

Novel online approaches to citizen engagement

Empowering citizens and facilitating civic participation through digital innovation in New Zealand and Australia

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This report, and accompanying material, can be downloaded at <https://www.mysociety.org/files/2016/02/novelapproaches.pdf>

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Executive Summary

A multitude of government services, civil society initiatives and community engagement projects have migrated online over the last 15 years. Online tools for engagement ('civic technologies' to use sectoral parlance) have matured and multiplied to enable citizens to communicate with, and receive information from, varying levels of government, with the ultimate aim of repositioning the power balance between the individual and the institution. Many such digital tools are warmly welcomed by individuals and organisations with the skills and expertise to understand their potential, to appreciate their scalability, and to embrace their use. Such tools are designed and implemented with the intention of being 'individual blind' – there should theoretically be no barriers to their use if designed with usability as a priority, and the fact that they are online should enable universal access. There are, however, significant imbalances in the use of civic technologies in the UK. Preliminary research carried out by mySociety evidences strong biases towards older, affluent, white-British identifying males. These individuals are fundamentally those already exhibiting high levels of personal and political efficacy, and whilst civic technology is for all, its disproportionate use by one homogenous group within society has the potential to distort the government's perception of public needs and public attitudes.

The UK is a world leader in developing and implementing civic technologies. mySociety was one of the first NGOs to coalesce around the principles of access and empowerment of citizens through emerging technologies, having begun life with their first launch, the 'FaxYourMP' project back in 1995. There are, however, lessons to be learned in how to embed such innovations within a wider and more diverse environment. Civic technologies in New Zealand and Australia, whilst operating at a lower-volume scale, operate within an environment of greater ethnic diversity and anecdotally seem to engage higher proportions of users from groups under-represented amongst users in the UK, namely young people, women, and individuals with non-white ethnicities. Aligning user demographic breakdown with population averages not only solidifies the legitimacy of such platforms as genuinely democratic tools, it ensures that a broad spectrum of interests and issues within communities are catered for equally by government agencies.

Aims

The award of a Winston Churchill Fellowship 2015 was made with the purpose of exploring how to engage a greater diversity of users in civic technology through observing and researching the practices of government, NGOs, politicians and end-users in Australia and New Zealand.

The research question was:

'How do government and civil society initiatives and innovations in New Zealand and Australia attempt to reduce digital exclusion amongst digitally under-represented user-groups?'

In order to answer this question, 40 interviews were conducted with government, political, civil society and private individuals in New Zealand and Australia. A range of official documentation produced by government sources and civil society research was also analysed to understand the history and development of current and planned initiatives. This report breaks the research findings down into three key themes: Society and Education, Politics, Government and Media, and Civic Tech Communities. These areas are interlinked, and focus on the key elements in facilitating greater engagement that emerged from the research.

Audience

This report is intended to provide evidence of operationally successful initiatives and environments in Australia and New Zealand that have the potential to engage citizens in the digital civic environment on a broader or more diverse level than in the UK. It also aims to look critically at these programmes, and to assess whether they have scalability, or whether they are suitable for use in the UK environment. This report is designed to be read primarily by local and central government politicians and policy-makers, educational managers, and civic technology practitioners, rather than for the academic community, and as such is written, as far as possible, in Plain English.

Recommendations

The recommendations made below suggest means by which the number of currently under-represented groups engaged in using civic technology in the UK may be increased, to a point where user numbers are proportional to the UK population. They are concerned with the overarching environment that civic technology exists within, and are primarily aimed at policymakers.

Recommendation 1: Examine the feasibility of using civic technology within the Key Stage 3 and 4 curriculum to introduce young adults to the concepts of civic technology, open data and political engagement

Recommendation 2: Target additional ICT/digital education at community level and within a community environment at individuals from ethnic minority communities, those who speak English as a second language, and those from disadvantaged areas

Recommendation 3: Use existing public initiatives such as government-sponsored hack-days to target under-represented groups within the civic technology community, using positive discrimination and a peer-support network, and ensuring symbolic representation of under-represented groups in the development and administration of such programmes

Recommendation 4: Ensure diversity and inclusion in the design and development of civic technologies, and in the user-testing and monitoring of such platforms, by enabling access to publicly funded resources

1. Introduction

1.1 Wicked problems

The UK has a high-quality and functional democratic system, envied by many around the world. It does, however, have issues with democratic engagement, with young people, women, and individuals from ethnic minorities under-represented across public life, and less likely to try to get the government to ‘work for them’ in one way or another. Engagement with civic life can occur across a wide spectrum of activity, from the very passive, such as finding information about public or political subjects online, to the extremely active, where individuals lead or join campaigns on specific issues either individually or as members of political parties. The majority of citizens fall into the middle of this spectrum, engaging, or at least, wishing to engage, at a low level, and are often motivated to do so by a specific issue that directly affects them. Examples of such engagement could be requesting official information, asking politicians for their support in championing an issue, or requesting fixes for specific local problems. While such examples are low level actions, they nevertheless require a certain amount of knowledge and confidence on the part of the citizen to recognise an issue, understand that they are entitled to take action, know how to take that action, and have the confidence that they will be heard by the individual or institution that they approach.

The UK suffers from a dominance of the political and civic class by older, affluent and well-educated white males. White male politicians dominate the political institutions (71% of MPs are male, 75% of Members of the House of Lords are male), the senior civil service (66% of senior civil service roles are held by men) and the senior private sector (women make up only 18% of FTSE 100 boards) in the UK, and they also dominate the higher echelons of local government (68% of local councillors are male) and public service delivery. The established media is also dominated by such individuals, with political correspondents and journalists again overwhelmingly white and male (Just 23% of reporters on national daily newspapers in the UK are women, and men typically outnumber women as ‘experts’ by 4:1 on major TV and radio programmes across channels.). While women, young people and individuals from ethnic minorities are present in these institutions, their visibility is low, and their numbers are not necessarily proportional to the general population. With such a visibly homogenous political class, individuals from underrepresented groups are presented with the constant message that they do not belong in that particular world, regardless of the diversity and open access policies in place to enable their participation. This is a key contributor to the lack of diversity in civic engagement.

The lack of consistent and high-quality political and democratic education at Key Stages 3 and 4 has also been identified as a barrier to engagement, particularly amongst younger people. The low voter turn-outs for general elections amongst the under 30s has been given an increasing amount of attention and has become a cause for concern amongst democracy commentators in the last 10 years. Whilst there are several studies to show that such disengagement is broadly life-cycle related and that this behaviour is adjusted in later life with the acquisition of greater personal and financial responsibilities, civil society and politicians are rightly concerned about the effect of government policy on a group less inclined to vote. The causes for low civic engagement encompass life-cycle barriers (transience due to study or travel, low use of politically ‘hot’ public services such as the NHS), but studies also point to a lack of knowledge of the political system in the UK as a key factor in reducing young person turn-out. [Research](#) shows that young people lack of knowledge about how the political system works, how votes are counted or valued, and exhibit a high level of cynicism, perceiving a high level of deliberate opaqueness in how government laws

and policies are produced, and believing that even if they did take civic action, politicians would not take note in any case.

The difficulties of broadening citizen engagement amongst under-represented groups in the past has been compounded by the necessity to engage in person. It takes a great deal of confidence to attempt to engage in a process that you do not feel well-informed in, or to approach seemingly powerful individuals from the homogenous political class if your own background is very different. It takes even more confidence to do such things in person and in public. In the digital era, this should no longer present a barrier, as engagement is now possible online. However, a [recent study by mySociety](#) has shown that women, young people and individuals from ethnic minorities remain under-represented in their online civic engagement in affluent countries such as the UK and USA. How then, can we begin to engage the under-represented in online civic activity?

1.2 Digital solutions?

Public organisations and politicians in the UK gradually began embracing online technologies around 1998, and now in 2015, the majority of public offices are accessible online. Indeed, many civic interactions are now available exclusively online, with public authorities and central government departments taking advantage of digital automation to reduce bureaucracy and operating costs. Vast stores of information are now available via the internet, so citizens are able to search through the dialogue of specific parliamentary debates, examine pay scales at their local NHS trust or browse the expense claims of their local MP. Public authorities do not, however, lead the digital field in web design or user experience. Many local authority websites in particular, can be difficult to navigate, and while information may be present, it may not be readily accessible. The websites of individual politicians can be equally diverse in their quality, with some barely updated, while others hold reams of unsorted information. Even central government and parliamentary websites can be frustrating to users unacquainted with official terminology or unable to spend significant amounts of time trawling through pages of unsearchable online documentation.

Civic technology has developed organically, outside official channels, to tackle issues such as these. This technology takes the form of online tools that enable individuals to make government work for them in the way that it should. These online platforms are designed and operated by NGOs around the world, and in many cases provide a more transparent and logical channel between government and citizen than government-operated channels for interaction. Championed in the UK by mySociety, hundreds of thousands of British citizens now use civic technologies to interact with official institutions in an efficient and arms-length manner. Sites such as www.WhatDoTheyKnow.com allow individuals to make Freedom of Information requests via an easy to use portal, in which all responses and disclosures are published as a searchable public record. Parliamentary monitoring is made easier by www.TheyWorkForYou.com, a site which publishes all UK parliamentary information and discussion in a fully searchable format, enables individuals to sign up to alerts when keywords are used in debate or included in the forthcoming parliamentary agenda, search MP voting records, and allows individuals to write to their representatives directly by providing links to mySociety's other major project, www.WriteToThem.com. Local issues can be addressed via the www.FixMyStreet.com platform, which enables users to drop pins into an interactive map to show where there is a problem such as a pothole or broken streetlight, and which then automatically sends the report to the local authority responsible for maintenance. Similar sites operate around the world, with parliamentary monitoring sites operational from the USA, to Kenya to Australia, and Freedom of Information sites operating from Panama to Indonesia. Groups such as Code for All and the Poplus

Federation draw individual groups developing civic technology together and provide a global network of peer support.

These civic technologies should theoretically reduce some of the barriers to engagement that prevent individuals from engaging in offline and in-person interactions. The theory of change that drives civic technologies is that small networked enterprises can build and popularise digital services that will measurably contribute to the goal of giving citizens the skills, confidence and knowledge they need in order to be capable of demanding better. Citizens will only try to demand better from governments if they have access to a rich mix of often scarce resources: from education, to wealth, to knowledge about government failings.

Civic technologists are highly aware that they cannot give people most of these things. They can, however, design tools that can provide easier and more effective channels for dialogue with institutions. The civic technology theory of change is based on a reading of history, and specifically of the history of reform campaigns, such as those that drove the democratisation of nations from the 17th to the 20th century. It is a common interpretation of political history that governments tend only to get better at serving the needs of citizens when citizens are capable of demanding better, creating a virtuous circle that leads steadily to better government. Through their arms' length position from government, their reduction in the use of jargon, their online nature, their user-friendly design, and their core function of enabling citizens to hold governments to account in one small way or another, these platforms should be accessible and easy to use for the majority of the British population.

Research demonstrates, however, that particularly in the UK the existing political class overwhelmingly dominates the user bases of these sites, and women, young people and individuals from ethnic minorities represent much smaller user percentages than the UK population averages.

1.3 Digital in the UK

Digital democracy in the UK has been widely debated in the public sphere, most recently in the [Speaker's Commission on Digital Democracy](#). These debates often focus on the potentials for digital technology in broadening democracy and encouraging participation. The assumption in many cases is that the technology infrastructure merely has to be installed, and people will duly engage – very much a 'build it and they will come' approach to increasing online public engagement. There are however, several barriers to online participation in civic activity.

A recent '[Heatmap](#)' developed by Go ON UK illustrates the significant pockets of the UK in which digital literacy skills are low to non-existent. Basic digital literacy skills include the ability to operate simple search engines to find information online, to use online tools to procure goods and services, and the ability to interact socially. The report released alongside the graphic states that in Wales, more than one third (38%) of adults lack basic digital literacy skills, and across the UK, this stands at 23%, just under one quarter of the population. Such high volumes of digital illiteracy prevent large sections of the UK population from engaging with civic activity online.

Digital literacy levels also differ between individuals. The same report by Go ON UK finds that men (80%) are more likely than women (74%) to have basic digital skills, and skills levels start to decline amongst the 45+ age bracket, with 65+ year olds having a basic digital skills level of just 43%.

One significant factor influencing these figures is access: to connectivity, to the equipment to support it, and to the knowledge of how to use it. Taking the figures from the Go ON UK report as an example, the

Welsh basic digital literacy figures are low because there are low levels of internet connectivity in many parts of the country, with some areas lacking service completely. This is compounded by lower than average income levels across much of Wales, preventing individuals from purchasing the hardware necessary to access civic technology. In addition to these factors, low levels of political education and awareness prevent citizens from understanding their rights or taking civic action to address their issues. Even where connectivity and hardware were available, such disengagement would likely result in low levels of digital civic engagement.

There is also the issue of bias in the digital workforce. Across the world, women have historically comprised only a small fraction of those employed in information technology roles. Whilst efforts, particularly in developed nations, are now concentrating on upskilling the next generation of workers to include more women, the current environment remains male dominated. And whilst good practice in user testing digital technologies is now taking very serious account of a wide range of citizen profiles, the historic male bias continues to influence how digital tools are designed and implemented.

1.4 Project objectives

This study was born of curiosity about why the real-world marginalised are also the digitally marginalised. In the digital revolution, those left behind will suffer economically and socially, yet some of the significant barriers that marginalise individuals in the real world – age, gender, race – should theoretically melt away in cyberspace. Why then, are those dominating civic technology use in the UK the established dominant political class?

This study looked to New Zealand and Australia to examine their approaches to civic engagement and digital inclusion. The overarching research question was:

‘How do government and civil society initiatives and innovations in New Zealand and Australia attempt to reduce digital exclusion amongst digitally under-represented user-groups?’

The guiding sub-questions were:

- How can the barriers to civic technology be reduced?
- How can the user-base of civic technology be diversified?
- How can novel approaches to citizen engagement online improve digital inclusion?

The primary project objective was to learn innovative methods for digital engagement from civic technology, government and private organisations in the countries studied. This learning would be used to inform the research and the development of civic technology in the UK and in the wider global civic technology society.

1.5 Travel and research methods

The countries examined for this study were Australia and New Zealand. These countries were selected because of their advanced public, NGO and private sectors, for their historic political and social links with, and similarities to, the UK, and for their small but thriving civic technology sectors. Both countries suffer societal inequalities comparable (but very different) to the UK, and both host a variety of innovative programmes to tackle the digital divide. New Zealand in particular has a very ethnically diverse society, and is a leader in inclusion for women, ethnic minorities and indigenous people. Practices and programmes

facilitating such inclusion could provide valuable lessons for the UK. Australia's federal system allows for diversity and innovation in digital public governance and administration at a more local level, and hosts large public and private sector partnership projects focusing on reducing digital exclusion. The lessons from such initiatives could prove useful in the integration of civic technologies with public administration.

The majority of information in this study was collected via semi-structured interviews with relevant organisations in New Zealand and Australia. However, official documentation, project and organisational reports, and online analytics tools were used to supplement the verbal accounts provided. At the very beginning of the fieldwork, the ANZCA conference in Queenstown provided the opportunity to network further with the academic and communications community to link to further organisations to interview.

Organisations visited and their locations are shown in Appendix 1.

The interviews conducted were informal and structured around core questions concerning innovation, diversity and society.

2. Society and Education

This research was inspired by preliminary studies examining the demographic breakdown of users of civic technologies in the UK. The data hint that there is inequality in the user-bases of such platforms, and this suggests that digital exclusion may be a factor in creating this imbalance. In order to consider solutions to digital exclusion, it was necessary to first understand why this form of exclusion occurs, and in this case, how it is tackled in New Zealand and Australia.

Concerns about the level of public engagement in civic life are abundant in developed western democracies, and a key factor in increasing engagement is considered to be a greater emphasis on politics and public life in education. The education system in New Zealand provides a fertile and agile space for skills and knowledge development, and for the normalisation of diversity in day-to-day life. While schools follow a National Curriculum, each individual school is managed independently by a Board of Trustees with a significantly higher degree of autonomy than schools in the UK. This has resulted in greater agility in introducing emerging subjects such as ICT, but has also fostered a more comprehensive approach to teaching national history, politics and citizenship. These learning themes were considered extremely important in reducing the social and knowledge barriers often faced by indigenous and minority groups in engaging with civic life. The ability to encompass and evolve such subjects quickly has arguably contributed to providing individuals in New Zealand with a greater sense of civic awareness. Whereas 50 years ago very few people learned about the Treaty of Waitangi in school, it is now uncommon to meet an individual that does not discuss the significance of the treaty when talking about the context of civic life in New Zealand. This educational experience endows individuals in New Zealand with an awareness of the rights and responsibilities of citizens, and an appreciation of the historic context in the contemporary social and cultural composition of the country. This level of cultural and civic learning is largely absent in UK schools, where 'citizenship' studies are often rolled into wider social and personal learning classes, and are not provided the same level of importance as subjects in which examinations are attached. Providing individuals with cultural and political learning opportunities in UK schools could begin to remove barriers to digital engagement at a very young age, and provide all young people with greater awareness of the significance of political history, migration and equality in the UK.

Diversity is proactively accommodated across social and civic life in New Zealand, and indigenous culture is publicly celebrated and integrated into political and parliamentary process. Significant barriers still remain in enabling the full participation of under-represented groups, and no citizen in New Zealand would claim that current arrangements and provisions for under-represented groups are perfect; however, significant structural programmes have provided an environment in which under-represented groups are highly visible in public life. This 'symbolic representation' of individuals from indigenous and minority communities plays an important role in ensuring that citizens from these groups feel confidence in their rights and in their ability to engage in civic activity.

Digital skills and ICT education has been a staple within New Zealand and Australian schools for several years, and [94% of schools](#) are now using online learning as a core part of teaching. At least [40% of schools](#) are using civic technology platforms with their classes. The early take-up of such subjects is now beginning to bear fruit. Younger people in New Zealand encouraged to develop digital skills, regardless of their ethnic identity, now have both the digital expertise and the understanding of public life to not only use civic technologies, but also design them. The diversity of such civic technology entrepreneurs affords minority

and indigenous groups substantive representation in the design and operation of civic technology platforms, ensuring these digital tools are fit for purpose and inclusive.

Case Study: 2020 Communications Trust

The development of digital skills in New Zealand amongst under-represented groups has focused on improving adult competence in online activity within 'real-world' community environments. The work of the 2020 Communications Trust has had significant results in integrating minority ethnic communities into online communities, in particular those that have extended families across borders. Targeting parents from minority ethnic communities, training in basic and intermediate ICT skills is conducted in safe community environments such as local schools and libraries. Children are welcomed at these sessions, and many participants speaking English as a second language benefit from the language and digital support provided by their children in their learning.

Importantly, the sessions provided are practical, and designed to enable users to integrate into the community as a whole, as well as reduce isolation by enabling individuals with dispersed families to communicate more easily with them using digital means. There is therefore a focus on social media usage such as Facebook, Skype and WhatsApp, use of government websites to ensure individuals are providing and receiving the correct services, and a focus on citizenship and community. Through using such programmes to reduce digital exclusion, individuals are not only provided with the necessary basic digital skills to conduct day-to-day activities online, but individuals are furnished with the knowledge of online community and civic activities that can enable them to be pro-active in civic activity, whether that is through information gathering on issues of personal interest such as education or healthcare, or taking the first steps to communicating with official channels such as local authorities or politicians.

The combination of early years and continuing education in citizenship and public life, and the support for digital innovation and engagement have created an environment in New Zealand in which greater online diversity is effectively facilitated. Currently, responses to digital exclusion in the UK are somewhat fragmented, and as a result may fail to engage those individuals most in need of support. Implementing digital development and citizenship through programmes such as Sure Start could provide a more coherent vehicle to emulate the work carried out in New Zealand in targeting digital exclusion in minority and disadvantaged communities.

Australian approaches to reducing digital exclusion have been championed by councils and by the private sector. Large corporations such as Australia Post and Telstra have invested significant funds into digital exclusion programmes run by organisations such as [Infoxchange](#), primarily because these organisations see the long-term economic benefits of digital inclusion, both broadly in society and for their own consumer base. Australia Post has identified the growth potential for its own business from consumer usage of sites such as eBay and Amazon, and Telstra similarly looks to the digitally excluded within society as a new growth area for its telecommunications products. In reducing digital exclusion across the board, these private companies are hoping to make bigger gains in the future. These initiatives have echoes of the coding programmes in the UK run by Barclays and the BBC, however, because they are targeting specifically unrepresented groups, are arguably more effective in reducing digital exclusion.

Case Study: Infoxchange

Infoxchange is a not-for-profit community organisation that delivers technology for social justice. It works to strengthen communities and organisations, using information technology as the primary tool to create positive social change. It supports a range of civic technology platforms to enable citizens experiencing disadvantage to connect, improve their digital proficiency and execute personal tasks. Target groups include homeless individuals and homeless shelters, young people, and individuals within the community with low or no digital literacy. Through practical and community based learning, the organisation introduces useful social and consumer platforms alongside civically useful platforms, enabling individuals to take advantage of multiple aspects of digital engagement.

Infoxchange also runs civic technology platforms such as the '[Ask Izzy](#)' app, which connects those in need of shelter with available beds. This app is interesting in its user base, because its benefits are targeted exclusively at individuals suffering at least one, and most likely several, forms of disadvantage. Disadvantaged individuals tend to be under-represented in the global civic technology user base, and the implementation of such an application demonstrates that digital exclusion is not exclusively to blame for the disjointed take up of civic technologies. Many individuals belonging to under-represented groups are fully competent in the use of digital tools, but unaware of such applications or lacking the hardware or connectivity to access them. In the UK applications such as StreetLink provide similar online services that demonstrate that individuals suffering from deprivation are often digitally competent. The key to such applications targeted at individuals suffering disadvantage is to design digital tools that are relevant and helpful.

Again, in Australia, citizenship and civics are considered a core part of the national curriculum, and those interviewed for this study pointed to these early educational experiences as integral in endowing citizens with the knowledge to engage with civic life as adults. Australians also pointed to the legal obligation for citizens to vote as being a positive influence in raising public awareness of politics and political engagement, and more generally in instilling an underlying confidence in the ability of individual citizens to raise issues with their political or administrative officials. Education, in digital skills, in citizenship, and in recognising diversity, is a significant factor in engagement with digital civics. Through integrating such themes into the UK curriculum, both issues concerning diversity, and digital exclusion, could be effectively addressed in unison.

3. Politics, Government and Media

The structural environment that civic technology exists within performs a significant role in the ability of civic technologies to develop and operate. The previous section highlighted the importance of education in preparing fertile ground for civic technologists to develop tools and for ordinary citizens to engage with such platforms; however access to hardware and connectivity is essential in increasing the quality of digital democracy. New Zealand has several programmes under which hardware is provided in educational settings for individual use, also enabling the wider family to use and become comfortable with tablet, mobile and PC technologies. Various administrations in Australia are focusing more on connectivity. The Australian Capital Territory government has undertaken extensive public wifi implementation which enables residents to access online services in the majority of central public areas. In the UK, programmes to provide connectivity to digitally excluded groups have been somewhat piecemeal. The UK government 'Home Access Grant' programme was short-lived, and there have been no significant programmes implemented to replace it.

In Australia, the rationale for focusing on connectivity centres around the costs of getting online. Mobile data costs are relatively more expensive than in the UK, and therefore many individuals rely on insecure or low-cost data plans. It is unusual for citizens not to own a device, however it is not unusual for individuals to be without sufficient credit to use their devices effectively. This provision enables some of those individuals most at risk of economic disadvantage to get online for whatever reason they want.

New Zealand and Australia have a common approach to community connectivity in the form of support for local libraries. While local libraries in the UK are closing or contracting at a steady rate, early initiatives in both Australia and New Zealand to transform libraries into community activity hubs have ensured that libraries in these countries are not only flourishing, but are well stocked, clean and providers of a spectrum of digital services. Any individual may walk into a library in Australia or New Zealand and ask the staff to teach them how to use a computer. While formal classes are run within libraries for people wishing to participate in formal learning, library staff are also fully trained 'digital natives' and regularly provide one-to-one learning support for citizens in setting up basic online accounts and services.

High quality hardware is available for public use in libraries in Australia and New Zealand, and high quality and fast internet connections mean that many people migrate towards libraries to take advantage of quiet workspace and connectivity. Long opening hours also enable people to use these facilities around work or school, with the majority of urban libraries remaining open into the late evening. Libraries are core to government efforts to reduce digital exclusion in both New Zealand and Australia, and provide a safe and non-threatening environment for citizens approaching digital engagement for the first time. Learning programmes focus on access to services and information via government and official websites, social media use and consumer comparison. Importantly, government-led civic technologies are integrated with these sessions.

The digitally inclusive library environment in Australia and New Zealand provides stark contrast to the UK, where libraries have suffered significant decline (especially since the financial crisis of 2008). The example of libraries in New Zealand and Australia demonstrates, however, that such facilities are capable not only of success in reducing the digital divide, but in becoming thriving community resources. Investment and strategic direction of libraries within the UK could reinvigorate these community assets and tackle digital exclusion.

Many government and public bodies have recognised the potential of the internet to facilitate a more agile and inclusive method of working with citizens, and are implementing civic technology platforms to harness so called ‘people power’. FixMyStreet is an example of how local issues are crowdsourced in the UK, reducing the need for official inspectors and ensuring issues are addressed efficiently, however there are many innovative ways in which to enable large-scale public participation for the benefit of citizens. Melbourne Urban Forest uses mapping software to address potential issues with its urban canopy, and has achieved impressive results.

Case Study: Melbourne Urban Forest

One of the most widely used civic technologies examined for this study was the [Melbourne Urban Forest](#) project. Initially implemented to crowd-source information on the condition of trees in Melbourne City following an extreme drought in 2009, this site became hugely popular in engaging a diverse international user-base. While the majority of site users provide the tree-related information the site was designed to acquire, many other users have used it to email individual trees directly.

The site has captured the imagination of residents and visitors alike, and demonstrates how good design and the opportunity to directly engage can provide channels for citizens to perform civic activities in a way that is fun and low on commitment.

The media also play an important role in promoting and demonstrating the uses of civic technologies in Australia and New Zealand. Many journalists use Freedom of Information legislation in New Zealand and Australia to build news stories, and often civic technology helps to facilitate those requests. The acquisition of the ‘FYI’ platform by the Herald newspaper (the newspaper with the largest circulation in New Zealand) has brought civic technology to a wider audience.

Case Study: FYI

FYI.org.nz is a Freedom of Information platform running on open source Alaveteli software designed to enable citizens to quickly and easily request official information. This platform then publishes all correspondence and disclosures for the benefit of other site users. This is a useful tool for journalists, but also for members of the public interested in accessing information held by government. This platform has seen an increase in usage since it was taken over by the Herald newspaper.

In Australia, the Guardian Australia news site employs specialists in digital tools who make use of open data made available by the state, as well as other sources of information, to build tools and infographics on topical civic issues. These media ‘infomediaries’ broaden the awareness of civic technologies for public use, and draw attention not only to stories of interest, but to digital processes open to the citizenry. Civic technologists contributing to this study believed that this was a contributor to broadening and diversifying the user-base of civic technologies in these territories.

Politicians, governments and media outlets all play significant roles in creating an environment in which civic technology is able to flourish. Basic connectivity solutions, combined with innovation and promotion of civic platforms encourage citizens to view civic technologies as ‘for them’, and coupled with digital skills and civic education, create an environment in which offline barriers to participation are significantly

reduced in an online context. In the UK, political, community and media organisations could benefit from integrating civic technologies into their programmes of work, and in turn, could increase the volume of citizens actively engaging digitally in civic life.

4. Civic technology communities

The previous two sections have shown that education, environmental conditions in which diversity is recognised and valued, access to hardware and connectivity, and the normalisation of civic technology use through peers, government and media, are all important factors in creating a society that can engage equally in civic activities using civic technology. High quality, relevant and user-friendly civic technologies themselves are the final part of the puzzle. Even with perfect social, political and economic conditions for civic technology use to thrive, the technology must be present and appropriate to ensure individuals are able to engage with it, and this requires an equally positive and vibrant civic technologist community. Both the New Zealand and Australian governments support digital innovation for economic and civic development, and digital clusters have formed in several of the main cities.

Case Study: Enspiral

[Enspiral](#) in Wellington, New Zealand is an inspiring, if complex, example of the supportive environment that can be created by the slowly coalescing civic technology field. This hub for digital pioneers provides a communal workspace, peer support, an inspiring array of projects that its loosely networked members are involved with, and opportunities for collaboration. This horizontal organisation has built up a number of spin-offs and sub-brands, contracts with government and commitments to campaigns. The community of developers in this collaborative project are diverse and inclusive, and whilst generally of a younger average age than the general population, are evenly split by gender and ethnically diverse.

Another civic technology community, [CodeForAustralia](#) provides a similarly inclusive and empowering environment, with a commitment to developing the skills and networks of individuals to tackle civic issues. With a focus on integrating solutions within government, CodeForAustralia fellows are able to maximise the impact of their ideas and make their technology available for all. The presence of under-represented groups amongst fellows provides diversity in the civic technology community and in design and decision-making. Currently their female fellows outnumber the males.

Design is a critical feature of civic technology development, and can sometimes be the difference between platform success or failure. Importantly, design is subtle in its ability to facilitate citizen participation. The placement of features and options, the colour scheme and imagery, the functionality and the format and availability of information can all influence if and how an individual interacts with a website or application. Poor design can dissuade citizens from using certain platforms, and this in turn, can reinforce underlying inequality in the users of civic technologies. Certain colour schemes or language may, for instance, subtly convey the impression that a platform is male-centric. Data presented in a particular way may make them only accessible or comprehensible to individuals with higher levels of education. Certain imagery may convey the impression that a platform is mostly used by a specific ethnic, social, class or belief group.

Such design features can influence if and how citizens participate digitally, however most features such as these are implemented through a lack of personal awareness rather than through considered and specific design choices. If a group of individuals designing civic technology is quite homogenous, then their personal norms are likely to be reflected through their work. This is in no way an indicator of those civic technologists harbouring prejudice, it is merely an absence of diversity in the design process. Where civic technology communities are diverse and where individuals with different age, gender and ethnicity

experiences are involved in design, subtle biases are often identified and amended through conversation and collaborative working. Diversity within civic technology communities themselves therefore adds significant value to the tools that they produce in providing an open and inclusive user environment that is equally as likely to be accommodating for under-represented groups as it is for dominant users.

Perhaps most important of all in levelling the user playing field in civic technology is for civic technologists to design and operate platforms that in some way capture the common popular imagination. Whereas some extremely valuable civic technologies could rightly be considered 'niche', others can facilitate participation regardless of individual demographic profile.

Case Study: Design+Democracy

Massey University in New Zealand runs '[Design+Democracy](#)' in which short-term civic technologies are being used to engage citizens in topical issues. At election time they implemented a Voter Advice Application (known as a VAA), and facilitated online interactions with politicians; however these interventions were targeted mostly at young people. More recently, their [Flagpost](#) platform has provided a forum in which to upload, rate and discuss options for the new national flag of New Zealand, and as this holds a more universal appeal, the site has gained traction more widely with citizens. Importantly, this project exists within a higher education institution, with all of the facilities and expertise that accompanies that base. Having a wide range of colleagues and students with which to develop and test ideas and designs has a beneficial impact upon the quality of the tools created.

The Melbourne Urban Forest project similarly holds broad appeal with residents, and the design facilitating so called 'tree-mail' served to capture the imagination of users. The feedback or transactional component of these sites enables citizens to achieve something civic in a positive and yet 'light-touch' manner on issues that are of interest or are important to them. In the case of Melbourne Urban Forest or in the case of FixMyStreet, the receipt and benefit of that individual citizen transmission is very visible and leads to tangible outcomes. This positive reinforcement of civic activity encourages citizens to repeat or amplify such activities, and 58% of individuals surveyed on similar civic technologies have indicated that they also promote such activities to friends and contacts online or in person. Greater use of civic technologies within the UK to harness the informational power of citizens has the potential to reduce the burden on local authorities and public bodies in a spectrum of ways. Providing a well-designed and 'light-touch' digital tool for public use could both improve government responsiveness and increase citizen participation.

Most civic technology innovations in New Zealand and Australia are in their infancy, and very few reach the volume of users that similar technologies in the UK and USA currently engage. However, the focus on local level interventions is quite different from the UK. The resident populations of Australia and New Zealand are small relative to the UK (23 million and 4.5 million respectively), and occupy greater land masses. However, with populations mostly clustered near large cities and towns, civic tech communities in New Zealand and Australia tend to focus less on national interests and more on local ones. This creates a first step to participation for citizens that is likely less intimidating to first-time users than national-level platforms with more abstract or opaque national-level concerns. Platforms such as FixMyStreet in the UK operate at similarly local levels, and research has shown that users of this site are demographically different to users of civic technologies concerned with more national issues. These users are interested in their

communities and are spread more evenly across the educational spectrum. More opportunities at local level in the UK could provide positive 'first-steps' into digital civic engagement.

5. Conclusions

Innovative and effective civic technology is being developed across the world, and in many ways the UK and USA are the primary hubs for its evolution. There are, however, imperfections in civic technology in the UK, in particular in the imbalance in user groups. The aim of this study was to examine civic technology and the environment it exists within in New Zealand and Australia and consider what lessons or interventions could be used in the UK to ensure that civic technologies are equally accessible and useful to the whole population.

New Zealand and Australia exhibit a wide range of public behaviours that potentially make the civic technology ground fertile for under-represented groups to participate. Diversity and broad provision within the educational, political, social and connective environments provide under-represented groups with greater symbolic presence and substantive representation than is currently observable in the UK. There are key lessons to be learned; however, these are large, structural issues only resolvable with government commitment. Whilst civic technologists are able to recognise and respond to identified needs concerning the design of technologies and the diversity of their own organisations, the key drivers for increasing online diversity and balancing user groups lies in tackling the underlying social, political and educational frameworks that disenfranchise currently under-represented groups.

It is, however, important to note that the UK remains a world leader in the civic technology sphere. The participants of this study were quick to comment on the initiative taken by the UK government and by UK civil society groups in developing and implementing civic technologies, and many participants voiced their admiration for the quality and variety of work being carried out by civil society, and by the central UK government's commitment to digital development. There are some very fine examples of broad civic technology use from New Zealand and Australia which have been discussed in this report, however the UK remains comparatively advanced in the civic technology field, and acts as a hub for knowledge and networks. The conclusions in this report in no way detract from the exemplary work carried out by the many committed individuals operating in civic technology and digital development in the UK.

5.1 Recommendations

The research highlighted areas of best practice in New Zealand and Australia, and prompted the following recommendations. These are primarily aimed at policy-makers as 'food for thought' in considering the importance of digital inclusion.

Recommendation 1: Examine the feasibility of using civic technology within the Key Stage 3 and 4 curriculum to introduce young adults to the concepts of civic technology, open data and political engagement

The inclusion of high quality and ongoing civic and political education combined with the use of civic technology tools such as [Figure.NZ](#) provides young people with greater confidence in discussion, opinion-forming and participation in civic issues. The use of civic technology as an investigatory tool provides problem solving elements to civic education. These, in turn, embed skills and experience in young people that are valuable in engaging with public or policy issues in later life.

Recommendation 2: Target additional ICT/digital education at community level and within a community environment at individuals from ethnic minority communities, those who speak English as a second language, and those from disadvantaged areas

Digital exclusion manifests strongly in communities that suffer multiple forms of disadvantage. The targeting of high-quality yet practical digital education for adults suffering various forms of exclusion has not only had the effect of improving digital engagement, but has had an overall positive effect on individual well-being in New Zealand and Australia. Community settings such as libraries and schools facilitate social interactions as well as providing digital skills, and increase the likelihood of individuals participating in initially low-level civic activity.

Recommendation 3: Use existing public initiatives such as government-sponsored hack-days to increase participation of individuals from under-represented groups within the civic technology community, targeting individuals from under-represented groups, facilitating peer-support, and ensuring symbolic representation of under-represented groups in the development and administration of such programmes

While the civic technology sphere does not suffer from the same diversity challenges as, for example, the gaming sector, there remains a similarly problematic level of homogeneity amongst civic technologists, in particular in leadership or symbolic positions. This is already changing in the UK, with the sector and government undertaking significant work to encourage women and girls into development roles; however, increased emphasis on recruiting and nurturing talent from under-represented groups, and increasing the visibility of these individuals, could eventually create a more accommodating and diverse civic technology scene.

Recommendation 4: Ensure diversity and inclusion in the design and development of civic technologies, and in the user-testing and monitoring of such platforms, by enabling access to publicly funded resources

Civic technologists themselves must monitor the diversity of their project staff, and how their own subconscious biases influence the development and design of their tools. It would be considered good practice for civic technology groups to work towards ensuring diversity within their organisations, at staff, volunteer and trustee level. User testing is also key to ironing out design or development issues, and diversity within the test pool has the potential to enhance the quality of civic technology tools and remove potential barriers to under-represented groups. Most charitable organisations do not have the facilities or the staff to conduct extensive user-testing, and in-kind support from government or from universities in providing access to user testing labs could enable much higher quality tools to be developed for relatively low costs.

Appendix 1

Participant organisations

Organisation	Location
ANZCA Conference 2015	Queenstown, New Zealand
2020 Trust	Wellington, New Zealand
FYI New Zealand	Wellington, New Zealand
Te Aho o Te Kura Pounamu	Wellington, New Zealand
Australian Greens	Wellington, New Zealand
Enspiral / Rabid	Wellington, New Zealand
Government Information Services	Wellington, New Zealand
UK High Commission	Wellington, New Zealand
Freedom of Information Commission	Wellington, New Zealand
Royal Society of New Zealand	Wellington, New Zealand
Massey University	Wellington, New Zealand
FYI New Zealand	Auckland, New Zealand
The Herald	Auckland, New Zealand
E-Democracy	Auckland, New Zealand
Auckland Council	Auckland, New Zealand
Figure.NZ (formerly WikiNZ)	Auckland, New Zealand
Open Local	Sydney, Australia
OpenAustralia	Sydney, Australia
RightToKnow Australia	Sydney, Australia
Open Forum	Sydney, Australia
The Guardian	Sydney, Australia
Winston Churchill Memorial Trust (Australia)	Canberra, Australia
ACT Government	Canberra, Australia
Government Digital Service	Canberra, Australia
Cofluence	Canberra, Australia
eGovAU	Canberra, Australia
Digital Canberra	Canberra, Australia
LinkDigital	Canberra, Australia
ACT Digital Communications Department	Canberra, Australia
Infoxchange	Melbourne, Australia
Local Government & Municipal Knowledgebase	Melbourne, Australia
CodeForAustralia	Melbourne, Australia

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