

# The Gigatown Competition in New Zealand: competition as digital infrastructure allocation?

Media International Australia  
2018, Vol. 168(1) 48–61  
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DOI: 10.1177/1329878X18783772  
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## Abstract

The Gigatown Competition (2013-2015) was a joint initiative between the telecommunications company Chorus and the New Zealand government to award a New Zealand town ‘the fastest internet in the Southern Hemisphere’ through a social media competition. Towns accrued points based on the volume of social media content related to the Competition and the benefits of ultra-fast broadband (UFB). I undertake a discourse analysis of select promotional materials and participation in the Competition to show how support for UFB as a necessary infrastructure for the New Zealand economy was achieved. I argue the Gigatown initiative mobilises a form of community participation in information and communications technologies (ICT) infrastructure premised on urban centres and towns competing against one another for their future viability. The success of the Competition and enthusiastic participation of towns in South Island can be contextualised by the governing and economic rationalities of urban austerity.

## Keywords

digital divide, digital infrastructure, Gigatown, governmentally, New Zealand, social media, urban austerity

This article draws on data gathered through the *Competing Futures: Community Building and the Gigatown Competition in the South Island* research project. The Gigatown Competition (2013–2015) was a joint initiative between the telecommunications company Chorus and the New Zealand government to award a New Zealand town ‘the fastest internet in the Southern Hemisphere’ through a social media competition. Towns accrued points based on the volume of social media content related to the competition and the benefits of ultrafast broadband (UFB). I undertake a discourse analysis of select promotional materials and participation in the competition to show how support for UFB as a necessary infrastructure for the New Zealand economy was achieved. I argue that the Gigatown initiative mobilises a form of community participation in information and communications technologies (ICT)

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infrastructure premised on urban centres and towns competing against one another for their future viability. The success of the competition and enthusiastic participation of towns in the South Island can be contextualised by the governing and economic rationalities of urban austerity, where municipal councils must look to competitively leverage existing resources and external forms of revenue at a time of decreasing national funding. Given this context, I suggest that the novelty of a New Zealand digital infrastructure competition should not distract from critical questions about the increasing salience of intra-city comparative and competitive planning rationalities and what public interests such rationalities serve.

In the first section of the article, I present a brief literature review on the digital divide and how policy discourse on this subject tends to legitimate and normalise the digitisation of services as a neutral or efficient process. That is, in rendering questions of access the site of problematisation with respect to digital infrastructure, its integration into public services as a utility is left unexamined. I then explain how the Gigatown Competition worked and how its incitement of social media use and business and governmental planning for urban digital futures is premised on the need to differentiate and innovate existing resources in comparison with other cities and urban centres. In this way, the competition exemplifies some of the paradoxes of the governing and economic logics of urban austerity, where private enterprises such as social media are leveraged for public participation and planning purposes and resource deficiency serves as the basis for creative generation.

## The digital divide

Familiar to policymakers, governments and human rights organisations, the digital divide refers to the role of digital technology and infrastructure in cementing existing educational, political and economic disadvantages in many communities (see Commission of the European Communities, 2001; Department for Trade and Industry, 2000; Mancinelli, 2007; Organisation for Economic Co-Operation and Development (OECD), 2001; Statistics New Zealand, 2004). The term's first significant use in a policy context occurred in a series of surveys by the National Telecommunications and Information Administration, an agency from the Department of Commerce in the United States (National Telecommunications and Information Administration (NTIA), 1995, 1998, 1999, 2000, 2002). Their surveys on telecommunications usage found a discrepancy in Internet access based on class indicators such as household income, level of education and home ownership. Recent studies, such as one undertaken by the Institute of Culture, Discourse & Communication at Auckland University of Technology on Internet usage in New Zealand (Crothers et al., 2016), corroborate the general thrust of the digital divide thesis: class indicators affect access to ICT. However, the study also points out that the gap between those who have and do not have ICT is closing as digital technology becomes more widespread and depreciates in terms of cost.

Nevertheless, critical attention to the inequalities that arise from the digital divide has led the United Nations to declare access to the Internet a human right (Human Rights Council, United Nations, 2011). The embedding of digital access into international governance frameworks exists alongside many national and local forms of advocacy regarding net neutrality, digital literacy education and transparency in governance. These struggles coalesce around digital technology and new media's (such as the Internet) infrastructural role in shaping forms of social, economic and political inclusion (or exclusion) for citizens.

While the challenges of addressing Internet access have produced an abundance of scholarship (Aichholzer and Schmutzer, 2001; Chen and Wellman, 2005; Chinn and Fairlie, 2007; Compaine, 2001; Norris, 2001; Wilhelm, 2000), the research possibilities with regard to the digital divide have been subject to critique. Research from the past decade contends that the digital divide presents a simplistic binary (Gunkel, 2003; Selwyn, 2004; Warschauer, 2002; Young, 2001) that does not

account for inequalities within communities with access to ICT (DiMaggio and Hargittai, 2001; Hoar and Hope, 2002; Van Dijk and Hacker, 2003) and that lack of ICT access intersects with already existing forms of inequality and marginalisation based on ethnicity and race (Fairlie et al., 2006; Hoffman et al., 2001; Mack, 2001; Prieger and Hu, 2008; Shelley et al., 2004), gender (Cooper, 2006; Cooper and Weaver, 2003; Liff et al., 2004), disability (Dobransky and Hargittai, 2006; Macdonald and Clayton, 2013) and age (Koopman-Boyden and Reid, 2009; Soar et al., 2011). The term ‘digital divide’ is also genealogically connected to ideals of universal access, which understand human rights and identity in universal rather than intersectional terms – where identities such as class intersect with other kinds of identities such as gender and ethnicity to produce differentially located citizens. In my forthcoming work, I have argued that ‘digital divide/s’ is a more critically useful term because it highlights how the inequalities connected to digital technologies are not actually a ‘divide’ as such, but rather the result of multiple communities coexisting with differing levels of use and access.

The digital divide thesis also exercises an ideological role in influencing the politics of infrastructure and its delivery. As a normative starting point for ‘correcting’ digital inequality, the thesis helps to legitimate rather than problematise the broader integration of digital technologies into a range of facets of everyday life. Although specific policies or advocacy issues related to the digital divide tend to focus on the technology of digital and new media from an end-user perspective, what underpins these concerns is the infrastructural role of digital technology and its capacity to effect the social, political or educational environment of its users. Digital technology and the digitisation of resources can enact subtle or overt forms of governmentality (Foucault, 1991) that reorganise services and their delivery according to the economic imperatives of digitally assisted infrastructure. By governmentality, I mean (in a Foucauldian sense) the ways in which policies and discourse can facilitate modes of behaving or using urban resources that align with the priorities of governing authorities. In the last phase of the Gigatown Competition, the five finalists (Gisborne, Dunedin, Wanaka, Timaru and Nelson) were required to produce a ‘Plan for Gig Success’, which would be judged by ‘a panel of influential Kiwis’ (StopPress, 2015) as well as the public through online voting. Dunedin’s participation in the competition was managed by the Digital Community Trust, a not-for-profit incorporation responsible for the strategic planning of digital infrastructure. In its ‘Plan for Gig Success’, the Trust outlines the benefits of UFB in the following way:

*Shared services and high quality internet access has allowed new teaching and learning pedagogies – virtual learning classrooms, blended learning, collaborative teaching models, a virtual school, extended communities of practise, personalized learning, teacher training pilots – in modern learning environments.* (Digital Community Trust, n.d.: 13)

Intended as a promotional item to advertise how Dunedin could use UFB, this excerpt highlights many of the exciting possibilities for service delivery. While not discounting these possibilities, my concern here is that the language around ICT tends to conflate its *capacities* with qualitatively *better* services. For instance, the practices listed here are predominantly delivery methods, not pedagogies. UFB infrastructure provides the possibility for a diversity of classroom designs and curriculum delivery, which is stated rather than explained to be more efficient – particularly in terms of reducing in-person teaching and learning, which is not supported in the literature as leading to qualitatively better learning.

The advantages attributed to the digitisation of human resources and urban services are similar to the discourses used by computing companies such as IBM to promote the integration of their technologies into urban planning and government. For instance, IBM City Forward is a web-based

platform that offers city managers the ability to collate and coordinate data about the use of public services (such as public transport and health centres). The platform itself is free, but works best with technology and sensors strategically placed throughout a city that can collate data. The promotional content frames the technology as empowering and participatory – for example, ‘The power to visualize a smarter city is in your hands’ and ‘Putting data into the hands of the people’ (IBM, n.d.). However, the aim of the software suite is to integrate privately owned computing into the delivery of what are otherwise public service provisions. The claims to a participatory and public use of the software are further complicated through economic discourses of competitiveness and entrepreneurialism. As the promotional material notes, ‘Competition among cities to engage and attract new residents, businesses and visitors means constant attention to providing a high quality of life and vibrant economic climate’ (IBM, n.d.). Thus the software, like the potential benefits of UFB in the ‘Plan for Gig Success’, invoke public benefits while also mobilising a narrative of economic competition between cities where technology can help to distinguish cities on the basis of technological enhancement of quality of life and increased economic productivity.

The rapid development of digital technologies and their infrastructural capacity in urban planning indicates how ICT engagement shapes forms of social and political inclusion in terms of who is able to access a qualitatively better lifestyle. What interests me about the debates and research approaches to the digital divide are the politics of infrastructure and how infrastructure discourse shapes what is sayable, knowable or thinkable in relation to its implementation and use. Drawing on the work of Michel Foucault (1981), I understand discourse to indicate the ways in which historically and culturally specific sets of knowledges come to be seen as naturally given truths or commonsense statements. In the words of Stuart Hall discourse refers to ‘a group of statements which provide a language for talking about – a way of representing the knowledge about – a particular topic at a particular historical moment’ (as cited in Hall, 1997, p. 44). What is communicated about digital technology influences practices associated with its use and implementation. As I will go on to discuss, the Gigatown Competition’s success lies not just in the material rewards given to the winning town, but its mobilisation of a discourse that UFB is vital to the economic revitalisation of cities and urban towns, as well as the New Zealand economy as a whole. In the next section, I provide a brief outline of Gigatown and its discursive framing before situating the competition within urban debates about infrastructure and the resources needed to compete in a global market.

## **The Gigatown Competition**

The Gigatown Competition (2013–2015) was a joint initiative between the telecommunications company Chorus and the New Zealand government to award a New Zealand town ‘the fastest internet in the Southern Hemisphere’ (Chorus, n.d.-a) through a social media competition. As explained above, towns accrued points based on the volume of social media traffic on acceptable platforms, including Facebook, Twitter, Instagram, YouTube, Flickr and blogs. Acceptable content included: ‘Posts or content that relate directly to the Gigatown competition’ such as ‘local activity promoting what you are doing to win the competition’, posts that ‘generate good discussions about how ultrafast broadband and gigabit fibre can provide benefits for your town’ and expressions of ‘Town pride’ that were linked ‘back to the competition in a relevant way’ (Chorus, n.d.-d). The competition consisted of a series of one-off events and online quizzes that required the voluntary production of a high volume of social media and online content about the benefits of UFB. The five towns with the highest points then went into the finals of the competition, where they were required to produce the ‘Plan for Gig Success’ as mentioned above. The town with the best plan then won installation of the UFB fibre network before any other town in New Zealand, in addition to

receiving a \$200,000 development fund (which was later increased to \$700,000, with \$500,000 contestable funding given to community groups and \$200,000 to business). At a gala function in Wellington, the former Communications Minister Amy Adams announced Dunedin as the winner of the competition on 26 November 2014.

The competition emerged from the former National and now Labour government's implementation of a national broadband scheme, which aims to stimulate consumer uptake of UFB through the provision of a fibre network and wireless access towers for rural areas (Ministry of Business, Innovation and Employment, 2017). Chorus won the major contract to deliver the fibre that enables Internet service providers (ISPs) to offer UFB. The contract is worth \$929 million and they will deliver 70% of the network (McBeth, 2013). The company is a telecommunications and fibre optic infrastructure service that cannot sell directly to consumers; rather, it provides services to other retailers. The winning city of Gigatown is thus effectively positioned as a 'wholesale' retailer in receipt of the prize. That is, the competition frames cities themselves as business retailers contracting into a service from Chorus. This discursive positioning of cities and urban centres as understood and needing to be run by market logics is reflective of broader urban austerity governing rationalities, as discussed below.

The competition was incredibly successful in garnering participation, with some municipal councils spending hundreds of thousands of dollars to participate (Johnstone, 2014; Telfer, 2014). The competition's operation required ingenuity and was creatively enticing, indicated by sustained participation and media interest throughout its near year-long duration. It generated a huge amount of social media traffic and content that touted the benefits of UFB. According to Chorus, 50 towns participated in the competition, there were 990,917 visits to the main Gigatown website and '5,950,000 conversations on social media about Gigatown and the power of UFB' (Chorus, n.d.-e). Interviews undertaken for the *Competing Futures* research project indicated that a number of local businesses offered prizes to stimulate local participation in the competition in Dunedin, which also doubled as a form of free advertising for these businesses, and there were stop-work and stop-school practices so that workers and students could devote time to creating social media content for the competition. Chorus won a prestigious advertising award, and business and consumer adoption of UFB has generally proliferated (Ministry of Business, Innovation and Employment, 2016; StopPress, 2015). Arguably, the competition served as a free advertising campaign for Chorus, UFB and the government's broadband scheme. Other locations had UFB before the competition began and ISPs did not sign on to deliver it until late in the competition (Malone, 2014; Telfer, 2014) – that is, despite the competition rhetoric about the winning town being the 'first' to have UFB, it was available elsewhere, perhaps highlighting the Gigatown initiative's marketing rather than infrastructural rationale. From a governmental perspective, the competition discursively incited the reorganisation of business, city planning, modes of citizenship and digital consumption, and urban infrastructure as receptive to the adoption of UFB, and the economic logics that underprop it, without 'direct' intervention from the national government or Chorus (Randell-Moon, forthcoming).

The competition greatly benefitted business and government interests, and was successful in mobilising participation, municipal council spending and attention to the economic as well as social benefits of fibre-optimised UFB. In the following section, I explain how the success of the competition is due to its social media component, which incites community participation and creativity as generative of planning solutions within urban austerity rationalities.

## **Urban austerity and the abundance of technology**

Cities and towns are increasingly located within a global economic, social and technological environment. With the shift to a post-industrial knowledge economy, where information and technological

innovation replace traditional manufacturing, municipal councils and urban planners must creatively leverage existing resources to compete with other regional, national and global urban centres. Rachel Weber (2002) describes the conditions and constraints of urban austerity in the following way: 'Cutting back national sources of assistance, such as urban renewal dollars and development block grants, has only aggravated interjurisdictional competition, raising the stakes and encouraging more desperate efforts to pin down increasingly fleet-footed capital' (p. 53). Gigatown exemplifies these practices by allocating urban resources through the select economy of a competition that requires participants to both promote the benefits of UFB more broadly and simultaneously justify its selective allocation based on a participant's competitiveness and readiness for UFB.

The competition's enterprising and actuarial logic can be situated as part of the broader governing and economic logics of urban austerity. In particular, a significant literature exists on 'Smart' and 'Creative' city policies where technological, creative and cultural innovation is positioned as the key to economic revitalisation (Caragliu et al., 2011). Related to this set of policy concerns is the strategic importance of social and human capital, which refers to the creative and cultural diversity of a population and the provisions for social and civic inclusion made available by urban governments. Social and human capital is correlated in smart and creative policy research with economic growth (Florida, 2005). As James Ash et al. (2015) note, 'The promise of smart cities is to solve a fundamental conundrum of cities – how to reduce costs and create economic growth and resilience while at the same time producing sustainability and improving services' (p. 10).

The Gigatown Competition reiterates 'smart' and 'creative' urban planning through the harnessing of social media to simultaneously enable community access and ownership of policy development alongside creative technological innovation. Dunedin's Gig Plan notes that, 'The community had taken ownership. It confirmed a community-wide shift in the vision of what our City could be, and the role the Gig will play in that future' (Digital Community Trust, n.d. *Competing Futures*: 1). Here, participation in the competition is aligned with participation in governance and future planning. This has implications for those who do not have social media proficiency or access to ICT. One project interviewee noted how difficult it was to get elderly communities involved, 'nobody from their end ... was willing to kind of pick it up and really drive it' (Interview, 11 October 2015). Nevertheless, those who participated in the competition have contributed to strategic future planning that prioritises the infrastructural capabilities of gigabit connectivity. For instance, the 2015–2016 Annual Report from Porirua City Council (2016: 9) outlines the strategic planning that emerged from the city's participation in the competition: 'Dunedin won the contest, but the community sent a clear message that they valued this technology. As a result of this feedback, in December 2015 the council launched the implementation of gigabit-speed Wi-Fi in the city centre'. Such planning is significant, given that the Porirua City Council reportedly spent close to \$100,000 to participate in the competition (Johnstone, 2014). Thus, it was able to realise strategic planning gains without winning the competition, an indication of one way Gigatown stimulated a digital infrastructure governmentality.

Gigatown also facilitated a governing interest in smart city planning. Dunedin's Gig Plan makes explicit reference to smart cities through the suggested implementation of an Internet of Things in Dunedin to improve public infrastructure and services (Digital Community Trust, n.d.: 2). The plan also envisages UFB as producing a conducive environment for creative and entrepreneurial tech ventures. For instance, the plan outlines a vision for 'a startup incubator community' and discusses the StartUp Space where 'An ambitious individual in medical school might meet an IT student, a developer, and a designer all in the same space. Together, they could create powerful tools for the health industry' (Digital Community Trust, n.d.: 7). Media reports also emphasised how Dunedin's win and digital infrastructural capacity have influenced tech companies to remain or establish bases in Dunedin (Loughrey, 2015). For instance, the *Otago Daily Times*, which is the only major news outlet to cover the South Island, ran a 2016 article noting that the Director of RocketWerkz

'was based in London ... but decided to return to New Zealand and faced a choice between Queenstown, Wanaka or Dunedin ... Dunedin's 1Gbps Internet – coupled with the promise of cheaper office space and housing – sealed the deal, he said' (Morris, 2016).

Technical infrastructure such as gigabit connectivity is vital to realising smart city urban landscapes and the establishment of tech companies noted above. In addition, 'creativity' as a buzzword and strategic policy priority is also aligned with smart city discourse in terms of the human and social capital needed to fuel collaboration and innovation. While a 'good dose of creativity is offered as the best (and, indeed, only) medicine available for those ailing cities and regions struggling to adapt to a putatively "new" economy' (Banks, 2009: 671), Gigatown exemplifies the tensions between creative participation in policy development and ownership of the mechanisms through which participation can take place. Gigatown holds the copyright of the social media materials produced by participants. In its 'terms of use', Chorus states that by posting material with the competition's tags and on Gigatown blogs, 'You grant Chorus a non-exclusive, royalty-free, transferable (without consent or notification), irrevocable, perpetual, worldwide right to use anything you post on any platform for the purpose of this Competition, in part or in its entirety, for any purpose' (Chorus, n.d.-b). Such terms mean that any image or content that is volunteered to the competition by participants is now the intellectual property of Chorus. This indicates some of the problems in leveraging social media platforms for community purposes. Such platforms are intrinsically designed to collate and monetise volunteered content (Tippet, 2015), which may be at odds with the participatory rhetoric of the competition.

Returning to the geographical dimensions of the competition, it is not surprising that South Island towns and cities dominated. With the exception of Gisborne, South Island towns also comprised the whole list of finalists. Aotearoa is bifurcated by settler colonial geographies into two islands: the South or Te Waipounamu and the North or Te Ika-a-Māui. The latter is smaller geographically, but more populous, owing to the major economic and governmental institutions of the country being located in either Wellington (Te Whanga-nui-a-Tara) or Auckland (Tāmaki-makaurau). With South Island towns and urban centres facing northern population drift and infrastructural obstacles to global competitiveness, the Gigatown Competition promised significant economic and technological benefits to the winning town. The extension of ultrafast bandwidth to private homes alone is expected to create substantial economic benefits and urban growth. According to the New Zealand Institute, a successful Fibre to the Home (FTTH) initiative could be worth between \$2.7 and \$4.4 billion a year to the economy (Clearwater, 2010).

Gigatown recognised the economic and demographic disparities between towns by weighting social media traffic according to population size. A press release from Chorus (2013) explained:

*In the first of the two rounds of the Gigatown competition social media and supporters' network points will be counted for each town and then multiplied by a correction factor to become 'Gigapoints'. The correction factor is based on the town's size, to ensure that each eligible town has the same opportunity to be the Gigatown.*

The precise calculations used for this 'correction factor' – that is, how population size figured into the multiplications – were not disclosed by Chorus (see Venture Southland, 2013). Larger cities such as Auckland and Wellington were also divided into smaller areas based on electoral maps, with the exception of the central and downtown parts being further subdivided into mini-towns (Chorus, n.d.-c). South Island towns such as Queenstown, Dunedin, Invercargill and Wanaka took strategic advantage of this differential weighting to pursue successful Gigatown entries, placing them consistently atop the competition ladder. When the five finalists were announced, Chorus removed the population weighting and reset scores to zero, enabling the eventual winner Dunedin

to move forward into second position – an element of the competition that was criticised by participants from Wanaka and local media (Cook, 2014; Fuller, 2014; Ibbotson, 2014a, 2014b). Chorus's use of statistics such as electoral mapping and census data on population size to create the participating Gigatown geographies further evidences a governmentalising approach to stimulating business and consumer uptake of UFB, and encourages towns to view and manage their resources in official governmental terms.

Scholars have argued that the demands for local urban economies to rejuvenate through entrepreneurialism and creativity, in the absence of national and universally accessible resource support, result 'in cities being pitted against each other on a global market' (Johansson and Kociatkiewicz, 2011: 394). The Gigatown initiative mobilised a form of community participation premised on urban centres and towns competing against one another for their future viability. For instance, at an Invercargill City Council (ICC) meeting in 2014, a speaker explained:

*Invercargill is sitting 14<sup>th</sup> out of the 50 towns and cities competing in the Chorus-run competition in which one centre will win \$200,000 and discounted 1 gigabit (100 times normal broadband) speed internet. We need to be in the top 5 by September to make the finals. Venture Southland is helping co-coordinate the Invercargill effort. Benefits of winning could include: Our schools will give students better opportunities for learning; Hospitals can better access international information and specialists; whole households can be online at once watching movies, playing games or doing homework; Business efficiency and growth with cloud computing; Better jobs through application of technology increasing productivity.*

Situated close to Dunedin in the South Island, the ICC saw Gigatown as a strategic way to enhance infrastructure and resources with assistance from Venture Southland – an economic development agency for the smaller regional towns close to Dunedin, which lack its population and the economic boost derived from the University of Otago. The Kāpiti Coast District, covering a smaller coastal region in the North Island, also considered the benefits of participating by drawing on competition metrics, 'If 40% of the Kāpiti population registered this alone would kick start the Kapiti campaign by approx 200,000 points' (Kāpiti Coast District, 2013: 3). As noted above, the competition metrics encourage municipal authorities such as the Kāpiti Coast District to employ a planning rationality shaped by both governmental and competitive market-based logics in order to maximise resources. These excerpts are illustrative of a governmentality whereby towns were positioned to compete with another in order to realise the infrastructural benefits of UFB. Here too, the public utility of UFB (for potential use in hospitals and schools) also sits alongside private consumption and business imperatives whereby citizens' social and political inclusion in urban resources is measured through enhanced lifestyle factors.

In this way, the competition illustrates some of the paradoxes of urban austerity. Towns and urban centres in the South Island are positioned as 'lacking' in the population numbers, growth and innovation of the North Island towns, thus driving participation in the competition. At the same time, participants draw on an abundance of technology and literacy in their engagement with the competition as it relies on access to and familiarity with a specific set of online applications – Facebook, Twitter, Instagram, YouTube and Flickr – and a not insignificant amount of fiscal and municipal resources in order to register and participate. Indeed, this was a salient point of criticism throughout the competition. For instance, one comment regarding the Dunedin City Council's (2015) strategic support of Gigatown in The Dunedin People's Panel, a survey of the Council's long-term plans and goals, exclaimed:

*Is Dunedin really so dumb that Chorus has basically outsourced its customer support to us, at our own cost? If the businesses of Dunedin are honest and not just looking for more handouts then the chamber of*

*commerce should be leading, and paying for, this adventure. The fact that Gigabit internet is already available (e.g. with the ISP Vetta Technologies) in Dunedin. If people want to sign up for it that is their business, but the Dunedin (and NZ!) ratepayers have already paid enough. (p. 20)*

Echoing these comments about the relative value of Gigabit connectivity to citizens outside of the business realm, other residents also queried why the high speeds of UFB were necessary for home or private Internet usage (Dunedin City Council, 2015: 23, 26, 27).

Opposition also occurred throughout the competition's duration. One of the research assistants on the project, Sarah Gallagher, observed that residents who were critical of the competition used the tags, #gigashite, #gigashit, #gigacrap and #gigaspam, rather than official tags issued by Chorus. These criticisms nevertheless took place through the same social media and digital infrastructure as that of the competition, and hence demonstrated – in line with the competition's aims – the range of social benefits brought by improved digital infrastructure.

Keeping in mind Weber's point about urban austerity energising rather than diminishing an interest in urban planning, promotional material associated with the competition was keen to emphasise the technological capacity for speed – for instance, the slogan 'the fastest internet in the Southern Hemisphere'. In another promotional item, Chorus uses the analogy of luxury cars to illustrate Internet speeds: 'Imagine your gig connection is a Ferrari [that] wants to go as fast as you do' (Chorus, n.d.-f). A press release entitled, 'Global Gigabit Wars: Getting Hooked on Speed' outlines the gigabit per second broadband services around the world in comparison with New Zealand. Although it uses the analogy of a war to explain gigabit capability competitiveness, suggesting conflict, the press release also describes New Zealand as undertaking a 'broadband journey' so that 'we, as a country, can earn more and do more with it' (Chorus, 2015).

In advocating for UFB as a shared utility that ought to be integrated into public infrastructure, so that 'we' can benefit from it, the competition rhetoric on the benefits of a faster service also became constrained in discourses of personal utility. As one of the research assistants on this project, Mahdis Azarmandi, pointed out, rather than focusing on a collective service – such as public transport – and how that can be improved, Chorus makes an appeal to a specific kind of luxury consumption (a Ferrari) that is an improvement on the utilitarian and ordinary car. Here, quality of experience is conflated with speed, as if digitising or implementing services through UFB automatically improves them as explained earlier. The rhetoric could be suggesting that Ferraris can be available to all if an infrastructure to accommodate them is implemented. However, the individualised mode of appeal – travelling in a car – is what opened Chorus and the competition to the criticisms outlined above – namely that the benefits of UFB are largely attributable to business and that private consumption of the Internet does not require the speeds of gigabit connectivity.

Within the context of urban austerity, it is not a lack of technology that impedes urban development as such, but the need to differentiate and innovate existing resources in distinction to other cities and urban centres. As a social media competition, Gigatown was able to leverage a relatively accessible technology platform (provided access to smartphones and computers is available in the first place) to mobilise creative and community participation via social media in the planning futures of urban centres and towns in New Zealand. While there was public criticism about the costs and ownership of creative content produced in the competition, such debate also took place through online and social media, thereby demonstrating the efficacy of Internet-assisted platforms for urban planning engagement. The possibilities for digitising public services stimulated a range of future imaginings of urban life in Dunedin, and elsewhere, in participating towns' strategic planning, but the *capacity* for doing things is not necessarily indicative of qualitatively *achieving* them. Care should be taken by urban planners (and competition creators) that the creative generation necessitated by austerity is mobilised for a collectively enhanced public benefit rather than private utility.

## Conclusion

Framed as an energising and creative endeavour, the Gigatown initiative harnessed competition as the policy mechanism through which resource allocation is implemented. In relying on a competitive governmentality to reorganise and orient future planning towards UFB-assisted infrastructure, the Gigatown Competition highlights some of the paradoxes of urban austerity economic and governing rationalities. The competition positions residents as both citizens who have the right to participate in policy planning and development, and consumers who must be proficient in social media in order to enjoy this right. In leveraging privately owned social media platforms for the promotion of UFB, Gigatown demonstrates the future possibilities of urban centres where ICT can both reinforce community participation and investment in local towns, and concentrate economic benefits for the already digitally literate and mobile.

More important, perhaps, than the tensions in a private–public enterprise, which encourages the individual consumption of more media to collectively secure resource allocation, the Gigatown Competition subtly reshapes policy discourse on digital infrastructure in the direction of competition rather than universal access. While Gigatown is part of a broader rollout of broadband availability, the initiative, underwritten by government investment in private telecommunications architecture and then furthered through volunteered social media output, has implications for how other public utilities or infrastructure might be implemented and allocated. For instance, smart devices have already been used to monitor and rank energy use among tenants in housing flats in the United Kingdom (Kelly, 2015). Smart cities and the Internet of Things are often promoted on the basis of increasing service efficiency, which is undoubtedly appealing, but could also be implemented in ways that economise and hierarchise the availability of public resources.

The competition was clearly incredibly successful in achieving input from municipal councils, the media and residents, and the sheer volume of content that was created for free attests to a keen interest in enhancing digital infrastructure and transforming UFB into a public utility. There is, however, a clear business incentive deriving from UFB. Although proposals for the digitisation of services such as education and hospitals make claims to greater efficiency, it is not clear whether this process equates to a qualitatively better service, or how those lacking in ICT proficiency or access will be included. Further, the boon for private consumers of UFB is rather blatantly framed as providing a classed and upwardly mobile lifestyle. What these three applications of UFB (business, digitisation of public services, private consumption) indicate is that research on and advocacy for the role of urban infrastructure in shaping forms of social, economic and political inclusion (or exclusion) for citizens will have to negotiate a policy terrain that has already been thoroughly disciplined by ICT interests in maintaining the availability of digital infrastructure. Within this framework, public or equitable forms of ICT utility depend on increasing investment to match the competitive advantage of others with access to enhanced digital infrastructure. Whether citizens are best served by a competitive rationality for digital infrastructure allocation remains to be seen.

## Acknowledgements

Many thanks to the research assistants on the *Competing Futures* project, Mahdis Azarmandi, Sarah Gallagher and Lewis Rarm, for their help and insights, which have significantly enhanced the research outputs. My thanks to the interviewees who generously gave their time to share their views, contributions and information on Gigatown. Finally, I thank the anonymous reviewers for helping to clarify important points of this analysis.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The analysis in this article was made possible by a University of Otago Research Grant.

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