

THE FUTURE OF ONLINE STAKEHOLDER ENGAGEMENT FOR THE WATER SECTOR

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ABSTRACT

Throughout the world, we have seen COVID-19 accelerate digital transformation. It has driven us to re-think the way we do many things – and the infrastructure, water, transport, and buildings industry has also been disrupted. Where a previous in-person community forum event or printed documents in a local library would have been sufficient to communicate an environmental assessment of a project, this is simply not the future. Where a team of project designers and engineers previously met in a room to collaborate on paper or 2D digital images, now this happens online in a connected, 3D, 4D, and now 5D environment. Globally, we have seen a significant shift towards new digital tools to help us adapt to this 'new normal' of our post-COVID world and a new digital future.

New Zealand is entering a period of significant change with the reform of the water sector, including the creation of the independent water services regulator, Taumata Arowai, and the amalgamation of 67 council water units into four water entities. This presents a great opportunity to do things differently and to consider what is possible with online stakeholder engagement in the New Zealand water sector.

In this paper, the authors provide examples from Australia, New Zealand, the United States and the United Kingdom to show where virtual engagement tools and online platforms are achieving effective and meaningful community engagement and what we can learn and apply to the water sector in New Zealand.

KEYWORDS

infrastructure, water, communications, digital transformation, digital engagement, innovation, water reform

PRESENTER PROFILE

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INTRODUCTION

In the past few years, three very distinct but powerful drivers have been behind digital innovation in the infrastructure and resource management sectors. Whilst seemingly unrelated at the source, the COVID-19 pandemic, widespread regulatory reform across environment and planning and mainstreaming of the climate change movement have coalesced to create a sweet spot for innovation in our communication and engagement practice.

This paper explores how global drivers are powering the transformation behind digital public services and the lessons we can learn about regulatory reform as a vehicle for change. The authors provide best practice examples from Australia, New Zealand, the United States and the United Kingdom to show where this is being done effectively and what we can learn and apply to the New Zealand water sector.

1 GLOBAL DRIVERS FOR DIGITAL INNOVATION

WE HAD TO CHANGE

Across the globe, stay-at-home orders forced us to work differently and find new ways to work, live and socialize remotely. Our need for connection has never been greater, yet the restrictions and inability to meet face-to-face left us searching for ways to communicate and engage online. The use of social media for connection in personal domains is not new, but notably COVID-19 has driven the rise of equivalent technologies in professional domains. It has driven exponential growth, most significantly accelerating the rate of digital adoption with the introduction of new apps or processes for what was once mandatory "in-person" or "on-paper" activities. To keep things moving, we have had no choice but to search for alternatives to many things we do. The answer, for many, has been with technology in the workplace. A McKinsey survey found that COVID-19 had brought forward the adoption of digital technologies in the workplace by three to four years and that these changes are here to stay (McKinsey, 2020).

WE NEED TO CHANGE

In terms of regulatory reform, there are some significant trends across environment and planning policy that are changing the way our industries communicate and engage the community. Independently, but unanimously, national planning frameworks have been found to create an onerous process that generates increasingly longer documents, that take longer and cost more to prepare, limit widespread public participation, and do not necessarily make for better decision-making or better environmental outcomes (Samuel, 2020; Ministry of Housing, Communities and Local Government, 2020).

A report issued to the White House Council on Environmental Quality (CEQ) in 2020 in the United States (US) found that the average completion time of an Environmental Impact Statement (EIS) was 4.5 years (Executive Office of the President of the United States, 2020). To address this issue, the US moved to streamline the National Environmental Policy Act (NEPA) process with the Council of Environmental Quality, finalising a major revision of 40 Codes of Federal Regulations that, in part, explicitly authorized use of digital solutions throughout the NEPA process (Council on Environmental Quality, 2020). This includes, for

example, establishing agency and project websites to host environmental documents and associated information, conducting online public hearings and meetings, providing notice to affected communities through electronic media and enabling electronic submission of public comments.

In England, a Planning for the Future white paper (2020) signaled an intention to make radical changes to the English planning system. It made powerful statements about the current planning system being a relic of the mid-20th century, reliant on documents, not data and with a user experience that discourages engagement. It specifically referenced the lack of interactive digital services. A reform of the planning system would allow local communities to be consulted from the very beginning of the planning process – rather than as a check-box activity later in the process. Through adoption of interactive digital services, such as online maps and data, the whole system will be made more accessible, modern and understandable.

In 2020, Australia's Independent Review of its environmental protection law (*Commonwealth Environment Protection and Biodiversity Conservation Act, 1999*) led to a set of key recommendations and reform, calling for improved community participation in decision-making and better access to information that is interactive and digitally connected (Samuel, 2020).

Across the world, we are seeing a clear and consistent call to action for regulatory reform that enables a more connected, more accessible and more inclusive community participation process for infrastructure planning and natural resource management.

WE WANT TO CHANGE

The climate movement, as a growing global social movement, has mainstreamed environmental issues such as greenhouse gases, global warming, sea level rise and more frequent extreme events. With this mainstreaming and highly active public debate, we have seen higher participation from society, in matters that affect natural resources, carbon emissions and community resilience. Aided by social media platforms and the new electronic methods for participating in infrastructure projects, there is greater interest and intent from people and communities to have their say on matters that affect their lives, livelihoods and the world we live in.

Collectively, these three trends are fueling a drive for innovative and new ways to communicate and engage in the modern world.

2 THE NZ FOCUS – WATER REFORM AND STAKEHOLDER ENGAGEMENT

Te Mana o te Wai recognises that protecting the health of freshwater (te hauora o te wai) will in turn protect the health and well-being of the wider environment (te hauora o te taiao) and of people (te hauora o te tangata) and protects the mauri of the wai.

New Zealand is entering a period of significant change with the reform of the water sector, including the creation of the independent water services regulator,

Taumata Arowai and the amalgamation of 67 council water units into four water entities. Effective stakeholder engagement is vitally important to achieve Te Mana o Te Wai, to support equal representation of communities across New Zealand and to establish trust in the governance of the new entities.

The importance of effective community participation has been considered in this regulatory reform with the Water Services Act 2021 (WSA) and proposed Water Services Entities Bill (WSEB) introducing new requirements for governance, iwi participation, and consumer engagement.

These requirements are reflected as reporting obligations, such as publishing an Asset Management Plan, Funding and Pricing Plan, and Infrastructure Plan. New entities must *“Prepare and publish a report on how the entity **considered consumer and community input** into, and feedback on, the plan and incorporated it into the plan”* (Water Services Entities Bill, 2021 cl 149, 152 & 155), as well as broader engagement provisions. These include the requirement for the Chief Executive of each water services entity to establish a consumer forum to assist with meaningful engagement and for the Chief Executive to undertake an annual consumer “stocktake” of the consumer interest. The intent is to capture feedback on how the entity is performing and plan a response to consumer and community needs.

But is this enough? The role of the legislation, as you might expect, is to prescribe ‘what’ is required, without going too far into ‘how’ this should be achieved. Broad guidelines are included such that community input or feedback may be sought via hui or meetings, social media or any other forum that the water services entity thinks appropriate. However, it stops short of defining what extent of consumer and community activities are considered appropriate, adequate, meaningful, or effective, and how the water regulator will apply consistency in assessment when reviewing a range of different engagement approaches.

Within these regulatory instruments, defined operating principles (Water Services Entities Bill, 2021, cl 13) create the environment to be progressive and ambitious in our approach to community engagement. The principles of openness and transparency, engaging early and meaningfully set the intention for water service entities to give effect to Te Mana o te Wai and represent the diversity of consumer interest across the region.

The overarching principle of being innovative in the design and delivery of water services and infrastructure is a call to action for our New Zealand community engagement practice and the water industry at large to think differently.

3 WHAT DOES EFFECTIVE ONLINE ENGAGEMENT LOOK LIKE?

International best practice guidelines for encouraging public participation in decision-making are published by the International Association for Public Participation (IAP2, 2022) and contain over 60 engagement methods that suit a variety of contexts and objectives. It is acknowledged that different techniques suit different target groups. For example, verbal communication is often preferred by Māori and Pacific people; young people prefer digital communication methods, and public meetings; hui, fono or focus groups are useful ways to get people

together to canvass different points of view and understand each other's perspectives (Te Tari Taiwhenua, 2022).

However, the focus of this paper is on the future of online stakeholder engagement. So, as we prepare for one of the most significant reforms in New Zealand's history, inspired by a greater sense of social, environmental, and cultural justice, and spurred on by COVID-19, the following sections of this paper will focus on the digital engagement methods being used around the world that we can apply across the New Zealand water sector to enable better social and environmental outcomes.

GETTING PEOPLE TOGETHER – VIRTUAL PUBLIC MEETINGS

The Eastern Busway Alliance project received approval from the Auckland Transport Board to start consultation with the Howick Ward community, just as the Level 4 COVID-19 lockdown started in late August 2021.

The project team were very mindful of the challenges and uncertainty being faced by all New Zealanders and sought broad advice from community leaders and elected representatives on the best approach for community consultation. Given the ongoing uncertainties of COVID-19, the decision was made to proceed with consultation in late October 2021 rather than delay these important conversations.

A virtual consultation room (Figure 1) was created and linked from the Eastern Busway webpage for people to visit. Giving the look and feel of a real room, virtual presentation boards were placed around the room that, when clicked on, directed participants to different aspects of the project. The information available included a concise brochure, 'Your Guide to the Eastern Busway', a short video, imagery and artist impressions, detailed project maps and frequently asked questions.



Figure 1 – Eastern Busway virtual consultation room

An interactive map, comments wall and a feedback form were the most popular engagement tools within the virtual room as they allowed participants to interact with the draft design, leave comments and to read what others had to say.

Over 13,100 people visited and interacted with the information within a two-week period. Combined with a social media and advertising campaign, the project reach was over 850,000 people across Auckland. Within four weeks, over 500 pieces of feedback were received online, which - considering societal challenges at the time - was considered strong coverage and exceeded previous consultation on the project.

Learnings from this case study highlighted the importance of household internet access. Howick Ward has very high access with 87% of households connected, which is atypical compared to other geographies in New Zealand. East Auckland is ethnically diverse, so links to a translation hub with resources in seven languages enabled greater access and provided a strong advantage to online, cost-effective scaling of information to diverse communities.

DIVERSE PARTICIPATION – TECHNIQUES FROM THE UK

When Dŵr Cymru Welsh Water wanted to engage with their community in relation to their new water strategy, they wanted to use online engagement platforms to ensure that the community could engage with the strategy, understand the impact of the proposal and provide informed feedback. As part of this strategy, Welsh Water were proposing to build a new water treatment works to replace three existing treatment plants. In addition, they were also upgrading existing pumping stations, building new pumping stations, upgrading existing pipelines and adding new pipeline routes.

Using a virtual stakeholder engagement tool (Figure 2), consultation functionality included interactive maps, where the customer could navigate through the proposed options, zoom in and out of maps, view the elements of each specific option and comment and provide feedback with individual “have your say” popups.

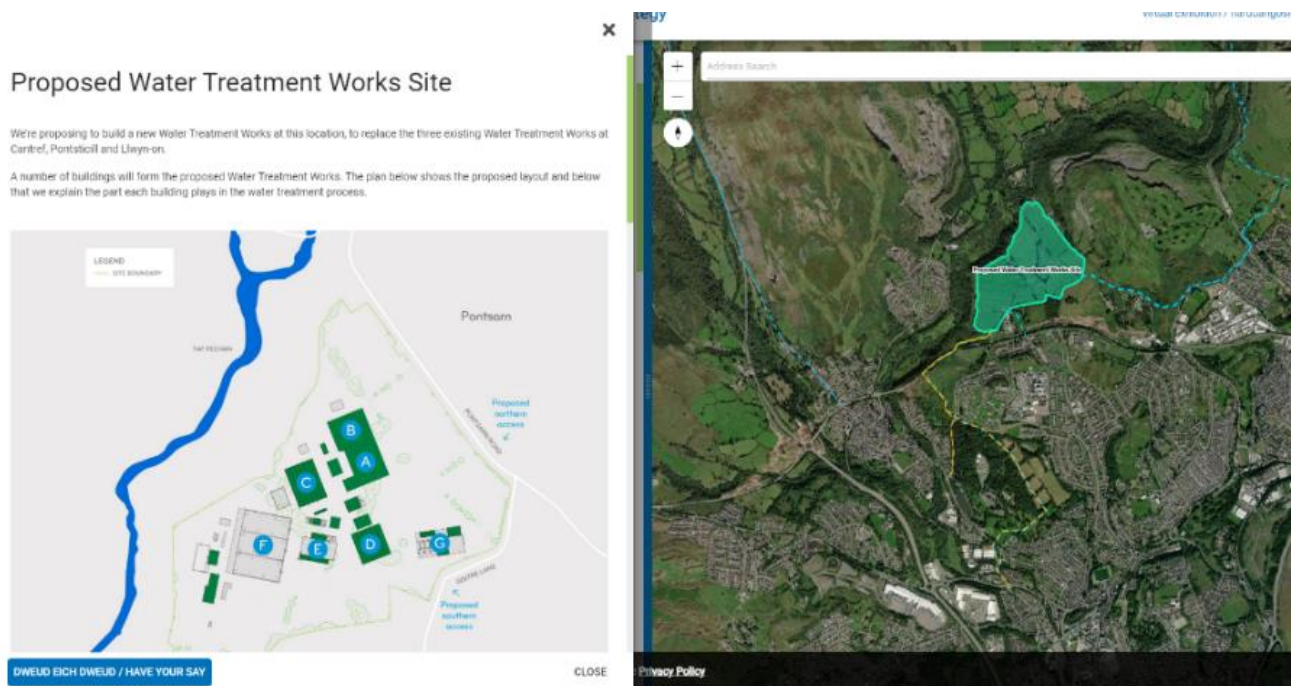


Figure 2 – Dŵr Cymru Welsh Water virtual stakeholder engagement tool

The site also provided the ability to select your preferred language, either Cymraeg (Welsh) or English (Figure 3). There are many projects in New Zealand where information could be provided to the community in both Te Reo Māori and English. The opportunity of automated online translation solutions or sharing of manually prepared materials in several languages where other languages are important for the community provides an enhanced engagement experience that a previous hard-copy or in-person only communication may have missed.

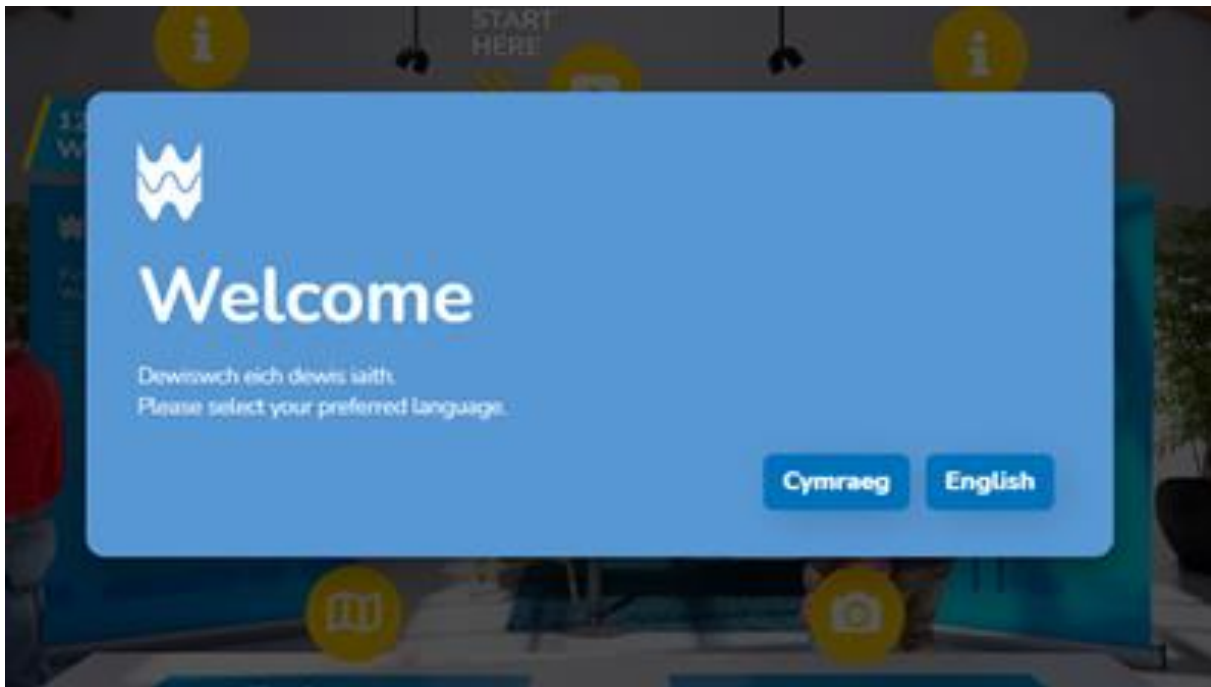


Figure 3 – Language options for enhanced engagement experience

Similar online portals and platforms are embracing the use of multimedia video, 3D graphics and spatial data, augmented and virtual reality and audio soundscape for story-telling and immersive experiences. These methods demonstrate the variety of engagement processes that can be achieved with digital tools as complementary techniques for sharing information and proposals in context of place and environment. We should continue to explore similar technology and techniques to allow people to provide verbal electronic submissions to water policy and planning decisions. This move has the potential to improve accessibility for Māori and Pacific Islands people, people with disabilities and other minority groups.

THE GROWTH IN ONLINE DOCUMENTS – A TRANSPORTATION CASE STUDY

Through major planning reforms in other global regions, we have seen that accelerating the development and application of interactive planning documents is a critical step in the planning process. It provides the ability for communities to review and comment on project alternatives and potential environmental impacts. Until recently, this process has mainly involved volumes of hard copy documents being placed in public places for review, with digital copies consisting of static PDFs available on project websites. Modern tools like online platforms are shown to:

- Help communities and key stakeholders understand and easily access information that is relevant and targeted to them
- Effectively convey and demonstrate key findings and impacts of the project
- Empower communities and stakeholders to provide timely, informed input.

In July 2021, the United States Federal Highway Administration and Arizona Department of Transportation published a digital, interactive Environmental Impact Statement (Figure 4). The Final Tier 1 Environmental Impact Statement (EIS) for the Interstate 11 (I-11) project strived to elevate their stakeholder engagement and offer greater accessibility and transparency for project stakeholders, agencies, and the public.

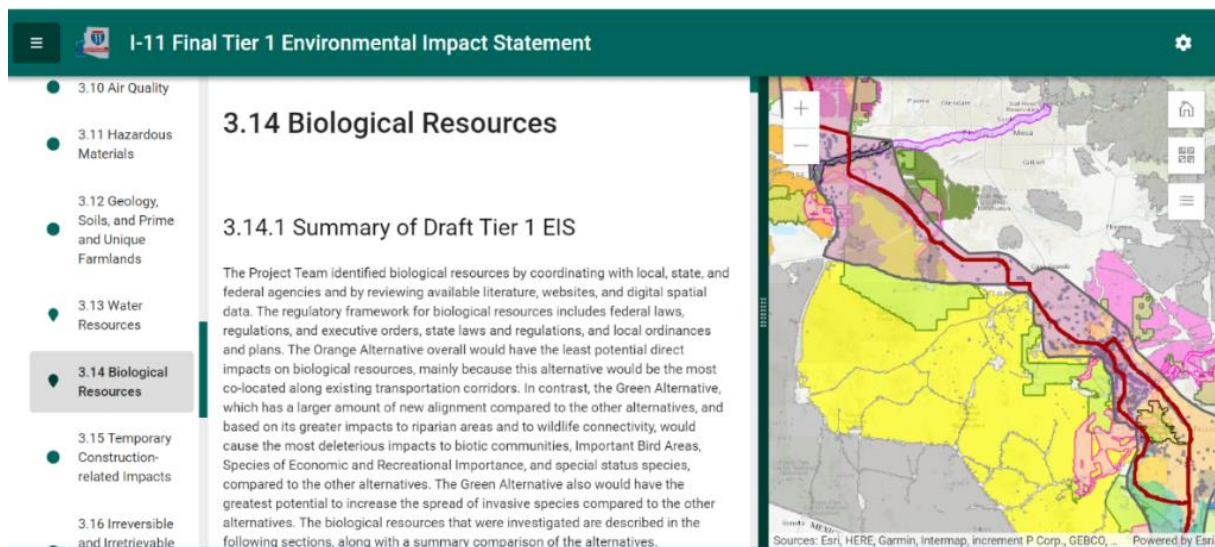


Figure 4 – Interactive Environmental Impact Statement for the I-11 project

Prior to the I-11 Final EIS, NEPA documents were moving in the direction of brochures and shortened, graphical PDF (static) documents. This team instead chose to move to an interactive approach. Publishing online, interactive content with graphics, videos, and zoomable maps allows readers to drill down into details where needed and truly understand the project.

Steven Olmsted, ADOT Program Delivery Manager, noted some early benefits realized from use of this digital solution - *"The Final EIS has been out for just 75 days and we are at over 3,000 views. We are very pleased with where it's at already. We received a lot of responses on the tool, especially how pleased partnering agencies were with the availability of shapefiles and map layers."*

INTERACTIVE MAPS – THE POWER OF SPATIAL DATA

Questionnaires or surveys are an essential part of any engagement toolkit. Data collection through an online survey is an established method to collect large amounts of data at relatively low cost with all the convenience for respondents to answer questions at any time and from any location. Dedicated online survey platforms have been widely deployed for about a decade. Throughout this time, maturity in methodological components has established the critical success factors of:

- a user-friendly design and layout
- selecting survey participants
- data management and
- ethical issues of informed consent, privacy and confidentiality.

Consistent with an overall trend of communication styles moving from largely text-based to spatial and video media, the rise of map-based survey questionnaires and the sophistication of the underlying technology is in an interesting growth phase. Application of map-based survey techniques in infrastructure projects enables more locationally-specific information to be supplied, often providing more accurate context to the response and in a spatial display, provides added benefits of quickly seeing, and interpreting trends, clusters and hotspots (Figure 5).

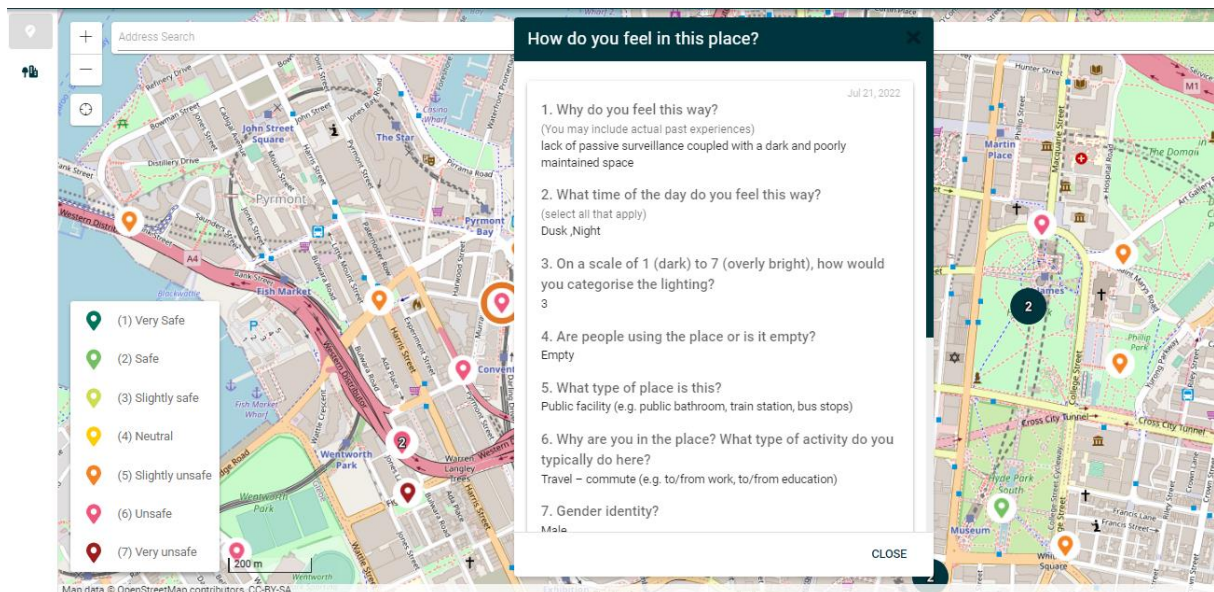


Figure 5 – A map-based survey technique used on the Safe Places site

This technique has been used in a survey aimed at exploring the perceptions of safety in public space and the factors that influence those perceptions, including aspects of the physical surrounds and the personal 'lens' by which these factors are viewed (AECOM, 2022). The results of the survey will inform the design of safe and inclusive public places, and to develop a toolkit for practitioners to design safer infrastructure and places.

The survey design has focused on a mobile-first user experience including geo-location features and web content accessibility. The survey has attracted over 1,000 interactions within a three-month pilot period.

There are a range of significant benefits to this style of engagement including:

- Technical information is provided in an easily accessible and user-friendly format which is imperative when working to build more meaningful, equitable engagement with the community.

- Readers can find relevant information faster often starting with a property or address search.
- Agencies can eliminate guesswork for those evaluating the data and comments from stakeholders.
- Real-time comments enable tracking of how and where project information is being received by the public and necessary adjustments to be made to messaging throughout the engagement process if required.
- Engagement and feedback can be broadened beyond just a physical location if users are temporarily re-located, geographically dispersed (regional areas) or have interests in an area but do not currently reside in that location.

Equally, the challenges of digital inclusion in New Zealand are well understood and there is widespread agreement about the varying levels of digital literacy across New Zealand. To be digitally included, a person needs to have affordable and reliable access, the necessary digital skills, a meaningful reason to engage with the digital world, and trust in the internet and online services (Cavanagh, AM 2020, Grimes, A & White, D, 2019; Digital Inclusion Research Group, 2017).

It is perhaps these high-level society challenges that tend to deter individuals, or groups within industry, from adopting online engagement tools. However, without adoption and real application, we limit our opportunity to resolve more specific challenges like data privacy, digital activism and data management. Perhaps our greatest challenge for the water reform is pushing past these barriers to adoption to allow innovation, and online community engagement solutions to expand and evolve in parallel to national improvements in digital inclusion.

4 CONCLUSIONS

There are a myriad of engagement tools to choose from in the market and finding the right fit relies heavily on understanding your audience, how they will access the information, the size of the project and the desired outcome. To maximise engagement and connection, face to face engagement is still an extremely powerful tool as it is direct, socially equitable and enables two-way clear dialogue.

However, we have seen from the lessons shared in this paper from across the world in a range of different infrastructure industries, that the inclusion of well-developed digital solution as part of this suite of engagement tools is extremely valuable to a diverse community and successful engagement. The major digital shift over recent years and the incredible benefits online tools can provide compels us to move 'digital' up the priority list of engagement solutions.

There is no greater time than now for us in the New Zealand water sector, to prioritise inclusion of digital solutions to further enhance our engagement with a range of New Zealanders including Māori and Pacific Island people – all who deserve to understand and have their say to drive better social and environmental outcomes.

Modern digital tools are simple to use and provide widespread opportunities for stakeholders to understand a project, its impacts, and its potential before it goes

ahead - facilitating deeper engagement and more informed consent and driving better and more cost-effective planning and project decisions.

It's up to us to decide how we embrace these times of reform to drive better outcomes for New Zealanders, our environment, and our communities.

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