

Article

## Accessible and Inclusive Cities: Exposing Design and Leadership Challenges for Bunbury and Geelong

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### Abstract

This article compares research identifying the systemic barriers to disability access and inclusion in two regional Australian cities, and discusses some of the leadership and design challenges that will need to be addressed by government and industry to embed universal design principles within the planning, development, and redevelopment of urban infrastructure. In Geelong, Victoria, given the often-opaque decision-making dynamics at play in the urban planning and development of cities, the disability community sought a more holistic and consultative approach to addressing access and inclusion. Systems-thinking for a collective impact approach was used to generate recommendations for action around improving universal design regulations, community attitudes to disability, access to information, accessible housing, partnerships, and disability employment. At Bunbury, Western Australia, a similar project analysed systemic factors affecting universal design at a local government level, and recommended a suite of safeguards for universal design including staff training, policies and procedures, best practice benchmarks, technical support and engagement in co-design. We describe the process followed in both studies to identify how, through collaborative and action-oriented research methods, the studies identified key technical, cultural, political, and structural changes required to achieve equitable access and inclusion in the urban landscape.

### Keywords

accessible cities; Australia; Bunbury; co-design; disability; Geelong; inclusion; inclusive design; participatory action research; universal design

### Issue

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### 1. Introduction

This article compares research from two Australian regional centres—Geelong in Victoria (Deakin HOME Research Hub, 2019) and Bunbury in Western Australia (Johnson, 2019)—that shared a similar goal of gaining recognition as exemplar cities in disability access and inclusion. We describe the collaborative and action-oriented research processes followed in both stud-

ies and discuss some of the technical, cultural, political, and structural changes identified to help achieve greater access and inclusion within the urban landscape. The projects bare comparison because of their alignment in terms of the research processes adopted, which in both cases relied on holistic understanding of their cities through wide-ranging community engagement, and the overlap in recommendations made by the studies for government and industry more widely that were aimed

at embedding universal design (UD) principles within the processes of planning, development, and redevelopment of urban infrastructure.

In Geelong, the perception of an extremely slow rate of progress being made by different tiers of government and the commercial sector to improve access and inclusion in the community, despite years of lobbying by disability advocates, suggested the need for a more holistic process to effect lasting structural change. This perception of slow progress by the “system” drew study participants’ attention to the complex underlying dynamics and patterns of interaction at play in their city, and the notion that “the problem of inaccessibility is embedded within the wider socio-political processes that frame the production of space in Western societies” (Gleeson, 2001, p. 252). Systems thinking, an analytical approach to the complexity that is applied to issues, problems, and contexts where there are many possible solutions or ways of creating solutions, was harnessed into a collective impact approach to develop a deeper understanding of the complex and interdependent structural, social, economic, and political processes that obstruct or drive change.

In Bunbury, a vision to become the “most accessible regional city in Australia” (City of Bunbury, 2017, p. 7) led to a partnership between the City of Bunbury and Edith Cowan University to co-fund an industry engagement scholarship for a PhD candidate to research the barriers and enablers of disability access and inclusion at a local government level. The project used participatory action research (PAR) methods to recruit a group of people with lived experience of disability as co-researchers. They were tasked with the role of analysing structural and cultural factors impacting disability access and inclusion outcomes within the City of Bunbury. Through deliberative dialogue with key decision-makers at the City of Bunbury, and framework analysis of the data gathered, the group identified significant technical and cultural barriers operating at the design stages of public infrastructure that were leading to inaccessible design outcomes and the experience of being “disabled by design.”

This article describes the processes followed in the Geelong and Bunbury studies to uncover key cultural and systemic themes related to UD and discusses the various recommendations made by both studies for embedding and safeguarding UD in public-realm design processes, including enhancements to regulatory standards, best practice benchmarking, staff training, accreditation, disability awareness, policies and procedures, and leadership and advocacy. At the heart of this comparison is understanding the very nature of making a change in the context of the seemingly insurmountable challenges facing people with lived experiences of disability within Australian cities.

While both projects were conceived of independently, they commenced with strikingly similar aims—reflecting a broader increase in societal responsiveness towards disability access and inclusion. The City of Bunbury’s aspiration in 2014 was to become the most

accessible regional city in Australia, a goal underpinned by a desire to understand how disability access and inclusion in Bunbury compared to other similar-sized regional cities in Australia. This effort was restrained by the lack of reliable indicators by which a local government could conduct a comparative baseline self-assessment regarding their progress towards disability access and inclusion.

Five years later, the Accessible & Inclusive Geelong Feasibility Study sought to ascertain the feasibility of making Geelong “a world-class accessible and inclusive city aligned with global benchmarks” (Deakin HOME Research Hub, 2019, p. 2). Like Bunbury’s aim, this was a highly aspirational goal that was difficult to evaluate progress towards. During the early stages of the project, a review of global evidence on benchmarking accessible and inclusive cities found that, when it comes to measurement, accessibility is a slippery concept even when applied only to the built environment. While the United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2007) did much to set an agreed definition of inclusion and equal access, the most direct explanation of built environment accessibility defines access only in terms of “equal” access, the elimination of “obstacles and barriers,” the “implementation of minimum standards and guidelines,” and the provision of “appropriate forms of assistance and support” (United Nations, 2007, Article 9). Measuring inclusion might be said to be even more boundless than accessibility, and there is certainly no agreed method (Neely-Barnes & Elswick, 2016).

Taken together, the lack of clarity about the concepts of accessibility and inclusion poses significant difficulties when applied to the task of defining the characteristics of an accessible and/or inclusive city. Without clear goals and baseline assessment, the achievements of both Bunbury and Geelong would be difficult to compare against other cities. However, both projects recognised an opportunity to instead focus attention on uncovering the often hidden and complex dynamics of decision-making that were leading to inaccessible and discriminatory design outcomes in the first place and thereby identifying key strategies that could facilitate lasting structural and cultural change with UD as the central focus.

## 2. Background

### 2.1. Models of Disability

People with disabilities have historically been stigmatised and segregated from the rest of society, mainly due to pervasive negative societal attitudes and barriers encountered in the built environment (National People with Disabilities and Carer Council, 2009). As we shall summarise here, the root of such discrimination originates in the way disability has been socially and culturally constructed through public discourse over the past 100 years.

During the 19th century, disability was largely constructed as a personal tragedy or the result of individual moral transgressions. Disability was considered a burden to be endured and even a eugenical threat to society (Mathieson et al., 2008). The dominant charitable response to disability was through the benevolent provision of institutional care (e.g., convalescent homes) for the physically “disabled,” and asylums for the mentally “impaired.” The charity model, which typically involved forms of dislocation from one’s family and community, led to people with disabilities being kept “out of sight, out of mind.” Effectively, this removed any pressure from designers of the public realm to provide accessible or inclusive environments outside of the specialised institutions, asylums and convalescent homes provided for the elderly or “infirm” (Imrie & Imrie, 1996; Kitchin, 1998; Mathieson et al., 2008).

Advances in medicine, together with two world wars causing widespread injury-related disability in the general population during the early part of the 20th century, saw a conversion or redevelopment of many asylums into medical hospitals. The medical model offered people with an impairment the hope of rehabilitation and reintegration into the community, but also saw a massive rise in numbers of people with permanent disabilities effectively removed from society. From the 1960s, Western governments began to re-integrate people with disabilities back into their families and communities, leading to the widespread closure of institutions (Carling-Jenkins, 2014; Cocks et al., 1996). However, after being “locked in” for so many decades, many people with disabilities now found themselves effectively “locked out” of society due to the overwhelming prevalence of physical and attitudinal barriers—an experience that lingers even up to the present day (National People with Disabilities and Carer Council, 2009).

In 1981, the United Nations began raising concerns about the global phenomenon of inaccessible urban landscapes and began to develop strategies for removing physical and social barriers to full participation in the community (United Nations, 2004). The social model of disability, developed from the late 1970s through to the 1990s, reframed the problem of disability by challenging charitable and medical model discourses that constructed disability as resulting entirely from personal tragedy or individual impairments. The social model instead critiqued the cultural and structural shortcomings in society that compounded impairment and even created it. Social model proponents argued that people experience impairment as a normal, expected condition of life, but that they become “disabled” by society when barriers manifest in the form of physical barriers and attitudinal prejudices (Oliver, 1990). The social model strongly influenced the creation of Australia’s first National Disability Strategy (2010–2020), which aimed to unite state and federal governments with the purpose of removing barriers to a full and inclusive life for citizens with disability (Australian Department of Social Services, 2011).

More recently, the universalist model of disability, as an evolution of the social model, defined ability in terms of a diverse spectrum, challenging the common binary of “disabled” and “non-disabled” (Bickenbach et al., 1999). This shift has had significant implications for public-realm design by positioning diversity as a core consideration for all design projects rather than an adjunct and adding an imperative to carefully consider the full spectrum of human abilities and limitations in all public-realm design (Australian Network on Disability, 2015).

## 2.2. Disability Participation in Built Environment Design

According to Owens (2015), no policy should be developed, or course of action taken without the full and direct participation of those who will be affected. People with disability should therefore be actively involved in design-related policy developments and decision-makings that enable them to defend their rights and lifestyles (Baum et al., 2006). Accordingly, researchers, architects, and urban planners have highlighted the need to foster participation in urban design by people with disability. It is argued that the presence of people with disability in informing the design of the built environment as valued partners and experts will mitigate the adverse stereotyping of disability and promote wider cultural and social acceptance of disability as a normal human condition (Nirje, 1985; Wolfensberger et al., 1972), and, in turn, lead to empowerment (Taket et al., 2013).

When people with disability are partners in the process of designing public spaces, via processes known as co-design or participatory design, public-realm design becomes a natural expression of an inclusive and participatory culture. Such co-design is described as a “reflexive dialogue” where the designer tries to shift the existing scenario into an optimal scenario through collaboration with key end-users (Sarmiento-Pelayo, 2015), a process leading to trust, dependability, and increased social capital (Ho et al., 2011). Yet there are significant hurdles to including people with disability in design, such as social isolation, their long history of oppression, time or energy constraints, and physical barriers to participation, to name only a few. However, Cook (2002) suggests that people with disabilities are perceived as “hard to reach” not so much because of their impairments, but because of the unwillingness or inability of authorities to make accommodations and involve them in decision-making processes in the appropriate manner.

## 2.3. Regulatory Framework

It is worth reviewing the role of planning frameworks and design guidelines in setting and implementing standards for accessibility in the built environment. Under Australian legislation, the major federal law relating to access to built environments is the Australian Disability Discrimination Act (1992). This act stipulates that a person may not be discriminated against by denying them

access to or use of public premises unless such barriers existed previously or removing them would impose “unjustifiable hardship” on the owner of the premises. In 2010, the Australian government committed to codifying individual rights to access public premises. Today, the Building Code of Australia sets minimum standards for building design and construction throughout the country. The standards are currently being reviewed so that they are consistent with the requirements contained within legislation, particularly the 1992 Australian Disability Discrimination Act. A common criticism of the Building Code of Australia is that it does not encourage developers and designers to go beyond the “minimum” standards it sets, to the degree necessary for creating built environments that are universally accessible (Hamraie, 2017).

As part of the Geelong study, a review of all planning regulatory documents relevant to the region was undertaken. This review highlighted that while these 25 documents mentioned “access” over 700 times, they did not always define or necessarily mandate this principle for the built form of planning over the region. This deficiency echoes the situation in most locations across Australia. For instance, the Planning and Environment Act (1987) and the Victoria Planning Provisions do not define the term “accessible.” Whilst definitions of access and inclusion remain ambiguous in principal planning frameworks, local governments commonly try to embed equality and rights in their local plans. For instance, the vision of the Geelong Access and Inclusion Plan is to “uphold the rights of equal and dignified access for everyone while setting out how we will work towards full equality for people with a disability to participate and be included in our broader community” (City of Greater Geraldton, 2018, p. 5). While the design of the built environment, access to public spaces and services, and decision-making process for those of all abilities are consistent concepts across these plans, they often lack precision (Johnson, 2019).

Out of new conceptions of disability as diversity has come strong advocacy for new approaches to built environment design for disability. Two commonly advanced approaches are worth describing here for their prominence in the results of the research described in this article: UD and co-design. UD, also known as “inclusive design,” “design for all,” “accessible design,” or “barrier-free design” (Persson et al., 2015), is defined as “the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design” (Mace et al., 1991, p. 7). The message behind UD is that the full range of human diversity can, and therefore should be, anticipated in design and that public-realm designers should seek to educate themselves about the spectrum of human abilities (Steinfeld & Maisel, 2012) and “learn from the margins” (Rappolt-Schlichtmann & Daley, 2013, p. 311). Despite the growing acceptance of UD principles, their use in practice is still in its early stages (Steinfeld

& Maisel, 2012). A prime aim of UD is to far exceed minimum standards as a means of reducing discrimination and enhancing social participation. This approach to design is called for internationally by the United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2007) and, in Australia, by a range of national, state, and local policy directives.

### 3. Method

#### 3.1. Principles and Methodology

For both studies, principles of inclusion, participation, and collaborative inquiry provided a methodological starting point to inform data collection. In Bunbury, PAR was used to engage people with lived experience of disability as co-researchers, who together investigated the barriers and enablers of UD within the City of Bunbury local government authority. PAR positions the traditionally powerless and oppressed as researchers and activists, engaged in a concurrent process of learning, sharing, and influencing. It also shares control over how the data is interpreted and applied, with the expectation that findings and recommendations will be acted upon within the immediate setting, rather than generalised and decontextualised for use in other settings. Even the process of inquiry itself can catalyse immediate action, without waiting months for the data to be translated, which is part of the intentionally transformative effect of PAR (McIntyre, 2008).

Similarly, in Geelong, an emancipatory and inclusive research approach provided a conceptual, ethical, and methodological starting point that necessitated the inclusion of people with disability throughout. This approach ensured that the issues examined were those identified by people with disability and that the outcomes would be owned by and more easily translated to inform social change by people with disability themselves. Furthermore, systems thinking was applied to the data collected, based on the principle that undesirable system behaviours (such as inaccessibility and social exclusion) can be identified and corrected through structured analysis that does not try to examine individual problem factors in isolation, but rather as parts of an interconnected whole. This framed the data analysis process by helping participants to connect individual or local concerns with larger cultural and systemic issues such as deficiencies in government decision-making, leadership, resource allocation, policies, regulations, and so on (BeLue et al., 2012). The methodology offered three key advantages: (a) directly sharing knowledge and experience between people with and without lived experience of disability on the barriers to accessibility and inclusivity, (b) allowing diverse stakeholders to generate a mutually agreed plan of action for overcoming city-scale obstacles to accessibility and inclusivity, and (c) maximising sustainability of change through collective impact, by providing an opportunity for positive

attitude shift towards disability in the process of conducting the research.

### 3.2. Data Collection and Analysis

Two modes of primary data collection were used in Geelong: three systems thinking workshops using the systems thinking in community knowledge exchange (STICKE) tool, and focus groups with people with lived experience of disability. STICKE workshops are based on the group model building methodology, which guides stakeholders through a series of participatory tasks to examine their mental models (cognitive representations of interdependent causes and effects) of a given situation or problem. Here, a series of four guided activities was facilitated by a team of 21 trained researchers across the three workshops: (a) introduction to the nature and scope of the problem, (b) identifying the various factors contributing to the problem over time, (c) identifying the interconnections between those factors, and (d) after being given theoretical background on how to identify potential points for intervention within causal loop diagrams, generating and prioritising actions to overcome the obstacles to change highlighted by these intervention points. Next, Meadows's (1999) framework of leverage points in systems analysis was used to evaluate the priority actions identified in the systems thinking workshops. Leverage points denote places within a complex system where interventions can be staged. Meadows (1999, p. 1) termed these "points of power." For this evaluation, each priority action was allocated by the research team (via a workshop) a value between 12 and 1, from *tinkering* (the least effective, given a 12-point value) to *paradigm-shifting* (the most effective, given a 1-point value). After all actions were allocated a value, Malhi et al.'s (2009) intervention level framework was used by the researchers to collapse the 12 leverage points into five corresponding intervention levels—paradigm, goals, systems structure, feedback and delays, and structural elements. These five levels were further synthesised by the research team into five themes that could be readily narrated and disseminated for validation back to participants with lived experiences of disability in focus groups. This process allowed participants with a range of abilities to assess the analytical process performed by the research team and assess the wider stakeholder evaluations made in the STICKE workshops.

In the Bunbury project, data collection involved the recording of a facilitated dialogue between participants using a method known as "deliberative dialogue," to identify current experiences of barriers encountered within the urban landscape and how the City's design culture and practices were creating or eliminating barriers. Not unlike the processes of consensus building used in systems thinking, deliberative dialogue is a process of inquiry that involves "listening deeply to other points of view, exploring new ideas and perspectives, searching for points of agreement, and bringing unexam-

ined assumptions into the open" (London, 2005, p. 1). Deliberative dialogue aims to move discussion between stakeholders "beyond the clash of opinions and arrive at a deeper and shared level of understanding" (London, 2005, p. 3) so that by actively thinking together, weighing the strengths and weaknesses of alternative points of view, and searching for a common understanding, new approaches to dealing with seemingly intractable problems become apparent. This occurred over a 12-month period. The results were analysed using framework analysis, a form of "thematic analysis" or "qualitative content analysis" (Ward et al., 2013), to identify thematic links and associations in the qualitative data, examine relationships between different parts of the data, and draw descriptive and/or explanatory conclusions clustered around themes (Gale et al., 2013). The themes identified via the process were used to guide further inquiry in an iterative process, and to generate key findings and recommendations.

### 3.3. Stakeholders/Participants

In Bunbury, two key participant groups were identified: co-researchers (people with lived experience of disability;  $n = 11$ ) and city informants (City of Bunbury employees or councillors with influence over public-realm design decisions;  $n = 32$ ). The co-research group was made up of six people with disabilities, three parents of people with disabilities, and two support workers, making 11 participants altogether. All group members had lived experience of physical, sensory, or cognitive impairments resulting from spinal injury, stroke, learning difficulty, autism, low vision, or cerebral palsy. City informants were City of Bunbury employees occupying positions ranging from chief executive officer to on-the-ground technical officers, who held decision-making power in relation to urban development or redevelopment and associated services.

In Geelong, stakeholders from a range of backgrounds were recruited. To gather a comprehensive understanding of the factors influencing the accessibility and inclusivity of Geelong, it was important that the sample was diverse and included people of a range of ages, professions, and abilities. Participants in the STICKE workshops ( $n = 49$  in total across three workshops) were drawn from disability support organisations, service providers, and key government personnel. Three focus groups were held with a mix of persons identifying as having a disability and living with a range of physical, cognitive, and sensory impairments. Each focus group was made up of members of the local community: a customer reference group for a disability support provider with 12 participants, six local members of a support group for survivors of stroke and acquired brain injury, and seven representatives from a project taskforce set up from the beginnings of the project to regularly advise the research team.



## 4. Findings

This section compares key findings and recommendations from the Geelong and Bunbury studies, especially as they relate to urban planning and development in regional cities. Both studies were catalysed by a similar intent: to achieve the highest standard of accessibility and inclusion in relation to other regional Australian cities. Upon commencement, both research groups encountered the same problem: Standardised measures of accessibility for urban landscapes and social inclusion did not exist. An analysis by the Geelong study of documented initiatives revealed few concrete, measurable recommendations, timelines, evaluative criteria and/or budgets related to accessibility, with poor integration across initiatives, frequent duplication, and gaps in coverage. The Bunbury study likewise found that existing measures for promoting access and inclusion at a local government level (such as disability access and inclusion plans and related committees and reporting mechanisms) lacked efficacy in guaranteeing consistency in UD outcomes, particularly as they had no power of compulsion beyond mandated Australian design codes.

### 4.1. Overview of Geelong Study Recommendations

The Geelong study identified five key principles of action to inform progress towards an accessible and inclusive city:

1. Adopt inclusive co-design and co-research approaches for the development, implementation, and evaluation of actions;
2. Embed principles of UD into the implementation of all actions;
3. Ensure built environment improvements and provision of affordable and appropriate housing, dedicated services, and employment are available for all, especially in areas with high immediate demand;
4. Prioritise attitudinal change towards inclusion and access;
5. Adopt inclusion as a core value for Geelong.

The study further identified six priority actions:

1. Regulations: Improve planning legislation and other regulatory measures to define and safeguard access and inclusion within the planning framework;
2. Attitudes: Raise awareness of and improve attitudes towards access and inclusion across different policy initiatives, platforms of communication, events, and spaces;
3. Information: Establish a Geelong accessible visitor and information centre run and managed by people with disabilities, with accessibility support staff, as an exemplar of the five principles of action;

4. Housing: Increase the supply of accessible and affordable public and community housing;
5. Partnerships: Increase business groups' collective participation in developing initiatives around inclusion;
6. Employment: Raise expectations and aspirations of employment and economic participation by co-designing work arrangements with people with disability.

### 4.2. Overview of Bunbury Study Recommendations

The Bunbury study developed recommendations based on a proposed model of "universal public-realm design" intended to embed and safeguard UD in public-realm design and development activities, particularly at a local government level. The model consists of five concurrent actions:

1. Co-design: Engaging people with lived experience of disability in co-design opportunities on a regular and structured basis;
2. Training: Upskilling all design practitioners in UD principles and general disability awareness through accredited training;
3. Technical support: Routinely engaging qualified UD technical specialists (for example, access consultants) as informants in complex public-realm design work;
4. Benchmarks: Capturing and standardising best practice benchmarks for UD over and above minimum mandated standards;
5. Procedural safeguards: Developing or enhancing design-related policies and procedures to include checklists, inspections, reporting, and other accountability mechanisms that ensure all design and development work is consistent with UD principles.

Based on the research in Geelong and Bunbury (Deakin HOME Research Hub, 2019; Johnson, 2019), the recommendations of both studies are listed and compared in Table 1.

## 5. Discussion

This section will discuss some of the key themes shared across both studies, including a range of recommendations related to technical, structural, and leadership improvements intended to embed and safeguard the practice of UD in urban planning and design activities.

### 5.1. Regulatory Standards and Best Practice Benchmarking

Both studies identified an urgent need in Australia for a more comprehensive suite of mandatory standards for accessibility to be applied to the built environment,

**Table 1.** Summary of recommendations.

Aspects	Bunbury	Geelong
Co-Design	Enable people with disabilities in decision-making about public infrastructure through co-design on a regular and structured basis	Co-design as a valuable and impactful method to achieve complex aspirational goals by engaging people with disabilities as partners in the development of a regulatory framework
UD	UD as an important and relatable concept to revolutionise public-realm design	UD as a means of overcoming access inequalities to the built environment
Benchmarks	Develop best practice benchmarks for similar design contexts over and above minimum mandated standards	Establish benchmarks for Geelong to become a world-class accessible and inclusive city
Incentives/Accreditation	<p>Incentives for achieving beyond minimum standards</p> <p>Information and assurance to the public through accreditation</p>	<p>Incentives for achieving increased accessibility</p> <p>Recognise best practices of world-class levels through accreditation</p>
Employment/Economic Participation	Equal employment opportunity policy in place with innovations in employment and progress towards the “most accessible regional city in Australia” aspiration	Engage people with disability to identify current barriers to participation in employment and the economy

based on UD principles. In some design scenarios such as housing, public transport, tourism, and public facilities, existing standards were seen as totally insufficient for safeguarding best practices in UD, as they overlook too many elements within the design scenario and fail to adequately ensure that people experiencing a range of impairments can access public spaces with confidence. In many instances, no mandatory guidelines exist to regulate, for example, accessible museum and art gallery exhibits, accessible gyms, or even minimum levels of accessibility in new private dwellings (although that last issue is currently being addressed through the adoption of the Liveable Housing Guidelines in Australia). However, it was recognised that mandatory standards can have the unintended effect of creating a “compliance mentality,” whereby compliance with minimum mandatory standards is valued above setting aspirational targets and incentives for UD. It was further suggested that compliance frameworks may negate in some minds any need for further consultation or co-design with people with disabilities.

Developing “best practice benchmarks” was suggested as an interim measure to provide guidance with, for example, streetscapes (to include elements like universally accessible drink fountains, barbecues, picnic benches, and wayfinding signage), playgrounds (including accessible play equipment, shade, footpaths, picnic facilities, and so forth), public transport (including accessible station platforms, bus stops, footpaths, information, and customer service), and a range of other sce-

narios. A key issue identified with aspiring to UD was the current absence of published guidelines over and above the minimum mandatory standards. One possibility suggested to progress this was that organisations such as local, state, and federal governments could take the initiative to document and implement new best practice guidelines for UD within their own scope of practice, either developed in-house or by a third party (such as the Access Institute of Australia) or developed and disseminated by a peak body organisation such as the Australian Local Government Association. These benchmarks would not be intended to become mandatory in the short term but might inform regulated standards in the future. Notably, in 2019, the City of Bunbury did adopt UD benchmarks for the built environment developed by the Access Institute of Australia to apply to their own buildings and facilities, but these benchmarks were only made available as part of the institute’s training program or for a fee via their website.

Better standards and benchmarks for UD in the built environment may help to make a comparative evaluation possible between cities, and it was suggested that any city-scale accessibility evaluation should include both quantitative and qualitative (user-centred) indicators of mobility, proximity, connectivity, affordability, convenience, and social acceptability. It was also observed that measuring social inclusion is more elusive and would entail the development of multiple indicators of user perception, to help create cities that move beyond a focus of “being present here” to one of “belonging here.”

## 5.2. Training, Accreditation, and Awareness

Both studies recognised that societal attitudes to disability in Australia, while greatly improved over past decades, remain generally negative and discriminatory (according to study participants and a range of research papers and reports cited within the studies). Such negative attitudes tend to translate into inaccessible built environments through low priority given to UD, and a general lack of understanding and awareness of the technical measures needed to achieve it. Compounding this problem, both studies observed that UD principles were not consistently included in design-related training courses at college or university, leading to significant technical skills gaps and a lack of awareness. Furthermore, while some organisations such as the City of Bunbury were now routinely training staff in disability awareness, and occasionally in the technical aspects of UD (depending on role), the frequency and quality of such training were not regulated and so tended to be sporadic.

To address this training deficit and lessen the UD knowledge gap, a few options were identified. One option was to introduce UD accreditation for employees with design responsibilities, similar to the manner in which local government engineering staff are currently required to maintain certain technical competency “tickets” through ongoing professional development or refresher courses. Another recommended option was the systematic use of accredited access consultants to help inform UD in built environment projects, which was otherwise found to occur in a somewhat ad-hoc manner. A further option identified was to develop a system of accreditation (like a star rating system) for buildings, streetscapes, and public amenities, which would provide for certification of compliance with a prescribed level of accessibility, and in the process of audit, systematically identify measures that could be taken to reach a higher level of accreditation.

Finally, both studies identified the need for people with disabilities to be informed and empowered through access to information about accessibility features and inclusion opportunities in their local communities. For Geelong, an idea was proposed to build an accessible visitor and information centre that would be managed by and for people with disabilities, as a centralised resource. Bunbury participants likewise identified difficulties in accessing information, especially in wayfinding, accessible parking, and inclusive activities and events, and suggested a range of improvements based on UD principles, such as improved wayfinding signage, accessible parking maps, promotion of accessible and inclusive event features, and so forth.

## 5.3. Co-Design

Co-design with people with lived experience of disability was recognised as a critical strategy in addressing inaccessibility in the built environment and recom-

mended by both studies as a key strategy for achieving UD across built environments and social inclusion endeavours. Co-design was recognised as a “deeper” form of engagement than the types of stakeholder consultation that often occur with so-called “special interest groups,” like people with disabilities. Co-design is described as involving end-users as partners in the design process from beginning to end, and even as part of the design team with shared responsibility for decision-making (depending on the scope of the design project and the willingness of the organisation to share control). In a co-design framework, people with disabilities are viewed as possessing valuable and essential expertise, derived from lived experience, that can be brought into dialogue with traditional forms of design expertise gained through technical training and professional experience, and harnessed towards producing a universally accessible urban landscape. Co-design, it was observed, ought to involve people experiencing a diverse range of impairments (including physical, sensory, and cognitive impairments), as well as those who support them, such as family members, support workers, occupational therapists, advocates, and so forth, who are not only concerned with individuals’ physical constraints but also with the social, attitudinal, and legislative parameters. The Geelong study recommended that co-design could permeate urban design by further engaging people with disabilities as partners in the development of regulatory frameworks, including policies, procedures, standards, best practice benchmarks, auditing tools, auditing activities, staff training, and other measures that embed UD into organisational culture and practice.

The Bunbury study recognised that competent facilitation is likely to be critical to the success of co-design, whether facilitated by members of a project team or by suitably skilled and qualified third parties (such as a community development officer in the local government context). It was argued that the success of co-design may depend almost entirely upon the quality of the relationships that can be established and maintained by the process facilitator, who must be capable of engendering trust and confidence and adept at knowledge translation. It was also recognised that most people with disabilities engaging in co-design will need opportunities to be educated about design, and designers educated about disability, for dialogue to be constructive. Concerns were acknowledged around the risk posed by the widespread integration of co-design in slowing down development project approvals and introducing additional steps into an already tight and complex process. It was suggested that the need for intensive co-design could be lessened over time if, through the process of each co-design project, new benchmarks for best practice in UD were reliably documented and consistently implemented in future similar projects. Finally, it was suggested that co-design is unlikely to succeed as a mainstream practice without significant changes to funding and policy frameworks, workforce skill levels, and an



embracing of technologies such as sophisticated online engagement tools.

#### 5.4. Policies and Procedures

Both studies called for new policy measures to safeguard UD, including improvements to existing policies and procedures or the introduction of further measures. The Geelong study provides some specific examples of state-level policy measures that could be implemented, including a new Access and Inclusion Policy embedded within the Principal Planning Framework, a review of the Apartment Design Guidelines for Victoria, a new decision-making criterion regarding access for all abilities, and the implementation of a new Local Planning Policy. The Bunbury study looked at the City of Bunbury's Purchasing Policy and found that it did not require staff members to be accountable for UD as it did for cost, safety and durability when justifying the purchase of goods or tendering of services. A range of other policies, procedures, technical manuals and strategies (such as the City's Public Open Space Strategy) were found to be in need of review and re-alignment with the City's aspiration of becoming fully accessible, by introducing additional checks and balances for UD.

One limitation noted was that while the City of Bunbury was willing to introduce more stringent policies and procedures to impose higher measures for accessibility on its own internal development projects, it was powerless as a local government authority to place any additional requirements upon private or commercial development applications beyond the applicable Australian Building Codes or other existing state or federal regulations, because any additional requirements not in the codes could be legally challenged—and likely would be due to perceived additional costs on the part of developers. It was determined, however, that local governments could play a role in educating commercial and private developers about the benefits of UD and could potentially offer incentives, such as a density bonus or reduced setbacks or other development incentives, should they meet stipulated UD measures.

Finally, it was recommended across the two studies that additional policies and procedures be implemented at every level of government to enhance built environment regulatory standards, support best-practice benchmarking, increase technical training, introduce accreditation, and mandate co-design. To be effective, these policy measures would need to be complemented by adequate resources.

#### 5.5. Leadership and Advocacy

Both studies called for "facilitative leadership" and increased availability of resources to implement the recommendations identified, particularly from federal, state, and local governments, and to eliminate barriers within existing community infrastructure by means of

a planned approach to auditing, shortlisting, and rectifying (in collaboration with people with disabilities). The Geelong study went further to recommend the establishment of a government-supported "transition leadership council" to drive the vision for an accessible and inclusive Geelong over a 10-year period, supporting applicable authorities to schedule a plan of action based on the evaluation of the actions proposed.

It was also suggested that high-profile disability advocates could be employed to engage policymakers and increase the profile of disability access and inclusion at a political level. As part of fostering leadership from both above and below, both studies recommended that organisations work to identify and cultivate local champions for access and inclusion, including from within government and within local communities. These champions, it was noted, are often already active, but need support and recognition for their efforts in promoting access, inclusion, and collaboration towards UD. It was also suggested that supportive signals be sent from leaders about their expectations of employees with respect to co-design, in tandem with policy and procedural measures, training, mentoring, and key performance indicators.

## 6. Conclusion

This article compared research identifying the systemic barriers to disability access and inclusion in two regional Australian cities. Both projects used participatory processes to engage a wide range of stakeholders, including many with lived experience of disability, in an exchange of ideas that linked physical barriers in the built environment with systemic barriers in design policy and leadership. This resulted in inclusive, emancipatory research and engagement able to seed deliberative dialogue and collective impact. In Geelong, a systems-thinking approach enabled the collaborative identification of principles and strategies for addressing access and inclusion across a range of domains, including regulations, attitudes, information, housing, partnerships, and employment. At Bunbury, PAR was used to empower people with lived experience of disability to engage key informants within local government, resulting in a range of systemic recommendations for safeguarding UD, including co-design, training, technical support, benchmarks, and procedural safeguards. When overlaid, the two studies revealed a number of opportunities for systemic improvement at technical, structural, and leadership levels to embed and safeguard UD and thereby transform urban design.

Geelong and Bunbury exist as microcosms of broader Australian and international urban landscapes and present typical challenges for governments and industry from a UD point of view. This comparison of the two independent studies has highlighted the factors that impact UD and social inclusion outcomes, including leadership, design culture, and design safeguards. Lasting structural

and attitudinal change is required to overcome the current state of play, in which people with disabilities are distanced from the design of the world around them, and treated as an aberration or special interest group, rather than as part of the “norm” or “mainstream.” These studies show that such change can best be informed, catalysed and implemented if people with lived experience are central to every stage of change. Moreover, such an inclusive approach can have the advantage of building more positive attitudes to disability through direct knowledge exchange between people with and without disabilities. Lastly, access and inclusion for all are fundamentally a design challenge that will involve explicit strategies on the part of governments and industry to embed co-design and strengthen UD safeguards. Stronger leadership is required from all levels of government to foster UD through policy development and collaborative knowledge exchange.

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### Conflict of Interests

There is no data associated with this research beyond the referenced literature. The authors declare no conflict of interests.

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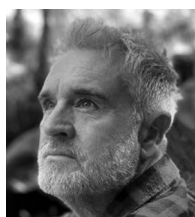
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