CONFIRMED ABSTRACTS FOR CONCURRENT SESSIONS

Accessibility Charter for Canterbury: Collaborating to go beyond compliance
Lorraine Guthrie, CEO Barrier Free NZ Trust

The situation in Canterbury which arose from the earthquakes provided New Zealand with an opportunity to repair and rebuild the city to a 'higher than mere compliance' standard. When the Canterbury Earthquake Recovery Authority (CERA) asked the residents of Canterbury what their priorities were for the rebuild, an accessible city was one of the five priorities. Barrier Free NZ Trust (the technical experts) in collaboration with the Earthquake Disability Leadership Group (representing disabled Cantabrians) initiated an Accessibility Charter, to bring together the organisations rebuilding the city, to make a joint commitment and to share and implement best practice ideas. The signatories to the Charter, commit to ensuring consideration of accessibility is a 'business as usual' process, through four key phases of their work; policy and procedure, education, technical expertise and the health and wellbeing of Cantabrians and the communities in which they live. Each founding signatory implemented the Charter in diverse ways depending upon the role they played in the rebuild. From a large city council which developed a working group to explore how the Charter could be implemented in every aspect of the council's work to a planning agency incorporating accessibility as a key strategic goal. Highlights for those involved have been; collaboration between technical experts and users of the environments, willingness of those within the organisations to aim for the highest level of accessibility practically possible and the creation of universally accessible environments and design solutions. The Accessibility Charter leaders acknowledge there are legislation minimums. But, with a committed internal organisational process ensuring that best practice possibilities are considered, a universally designed accessible and ultimately inclusive environment is more likely to be the outcome. The Trust and EDLG continue to grow the signatory base for the Accessibility Charter in Canterbury and to explore its application across New Zealand. This presentation will share the development of the Charter, key relationships, organisational implementation plans and a vision for what could be achieved by the Charter.

Accessible beaches for all: A case study
Tom Bevan, Access and Inclusion Officer, Hobsons Bay City Council

I imagined that I'd only be able to roll by the beach to watch everyone else enjoying themselves and take in the sea air, Alex, a nine-year-old wheelchair user. Hobsons Bay City

Council's Accessible Beaches Project pushes the boundaries of universal design in a complex natural environment. In a first for Australia, beach matting is available twenty-four hours a day seven days a week, and beach wheelchairs, including water chairs are available at Altona and Williamstown Beaches. This universally designed infrastructure supports people with a disability and provides universal access for older people, those with prams, and toddlers. Most importantly, it has empowered families of people with a disability to spontaneously share a day at the beach without having to sit on the sidelines. Over the last two summers Council has led the way in beach accessibility state-wide and continues to be a catalyst on a national level. Through inter-council collaboration and with the support of many stakeholders, the beach access movement has gained momentum and seen some fantastic wins. This presentation will outline a four year case study capturing the trials and tribulations of endeavouring to work towards two fully accessible beaches by 2020. A highlight this summer was the introduction of an adult changing facility completing Altona's accessible hub and providing the platform to deliver activities such as accessible snorkelling sessions to the community. Six Victorian beaches now run beach access programs in 2018. There were none in 2015. There are huge positive health and wellbeing impacts of having an accessible beach available, a conduit to promoting social inclusion amongst the community, raising awareness around the needs of people with a disability, strengthening family connections as well as enabling independence for users - all important aspects that contribute to overall community wellbeing. Hobsons Bay will continue to lead the way in making beaches for all by providing the opportunity to be spontaneous and actively participate in the community rather than watch from the sidelines.

Accessible Housing and the National Construction Code
Kieran O'Donnell
The Australian Building Codes Board's (ABCB) is a Council of Australian Governments (COAG) standards writing body responsible for the development of the National Construction Code (NCC), which sets out the mandatory construction requirements for all buildings. The NCC is adopted by each State and Territory through its respective legislation. The NCC includes minimum building access requirements for people with a disability, however these requirements currently do not apply to housing. In 2017, the Building Ministers Forum, with the support of all COAG First Ministers, asked the ABCB to undertake a regulation impact assessment on the possible inclusion of accessibility standards for housing in the NCC. This presentation will provide an insight into the thinking behind the project and outline how the ABCB will deliver this significant and high priority project.

A journey in inclusive tourism: Finding and providing the right information
Nadia Feeney
The Australian Tourism Data Warehouse (ATDW) in partnership with Tourism Australia and all the State and Territory government tourism organisations, is the most comprehensive, central storage and multi-channel distribution network for tourism industry products and destination information, supporting over 40,000 listed products, 130,000 images across 11

product categories. This content is compiled in a nationally agreed format and electronically accessible by over 200 distribution partners including tourism operators, wholesalers, retailers and commercial distributors for use in their consumer facing websites, mobile applications and booking systems.

ATDW in conjunction with Local Government NSW (LGNSW) and Destination New South Wales (DNSW) have recently completed a project to enhance and boost the level and type of accessibility content which is available to consumers looking to book an inclusive travel holiday or experience through this vast network. Hence making it easier for consumers with specific needs be they wheelchair access, mobility support, allergy, vision or audio services to search for and locate Australian tourism experiences to suit their needs. Research conducted by the University of NSW and an extensive consultation process, as part of the project, guided the development of the new questions and dataset. This dataset was then built into the ATDW-Online platform and database and has become a mandatory field for all business and event listings to complete.

This presentation will showcase the new dataset, the platform interface changes and look at the response and outcomes of the collection of this accessible content. Where possible, a case study of the implementation of the data to consumers will also be demonstrated.

Architecture for All – Existing and Historic Buildings
Allen Kong, Architect

The quality of the built environment has a strong influence on the quality of people's lives. Buildings and spaces that are designed inclusively, contribute to breaking down barriers. They can greatly enhance a person's mobility, their sense of belonging and security, their health and well-being. They contribute also to the strengthening of communities whilst responding to the needs of people of all ages and abilities. The challenge for architect's to-day is to ensure that the built environment will facilitate the active participation and independence of all. This presentation will show how the international case studies meet the concept of universal design and inclusion within the genre of existing and historic buildings. Examples will include: Malahide Parish Centre; Diposit del Marti Spain; St. Mel's Cathedral Ireland; Viva Blue House Hong Kong; Residential center for people with physical functional diversity Vigatans, Spain. The international presentations gives perspective the varying opportunities that different regions have to implement inclusive design practices.

Architecture for All – Places and New Buildings
Allen Kong, Architect

The quality of the built environment has a strong influence on the quality of people's lives. Buildings and spaces that are designed inclusively, contribute to breaking down barriers. They can greatly enhance a person's mobility, their sense of belonging and security, their health and well-being. They contribute also to the strengthening of communities whilst responding to the needs of people of all ages and abilities. The challenge for architects today is to ensure that the built environment will facilitate the active participation and

independence of all. This presentation will show how the international case studies meet the concept of universal design and inclusion within the public realm and new buildings. Examples of places included in the presentation will be: Paseo Puerta de Tierra, Puerto Rico; Rehabilitation of Karpenisi Town Center Greece; Kwun Tong Promenade; Hong Kong and the Project of Liaodong Bay Citizen Activity Center and Wetland Park China. Examples of new buildings will include: BE Friendly Spaces; Mạo Khê, tx. Đông Triều, Quảng Ninh, Vietnam; Amanenomori Nursery School, Japan: Coláiste Ailigh, Ireland: and Jungle Flower School Vietnam. These international perspectives will show the varying opportunities that different regions have to implement inclusive design practices.

Building all new homes to an agreed universal design standard: Understanding the perceived costs and benefits to Australian society

Courtney Wright[1], Jacinta Colley[1], & Margaret Ward[1,2]

It is widely acknowledged that housing is a social determinant of health and wellbeing. Yet, many thousands of Australians with reduced physical capacity incur significant housing challenges that impact on their quality of life. Due to existing housing design standards and a subsequent lack of physically accessible housing in the private sector, ageing Australians and people with short-term, long-term, or life-long illness or injury are often forced to: (a) modify their home at significant expense, (b) relocate to an undesirable residential environment such as a group home or nursing home, or (c) remain in their physically inaccessible property where they (and/or their family or non-family carers) are at high risk of injury. In response to persistent advocacy from people with disability and their supporters, the Australian Government established the National Dialogue on Universal Housing Design (NDUHD) in 2009, to address the lack of inclusive housing in Australia. The National Dialogue comprised housing industry leaders, community leaders and others, and argued for an industry-led voluntary approach over 10 years, a national guideline and a strategic plan with the aspirational goal that "all new homes will be of an agreed Universal Housing Design standard by 2020" (NDUHD, 2010). A year later, the Council of Australian Governments' 2010-2020 National Disability Strategy included a commitment by all three levels of government to work with the National Dialogue towards meeting their 2020 target. Owing to a perceived lack of consumer demand, however, the voluntary uptake of Universal Housing Design has been met with resistance to implement by the housing and construction sector. This has resulted in a relatively unchanged housing landscape for many individuals who require physically accessible housing to support inclusion and participation in family and community life. This research aimed to investigate the perceived costs and benefits to Australian society if all new homes were built to an agreed Universal Design standard. Findings from this research revealed conflicting views of participants surrounding a person's rights (and whose rights take priority), as well as the perceived financial impact of change. This presentation will detail the research findings, its implications, and suggest future research directions.

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[2] *Australian Network for Universal Housing Design, Strawberry Hills, Australia*

Development and Evaluation of Universal Design Consultation Guide for Occupational Therapy Practitioners
Dr Apeksha Gohil

The Universal Design Consultation Guide (UDC Guide) for Occupational Therapists (OT) was developed in the United States as a part of a Doctoral project in 2016. The Guide is intended for OT to consult with clients – service providers, service users, and key stakeholders from diverse contexts, such as housing, healthcare, public spaces to reach targeted universal design solutions in order to provide opportunities for full participation of all potential users. OT's training in activity analysis, human structure and function, and application of theories of person-environment fit in different contexts qualify them to provide creative solutions to build an accessible community for all users. In spite of the distinct value that OT can bring to the environmental accessibility table, there is limited guidance on how to embark on this new frontier of universal design as an OT. The UDC guide can help provide OT with an evidence-informed step-wise process to work with stakeholders across diverse settings. This presentation will give an overview of the development process, the lessons learned and the outcomes achieved. The Guide is a 45 page manual and the content is informed by theories and empirical evidence from multiple disciplines, including: psychology, occupational therapy, design, and business management. The Guide is divided into three stages: 1) Educate the client, 2) Needs Assessment, and 3) Recommend UD solutions. Each stage provides resources in the form of PowerPoint, case studies, templates, activity analysis matrix, universal design decision matrix, and worksheets to guide OT through each stage on how to engage different stakeholders to reach universal design solutions. It emphasizes a participatory approach of consulting by engaging multiple stakeholders. The Guide was then reviewed and evaluated by six OT practitioners and students, who discussed the strengths and limitations of the Guide and shared their recommendations in a focus group session. Based on the qualitative findings, three themes emerged from the participant's feedback – 1) usability of the UDC guide, 2) distinct role of OTs as practitioners, advocates, and consultants of UD, and 3) recognition of OT practitioner's role among other UD professionals. The UDC guide was revised based on participant feedback and the final revised version is prepared for dissemination.

Everyone's Business: Inclusive Tourism Online Learning Course
Chris Maclean, Policy Officer, Local Government NSW

Local Government NSW recently coordinated, through a co-design process, the development of an online learning course which aims to capitalise on the potential of the Inclusive Tourism market in Australia. A recent analysis estimated this market was worth up to $8.9 billion over the first three months of 2017. It also highlights the expected growth of the sector as our population ages and more people experience some level of disability. This presentation will show how the principles of universal design were incorporated into the development of course materials and resources. It will also discuss the background to the project with a brief outline of the online learning course that was launched in February 2018

including: the course content, structure and resources; key facts around the inclusive tourism market; tips for the tourism sector and businesses in inclusive design and implementation principles; and the benefits to be gained from an inclusive design approach. There is growing evidence to show that businesses and local councils that are prepared to provide more inclusive information and customer service as well as physical access to their venues will create more opportunities to tap into this growing market. The presentation will focus on the consultation process undertaken in designing and developing the online resource including consultation with the tourism and business sector to promote and deliver the course which included a NSW state-wide roadshow. Key partners involved in the collaboration included the NSW Business Chamber, Australian Tourism Data Warehouse, Destination NSW, Centre for Universal Design Australia, University of Technology Sydney and NSW State Government. The potential outcomes for the sector through applying inclusive design principles across all aspects of business development i.e. communication strategies, information dissemination, customer service, and physical access are also discussed. The sector includes more than 95,000 tourism operators and businesses in NSW which, through the application of inclusive design principles, can open their businesses and venues to a very large market which had previously missed out on the opportunities of travelling and engaging in the many benefits the tourism industry can provide.

Flexibility and Technology in Universal Design - Specialist Disability Accommodation
Queenie Tran, Operations Manager, Summer Housing

In designing for those with the highest physical support needs, you design for most needs in the community. At Summer Housing, we've applied universal design principles in our design of apartments to cater for people with significant physical impairment and very high support needs so that they can lead ordinary lives. This paper looks beyond Livable Housing Design Guidelines as a universal design standard and how incorporating flexibility in design and supports allow residents to builds individual capacity through smart technology to control their surroundings with the knowledge that help is at hand, if at all required. You wouldn't know just by looking at these multi-residential buildings that they contain specialist disability accommodation salt-and-peppered throughout. And we wouldn't want you to either. Specialist by name; ordinary in use, these apartments are home to individuals who were in residential aged care facilities, or at risk of entering one, years before their time. This paper will examine the flexible design options considered in our apartments to allow residents to live as independently as possible, enhancing their health, wellbeing and participation in the community. By accommodating flexibility from the outset, our housing product recognises that our abilities change over time and that the environment will need to adjust for those changes. The inherent flexibility has allowed for substantial cost reductions when modifications are required, but also improved the liveability of the apartments. We will also discuss the impact of integrated technology solutions to increase choice and control and reduce support needs. Technology is intrinsic to providing a safe environment for residents and can be considered under the broad banners of home automation, communication systems and safety. Through a case study of the design and

function of some of Summer Housing's apartments, we will explore how we've addressed the principles of universal design to provide greater independence, safety and security to those who are usually relegated to aged care homes.

Home coming? A story of reassurance, opportunity and hope for universally designed housing in Australia
Dr Penny Galbraith

This paper shows the complexity of housing and how it is the linch-pin for achieving economic, social and human rights imperatives.   In Australia there are no minimum housing standards; the effect is now critical. In October 2017, a regulatory impact assessment was instructed, to consider Livable Housing Australia's Silver and Gold standards, for inclusion in the National Construction Code. Research was undertaken to provide a knowledge and evidence base upon which to evaluate the role and importance of housing and minimum housing standards in Australia. It is intended to use the research to inform the Regulatory Impact Assessment process and wider housing policy. The research broadens the policy perspective, provides an expanded statistical context; and detailed analyses of Silver, Gold and Platinum design levels. The policy perspective includes greater economic focus, including the significant effect on productivity directly attributable to housing. Housing is suffering from 'policy-lag'. 34 specific policy 'problems' are identified that could be solved or mitigated if acceptable standards of housing were introduced. It is reassuring that universal design has permeated all levels of government policy. The statistical context explores demographics, households, dwelling types; tenure; occupants; disability and carers. Detailed analyses challenge many common assumptions and re-frames accessible housing into a mainstream problem. 73% of all dwellings are separate houses and the average home has 3.1 bedrooms. There are tremendous opportunities for universally design-led mainstream solutions. The compliance gap analyses show which design features might cost more; have potential to be designed out; or be cost neutral. Many design features are cost neutral and arguably should be included within mandated standards. As there is a minimal gap between universal design standards and current housing, there is hope that all Australians will, one day, live in a universally designed home.

Home Modification as a strategy to achieve universal design in housing
Panel session led by Michael Bleasdale and Elizabeth Ainsworth

This panel session will look at the challenges facing the home modifications industry as aged care reforms and the NDIS are rolled out across Australia. The session will focus on quality and innovation in design, and what is required across the building sector and the occupation therapy profession to ensure that consumers get products and services which are fit for purpose and that reflect individual preference. Builders experienced in home modifications will be among the panellists. This hour long interactive session will involve delegates in discussions.

If it's not universally designed, you're leaving us behind
Karen Fankhauser, Disability Advocate

I spent my 45 birthday in a nursing home not knowing if I could ever come home- my muscles, weakened by muscular dystrophy, were no longer strong enough to enable me to walk and I was now a wheelchair user. At that time I didn't know what universal design was, but I knew that all housing needed to be more accessible – for not only myself but other people, younger and older, whose homes were not able to accommodate their mobility equipment. I was lucky – I made it home, but my rental property was only meant to be a temporary situation. Five years on and we are still pushing for universally designed housing! I've become actively involved in advocating for universal design in not only housing but visitor experiences through the Mornington Peninsula Shire's All Abilities Consultative Committee and on and individual level. I was awarded Mornington Peninsula Shire's Citizen of the Year 2018. This year's 3rd Australian Universal Design Conference, "Home and Away: Creating Inclusion Everywhere" falls on my 50th birthday. My presentation is about why universal design is important from the lived experience of disability perspective. Storytelling from people with disabilities is a powerful conduit for change. It gives people a reference point for the 'why' we need to aim for higher than mere DDA compliance and to instead adopt universal design principles. The topics I will address include housing, travel and transportation, tourism and destinations, inclusive events (I create my own form of inclusion at most events), and community (specifically people with disabilities) involvement in design processes. I will incorporate photos and videos to underpin what my view on inclusion is, and to reinforce how universal design principles enhance an experience, whereas the concept of accessibility, through implicit associations, low expectations, negative stereotypes and unconscious bias perpetuate the idea that accessibility is for people with disabilities and therefore separate to the mainstream.

Living in Place - Who are we designing for?
Thea Kurdi, DesignABLE

Getting accessibility right is often an uphill struggle in projects. The application of accessible design requirements often happens as an afterthought. It is time to challenge the design industry to reconsider the question, "Who are we designing for?" Residential design in all housing types will be discussed using information and insights from participating the Royal Architectural Institute Age-Friendly Housing Options Task Force, and consulting with the Ontario Older Women's Network on their Living in Place campaign to change the building code. Facts, figures, and concrete design solutions will be outlined that are already transforming the housing industry. Changes to building codes, international trends, local examples, myth busting, and what the house of the future looks like will also be presented.

Moving up - Universal Design in Mixed Use Buildings
Elise Copeland, Principle Specialist Universal Access and Design, Auckland City Council

In partnership with the Universal Design Forum, which comprises a range of local government and disability advocacy organisations, the Universal Design Tool and the

Universal Design Hub of the Auckland Design Manual has been developed. Universal design aims to create places and spaces that are inclusive for all people. The Universal Design Tool is a world first website that takes people through a universal design approach for mixed use buildings. While it is widely acknowledged that accessibility of the built environment is improved through legislation, universal design may be better promoted through inspiration. The Universal Design Tool aims to accomplish this by providing an image bank designed to inspire architects, designers, property developers and builders to incorporate universal design into their next project. This presentation will showcase the Tool which provides practical design solutions illustrated with diagrams, real life examples and checklists. It is a free resource showcasing good universal design outcomes for public buildings and mixed use developments. This includes two sections specifically dedicated to universal design in a residential context. The Tool aims to support the delivery of a human centred design approach taking into consideration a wide range of abilities, life stages and overall context of the development. The images are freely downloadable and can be used to inspire and advocate for better building design.

Powered Mobility Options
Dr Theresa Harada, University of Wollongong

Powered mobility options are critical for people with physical mobility needs to maintain good health, have social support, and maintain relationships. How powered mobility technologies help an increasing number of ageing Australians achieve these basic capabilities is illustrated in the sales of mobility scooters. Yet within urban planning where attention remains focused on the car, this mode of powered transport is largely invisible, often subsumed into plans within the category of 'pedestrian'. How powered mobilities are incorporated into future transport plans raises important questions to ensure passenger safety for all modes of transport. One starting point to plan for more socially inclusive transport infrastructure is to help better understand the current barriers for powered mobility users. There is little statistical data about the number of power mobility users in Australia and less about the challenges they face as they navigate everyday terrains. This presentation will report on a scoping project that was carried out in Wollongong, NSW which employed semi-structured interviews, solicited diaries, 'go-alongs' and video-methods. This mixed qualitative method project allowed powered mobility users to discuss their ideas about powered mobility, driving skills and material elements including the weather, topography, surfaces and roads. These methods offered insights to their interactions with cycles, pedestrians and cars, the identification of problematic areas on their daily journeys and how powered mobility scooters helped them to achieve basic capabilities. The findings from the project identified that mobility scooter users faced significant obstacles including infrastructural shortfalls, inter-modality barriers and social stigma. We identified that mobility scooter users are adept at circumnavigating many of these constraints but often put themselves at significant risk, therefore we suggest that more work is needed to understand how to incorporate this mode of powered mobility into everyday landscapes. The relative benefits of using mobility scooters included a sense of

freedom and independence, social participation and improved autonomy. We propose to upscale this pilot work and generate a participant led interactive GIS mapping to better understand the everyday challenges of moving about with powered mobility technologies. The proposed project will be based in three different demographic areas: suburban Sydney, the country town of Ballina, and the small city of Wollongong to highlight geographic differences. The project will provide unique insights to the ideas, bodily skills and materials that may operate to either mobilise or constrain powered mobility use. The envisaged outcome is a site that can be updated and accessed by users. This practical data overcomes historic information gaps to enable universal design based on the user-generated empirical material that allows for inclusive design for all.

Provision of safe pedestrian surfaces throughout economically reasonable life cycles
Richard Bowman, Principle, Intertile Research

As many floors can become slippery due to wear, what slip resistance is needed when building housing where the owners intend to age in place? Although various slip resistance guidance has been developed, what has been based on robust evidence-based research; well-intended subjective approaches; and/or to serve vested interests? While some access consultants have recommended highly slip resistant surfaces for use in inclusive residential bathrooms, their textured surfaces will cause cleaning problems. How should one specify readily cleanable products for slip resistant accessible paths of travel? To what extent is the existing infrastructure unsafe (in terms of slippery floors)? Where people have slipped and then fallen, is there data that quantifies the environmental contribution? Do specific forms of disability feature disproportionately in the falls data? While most falls of older people are likely due to a loss of balance or a failure to use prescribed aids, is the floor a convenient, least embarrassing scapegoat? While the Standards Australia Handbook 197 slip resistance guidance was the best practice approach 20 years ago, its inclusive basis is poorly recognised. The basis of the 2014 HB 198 recommendations and the National Construction Code requirements for ramps and stairways require confirmation. The requirements for residential stairs are unnecessarily high; and imply a similar need elsewhere. Why has the Australian Tile Council resisted the provision of SR guidance for residential situations? Why has it obstructed the adoption of improved slip resistance testing procedures and better product selection practices? This presentation will highlight specific limitations of some accepted research. It will question why some organisations' mercenary approach has been permitted to frustrate the development of improved slip resistance testing procedures that would enable better specification practices. It will provide a roadmap for attaining a Goldilocks solution to satisfying reasonable expectations for inclusive safe flooring.

The Universal Design Process: Australian study, global implications
Cathryn Grant, Deakin University

In 2017, a multidisciplinary Deakin University research team aimed to explore stakeholder knowledge and perceptions of universal design and to scope evidence of applying and evaluating universal design in the built environment. A number of findings reveal conflicts

between what is currently practiced and what people believe should be practiced in universal design processes. A literature review, electronic survey and in-depth interviews with industry representatives (architects, project managers, occupational therapists, access consultants, building surveyors), academics, and building users were conducted, including those with a lived experience of disability. A total of 157 survey responses were received from across Australia (83%) and internationally (16.6%). Interviews were conducted with 37 key informants, 7 of which were international participants. Quantitative data analysis was conducted and a grounded theory was used to analyse qualitative data. Nearly three quarters of survey participants reported having experience in applying universal design to public, commercial and/or housing built environments. Yet, while 85% of respondents rated the evaluation of universal design application to built environments as "extremely important", only one third had such experience. Who is applying universal design and when? Whose responsibility is it, and should it be, to ensure that universal design outcomes are achieved, and at what stage of the building process? This presentation will unravel the similarities and differences in perspective between professional occupations and/or those with a lived experience of disability. Case studies based on survey and interview responses will be used to delve into the complexity, diversity and collaborative nature of universal design processes, and to consider what stakeholders believe successful application and evaluation might look like.

Universal design in all new housing: Keeping COAG to account
Dr Margaret Ward, Australian Network for Universal Housing Design

This presentation outlines the journey from 2010 when the housing industry agreed to include universal design features voluntarily in all new housing by 2020 to the current commitment by COAG to perform a Regulatory Impact Assessment of mandating accessibility in private housing within the National Construction Code. The failure of the voluntary approach to providing universal design in all new housing should be of no surprise. There is little incentive for the housing industry to change their design practices to consider the possible future needs of individual housing occupants within a market-driven environment. The housing industry has even less interest in further regulation in a highly competitive environment responding to private investors and home-buyers. Since 2002, the Australian Network for Universal Housing Design has consistently called for regulation. They have always maintained there is a public interest in the provision of universal design in private spaces, if Australia is to build accessible and inclusive communities. Universally-designed airports, shopping centres and casinos are of little use to those who cannot even live safely in their homes. For some time, both State and Commonwealth governments have espoused high ideals on access and inclusion and have heavily invested in keeping people with disability and older people at home with their families and community for as long as possible. The need for a systemic approach to housing to support these programs is now of national concern. Yet, the timid and disconnected initiatives by governments to improve the supply of universally designed housing have been largely ineffective. It has taken those most affected, including people with disability, older people and their families, to call COAG

to account and to ensure a thorough and timely Regulatory Impact Assessment is done. COAG now must take a public interest in the design of private housing, manage the self-interest of the housing industry, and build universally-designed residential environments for future Australians.

Universal design in social policy: addressing the paradox of equality
Dr Emily Steel, University of Southern Queensland

Contemporary human rights instruments have moved on from formal equality and adopted the principle of substantive equality. This approach recognises and accommodates differences, advocating for different treatment in order to achieve equality but incentivising marginalised groups to emphasise their differences in order to secure appropriate responses to their needs. Governments have often responded by producing a complex array of government programs for 'special' populations that overlap each other while still leaving gaps, as highlighted in the 'Shut Out' Report (National People with Disabilities and Carers Council, 2009). This paper will review the revision of Australia's disability policies and their adoption of contemporary human rights and universal design principles. The adoption of universal design principles in social policy, proposed by Irving Zola (1989), has been advocated as an approach to tackle the paradox of equality (Bickenbach, 2014). Instead of designing or revising policies implementing specific rights for specific groups, policies that apply to all citizens are based on human rights. This approach to policy has failed in the past because it has been linked to the concept of normalisation and attempts to reduce or remove differences, resulting in segregation of those unable to 'integrate' into the mainstream (Bickenbach, 2014; Imrie, 1997). However, if aligned with the conceptual positioning of difference as part of a spectrum of diversity, and operationalised through universal design processes, it may have more success. As a philosophy that aims to enable and empower a diverse population, universal design is relevant to populations who often experience discrimination by design (e.g. older people, people from culturally and linguistically diverse backgrounds, refugees) (Steinfeld et al., 2012). When considered as a philosophy and process, universal design goes beyond technical details and becomes a way of thinking and working. Universal design objectives have been demonstrated to be analogous to social policy development that is consistent with contemporary human rights principles (Bickenbach, 2014). The challenge is to respect diversity by anticipating and responding to differences, both in the design of infrastructure (physical and virtual) and the delivery of services.

Unlimited PossAbilities
Diana Palmer

"Tourism for all is the right for all of the world's citizens to experience the incredible diversity of our planet and the beauty of the world in which we live". United Nations World Tourism Organisation 2016 (UNWTO). This presentation will bring to the conference the hard won learnings in policy and practice in the birth of the National Disability Insurance Scheme, and the quest by people with disability to access choice and control in tourism and

leisure. The barriers to inclusive tourism will be explored and give example of process design for collaboration informed by human rights, and practises to ensure people with disability have access to the right information to allow informed decision making in their travel and leisure activities

Up and away: Improving the Accessibility of Airports for Travelers with Dementia
Jill Franz, Maria O'Reilly, and Nicole Shepherd

In the last fifteen to twenty years statistics show a substantial increase in the numbers of Australian residents aged over 65 traveling within Australia as well as overseas. While a diagnosis of dementia should not exclude people from enjoying air travel, research has shown that navigating the airport is a significant challenge for travelers with dementia and their companions (O'Reilly & Shepherd, 2016). For people with dementia there is a tendency to experience difficulties with way-finding and become confused in unfamiliar and visually cluttered environments. Further, as dementia is a condition largely of old age, it is likely that they will also be coping with comorbidities impacting hearing, vision and mobility. While the ability to cope with these comorbidities may be improved by changes in legislation that has aimed to make public spaces more accessible to those with mobility limitations and visual and hearing impairments, little attention has been paid to the unique environmental needs of people with cognitive or processing impairments, such as dementia. This presentation reports on a project that was undertaken by a multidisciplinary team to assess the dementia friendliness of Brisbane Airport (Domestic and International Terminals). With the very generous assistance of the Brisbane Airport Corporation (BAC) we walked through the terminals with people with dementia and their travel companions, who pointed out areas of the airport that they found difficult to navigate or comprehend. Using the Dementia Friendly Communities Environmental Assessment Tool (DFC-EAT) (Fleming & Bennett, 2015), we were then able to calculate a "Dementia Friendly" score for each segment of the journey through the airport. We found that the dementia friendly score varied from terminal to terminal as well as across various stages of the journey between drop-off or parking at the airport and boarding. From this assessment we were able to make several recommendations regarding the physical environment and customer assistance to enhance inclusion and the travel experience of people with dementia and their companions. With BAC responding to many of these recommendations and the related launch of an airport guide for travelers with dementia, Alzheimer's Australia (now Dementia Australia) recently named Brisbane Airport as Australia's first dementia-friendly airport. References for this presentation: Professor Jill Franz (QUT), Dr Maria O'Reilly (CQU), Ms Nicole Shepherd (UQ).

Using virtual reality to communicate accessible housing design policy within Australia's National Disability Insurance Scheme
Ms Libby Callaway[1] Dr Kate Tregloan[2]

Australia's ten-year National Disability Strategy highlights the need for universal design principles to build 'an inclusive Australian society that enables people with disability to fulfil their potential as equal citizens'. Inclusive housing and community design is a key enabler to

address this need, and benefits from an interdisciplinary approach with the tenant and their supporters, health professionals, architects and technologists.

Objectives

1) Detail a two-year national housing research project funded as part of the second implementation plan of Australia's National Disability Strategy, focused on disability housing reform underway through Australia's $22B National Disability Insurance Scheme (NDIS);

2) Demonstrate communication of interdisciplinary housing and community design evaluation findings from this research, linked to the new NDIS Specialist Disability Accommodation (SDA) policy and made available within 'virtual housing tours' on a web platform called 'My Home Space'.

3) Discuss how 'My Home Space' demonstrates key issues and design responses that can be generalised for universal design.

Approach: Post-occupancy evaluation fieldwork undertaken across Australia used both published measures and customised methods. Housing, technology, support and community design and user (tenant) experiences were examined. A national housing roundtable with state and federal housing and disability government representatives was convened. Research evidence coupled with findings from the round table and current SDA policy documents informed a submission to the Senate Inquiry into Outcomes within Australia's National Disability Strategy. Findings from this range of activities were also converted into 'virtual reality' as online housing tours within 'My Home Space'. These tours allow the user to explore different housing scenarios, filtered by NDIS SDA design category, housing type and specific activities, to explore the application of current government policies, accessibility guidelines and research findings in virtual space.

Outcome: The innovative, interdisciplinary multimedia methods of 'My Home Space' were initially developed to communicate policy and research findings relating to housing for people with disability, and inform design decisions. This approach can be applied for other settings and stakeholders to inform and communicate a range of design principles to varied audiences, supporting universal design.

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CONFIRMED POSTER ABSTRACTS

Re-imagining Co-design through Ability and Techné
Janice Rieger[1,] Jasmien Herssens[2], Megan Strickfaden[3]
Feeling 'at home' or 'feeling away' is often tied to placemaking and the ways that people explore, observe and create meaning within environments. Through three international case studies this presentation explores environments with people with visual impairments in Canada and Belgium. This research provokes alternate ways of 'seeing' and 'being' in the world and we propose that spatial design and co-design can be approached and understood differently through ableism and techné. We assert that the normative ways that designers think, act, and design for/with people who have disabilities can be shifted when considering ableism and techné together. Our methods differ from other design processes and methods,

in that we situate design within an understanding of ableism and techné, where we are reflexive of ability biases and we also do not assume to understand the abilities of our users and/or co-designers. In other words, we do not assume that if we work with people who are visually impaired that we have to revert to non-visual methods for communicating and co-designing. Our multimodal and multisensorial studies (filming, photographing, observing and dialoguing while wandering) situate disabilities and abilities spatially, in a way that 'brings to light' different knowledge processes and methods for designing through exploration, observation and creation. Our case studies allow for a reimagining of design and co-design, as a situated, co-constituted knowledge creation, though techné and ability.

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KEYWORDS: ableism; co-design; design; disabilities; environments; multisensorial; techné

Note: Techné is an art or skill. It is about the principles or method employed in making something. It is used in architecture and interior design.

So Close and Yet so Far Away: Teaching Design Students to Design for Differences through Reflective Practice and Authentic Learning

Janice Rieger and Annie Rolfe

Current literature and studies in design education report that students and educators may base their designs on what they already know (about themselves and their peers) or on stereotypical notions of others. This research expands upon empirical studies undertaken in Canada and the UK by exploring inclusive design pedagogies within an Australian context. This presentation provides a critical examination of different methods and pedagogical approaches that were employed in several design classes with architecture and interior design students at QUT. The aim of the various approaches was to assist the design students in understanding how to design for real users with differing abilities rather than themselves, fake personas or imagined users. This research is framed by reflective practice and authentic learning and is co-constituted with students, teachers and people with differing abilities. A mixed method approach was used culminating in a multimodal data set (qualitative and quantitative questionnaires; student journals and design projects). Through the analysis of rich data this presentation opens up opportunities for further discussion around reflective practice in design education and specifically around pedagogies of authentic learning experiences for students to gain an understanding of how to design for/with people with disabilities. While there are no simple conclusions, or easy answers for how to create universal designs, our findings point towards creating new engagements and knowledge processes and scaffolding these activities around reflective practice and authentic learning, so that design students and educators can begin to understand the differing ways of designing for/with people with disabilities. KEYWORDS: authentic learning, design, design education, disabilities, reflective practice, spatial design

Universal design means … designing for people with dementia

Terri Preece and Kirsty Bennett

With almost fifty million people affected by dementia worldwide there is a growing recognition of the need to make our communities more supportive for people with

dementia. Research has identified dementia is the single greatest cause of disability in older Australians, and there are currently over 26,000 people with younger onset dementia. The evidence based principles used in designing for people with dementia align with, and can enhance universal design principles. These are demonstrated through the development of the Dementia Friendly Community - Environmental Assessment tool (DFC-EAT). This tool was developed to provide a systematic framework for reviewing public and commercial buildings and identifying areas for improvement. It is organised around the key design principles and the typical parts of the journey a person takes when visiting a building.