Digital Social Innovation and Civic Participation: Toward Responsible and Inclusive Transport Planning

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Abstract:

This paper makes the case for Digital Social Innovation as a step toward democratic participation and engagement in the planning process. Information and communication technologies are increasingly playing a major part in mobilising collective social and political action as a response to the outdated planning policies and practices. With transport infrastructures constrained by the unprecedented global impact of COVID-19, DSI can potentially become a defining element of the post-pandemic world. We use the case of transport planning in Auckland and analyse the role of a proactive advocacy group and its use of technical expertise to offer opinions through virtual shared platforms for public participation and empowerment. City Rail Link is discussed as a large-scale public transport project that received political and community support due to the efforts of digital social innovators.

1. Introduction: Social Innovation and Civic Participation

Social innovation refers to those changes in agendas, agency and institutions that lead to a better inclusion of vulnerable groups and individuals into various spheres of society (Van den Broeck et al 2019). The conceptualisation of innovation in social sense can be traced in religious contexts since the 15th century, political revolutions in the 17th and 18th centuries, economic reforms in the 19th century and social movements and management sciences in the 20th century (Godin 2015). The twenty-first century has witnessed a resurgence of social innovations with a plethora of conceptual and empirical works widely surfacing across academia, policy and practice. However, the contemporary theorizations and applications of social innovation are getting caught in the reductionist views of social and technical determinism (Araújo & Cândido 2015), neoliberal interpretations of entrepreneurship and the delegation of public sector's responsibilities of wellbeing to either the private sector or the third sector (Moulaert et al. 2017). Ayob et al. (2016) identify two major traditions of social innovation in contemporary social policy theorisation. Social innovation in a weak tradition relates to the utilitarian social change value of an innovation (Pol and Ville, 2009), whereas a strong social innovation tradition converges on the restructuring of power relations between different individuals and groups (Moulaert and Mehmood, 2020). Another interesting categorisation is provided by Shockley (2015) who generalises two distinct literatures in social innovation. One termed as Anglo-American entrepreneurship studies is largely rooted in Anglophone literature based on economics, management and business studies as a retreat of the welfare state and the emergence of 'caring neoliberalism' with the state shifting away from

its social welfare function and bequeathing the responsibility to market forces as well as individuals, families, social networks and the civil society (Moulaert et al. 2017). The second, Euro-Canadian influenced social economies literature which is based on the social movements and solidarity economy initiatives that have emerged from community development studies. With such diversity of the prevailing and often contradictory arguments and actions, we can maintain that social innovation has created a significant shift in the way society deals with complex social, economic, political and environmental issues. Subsequently, social innovation seems to have become a victim of its own success with many policy makers tending it as the economics rational for getting more done with less (Hubert 2010; Defourny and Nyssens 2013). Such views particularly gained momentum in the aftermath of debt crisis of 2007-08 as scholars, planners and practitioners searched for better alternatives to the traditional ways of doing things whereas policy makers looked for cost-effective alternatives for reducing welfare spending (Moulaert et al. 2017). The unprecedented global impact of COVID-19 in 2020-21 on social, political, cultural, economic and environmental conditions have constrained people's mobility, the ability to meet in person, and led to social distancing measures. Digital Social Innovation (DSI) can potentially become a defining element of the post-COVID-19 world. As an emerging area of research DSI facilitates the use of information and communication technologies to confront social, economic and environmental challenges. With the predominant argument for social inclusion of communities and groups that are often left out of the planning and policy processes (Ekhardt et al. 2016), new digital technologies are increasingly viewed as a potential source of citizen empowerment and civic participation (Lyons 2015).

Civic participation is a key element of planning policy and research. It can comprise of individual and collective actions that identify and address issues of public concern. As a transformative process, active civic participation displays a sense of citizenship and awareness among individuals and communities about issues of common value and interest to the society (Mehmood and Moulaert 2013; Mehmood 2016; Mehmood et al. 2020). Planning literature in support of civic participation can be grouped into two broad rationales (Rydin & Pennington, 2000). In the first instance, civic engagement is regarded as a democratic right. Arguably in a democracy, public policy should reflect people's values, best determined through dialogue. Accordingly, every resident has a democratic right to participate in the decisions that affect the individuals, groups or communities. This view stands in stark contrast to the customary technocratic approaches in transport planning which fail to meet the demands for democratic accountability (Willson 2001, Bickerstaff et al. 2002). The second rationale takes a more pragmatic view focusing on the benefits of collaborative planning through deliberation and open dialogue. Participatory processes open new opportunities for learning through the exchange of local and expert knowledge in collaboration with local communities (Rydin and Pennington 2000). Public support gained through participatory process can improve implementation by increasing the visibility and value of projects to the citizens (Curtis 2008). Moreover, by bridging understanding between different stakeholders, civic engagement helps building partnerships and facilitate social and institutional change (Fouracre et al. 2006). DSI provides such platform for multilateral, participatory and community-based interaction.

The paper aims to identify how socially innovative community initiatives impact and improve socio-political relations and democratic empowerment in the digital realm. The next section critically explores the concept and practice in DSI, its contemporary understandings and applications. Section 3 looks at how transport planning and policy is being shaped with the emergence of online public groups as digital social innovators in Auckland. Section 4 explains the methodology employed for the research, followed by the analysis of digital civic participation scene in Auckland with a particular focus on Greater Auckland blog comprising

of transport planning commentators and concerned citizens (section 5). Their continuing efforts to counter the pro-road policies and support sustainable and smart mobility through citizens-centred, responsible and inclusive public transport planning are discussed using the case of the City Rail Link (CRL) project in the downtown Auckland. In conclusion, we examine how DSI can shape discussion of the present and future urban transport policy and planning, and beyond.

2. Rethinking Digital Social Innovation

A participatory view of Digital Social Innovation (DSI) refers to the exploration of "new models where researchers, social innovators and citizen participants collaborate in co-creating knowledge and solutions for societal challenges" (Novak et al. 2018: 124). However, a rhetoric on civic participation does not guarantee success of socially innovative actions or initiatives, whether in the physical or the digital realm. Scholarship in DSI have largely concentrated on harnessing new technologies for wider social benefit to the citizens, citizen empowerment to use collective knowledges, added transparency and accountability of public and private institutions, fostering collaborative technological and business entrepreneurship, and the use of new technologies in social and environmental sustainability. To identify drivers and barriers of successful DSI, Eckhardt et al. (2017) suggest building a digital ecosystem of innovation. Grounding their argument on the context-specificity of key drivers and barriers of DSI they classify four analytical contexts. These include: 'role context' referring to social and political attitudes, behaviours, motivations, skills and capabilities of the relevant actors; 'functional context' referring to the models of collaboration such as standard orders and procedures, management and governance; 'structural context' referring to social, economic, political and institutional path dependencies; and, 'normative context' referring to conventional social standards based on historical, ethical, legal and professional norms (Eckhardt et al. 2017: 73-74). Whereas roles, functions, structures and norms provide good analytical insights to socially innovative actions, these could hardly be associated with key drivers or barriers for (digital) social innovation primarily because such models do not clearly take notice of grassroots initiative, collective action and social movement aspects of a social innovation project. This kind of approach can be explained through the weak tradition of social innovation with more focus on planned participation of citizens, to promote new ways of doing business, and making people more aware of their rights and responsibilities as citizens. Though useful in terms of analytical underpinnings, such models remain confined to the context-specificity with limited or no attention towards context-sensitivity especially in terms of globally aware, but highly localised, digital activism. Another weakness of this and other technology driven definitions is that DSI is often cherished as a sub-set, rather than an extension of, social innovation. This lack of cognisance about the true potential of DSI can be associated with the trends in technological determinism, as discussed below.

We understand that DSI literature is still in infancy (Rodrigo et al. 2019). It has been variously associated with e-commerce through social entrepreneurship (Bonina et al. 2020) and e-governance for improving social services and social policy (Misuraca and Pasi 2019). To progress, the approach requires further conceptual and applied research across disciplines and sectors. However, for this purpose, a context sensitive definition of social innovation conditions its emergence to the needs satisfaction of citizens, improvement in social relations amongst and between communities, and empowerment of vulnerable, neglected and other such (social, economic, cultural, ethnic, geographic and other) groups and communities that are often left out of the conventional planning and policy processes, procedures and other codes of conduct (Van den Broeck et al. 2019). Digital social innovation can therefore be defined for our purpose in this paper in terms of the *use of information and communication technologies to identify*

community needs and mobilise collective social and political action to address those needs that would not only improve social relations and promote civic participation but also infuse a sense of empowerment and acceptance for individuals, groups and communities. Social networking platforms and virtual communities and locations of public voice and discussions are a case in point.

DSI can be termed as a hybrid between the strong and weak traditions of social innovation as mentioned above, but there is also a need to consider the emergence and applicability of DSI beyond data modelling and service provision, and more into its transformative role in influencing policy and planning. In this respect, the role of technological determinism cannot be overlooked since new technologies – especially in the fields of information and communication – are assumed to be shaping how social innovations are emerged, organised and put into practice. Technological aspects emphasise an active role of new technologies in shaping social relations and bringing together communities for collective action (Wyatt 2008). Often associated with Veblen's theory of institutional change, technological determinism is characterized by a dynamic interaction between habits of thought, instincts, institutions and behavioural change, leading to the evolution of institutions (Brette 2003; Veblen 1919). A technologically deterministic view, therefore, may not necessarily have to follow a linear reductionist progression of cause-effect and problem-solution relationships in which technology becomes a determining factor for social inclusion. Recent literature in social innovation, especially in urban and regional development, is largely fashioned as a critique of technological determinism (Oosterlynck 2019). Technology in this respect can be seen in the sense of a non-neutral determinant of social and institutional change, a novel technique, methodology or a toolkit to include the voice of women, elderly and youth, empower communities and improve social interaction. In terms of media determinism, the means and ways of communicating is also subject to social context (Powers and McLuhan 1989), problematising social exclusion and establishing avenues for dealing with societal challenges in a variety of spatial, temporal and virtual settings. Digital social platforms have proved effective when engaging young people on improving the situations of their places and communities whose voices are often absent in the formal planning and consultation processes (Abdullah and Sahharon 2020). The question however remains whether the new and emerging digital technologies actually substitute physical action or serve more as a complement or extension to the conventional ways of advocacy and activism? To address this concern, we refer to the case of civic participation in transport policy with a look at the example of transport planning in Auckland.

3. Civic participation and public transport planning in Auckland

Historically, transport planning has adopted standard processes and steps to accommodate technological innovation in its practice (Banister, 2001). Little attention has been given beyond consultations towards more inclusive and participatory engagement of citizens in making choices of mobility and accessibility. There have been some occasional dissident voices that challenge the existing policy norms and call for bringing longer-term changes in transport planning for the benefit and inclusion of communities (see for example Lucas 2006; 2012). Using the case of civic participation in transport planning, Ward (2001) infers that participatory processes facilitate a clearer definition of problems and encourage building partnerships and understanding between a diversity of stakeholders. The author further identifies two challenges in participatory planning: 1) participatory processes are generally more time-consuming, although they may in fact save time in the long run because policies developed under such processes are less likely to meet resistance in implementation; 2) the existing concentrated

power structures in planning also obstruct the effectiveness of meaningful multi-stakeholder involvement. These challenges call for an inclusive approach that empowers communities for decisions that directly affect their everyday living. Civic participation can vary from conventional physical forms of activism to the alternative, more flexible and creative manifestations of digital social media communication, information sharing and interaction as witnessed during the COVID-19 pandemic. Use of media and social networks, and access to online resources also shape the nature, extent and proximities of networks of communities. In public sector planning, it often appears that digital technologies are "framed as a way of responding to fiscal constraints while at the same time increasing and personalizing service quality" as an alternative way of social innovation (Tracey and Stott, 2017: 56). Civic participation within a DSI framework, besides making use of local knowledge and resources, allows for a diversity of perspectives for addressing societal challenges in general and public transport and mobility related issues in particular, as we observe in the case of transport planning in Auckland.

Mees and Dodson (2007) argue that Auckland's long history of technocratic and undemocratic planning decision-making has severely retarded the development of public transport. Both central and local governments have repeatedly prioritised technical rationality for pro-road strategies while disregarding or distorting public preferences for improving public transport. Imran and Pearce (2015) argue that the solution to public transport can be found in exploring how various community groups or oppositional actors are involved in initiating debates to redefine public transport problems and solutions as per communities' aspirations. Since the establishment of Auckland (Super) Council in 2010, the forward-looking role of community groups has helped communication buy-in or gaps between users of public transport and the planners. Whereas traditional media sources, consultation processes, opinion surveys, and established lobbying groups all provide discussions for transport planning, these conventional procedures lack the bottom-up participatory aspects that only the community groups could bring. Such engagement by the concerned citizens allows greater grassroots participation through partnership tactics and creates opportunities for bilateral dialogue (Johnson and Kaye 2004).

4. Context and Methodology

Digital activism in Auckland is quite dynamic especially when it comes to the citizens' awareness and concern about public transport planning. The cohort of civil society organisations campaigning through digital and social media ranges from locally based online communities to the international activists with a number of urban, regional and national campaign groups in between. These groups could be situated at various degrees on the stretch between weak and strong social innovation traditions. Much of the concerns for public transport provision, accessibility and use in Auckland are rooted in the challenges associated with mitigating the impacts of climate change on the larger metropolitan area. Canvassing in this respect is mostly related to achieving sustainable development goals and finding alternative solutions such as sustainable energy sources, conserving energy and decreasing carbon emissions. Despite the diversity of objectives, type of stakeholders and proposed strategies to address transport problems in the city, the civil society advocacy have demonstrated considerable unity and mutual support with multi-organisational collaborations commonly observed (McArthur 2018). Among the prominent DSI campaign groups Generation Zero, The Campaign for Better Transport, and Greater Auckland are noticeable.

Generation Zero (GZ) focus has been on tackling climate change by promoting carbon-neutrality. Since its establishment in 2011, GZ has positioned itself as a youth-led environmental movement whose members are predominately tertiary students and young professionals. GZ initiated the campaign for Zero Carbon Act to promote sustainable transport. A unique feature of GZ's campaigns is their ability to deliver sustainability rhetoric with a twist of innovation. In addition to conventional channels of planning participation such as formal submissions, GZ has used various creative media types including short films, online petitions, and public conferences to raise public awareness of energy, emissions and funding issues in transportation. Auckland is a central focus of GZ campaign. GZ expressed its concerns over the previous national Government's refusal to fund Auckland's CRL project. Even after the Government eventually announced its decision to support the CRL, GZ continued to criticise the Government's lack of commitment by highlighting the fact that the CRL's completion date was delayed from 2020 to 2024. GZ's main achievement is lobbying for the Zero Carbon Act which was passed by the NZ parliament in 2019 with near-unanimous support.

The Campaign for Better Transport (TCFBT) brands itself as a politically independent, voluntary incorporated society with the goal of promoting alternative transport, including public transport and active transport in Auckland and beyond. A relatively long-established local advocacy group, TCFBT has largely adopted traditional methods of building alliances and networks. The Campaign works with stakeholders in the public and private sectors, and with local communities to formulate proposals that are effective and influential. The group has been particularly active with a series of pro-rail campaigns. These include reopening Onehunga Rail, creating a rail link between the city and the airport, reinstituting a waterfront tram, establishing an Auckland-Hamilton commuter rail service, extending the rail service to Mt Roskill and the CRL. In their airport-rail campaign, TCFBT mobilised public support by pointing out that the project would benefit not only airline passengers but also the thousands of workers commuting daily to the Auckland Airport and its vicinity. The group launched a petition bearing over 10,000 signatures calling for the relevant authorities (the former Manakau City Council, Kiwi Rail, Auckland Airport, the former Auckland Regional Council) to work together urgently and designate a rail corridor. The campaign successfully led to the signing of a Memorandum of Understanding between the authorities to designate the proposed route.

Greater Auckland (GA) is an online community-based civil society organisation that "provide[s] commentary and encourage[s] intelligent debate about transport issues, with a particular focus on Auckland" (GA 2017a). The GA advocacy is distinguished from the other pro-public transport groups for its establishment as an independent forum using professional knowledge with the capacity to conduct in-depth and technical analyses on specific issues of public concern. The group uses various virtual platforms for blogging and social networking to host regular contributions by permanent and long-term volunteers as well as guest contributors. Initially created as 'Transport Blog' in 2008, the group changed its identity to the current name in 2017 to cover wider urban challenges. However, with a higher concentration of transport planning enthusiasts – many of whom have expertise in the field – transport and mobility in Auckland remain GA's core focus. The group's outputs are largely open for public consumption, comment and discussion.

There is no doubt that GZ was an influential proponent of Zero Carbon Act and the TCFBT championed a number of rail projects effectively. With its policy impact and expert make-up, GA provides a suitable example within our definition and framework of DSI besides its effective role in civic participation and collective action. The following section chronicles some key actions and impacts evaluated on the basis of our research particularly in the case of

advocacy for the City Rail Link (CRL) in recent years. In this context, the research took place in two phases.

In the first stage, researchers conducted in-depth interviews with three of the current and former bloggers and social media influencers. The interviews explored their motivations for the critical social media posts, the impact of their works and responses or experiences of formal consultation processes. Each interview was one hour long and transcribed ad verbatim. Efforts were made to ensure that interpretations of the interviewees were clearly captured. The team however remained mindful of the research limitations in terms of the level of subjectivity that might have been assigned to the meanings of written and/or verbal interpretations of data (Ormston et al., 2013). Data was analysed thematically and iteratively using NVivo.

In the second stage, content analysis was conducted over 400 blogs and social media posts and examined to synthesise key themes and phrases related to City Rail Link (CRL). Attention was paid to social media posts published between 2013 and 2015, a time when CRL debate was generated and key policy decisions made. The second phase spanned the 2018-2020 period with a particular emphasis on the issues around CRL project implementation, costs and delays. Content analysis helped breaking down lengthy texts into manageable units of analysis (Hsieh and Shannon 2005; Imran 2017). Keywords were grouped into four main overlying categories – economic, social, environmental and political – plus an 'other' category. We realised that social aspects often remain absent in technocratic transport solutions (see Adli and Donovan 2018). Variations of the themes were also considered, e.g. 'cost' also searched for 'costly'. Worth mentioning that the word search did not count comments, only the contents of the original articles. The selected themes proved useful for objective evaluation as compared with contrasting contents based on readers' impressions.

5. Analysis – Civic participation and transport planning in Auckland – the role of DSI

The following section is based on research conducted as part of the project analysing civil society's role in attempting to change unsustainable transport planning practices by scoping the digital activism scene in Auckland.

5.1 Greater Auckland – drive for better public transport?

Greater Auckland Blog was run by many people, but two names are of particular mention here as main contributors to GA activism. Patrick Reynolds, a part-time academic who remained active until he joined New Zealand Transport Agency as a Board member in 2019. The second, Matt Lowrie, principal administrator. Accordingly,

> "We don't have a culture of good grass roots organisations. I mean we started the blog, or should I say we all became attracted to the blog because we felt there was a huge void in voices from below coming up" (GA2, former GA Blogger)

> "The tragedy of our system is that all of those who have transport knowledge work for Auckland Council, Auckland Transport and NZ Transport Agency and are not allowed to say anything in the transport debates. And so the debates are then dominated by those who don't have a clue. Fortunately, GA Blog, skirts the edge of that where there's a lot of people who do know what they are talking about who are able, have the freedom to talk about it" (GA1, former GA Blogger)

GA was a vocal critic of the pro-road policies of former centre-right national government between 2008-17, and its reluctance to fund public transport. They argued against the 'predict and provide storylines' of the government which locked public transport funding into a vicious circle of road building with chronic underinvestment in alternative transport over the past 60 years. GA generally exhibits a sympathetic view of public transport. Many of its opinion pieces have addressed misconceptions about low-density and hilly topography of Auckland being unsuitable for cost effective public transport provision. The group often uses comparative analyses between Auckland and its international counterparts to demonstrate that quality of the public transport system rather than the urban form or topography is what attracts citizens' use of public transport in major cities. It is worth noting that most of the online GA activism and analysis is found on information that is either available in public domain (such as previously published documents, newspaper articles, and press releases) or is willingly provided by agencies or individuals as the owners of the intellectual property. Bloggers explained their experience of traditional consultation process and the reasons for DSI initiatives as follows:

> "We need to have an ongoing better strategic conversation with the community about transport in Auckland" (GA1, former GA Blogger)

> "There's so many [consultation going on in the city]. I am exhausted by [the consultation process]. I am not claiming that the consultation process is completely broken. I think it's got some issues in a democratic sense and also I am exhausted by it. I have actually stopped submitting. I put my work into the Blog post and I am influencing the conversation that way and have good reason to believe that's the case" (GA2, former GA Blogger)

> "I often get frustrated in our, normal approach to consultation. We ask essentially the same people what they think, and they tell the same thing that they told last time. And they are a very small section of society, very unrepresentative, presumably a lot of retired people, because they have the time to do it, a lot of big companies because they can pay someone to give some feedback on it" (GA1, former GA Blogger)

Besides online activism, many GA commentators have engaged in public participation processes of planning policies either on behalf of GA or in individual capacity with the primary purpose of promoting public transport. GA is also very active in raising a series of innovative and alternative solutions in response to the central and local government transport policies. One notable example is the campaign for Congestion Free Network (CFN) as a strategic public transport network for the city proposed in 2013 in collaboration with other DSI advocacy groups such as Campaign for Better Transport and Generation Zero. Many of the CFN proposals were taken onboard by the national government and Auckland Council. In 2017, GA proposed CFN2 as the next step for the future of public transport in the city. The plan integrated enhanced Bus Rapid Transport routes with corridors for Light Rail and Heavy Rail Lines (GA 2017b). Another major proposal formulated by GA was that of a Regional Rapid Rail system. Aligning with the GA's new identity of thinking beyond transport systems, to foster regional economic development by connecting Auckland, Waikato and Bay of Plenty and facilitate intercity travel through high-speed rail links. The proposal was based on four pillars of using correct technology for affordable performance; making use of the current infrastructure; provision of reliable and regular connections; and, integrated development and land-use planning and management (GA 2017c). In the lead up to the 2017 New Zealand general election, both the CFN and Regional Rapid Rail schemes were adopted by the Labour Party and the Green Party. After coming to power, the coalition government as well as the Auckland

Council adopted the CFN proposals (Auckland Council 2017; NZTA 2017). Despite the promise of exploring funding the light rail links by the Labour-Greens coalition (2017-2020), the progress remained very slow initially and was subsequently discarded. After the 2020 election of majority Labour government (2020-2023) the light rail debate resurfaced. In spite of the light rail progress, these policy discussions and their political impacts indicate the influence of GA and other DSI groups to generate local and national-level discussion and media attention on transport sustainability issues. Hence:

> "We've come a hell of a long way in the last few years. I was on the blog and saying Auckland just completely stuffed, nearly worst in the world. You know, it's world-leading best practice, what we're going to do in Auckland, that's a fantastic leap" (GA1, former GA Blogger)

GA's opinion pieces are frequently reproduced and discussed on television and radio outlets and its contributors and administrators are regularly invited to speak at public conferences and discussion forums. There are however certain criticisms of how GA approaches the issues of public interest. Some lobbying groups are concerned about how GA feeds too much of critical and technical information to policymakers which reduces leverage for the respective lobbyists. Within its own circles, the non-conformist and non-conventional views of GA leadership have resulted in some members dissociating themselves from certain campaigns. Another criticism is that GA tends to represent a young, professional and tech-savvy white middle-class which does not engage with the ageing population and minority, ethnic, native and cultural groups. Irrespective of these criticisms, it is a fact that GA has so far managed to raise grassroots initiatives and have successfully affected various formal consultation, planning and policymaking processes. The following section chronicles GA's activism for the City Rail Link project in Auckland.

5.2 The City Rail Link (CRL)

The City Rail Link (CRL) is an underground rail tunnel, first proposed in 1923, later in the 1960's, and most recently from 2010 onwards, to improve the capacity of Auckland rail network. It can be termed as the first large-scale public-transport project of its kind in New Zealand. Once completed in 2024, CRL will connect Britomart Transport Centre (Downtown station) with the city's rail network. The 3.4 km long twin tunnels are up to 42 metres below the city centre streets to shorten the journey times and offer more travel options (CRL 2020). GA was a major proponent and cautiously critical of the CRL in terms of its benefits to the community since the earlier times in 2011. Content analysis revealed that the *economic* themes of cost and funding regarding CRL were commonly mentioned in the materials. Discussion of funding generally centred on the gap in funding by the government as well as when, how and whether it will commit to the funding targets. In terms of *social* themes, patronage, mobility and Aucklanders were commonly referred in terms of how the CRL would allow capacity levels to double after it came into operation besides providing options for the disadvantaged travellers (e.g., low-income groups). *Environmental* themes were largely absent from GA articles with land-use, emissions and pollution scarcely mentioned. This shows the lack of attention by GA to the environmental benefits and costs of CRL. For example, discussions on land-use changes were predominantly concerned with agglomeration benefits. The *political* theme was frequently considered in the articles with terms such as government and policy commonly referred in relation to the political influences and implications of the CRL. Overall, the content analysis showed that GA paid substantial attention to the CRL project from its inception and over the course of its development (Imran, 2017). GA received massive support

for its proactive and forward-looking discussions on CRL. This can be seen through the feedback on GA articles and the praise they received in media outlets. A GA blogger argued:

> "I think we'll start to see that shift occur and as that happens that discussion will change from road vs public transport to around what we build around a CRL and I think that could be a really big turning point for Auckland" (ML, GA Blogger)

Auckland Transport and Auckland Council also took notice of GA's continuous, provocative and informed discussions. Subsequently, Patrick Reynolds was appointed as committee member on the Auckland Transport Board to "help challenge the board's thinking and broaden its perspective" (Auckland Council, 2017b). GA continued to generate public discussion on CRL progress and various technical, financial and policy issues over the course of its construction. During the country-wide lockdown after COVID-19 outbreak, CRL also ground to a halt and concerns were raised about its spiralling costs. Responding to the discussions on mothballing the public-funded project Matt Lowrie argued for a business case based on cost-benefit analysis along with historical facts and figures to assert that the project was in advanced stage of construction (Lowrie 2020). He also raised question as to why the exclusive focus of many economists remained on public transport projects, comparing with a number of other road-building projects across the country which were also faced with similar rising costs yet were given go-ahead? The Green Party went further with a roadmap for upgrade and extension of the infrastructure to a larger inter-city railway system on the North Island as part of post-COVID-19 rebuilding plans in the run up to 2020 general elections (Shaw and Genter 2020). However, with the landslide victory of the Labour Party, there appeared little possibility of the inter-city passenger railway system getting reasonable political or policy traction.

6. Discussion and Conclusion: towards responsible and inclusive transport planning

Transport planning in New Zealand has been traditionally dominated by technocrats and professionals who relied predominately on quantitative techniques and technological solutions for policy and decision making with little regard for public discussion and debate. Although current legislations offer opportunities for community and civil society groups to be involved in transport planning processes, people are not sufficiently empowered to be a part of joint decision-making in transport policies. Instead, the Council can exercise discretion as to whether to give effect to public opinion or not. This fact is evident from the 2012 Auckland [Spatial] Plan which went through a series of participatory processes including community meetings, workshops, and statutory plan submission. The Plan claimed to be based on a shared vision of making Auckland the most liveable city in the world. Yet, critics found that in the end the Plan failed to deliver a robust policy to implement public transport projects and turned out to be a continuation of the status quo in disguise (Imran & Pearce 2015). This, in a sense, demonstrates a dilemma in the existing participatory processes: although public opinions hold statutory significance in many instances, they are still subject to moderation or even manipulation by Council planners and experts in finalising transport policies. The research suggests that more participatory and wide-reaching forms of public discussion offer an alternative to traditional media and technocratic approaches to democratic planning processes. There is therefore a need for public emancipation and consensus whilst addressing citizens' needs through meaningful dialogue, deliberation and discussion. In the absence of a truly democratic public engagement in transport planning, various proactive community groups have emerged as social movements on the Auckland planning scene as listed above i.e., Greater Auckland (GA), Generation Zero and Campaign for Better Transport. These groups provide agency showcasing information through online and visual platforms with immediate access to information and data for public

understanding and consumption. Digital Social Innovation (DSI) has lubricated these movements, creating new and ongoing opportunities for public to engage with policy and planning issues through virtual platforms, online blogs, opinion pieces, comments, and petitions. From the research and analysis, this paper has demonstrated the role of GA in organising public discussion on CRL right from the inception and following up with the development as a successful case of sustainable, accessible and low-carbon transport provision in Auckland.

Proactive digital social innovators have challenged the technocratic planning approach in Auckland. These DSI platforms have fashioned novel and alternative ways to generate genuine debate, facilitate idea promulgation and discussion that have enriched both professional and public participation and understanding. The use of electronic social media, websites and blogs in comparison with more traditional communication and consultation practices provide greater accessibility and awareness (Gustafsson and Khan 2017). GA, in collaboration with other campaign groups and civil society organisations to facilitate discussion and debates on CRL to reprioritise, revitalise and offer viable solutions for sustainable and inclusive public transport in Auckland, as evident from the following quote:

> "Well, we have a very close relationship with the Campaign for Better Transport and with Generation Zero. We worked with those organisations very well and we are all paddling the waka in the same direction" (GA2, a former GA Blogger)

While public transport remains a primary responsibility of the local and national governments, these social innovators have continued to stimulate critical debates, not bound by the statutory deadlines and public consultation events, so that alternative ways of setting public transport priorities could be developed. These emerging DSI practices generate open debates on public transport and have the further potential to help facilitate institutional change to find alternative investments to the unsustainable road infrastructure projects. Whilst DSI have shown potential to facilitate such change, it is important to note the limits of these forms of community activism in that their role remains primarily confined to generating intelligent conversation and support through virtual platforms and online resources which can subsequently convince or compel the urban, regional and national governments to move towards more sustainable and inclusive transport planning options.

Groups such as GA,GZ and TCFBT offer a hybrid between the strong and weak social innovations from restructuring power relations to redefining social values and change mechanisms. These DSI initiatives depict the prowess to provide professional and long-lasting platforms where arguments and counter arguments, substantiated with research and data could be discussed, to make transport planning responsible and inclusive. DSI offer an exercise to broaden the democratic process to show how the less traditional and informal channels could help overcome a deficit of democracy in transport planning. This is also a form of ongoing and informal civic participation that is not driven by deadlines and the narrow scope of the formal consultations. The contributors in such situations are guided by a broad mission of values to validate or scrutinise publicly available information in a wide-ranging debate. Before the advent of electronic means, this information would have been largely difficult to access by general public, archived in bundles of files, reports, plans and other policy documents. These community and advocacy groups and their campaigns provide opportunities for civic engagement in a democratic process. DSI as a citizen-driven and informed activism is also useful for young people and other marginalised communities, who do not necessarily have the

means to engage with government policies in a formal way or are hesitant or nervous with doing so.

We should however be mindful of the DSI discourses. Whilst benefits of digital accessibility and activism are widely acknowledged, there are also certain limitations associated with it. Questions may arise as to the very nature of access of general public, especially those that are vulnerable and/or belong to more socially excluded groups of the society (unemployed, migrants, elderly, children) who do not have the knowledge, capacity or opportunity to attend the special-purpose discussion forums. Also, there are still people who do not have to benefit of unlimited, continued or quality access to mobile phones, tablets, computers, or those in the suburbs who do not have good/reliable internet connections. We conclude by asserting that virtual communities, social purpose groups and platforms can provide citizenry and civic leadership and define the future of responsible and inclusive transport systems. These virtual collectives have the potential to become catalysts of policy change in favour of sustainable transport.

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7. References

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