival was held annually in 2012, 2013 and 2014 and has occurred biennially since, occurring every second Labour Weekend over a 4-day period. The project was originally initiated by creatives in the community through crowdfunding and local sponsorship. In addition to crowdfunding, the event is now also financially supported by a wide range of donors, seeking to contribute to Christchurch's ongoing regeneration.

Each festival has a different 'headline event' exploring urban ideas and inviting members of the public to reimagine what they want Christchurch to become. FESTA 2012—'Luxcity'—was a light festival that attracted more than 20,000 people back to part of the central city which had been cordoned off since the earthquakes in February 2011, inviting them to reclaim their city. FESTA 2013—'Canterbury Tales'—was headlined by a parade of giant puppets resembling local politicians, thus constructing a political allegory about the governance of the city which challenged the incumbent top-down approach. FESTA 2014—'The Future Will Be Live'—created an entire block of a futuristic city, inviting people to think about



Figure 5.
Events as part of FESTA 2018 (images supplied by Anna Wright at the University of Auckland).

what a rebuilt Christchurch might look like, while FESTA 2016—‘We Have the Means’—addressed recycling and reuse as a demonstration of what a sustainable city means. FESTA 2018 invited the public to share in a celebration of communities and food and to consider the importance of these in Christchurch.

FESTA is an example of a temporal recurring event that is largely crowd and donor funded. It is participatory, attracts large numbers of people and seeks to encourage people to imagine and experience Christchurch differently. It celebrates the culture of creativity and active citizenship that has emerged in Christchurch since the earthquakes and encourages more people to understand and be involved in remaking their city.

This experience mirrors many learnings discussed by Heath, Rabinovich and Barreto [27] and Wesener [13], who emphasise that beyond having value in and of itself, temporary urbanism initiatives facilitate the experiencing of new, innovative ideas, generating wider and longer-term benefits to the community they are tested in. It enhances understanding and enables informed, wider strategic planning and decision-making by council and government authorities.

The final case study is the Commons, a prominent vacant site on Victoria Street in the central business district, made available by the Christchurch City Council for temporary interventions (see **Figure 6**). The Commons provides space for a diverse range of activities, collaborative work and community events. The initiative was established in 2012 to empower local communities to experiment in temporary urbanism and to co-locate with likeminded initiatives. It is a collaboration between Christchurch City Council, which owns the site; Life in Vacant Spaces, which administers it; and Gap Filler, which oversees everyday management.

Between 2012 and 2014, the Pallet Pavilion (constructed and managed by Gap Filler) operated on the Commons and was a temporary community event venue constructed out of 3000 pallets. Built by hundreds of volunteers, the Pavilion



Figure 6.
Various placemaking initiatives at the Commons [34]. (Top left) Catalyst project the Pallet Pavilion (December 2012–May 2014). (Top right) Grandstandium (October 2014–Current). (Bottom) The Arcades Project (June 2013–current).

hosted more than 250 events including live music, markets, outdoor cinema, yoga, book launches, film screenings, classes, lectures and associated mobile food caravans and trucks. While the Pallet Pavilion reclaimed the Commons for public use, the Arcades Project in 2012 reclaimed the diagonal alignment of Victoria Street which had been truncated by the Crowne Plaza Hotel that was formerly on the site. A crowdfunded architectural project, composed of a series of modular temporary structures in the form of an elongated archway, created a large open space with the capacity for caravans or marquees to join either side to form a dynamic market strip. The structure was initially displayed at FESTA 2012 and now provides space for special events at the Commons. Reopening the diagonal pedestrian route through the Arcades and Victoria Square has created a popular pedestrian and cycling route which has been supported by the Council and is also an excellent example of temporary uses influencing permanent city form which reclaimed an historic urban axis.

The Commons has hosted a wide range of projects and events, community groups and individuals in a collective space. Its facilities include water, power, temporary offices and meeting rooms, as well as public toilets. Perhaps, most importantly, it provides a welcoming space for participation, collaboration, support and interaction as part of a transitional community. As a result, the Commons has also hosted a number of start-up community organisations that have continued to develop and thrive both on-site and off-site. These include *RAD Bikes* (Recycle A Dunger), a community bike shed where people can recycle old bikes and learn how to fix and maintain them, and *Makercrate* (subsequently Fab Lab Christchurch) who provide a space, tools and technology for the community to come together, share ideas and make things and *Erica Austin Curation*—an event management organisation.

The significance of the Commons is twofold and lies in the way in which community groups and transitional activities have reclaimed a piece of the city for the public. Through the creation of a hub or centre for transitional activities, groups were able to establish a mandate to debate the importance of urban environments while encouraging and advocating for collaboration and sharing of ideas. They were also able to provide tangible opportunities for participation, by a wide range of groups, in redesigning and rebuilding narrative.

3.2 Part 2: Resilient Greater Christchurch Framework

The Resilient Greater Christchurch Framework [7] was developed by the Greater Christchurch Partnership Committee, a collaborative partnership between four councils in the Greater Christchurch area, Ngāi Tahu Iwi, and government organisations including the New Zealand Transport Agency, the Canterbury District Health Board, the Department of the Prime Minister and Cabinet and the city's regeneration agency, Regenerate Christchurch. It was developed to enhance the current and future resilience of Christchurch's citizens, the built environment and the economy. The plan establishes four key goals to foster resilience and build capacity in the people, places, organisations and systems of Greater Christchurch. These include:

- **Connect:** the need to connect the changing communities within Christchurch, including both communities disrupted by those leaving the city and new communities formed by those coming into the city to contribute to the rebuild
- **Participate:** to encourage and empower community engagement at the grass-root level and provide the opportunity for the community to actively engage with the decision-making process

- Prosper: to uphold and sustain Christchurch’s environment and natural resources while supporting economic outputs, innovation and the attraction of people and capital
- Understand: to ensure that the community and agencies understand, manage and prepare for any future risks and hazards that Christchurch will face [7]

Figure 7 shows that each of these core goals is given effect to through a series of interconnected programmes, with each programme having a series of action areas outlining projects or initiatives to follow up. Interweaving and overarching each of these elements are two guiding principles, which must be given effect to at each stage, including a meaningful Treaty partnership with Ngāi Tahu (local indigenous tribe) and consistency and collaboration across all tiers of government.

CONNECT	PARTICIPATE	PROSPER	UNDERSTAND
We are connected communities living in adaptable places	We are a community that participates in shaping our future	We are prosperous by sustaining the vitality of the environment, fostering innovation and attracting people	We understand risks to be better prepared for future challenges
1 Connect people	4 Build participation and trust in decision-making	6 Connect internationally	9 Improve community understanding and acceptance of risk
A Develop events and local information resources to help new residents build connections with people in their immediate communities. B Develop, improve and sustain support programmes for vulnerable people as an enduring resilience-building activity.	A Experiment with alternative forms of public participation to promote awareness of issues and engage people in decision-making. B Develop tools, mechanisms and processes that enable individuals to be more active participants in the success of Greater Christchurch.	A Build strong national and international connections as foundations to attract people, develop markets and stimulate collaboration. B Future proof our physical infrastructure to safeguard our economic performance and overseas trading connections. C Invest in attracting and retaining workers from overseas to supplement our ageing workforce and stimulate new business ideas.	A Develop and agree objective risk evidence and definitions in a non-technical language as starting points to engage the community about risks they face. B Openly engage the community to explore risk scenarios as a foundation for dialogue about risk reduction.
2 Create adaptable places	5 Support community organisations and leaders	7 Foster a culture of innovation	10 Manage the risks we face
A Consolidate and enhance our network of strategic and local centres to provide accessible focal points for communities. B Promote transport alternatives in everyday life to reduce car dependency. C Collaborate with communities to create healthy, safe and welcoming facilities and places.	A Provide support services that enable community groups and leaders to resolve administrative and regulatory processes. B Facilitate networking between community organisations as a means to develop shared direction and more efficient use of resources. C Strengthen funding arrangements to build confidence and stimulate investment in the community and voluntary sector.	A Support an environment that enables innovation and creativity as means to diversify our economy and add value to our production. B Commissioning of research and regular reviews of global and technological trends to maintain awareness of fast moving change. C Support the emergence of the social enterprise sector as partners in driving change in our communities.	A Develop a risk reduction framework to help us invest efficiently in interventions around our threats and hazards. B Review the role and use of insurance as a tool for risk transfer. C Support community preparedness in response to acceptance of risk.
3 Improve the quality, choice and affordability of housing		8 Sustain the vitality of the natural environment	11 Securing our future in the eastern parts of Christchurch
A Continue to support and develop initiatives to improve the quality of new and existing housing. B Develop a consistent source of housing research to inform proactive planning for Greater Christchurch's future housing needs.		A Build capacity to source food from our local and urban environments to sustain our people and rediscover our relationships with nature. B Develop projects and initiatives that support restoration of indigenous biodiversity across an ecological network.	<i>During 2016/17, the newly formed Regenerate Christchurch will set out an initial list of priorities and projects which the Implementation Plan (at the back of this document) will pick up.</i>

Figure 7.
An overview of the Resilient Greater Christchurch Framework [7].

This Framework is used to identify the various ways in which the case study projects meet the resilience criteria which are discussed in the Resilient Greater Christchurch Plan [7]. The process of considering how each of the three case studies aligned to the four goals of the Framework was intended to guide the review of these projects and is not an exhaustive evaluation process. Instead, the subsequent section is framed as a discussion to both present the projects as exemplars of important temporary urbanism within the context of resilience planning in Christchurch and to discuss the role of placemaking more generally as a tool for post-disaster regeneration and resilience.

4. A discussion of the relationship between placemaking projects and the resilience of Christchurch

The evaluation of the placemaking case studies against the four goals of the resilience criteria, as set out in the Resilient Greater Christchurch Framework, reveals that each of the case studies has made significant contributions to the resilience of Greater Christchurch. All three case studies contributed strongly to the criteria set out under the *Connect* and *Participate* goals. In particular, the Re:START Mall aligned strongly to the *Prosper* criteria, the FESTA case study rated highly against the *Understand* criteria and the Commons rated most highly against the *Participate* criteria. Rather than discussing each project individually, how they support resilience is examined by considering how they address the criteria set out within the four goals (Connect, Participate, Prosper and Understand) of the Framework.

4.1 'Connect'

Under the theme of *Connect, connecting people* to their communities is a fundamental tenet of the Resilient Greater Christchurch Framework [7]. The Re:START container mall was pivotal in providing a physical place for residents to connect with one another and to reconnect with the central city, which was one of the areas most affected by the earthquakes. Re:START provided eating and gathering areas to support the retail offering, acting as a new shopping centre in the CBD. Events including street performers and buskers, exhibitions, music, dance, theatre, fashion shows, art works and festivals activated the container mall, providing opportunities for residents to reinhabit the central city. In this way, Re:START provided a critical hub for connecting people through enabling retail activities in the central city for 5 years from 2011 until the permanent retail developments in the Bank of New Zealand (BNZ) and Australia and New Zealand Banking Group (ANZ) Centres and the Crossing were opened in 2016/2017. Today, many of the businesses from the container mall have successfully relocated into permanent retail buildings. The container mall remains one of the most recognised symbols of Christchurch's recovery and a strong symbol of community connectedness with each other and with the city. While the overall economic impact of the container mall has not been assessed, it maintained the central city as a retail destination through the 5-year gap between emergency response and recovery.

Additionally, FESTA was created as an event to build connections with people in their communities. It was set up to celebrate the transitional and placemaking initiatives that have emerged in Christchurch since the earthquakes and to encourage more people to get involved in remaking their city through a positive collective experience. Attendance at FESTA has been significant for a city of 374,000, with numbers totalling as follows:

- Luxcity (2012)—20, 000 people
- Lean Means (2016)—16,000 people
- FEASTA (2018)—12–14,000 people

FESTA was purposely developed and has evolved to offer opportunities for the public at large to experience a reimagined Christchurch, comprising imaginative architectural installations, workshops, talks, pop-up projects, family events, tours, live performance and artworks—the festival supports learning about cities and improved community connections.

Often feeding in to events at FESTA, the Commons similarly facilitated many connections between the various community organisations and individuals involved in the site and the wider community. It actively built connections with neighbours and the general public who walked through the Commons to Victoria Square or attended one of the many events held at the site; there were more than 250 events held at the Pallet Pavilion project during the 2 years that it was on the Commons. The space continued to be used for events over the following years, including markets, Holi Festival of Colours, music concerts, Speakers' Corner, retro-sports events, a bicycle-powered cinema, exhibitions, performances, a cardboard shelter workshop and pop-up dining events.

Continuing under the category of *connecting people*, resilience thinking is seen to align with developing, improving and sustaining support programmes for vulnerable people as an enduring resilience-building activity [7]. How each project may have addressed this criterion depends largely on how vulnerable people are defined. In the aftermath of the earthquakes as these projects were being developed, they each arguably assisted a wide range of Christchurch residents, through their community-building events and activations, who were dealing with the impacts of the earthquakes in different ways. The true extent and exact impact of the combined efforts of these case studies on improving and sustaining support programmes for vulnerable people are unclear. For example, over the years the Commons attracted homeless people looking for shelter, toilets and food. This started with the Pallet Pavilion project at the site, and since this time, Gap Filler and other partner organisations at the Commons have adopted a supportive approach by befriending the individuals, offering them small jobs in exchange for food and working with local wardens to establish boundaries.

Creating adaptable places follows *connecting people* as a second significant category within the theme of *Connect* in the Resilient Greater Christchurch Framework. This is firstly focused on consolidating and enhancing the available network of strategic and local centres across the city, to provide accessible focal points for communities [7]. While the case study projects were deliberately and predominantly focused on bringing life back into the CBD, considering this as a key strategic local centre, it is evident in considering this criterion that each of the projects contributed strongly to resilience of post-earthquake Christchurch by activating this central node of the city. Re:START, for example, was a key part of the primary hub of activity in the central city for 5 years after the second earthquake in 2011. The project acted as a lynchpin, maintaining the central city in the network of strategic and local centres by providing an accessible focal point for Christchurch residents and visitors while planning for the permanent rebuild was being implemented. The not-for-profit model allowed new businesses to test and establish themselves before transitioning into permanent developments, and the temporary retail spaces kept central city retailing alive after the earthquakes.

FESTA has involved some of the largest events in the central city since the earthquakes and was instrumental in attracting people back to the central city once the earthquake cordon was removed, notably from 2012 and 2013. The event has fostered an ongoing dialogue through workshops and guest speakers and encouraged the public to reimagine what Christchurch could become.

In between the relative longevity of Re:START (7 years) and the temporary nature of FESTA sits the placemaking programme at the Commons. The Commons was established on a site that had effectively been privatised for 25 years by a hotel development which truncated Victoria Street and the diagonal access to the centrally located Victoria Square. The Commons turned this land into a public space and invited the public to reclaim it and recreate the diagonal route. In doing so, it has formed a much stronger connection between Victoria Street and the Town Hall and Victoria Square and the central city. The programme of placemaking to encourage this transformation was delivered by multiple organisations over multiple years, through revolving temporary projects of differing timeframes at the same site. Through its inclusivity and adaptability, the Commons became a focal point for the transitional movement in Christchurch—the HQ of temporary urbanism. Creating a highly visible physical space with various transitional projects happening on it, this has been an important part of the identity of the transitional movement in Christchurch and has undoubtedly provided an accessible focal point for both locals and visitors to connect with the central city as an important strategic centre.

Building on the notion of consolidating and enhancing strategic and local centres across the city, collaborating with communities to create healthy, safe and welcoming facilities and places is a second key criterion within the *creating adaptable places* category of the *Connect* theme [7]. All three of the case studies clearly align to this criterion. Re:START was created through a collaboration between businesses and government organisations and managed via the Re:START the Heart Trust which had representatives from various community groups and organisations involved. Additionally, a wide range of stakeholders contributed to the viability and success of the Re:START case study, including land owners who provided land for the mall at nil or nominal cost, the Central City Business Association, which supported the original proposal, and a number of professionals who provided design services pro bono or at reduced rates.

The project provided an opportunity to create healthy, safe and welcoming facilities in the area of the central city which was known as the CBD Red Zone, a civil defence cordon and public exclusion zone implemented due to the damage caused by the 2011 earthquake. Despite government agencies renaming the area to the CBD Rebuild Zone, the stigma of the Red Zone and the danger associated with it were initial deterrents for many residents to reoccupy the central city. The significance of opening retail facilities in this area was therefore about more than providing important urban amenities for residents; the project became symbolic of the rebuilding and resilience of Christchurch.

FESTA was similarly created through an extensive network of collaborations with a wide range of groups and individuals. The festival is run by a charitable trust—Te Pūtahi: Christchurch Centre for Architecture and City-Making. Other organisations such as Greening the Rubble, Creative Junk, Gap Filler and Rekindle are involved in specific parts of the festivals as well as at the Commons site. The professional institutes of architects and landscape architects participate in the festivals alongside a number of other artists, community groups, youth groups, cultural performance groups and local businesses.

In turn, the Commons is a collaboration between Christchurch City Council, which owns the site; the Life in Vacant Spaces Trust, which administers it; and Gap Filler, which oversees everyday management. The Commons was governed by a

set of principles, and decisions about its future were made by a group composed of the various site members. A range of other community organisations, social enterprises, businesses and individuals have been a part of the collaborative approach to the Commons, becoming a part of the Commons community and contributing their ideas and projects.

The final criteria in the *Connect* theme fall less clearly under the mandate and scope of the case study projects. For example, the relationship between resilience and mobility is addressed under the criterion of 'promoting transport alternatives in everyday life to reduce car dependency' [7]. While FESTA has included workshops and bike tours promoting alternative modes of transport and launched initiatives such as the Food Resilience Network Canterbury to reduce dependence on vehicular transport, and the Commons has encouraged people to walk through the central city, in general these placemaking activities have not targeted the promotion of transport alternatives. Successively, the criterion to 'improve the quality, choice and affordability of housing' [7] as a signifier of resilience is beyond the scope of the case study projects.

4.2 'Participate'

The theme of *Participate* in the context of rebuilding and regenerating Christchurch centres around enabling a way for the community voice to be heard and for people to feel empowered and responsible for the future of their city within a top-down government-led recovery process. Considering the case studies within this theme aligns to both the global trend towards increasing citizen-centric participatory planning and citizen-led self-determination in shaping the future identity of post-disaster cities such as Christchurch.

Building participation and trust in decision-making, by experimenting with alternative forms of public participation, is a significant process identified in the Resilient Greater Christchurch Framework for promoting awareness about key issues and subsequently to engage people in decision-making [7]. Re:START provided an alternative retail model where the container mall was established and managed by a not-for-profit community trust. The trust was able to successfully run Re:START for 5 years where a market model would not have been economic and external agencies would have struggled to raise funding from such a wide variety of sources. While there was a level of public distrust of the various local and national government agencies involved in the rebuild, there was a high degree of support for the Restart the Heart Trust.

FESTA is an experimental form of public participation and promotes awareness of current urban issues (predominantly associated with the rebuild) in a way that engages people through architecture, design creativity and food. Through this participation people feel, they are contributing to the discussion about the future of the city and that they are creating a place for themselves in the future Christchurch. Such a well-supported event also signals the need for further investment in arts and culture. FESTA is organised by Te Putahi (Centre for Architecture and City-Making), a charitable trust. Te Putahi, in collaboration with the Christchurch City Council, also runs the Christchurch Conversations Series which hosts national and international speakers talking about city-making as another way to promote awareness about key urban issues.

Over time, there have been significant changes to the projects on the Commons site, the people involved and the public usage of the site. While the three core members have been consistent, many other people and groups have been involved. The Commons has therefore been an ongoing experiment in self-governance where the groups involved in temporary urbanism and placemaking collaborate and make decisions about what happens on the site.

Furthermore, each of the three projects has also established innovative ways to develop tools, mechanisms and processes that enable individuals to be more active participants in the success of Christchurch. Re:START, for example, enabled more than 50 small retail businesses to operate successfully in the container mall and to support other remaining central city retailers. The success of the container mall in maintaining the central city as a retail destination in turn supported the success of Greater Christchurch. FESTA is specifically aimed at getting more people to be involved in remaking their city and to stimulate long-term change in how and who makes Christchurch. Through a combination of learning and participation in a positive collective experience, the festival encourages people to become more active and involved citizens. At its core, FESTA is conceived as an event that seeks new ways to create meaningful connections between and within communities and urban places in a co-operative and open way. Likewise, the Commons has been a testing ground for the evolution of a number of different tools, mechanisms and processes. The Pallet Pavilion was designed so that it could be constructed by unskilled volunteers under the supervision of a builder. The project Makercrate was initially developed in a shipping container on the Commons before it was moved to activate other sites. The Food Truck Collective started gathering at the Commons on Friday nights before graduating to Cathedral Square as the event became more popular. The Space Academy pop-up café started life at the Commons before moving into an old commercial building on St. Asaph Street in a permanent form. The Commons has been a safe place to try new ideas and new ways of doing things before moving onto other spaces.

Supporting community organisations and leaders has been spearheaded by the Commons case study. The partnership with Christchurch City Council at the Commons has helped to resolve some regulatory issues. The Pallet Pavilion, for example, was one of the early transitional projects requiring a building consent. It quickly became obvious that transitional projects would be hamstrung by the bureaucratic business-as-usual consenting process and that the people involved did not have the skills or resources to navigate the process. In order to resolve this, the Transitional Team at the Council provided expert technical assistance and worked with a couple of building consent officers to develop a more supportive solution-focused process for transitional projects. Subsequently, the success of the approach culminated in the Arcades Project at the Commons (a modular series of 6-metre archways) being classified as a 'garden pergola' not requiring a building consent (noting that the structure was designed and supervised by structural engineers).

The Commons has also provided shared space and governance arrangements that facilitate networking between community organisations. Shared resources, including available land, power, water, meeting rooms and public toilets, have made it easier and more efficient for transitional projects to be delivered at the site. The day-to-day management by Gap Filler and the governance group composed of the various groups on-site have all provided points of contact for networking with other community organisations.

Arguably, the Christchurch City Council transitional programme has been pivotal in enabling community groups and social enterprises to operate effectively in transitional activities and spaces. There are three key components to the Council's transitional programmes:

1. **Core funding for key groups** including Gap Filler, Greening the Rubble and Life in Vacant Spaces. This funding has allowed the people involved to have some security of income, so they can work in the transitional space without worrying about where their next meal is coming from. However, this funding only covers a limited part of the total operating budget.

2. **Technical expertise** to support transitional groups. Council established the Life in Vacant Spaces Trust to find and lease vacant sites and protect landowners by providing public liability insurance for community groups. Council also supported the provision of key infrastructure and services to sites. Life in Vacant Spaces was therefore able to resolve many of the technical and legal risks for the transitional groups, letting them focus on the placemaking.

3. **Contestable project funding** for transitional projects provided a potential source of funding for them. Given the broad range and evolution of transitional projects, one of the difficulties in administering the funding has been developing a useful scope and set of criteria against which to evaluate them. This is an area where a framework, such as the Resilient Greater Christchurch Framework, provides a useful initial guide from which a more specific evaluation process could be developed.

Strengthening funding arrangements to build confidence and stimulate investment in the community and voluntary sector has also been demonstrated at Re:START where successful partnerships were established between a community trust, local and national government and the private sector. Initial funding came through a grant from the Christchurch Earthquake Appeal Trust (\$3,368,523.00) and sponsorship from ASB (\$300,000). Private landowners provided the land at nil or nominal cost, and the business operations covered marketing and operational costs. The success of the container mall and the broad-based funding model helped to build confidence and stimulate further investment in the community and voluntary sector.

Similarly, the joint funding arrangements for FESTA demonstrate a high level of collaboration and support for temporary urbanism in Christchurch. The key funder is Christchurch City Council with additional grants from national groups including the Creative New Zealand, the Warren Trust and the Lion Foundation. Crowdfunding, as well as individual donations and support, has provided a successful stream of income for later festivals. There has been significant sponsorship by local businesses including pro bono time and expertise and the pro bono use of equipment and materials. For example, the cranes and heavy machinery used to construct and support the architectural installations in Luxcity (2012) was provided pro bono by demolition companies working in the central city.

4.3 'Prosper'

The third of the four themes is *Prosper*. Within the category of *connecting internationally*, all three case studies have built strong national and international connections to attract people, develop markets and stimulate collaboration in line with the Resilient Greater Christchurch Framework [7].

For example, as an innovative shopping precinct made from shipping containers, Re:START brought shoppers back to the Christchurch CBD and drew attention from around the world. Re:START has been used as a great example of successful placemaking and assisted in elevating the importance of placemaking in both the local and international discourses. It has been included in current placemaking and adaptive urbanism literature (e.g. Bennett, Wesener, Swaffield, Brand et al.) and was included in global publications such as Lonely Planet [35]. It demonstrated the value of leading international trends and adapting to change in our urban environments. It also achieved significant recognition nationally with awards including:

- Property Council NZ RCG Retail Property Award 2012—Merit
- New Zealand Institute of Architects New Zealand Architecture Award 2013—Planning and Urban Design
- New Zealand Institute of Landscape Architects Pride of Place Community Design Award 2015

FESTA has also built strong national and international connections with design, architecture and landscape architecture schools to produce the installations as part of the festival. Nationally, these collaborators include the University of Auckland, Victoria University of Wellington, the ARA Institute, Lincoln University, Unitec and Massey University. Australian-built environment schools involved include programmes from the University of Adelaide, the University of New South Wales, the University of South Australia and the University of Technology, Sydney.

At the Commons, the Pallet Pavilion was a finalist in the International Award for Public Art (IAPA) in 2014, and the presence of the Gap Filler office at the Commons has attracted significant numbers of national and international visitors, becoming one of the must-see sites for visitors coming to Christchurch to see temporary urbanism in action.

Each of the projects similarly contributed to *fostering a culture of innovation* in post-earthquake Christchurch. While shipping containers, like those used in the Re:START mall, have been used to construct shopping malls in other places, including London and Kyrgyzstan, and temporary shopping areas have been created after other disasters, the use of shipping containers to create a post-disaster temporary shopping mall is an innovative typology. This innovative funding and ownership model used is arguably as significant as the built form, sidestepping the conventional land ownership and profit drivers that would make this kind of development less viable under a ‘business as usual’ scenario. Aforementioned governance models behind FESTA and the Commons were similarly enabling of innovative urban outcomes.

The purpose of this innovative approach was often to ‘support the emergence of the social enterprise sector as partners in driving change’ [7] in the community. Re:START was one of a number of highly successful social enterprises in Christchurch after the earthquakes. Others included the Arts Centre Trust, the Isaac Theatre Royal Trust and the Christchurch Stadium Trust. The speed and effectiveness of these trusts in driving changes in the city have been considered; hosting the Social Enterprise World Forum in Christchurch in 2016 suggests that social enterprise promoting environmental and social sustainability alongside financial imperatives has become an accepted part of doing business in Christchurch. FESTA itself is an emerging social enterprise. It is run by a charitable trust with the aim of supporting and celebrating active citizenship. The wide-ranging collaboration with agencies, businesses, community groups, universities and other social enterprises is evidence of its success in supporting the emergence of the social enterprise sector to support the wider resilience of Christchurch.

The final category within the *Prosper* theme is ‘*sustain the vitality of the natural environment*’ [7]. FESTA in 2018, named FEASTA, explored the interconnections between food and urbanism and the capacity of food to shape and enrich our urban environments. It explored a whole range of options for producing food in our local and urban environments, improving resilience and public health. At The Commons, the Food Truck Collective established itself and was then able to move to other sites as its popularity grew. This initiative provided a place for food businesses to source products from local and urban environments and promote urban agriculture.

An example is the *Plant Exchange* run by the social enterprise group *Greening the Rubble*, where people bring plants, crops and trees, to swap them for other varieties. Each year, hops are planted and grown over the Arcades Project at the Commons before being harvested and brewed into a Commons beer.

4.4 'Understand'

Lastly, the theme of *Understand*, in the context of the case study projects, focuses on creating community support for the more macroscaled planning strategies and the way in which these exemplars of temporary urbanism are conduits which have helped to facilitate the transition from the rebuild and recovery phases into the ongoing regeneration and placemaking of Christchurch. Their continuation also stands as a reminder of what Christchurch was, where it has been and where it is going and demonstrates the resilience that temporary projects can help to develop its post-disaster cities.

A willingness to openly engage the community to explore risk scenarios [7] was demonstrated by FESTA through its forums for open engagement and participation about various aspects of city-making and the risks and trade-offs associated with different choices. The wider FESTA programme includes a range of workshops, international guest speakers, book launches, guided tours and exhibitions which address issues such as food resilience, recycling and reuse and the exploration of alternative building techniques. Previous workshops at the event, for example, have included constructing adobe bricks, rammed earth, straw-bale and cob buildings, assembling 3D printed wikihouses and building green roofs.

Perhaps, the most significant way in which the projects represent this theme is the way in which they act as testing grounds for prototyping ideas. By testing new ideas, at a relatively low cost, short-term placemaking initiatives at these case studies created buy-in from residents. This invariably led to investment into their development, such as the now-permanent marketplace on the site of the Re:START mall and wider value for the city, both economically and socially.

5. Conclusion

Temporary and adaptive urbanism projects were particularly significant in the period between the Canterbury earthquakes in 2010 and 2011 and the opening of the first major permanent developments in Christchurch (the Christchurch Bus Interchange and Margaret Mahy Family Playground in 2015 and the BNZ Retail Centre in 2016). During this period, they represented limited signs of tangible recovery on the ground.

The three case studies considered in this chapter demonstrate the range of significant placemaking that occurred in Christchurch. These projects were significant in reconnecting residents with the city centre, fostering a culture of innovation as the city recovered, supporting community organisations to flourish, building participation in decision-making and, ultimately, creating resilient urban spaces through their adaptability and broad inclusion of residents. In this context, temporary and adaptive urban projects have contributed in a major way to the recovery of Christchurch communities and to building and supporting the resilience of the city. An evaluation of three case studies suggests that placemaking projects rate highly against resilience criteria and that different types of projects contribute in different ways.

The use of temporary or adaptive urbanism or placemaking as a disaster recovery strategy is of critical importance, particularly in the period between the end

of the emergency response and before permanent rebuilding is completed. This chapter demonstrates that placemaking projects have a central role in empowering communities and enhancing community resilience in post-disaster scenarios.

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