Australian Government

Department of Infrastructure and Regional Development

The Whole Journey

A guide for thinking beyond compliance to create accessible public transport journeys

Consultation Draft
March 2017

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Contact us

Director – Road Safety Policy and Transport Standards
Road Safety and Productivity Branch
Department of Infrastructure and Regional Development
GPO Box 594
Canberra ACT 2601
Australia

Email: dsaptwholejourney@infrastructure.gov.au
Website: www.infrastructure.gov.au

THE WHOLE JOURNEY: A GUIDE FOR THINKING BEYOND COMPLIANCE TO CREATE ACCESSIBLE PUBLIC TRANSPORT JOURNEYS

CONSULTATION DRAFT

March 2017

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ACRONYMS

DDA	*Disability Discrimination Act 1992*
MLAK	Master Locksmith Access Key
NDIS	National Disability Insurance Scheme
TGSI	Tactile Ground Surface Indicator
WCAG	Web Content Accessibility Guidelines

1 Introduction

The Disability Standards for Accessible Public Transport 2002 (Transport Standards)[1] as amended, are formulated by the Attorney–General under subsection 31(1) of the Commonwealth *Disability Discrimination Act 1992* (DDA)[2]. The Minister for Infrastructure and Regional Development is responsible for providing public transport policy advice on the Transport Standards.

Before the introduction of the Transport Standards—while certain obligations existed in the DDA itself and individuals had the right to lodge discrimination complaints—there was no focused effort to remove discrimination from Australia's public transport systems (including aircraft, buses and coaches, ferries, taxis, trains, trams, light rail, motor rail, rack railways, and other rolling stock (including vehicles and vessels classified as public transport in the Transport Standards).

The Transport Standards seek to provide a level of certainty to operators and providers of public transport services and infrastructure on their responsibilities under the DDA. The standards identify a series of target dates for compliance within a 20 year timeframe, and 30 years for certain trains and trams. The standards also help to ensure Australia meets its international obligations.

The ratification of the United Nations Convention on the Rights of Persons with Disabilities[3] in 2008 reflects Australia's commitment to promoting and supporting equal and active participation by people with disability in economic and social life. The DDA and Transport Standards are important elements in Australia meeting its international obligations.

In addition, there are a number of support programs. For example, the Australian Government has established the National Disability Insurance Scheme (NDIS)[4] to support people with a permanent and significant disability which affects their ability to take part in everyday activities.

In the 14 years since the Transport Standards were established, there has been a significant change in the way that governments, public transport operators and providers

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[1] https://www.legislation.gov.au/Details/F2011C00213
[2] https://www.legislation.gov.au/Details/C2016C00763
[3] cpted.net/
[4] https://www.ndis.gov.au/

address access to public transport for people with disability. In this context, the DDA requires the Transport Standards to be reviewed every five years, with the first review commencing in 2007 and the second in 2012. The next review is scheduled to commence in 2017.

The Second Review of the Transport Standards[5], found the standards were effective in bringing forward investment in accessible infrastructure and conveyances, and requiring public transport operators and providers—public and private—to plan and implement upgrades to their transport assets.

The second review also highlighted that the Transport Standards have been effective in reducing discrimination on the grounds of disability, and that progress towards compliance with the standards was continuing. Still, there were a number of areas where improvements could be made.

One of these was addressing whole-of-journey accessibility, one of seven key recommendations from the review. This document *The Whole Journey: a guide for thinking beyond compliance to create accessible public transport journeys* (The Whole Journey) has been prepared to address this recommendation.

DSAPT 2nd Review Report Recommendation 4

"That the Australian Government, jointly with state, territory and local governments, develop accessibility guidelines for a whole-of-journey approach to public transport planning by 30 June 2016."

The Australian Government's Response to the Second Review, also agreed to work jointly with state and territory governments to update and modernise the Transport Standards. The modernisation process is being undertaken in close consultation with industry, local government and the disability sector and includes consideration of current alternative and innovative design solutions.

1.1 The whole journey

Whole-of-journey planning is about creating complete, seamless journeys for public transport users – journeys from A to B and to C to D and back again. Public transport is a crucial aspect of liveability in any community, providing an alternative to private vehicles.

[5]https://infrastructure.gov.au/transport/disabilities/review/files/Review_of_Disability_Standards_for_Accessible_Public_Transport.pdf

Public transport seeks to offer cost effective, environmentally sustainable mass transport services for those who choose to use it, as well as those who have no other transport choice due to their age (young or elderly), economic situation, lack of a driver's licence or disability status. For these people especially, public transport is key to their participation and inclusion in society.

Delivering an accessible, whole public transport journey is important not only for those with permanent disability, but also for people who may have a temporary disability—such as an injury—as well as the elderly, pregnant women, people travelling with children, and people who are in unfamiliar locations or burdened by luggage, goods or equipment.

Quote from Submission 48 – National Disability Services

"The success of the Transport Standards is about achieving access for the 'whole journey'. The standards are only a means to an end. Success is not achieved with partial implementation: for example, a train door may be wide enough but if a person cannot access timetable information they cannot use the train. Real success is only achieved when people are able to make the whole journey.

Whole-of-journey accessibility requires that accessible provision is consistent and reliable. It only takes one 'stranding' or one barrier along the journey for a person to lose confidence with the transport system and to disable further participation."

The Transport Standards provide extensive technical criteria for certain parts of a public transport journey, including stops, terminals and public transport vehicles. They have created a wave of positive change across all aspects of the public transport that they cover.

It is recognised though, that compliance with the requirements of these standards does not necessarily result in a fully accessible public transport system. There are many other aspects of a person's journey that are not addressed by the standards. Even in public transport systems that otherwise comply with prescribed accessibility standards, people with disability often face a range of barriers to a seamless accessible journey.

While some guidance on whole-of-journey planning is available at the local, state and territory government levels, there has been no guidance at the national level to help operators and providers to consistently address whole-of-journey accessibility.

This guide helps unpack each element of the journey to provide direction and promote understanding of the experiences people have within and between the different parts of a journey.

1.2 Who should use *The Whole Journey* guide?

This guide is designed to encourage policy makers, planners, designers, builders, certifiers and operators to think beyond compliance and the physical and governance boundaries of services and infrastructure, and to focus instead on people's accessibility needs across their whole journey.

This means a change of focus from providing compliant public transport infrastructure or services, to enabling a travel experience that is accessible, comfortable, seamless, efficient and cost effective.

This whole journey approach requires cooperation and dialogue between those who deliver, service and use parts of the transport system with everyone working together to identify issues, solutions and opportunities.

Carolyn, Victorian public transport user:

"Better and compulsory training in disability access (understanding the DDA, not just complying with standards) is needed for people responsible for planning, purchasing, and delivering services, from the ones designing and ordering new rolling stock or modifying existing infrastructure, through to those delivering the service: ticket sales, drivers, etc."

This includes:

- state and territory governments agencies
- local governments
- public transport infrastructure owners
- public transport service providers
- architects
- landscape architects
- urban designers
- strategic and urban planners
- transport planners
- engineers
- building certifiers
- accessibility consultants/auditors
- software/website designers
- builders
- owners of private facilities
- retailers
- building managers
- precinct managers
- academia/researchers
- public policy makers
- disability support workers and agencies

1.3 Benefits of focusing on the whole journey

In 2015 there were 4.3 million Australians with disability, representing 18.3 per cent of the population (Australian Bureau of Statistics, 2015). Around half of Australians aged 65 years or more reported having disability. Given Australia's growing and ageing population, the number of people with disability will continue to increase.

People with disability are more likely to experience social and economic disadvantage because of more limited opportunities to earn income and the high cost (in proportion to their income) of their housing, travel, medical and other needs. In many cases disability restricts people from driving a private vehicle, either through physical or cognitive ability or the lack of economic resources to own and operate a car. For many people, the perceived or real inaccessibility of public transport leaves them reliant on family or friends, or particular types of public transport such as the taxi system and the increasingly popular ride-share. This reliance on others to drive them where they want to go affects their ability to participate independently in many social, economic or cultural aspects of the community.

Access to public transport opens up opportunities for personal empowerment, social inclusion and community participation. People can choose to travel to see friends and family, participate in social and cultural activities or other initiatives such as training or adult education. Accessible public transport allows individuals to travel based on their requirements (such as cost, time of day, urgency of travel, length of the journey, interchanges etc.) rather than having to rely on private transport options.

Public transport is cost effective for individuals and the economy. Improving the accessibility of public transport has the potential to promote more efficient transport decisions by individuals, and increase the customer base, with more people able to travel for work, business or study, thereby improving productivity that supports a stronger economy.

2 Influencing factors

There are a range of factors that sit outside the public transport system but which influence the accessibility of a journey using public transport. This section highlights some of the influencing factors that need to be considered when planning for whole-of-journey accessible public transport.

2.1 The varied needs of users

The expectations of people with disability are just as varied as those of other public transport users – they have their own individual needs and preferences.

The availability of accessible public transport is, or should be, the key to independence and participation for many people with disability.

Some disabilities are clearly identifiable, others are not, and each person will have varying levels of comfort in talking about their access requirements. Some people require high levels of assistance, while for others, just a few small access improvements can make a world of difference to their journey.

Everyone involved in the provision of accessible public transport has a responsibility to understand and respect these differences as they work towards enabling transport users to more easily participate in and travel through the built environment.

Accessibility should be top of mind in our decision-making, not an afterthought when faced with compliance requirements. This thinking will benefit all users, not just those with accessibility requirements.

2.2 Universal design considerations

As outlined in the National Disability Strategy[6][7]:

"Taking a universal design approach to programs, services and facilities is an effective way to remove barriers that exclude people with disability. Universal design allows everyone, to the greatest extent possible, and regardless of age or disability, to use buildings, transport, products and services without the need for specialised or adapted features.

[6] https://www.dss.gov.au/our-responsibilities/disability-and-carers/program-services/government-international/national-disability-strategy

[7]

The principles of universal design can also be applied to the design of programs run by government, businesses and non-government organisations. This will result in greater efficiency by maximising the number of people who can use and access a program without the need for costly add-ons or specialised assistance.

Universal design assists everyone, not just people with disability. For example, wider doorways are better for people with prams, while decals on fully glazed doors help to keep everyone safe. Providing information in plain language can assist people who speak English as a second language and people with low literacy. As the population ages, the presence of disability will increase, and adopting a universal design approach will become even more important."

Important elements of universal design include (Audirac, 2008):

- **Accessible design:** designing for equal useability for people with a diversity of abilities with regard to mobility, facilities, devices and services, and incorporating disability access standards.
- **Inclusive design:** designing products and services for the needs of the widest possible audience, irrespective of age or ability.
- **User-centred design:** placing users' perspectives and needs at the centre of the design process.
- **Barrier-free design:** constructing or retro-fitting infrastructure and vehicles to eliminate barriers and obstacles that would otherwise restrict the range of users and purposes for which the space can be used.
- **Trans-generational design:** improving quality of life for people of all ages and abilities, both now and into the future.
- **Assistive technology:** engineering that enables people with a range of abilities to complete tasks by enhancing physical, sensory and cognitive abilities.

The Australian Local Government Association's *Disability Inclusion Planning: A Guide for Local Government*[8] (October 2016) is a valuable tool for integrating disability inclusion planning within organisations.

While it was developed for use by councils, it also provides a more general resource to inform design matters in the context of the National Disability Strategy 2010–2020 [9] (NDS), the introduction of the National Disability Insurance Scheme,[10] and responding to the

[8]http://alga.asn.au/site/misc/alga/downloads/publications/Disability_Inclusion_Planning.pdf
[9] https://www.dss.gov.au/our-responsibilities/disability-and-carers/publications-articles/policy-research/national-disability-strategy-2010-2020
[10] https://www.ndis.gov.au/

requirements of state, territory and Commonwealth legislation and policy. The guide's suggested steps for disability inclusion action planning are:

- allocate **responsibility**
- **consult** with the community and staff
- map your **operating environment**
- determine **governance and accountability**
- develop **strategies and actions**
- develop a **monitoring, evaluation and reporting** strategy
- publish, **promote and implement** the plan.

2.3 Drivers of change

Some key trends and issues shaping the future of transport in Australia will also influence public transport journeys.

An ageing population: Australia's population is growing strongly, and the number of Australians aged over 75 years will increase from 6.4 per cent to more than 14 per cent of the population by 2060. Our ageing population gives added urgency to the need to ensure greater public transport accessibility at all stages of people's journeys.

Climate change: changes in our climate mean an increasing incidence of extreme weather events such as heatwaves and storms. This creates potential for greater disruption to public transport services and a higher demand for weather protection to address these extremes. It will require greater redundancy and flexibility in the transport systems to effectively manage climate related disruption.

Digital connectivity and big data: the increasing digitalisation of transport information, ticketing and services is leading to techno-reliance and reduced staffing levels both on public transport services (with the introduction of driverless trains for instance) as well as the introduction of new transport modes, such as car-sharing services and autonomous vehicles.

The increasing availability of data can help us better understand customers and their trips, more effectively integrate travel options with destinations, and enable systems to be designed for user needs and their desired experience. Data can also enable staff to provide customer focused one-on-one assistance during their journey, where needed.

Autonomous vehicles: autonomous vehicles that sense the environment and navigate without human input are no longer science fiction. It is expected that these vehicles will have a significant impact on future public transport delivery. Important considerations

include the capacity for such vehicles to verbally as well as visually indicate their whereabouts, and to provide passengers with journey advice.

Urbanisation: Australia is highly urbanised, with more than 90 per cent of the population living in urban areas. Urbanisation, with integrated, inclusive and iterative planning, can provide great opportunities to citizens in terms of culture, commerce and productivity. The complexity of cities however creates challenges, including urban sprawl, increasing traffic congestion, car-reliance and decreasing rural populations. These will have implications for public transport accessibility.

Other possible drivers might include:

- the increasing connectivity of transport users in terms of apps and real time communication between users
- real-time monitoring of video surveillance equipment and access to public address systems
- the effect of technology on infrastructure management practices and staffing.

2.4 Urban design

The design of the urban environment, streets and the layout of building structures form the foundation of movement networks in cities and regional areas. As identified in the Urban Design Compendium[11] (English Partnerships, 2000), a good movement framework:

- Provides the maximum choice for how people will make their journeys.
- Takes full account of the kinds of movement a development will generate.
- Makes clear connections to existing routes and facilities.

Applying good urban design principles to spaces that form part of a public transport journey (such as origins and destinations, public transport interchanges and the streets in between) are critical factors that contribute to the quality and character of a journey. Adopting urban design principles such as supporting active and interesting building façades that put ‘eyes on the streets’ can enhance an area’s sense of security and safety.

Good urban design can also support wayfinding. Through visual cues in the environment, such as landmarks, views and vistas, and permeable street blocks, a journey’s start and end in particular become more comfortable and safe with a clear network of routes and paths.

[11] https://udc.homesandcommunities.co.uk/urban-design-compendium?page_id=&page=1

2.5 Integrated planning

Integrated planning recognises that a city or regional area is supported and governed by the interrelationships between physical infrastructure, people and the context of a place. Cities and towns are hubs for ideas, commerce, culture, productivity and social development. An integrated planning approach considers the design of transport networks within the context of the opportunities that cities and regional areas can bring.

Maximising the integration of land use planning and transport planning provides the best opportunity to enhance the accessibility of an area, and enhance users' experience of the whole journey. This also enables streets to be considered as public spaces that feel safe, comfortable and are a delight to experience.

New (greenfield) developments versus existing or old (brownfield) situations pose varied challenges. Greenfield sites provide opportunities to achieve best practice accessibility informed by disability advisory groups (see figure 14). Improving accessibility of existing facilities, particularly those with heritage classification or engineering constraints, can pose significant challenges and costs. Working with disability advisory groups in these situations is particularly important, and frequently enables solutions to be found that best meet the needs of all parties involved.

An integrated planning process also considers the design of places in the context of human behaviour and experience. This design approach brings a truly holistic perspective to the planning and design of public transport. It brings focus to users' journeys and their interactions with the environment during these journeys.

2.6 Governance and management of places

A range of stakeholders are involved in planning, designing, procuring/purchasing, constructing, certifying, operating and maintaining, and redeveloping public transport systems and their surrounds.

These stakeholders are often restricted by issues such as geographic boundaries, land ownership, scope of work, budgets, separate approval processes and other issues that effectively 'divide up' public space and aspects of the public transport system. This division means people often only focus on their piece of the puzzle, rather than the complete picture.

Effective governance and management of precincts and places that interface with public transport is an important aspect of creating whole public transport journeys. A clear vision for the whole, will lead to more pieces fitting together to provide accessible public transport journeys.

2.7 Liveability

Public transport accessibility is the key to creating equitable environments where everyone can access and benefit from the full range of opportunities available in our society. A seamless and enjoyable public transport journey can enable greater access to jobs, healthcare, education and other services.

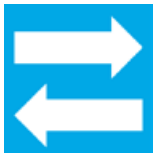
Urbanists like Jan Gehl of Gehl Architects, have forged the way for conversations that focus on the relationship between the shape of cities and their impact on quality of life. Such thought leaders advocate strongly for investment in high quality public spaces (including street networks) with connected and accessible public transport networks.

> "For cities to be liveable, people need to have freedom of choice in terms of mobility. According to what your daily needs are, you can walk, you can bicycle, you can take public transport," **Jan Gehl, of Gehl Architects**

3 Parts of a journey

In this part of The Whole Journey, we explore a person's journey across eight key stages.

Pre-journey planning: when decisions about the use of public transport are made based on the available information.



Journey start and end: the start and end of the journey that occur outside the public transport system, for example, travelling from home to the stop, station or terminal along a footpath, and then from the stop, station or terminal to the final destination.

Public transport stop/station: dedicated locations where public transport services operate to and from.

Public transport service: the conveyance that enables the journey, the 'on board experience', as well as the scheduling/routing of services.

Interchange: places where service or mode transfers take place.

Return journey planning: reversing the journey for the return to origin or an onward journey to another place.

Disruption to business-as-usual: planned and unplanned disruption to public transport services or along the journey start and end sections.

Supporting infrastructure: mid and end of trip infrastructure such as toilets, drinking fountains, wayfinding and seating that support the journey.

3.1 Pre-journey planning

Pre-journey planning generally takes place before someone leaves their location to start their public transport experience. It involves accessing information about public transport routes, service timetables, and any required connections and conditions at the destination, from online sources, telephone services, and printed materials or by asking someone (friends, family, customer service staff or other people) to help provide this information.

People with disability have highlighted that a great deal of time and effort is required in the pre-journey planning stage to give people with accessibility requirements confidence that they can efficiently and safely complete their public transport journey. This is in contrast to other customers who can often make more spontaneous decisions to travel by public transport.

During this pre-journey phase, public transport users are seeking information to confirm the accessibility of all parts of the journey. Their decision making during this phase is also influenced by past experiences. Building confidence around the accessibility of the entire journey is key to enabling and encouraging more people to use public transport for their travel needs.

Aspirations for this journey part

- Encourage and enable more people to make informed decisions about using public transport.
- Reduce the amount of time it takes to pre-plan public transport journeys.
- Increase the confidence of public transport users that their journey will be seamless and safe.

How can we achieve this?

3.1.1 Providing a richer set of information/data in journey planning tools

People with disability have highlighted that they often have to use a number of customer service information resources, apps or other data sources to understand or confirm the accessibility of their journey. Adding additional data into regular journey planning apps—such as the accessibility status of stops, vehicles and interchanges—as well as information about the surrounding environment, provides the information people need to know to make informed decisions about their journey. This includes details on facilities

available at the stop/station (i.e. shelter), gradients, locations of steps, stairs, ramps (including kerb ramps), escalators and lifts, accessible car parking locations, footpath quality and continuity, gradient of ferry boarding points subject to tidal variation, and weather data.

Real-time information about the 'busyness' of the public transport system should be included in these tools so people can decide if they want to delay their journey for a less busy time. Information about delays and disruptions should also be included as they occur, to allow continued planning en-route.

Journey planning tools should make use of this information and provide individualised planning information based on people's needs.

3.1.2 Provide information in a range of formats

People seek information in different formats. Tech savvy travellers often use apps for their journey planning, while some people prefer to speak to customer service officers, use visual information sources, or read paper timetables and information at the public transport stop.

Currently, information about accessibility options is not always easy to find on the websites of transport providers. Clearly communicating the availability of journey planning tools and assistance is an important whole-of-journey consideration. Links to information and journey accessibility planning tools and assistance should be consistently located on service providers' websites across the country, and user testing should be a design consideration for online information.

3.1.3 Providing training

Some people with disability are comfortable using technology for their journey planning, some are not. Organisations offering journey planning tools and apps should also provide training sessions so people can set up and gain skills and confidence in using the apps and tools.

Opportunities for people to physically experience the public transport system in a controlled and comfortable environment through training sessions or open days could also be considered. These activities would build people's confidence and capacity to make decisions about travelling by public transport. The United Kingdom for example has produced a comprehensive Travel Training Good Practice Guide [12]to facilitate this.

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[12]https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/4482/guidance.pdf

3.1.4 Customer service to cover the whole journey

Customer service staff should be trained and equipped to help people plan their whole journey, not just the journey's 'public transport' aspects. This includes having information available about the surrounding environment that can be shared with customers (including any road closures or construction works, which may require journeys to be re-routed). This information should be up-to-date and checked regularly to ensure its accuracy.

3.1.5 More consistency within the public transport system

The more consistent journeys are, the easier pre-journey planning will be. If people generally know where to seek travel information and what to expect along each part of their journey, they will have more confidence relying on past experiences to help inform their journey planning.

3.1.6 Address Web Content Accessibility Guidelines (WCAG)

WCAG is an internationally recognised standard that documents how to make web content more accessible for people with disability. There are 12 guidelines that are organised under four principles: perceivable, operable, understandable and robust. Journey planning tools should seek to meet these guidelines. See Web Content Accessibility Guidelines [13]for more information.

3.1.7 User involvement in tools development

Inclusion of people with disability is an essential part of the development and testing of new apps and tools to make sure that they meet the needs of users.

[13] https://www.w3.org/WAI/intro/wcag.php

Online ‘plan a journey’ and training tools

Trip planning results and timetables on the Transport for NSW website use notes to show accessible trips. Customers with disability can plan their trips using only accessible services. A ‘location facilities’ search tool has been introduced that lists facilities (including accessible features) at stations, interchanges and wharves. This is complemented by the First Stop Transport eLearning module developed for anyone wanting to learn how to use public transport. The eLearning module also incorporates training materials for those seeking accreditation as a travel trainer through a Registered Training Organisation.

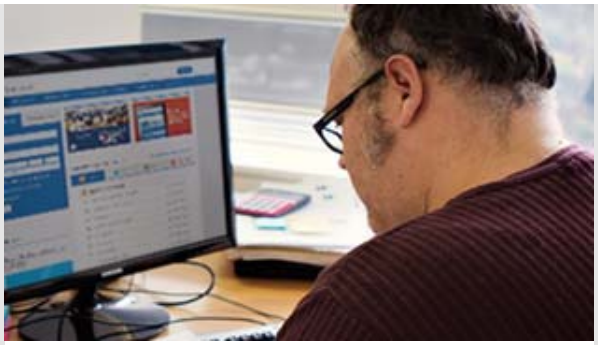

Figure 1 – Transport for NSW Online trip planning © Transport for NSW

Adelaide Metro’s smartcard introduction videos

The Adelaide Metro website has a series of videos that introduce its new smartcard ticketing system. The information is provided in a range of formats including spoken, plain English, subtitles, images and photographs, with on-screen AUSLAN interpreting for all content. These multiple formats cover a wide range of information needs.

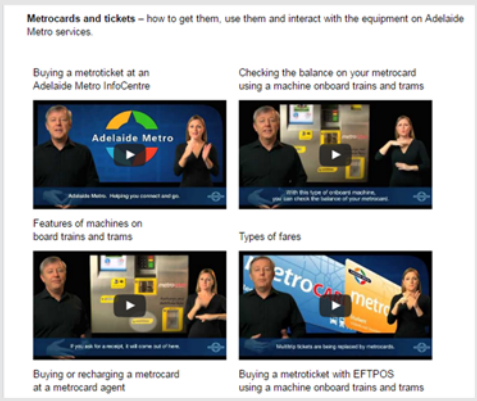

Figure 2 - Video clips to introduce smartcard ticketing system © Adelaide Metro (Creative Commons)

The Rocks Precinct accessibility maps

Sydney’s Rocks Accessibility Map is a good example of a precinct wide approach to the provision of accessibility information. It provides information about routes through the precinct that are and aren’t accessible, and details accessible paths, lifts and bathrooms. It also includes information about public transport options within the precinct.

Figure 3 - The Rocks Accessibility map © Sydney Harbour Foreshore Authority

3.2 Journey start and end

To enter the public transport system, people need to travel from their location to a public transport node, such as a bus stop, train station, ferry terminal or airport. Depending on the distance to the public transport node, public transport options and the local setting, people may do this by walking, travelling in a mobility device (such as a wheelchair or motorised scooter), catching a taxi or ride share, driving a private vehicle and parking at the station, or being dropped off by another person.

People with disability have highlighted that the start and end of their journey can often be problematic due to a lack of information about the environment they are entering. This is also a challenging part of the journey for transport operators and service providers because they often have no control over conditions surrounding the public transport infrastructure.

The journey start and end is managed and affected by a range of stakeholders including local government, state and territory government departments, private developers and landowners, and utility providers (such as telecommunications, gas or water). When issues arise during this part of the journey it can be difficult for public transport users to work out which organisation to contact for assistance.

This part of the journey is not addressed by the Transport Standards, but is subject to broader DDA requirements.

Aspirations for this journey part

- Travelling to and from public transport nodes is easy and efficient for people with accessibility requirements.
- Stakeholders involved in managing the environment surrounding the public transport network understand the impact their actions have on public transport users, and work cooperatively to resolve issues and explore opportunities.

Excerpt from submission by John McPherson to 2012 review

Unless the pedestrian and transport connections between transport nodes are fully accessible, transport nodes risk being no more than accessible islands in an inaccessible ocean. Large areas of both urban and rural landscape currently feature these archipelagos of accessibility, with their scattered stops, stations and terminals embedded in a matrix of difficult access paths and poorly coordinated multimodal transport routes.

How can we achieve this?

3.2.1 Transparent information about accessing stops/stations/terminals

Having a Transport Standards compliant stop/station/terminal does not automatically make the infrastructure accessible. Issues such as topography in the vicinity of transport infrastructure and legacy streetscape features are not easily resolved.

Therefore, information about the environment surrounding the public transport infrastructure needs to be made available. This would enable people to plan their journey based on their individual needs and be directed to use suitable routes to public transport nodes. This is especially relevant to footpath gradients, quality and continuity, and the availability and suitability of kerb ramps.

3.2.2 Pathway quality

Pathways leading to public transport nodes should be maintained to a high standard by the relevant authority. This will make this part of the journey as safe, convenient and comfortable as possible for those with accessibility requirements. Improving pathways means fixing broken pavements, maintaining levels, managing street clutter and avoiding trip hazards.

In regional and rural areas, not all footpaths will be paved or sealed. Areas in the vicinity of public transport infrastructure should be prioritised for this treatment. Where this is not possible, measures should be considered such as compacting the existing soil to create a smooth surface, rather than using materials that could be uneven or unstable, such as gravel. In some instances, an alternative stop location could be considered that might achieve a better result.

3.2.3 Obstructions

People with disability have highlighted that temporary signage (such as A-frames), parked cars, retractable barriers, low hanging branches, commercial activity such as café or retail display stands, construction works and other obstructions along pedestrian pathways are significant issues that impact access to public transport. The Australian Human Rights Commission has provided footpath and access requirements[14] guidance as part of the Commonwealth *Disability Discrimination Act 1992*.

Increasing awareness of these issues within the community will improve access to the public transport system.

Where required, those with enforcement powers (e.g. local government) should work with stakeholders to maintain unobstructed paths, especially in the vicinity of public transport infrastructure.

For example, to ensure effective collaboration between stakeholders, the Yarra and Melbourne councils in Victoria have taken an active role in developing footpath use policies.[15]

3.2.4 Precinct planning and coordination

Stations often function as the centre of many communities, important nodes in a neighbourhood. A series of activities at stations can transform a station or stop into a multi-use destination.

Where public transport nodes sit within a precinct—such as a retail, health, education or sporting facility or airport terminal—planners and managers should consider how activities within the precinct may impact access to public transport, especially for those with accessibility requirements.

From a planning perspective, precincts should be planned with their role as a conduit and supporter of public transport infrastructure in mind. This may involve integrating seating, clear wayfinding information and cues, shade and other supporting infrastructure into the public realm.

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[14] https://www.humanrights.gov.au/our-work/disability-rights/publications/advisory-note-streetscape-public-outdoor-areas-fixtures
[15] http://www.yarracity.vic.gov.au/Business/Permits-and-regulations/Footpath-trading/

From a management perspective, the area's role in public transport journeys should be acknowledged and respected through day-to-day precinct management. Actions that take place in the precinct have the potential to impact people's public transport journeys.

An example is the Australian Taxi Industry Association, which has sought to address this need through its Taxi Rank Design Specification.[16] This guides the process of designing accessible taxi ranks for various facility types located in urban centres. Tank Rank Master Plans[17]have been developed for Adelaide, Brisbane, Canberra, Melbourne and Sydney.

3.2.5 Temporary works

Pedestrian movement and informal desire lines should be considered in traffic management planning for temporary works that impact pathways, kerb ramps and pedestrian crossings in the vicinity of public transport infrastructure. Organisations that approve works and management plans should require that provisions such as temporary kerb ramps be included in management plans.

Blind and vision-impaired people have highlighted that they struggle with these types of temporary works as signage is often used to direct people to detours. Alternative means of communicating changes and detours, or a combination of measures, should also be considered, for example temporary fencing in place of bollards.

Consideration should also be given to ways to communicate temporary changes and diversions so that this information can be used by journey planning tools to inform people of temporary changes that may affect their journey.

Utility owners should consider the impact of their work on accessibility, especially in relation to temporary works and reinstating pavements, particularly in the vicinity of public transport infrastructure.

[16] http://www.atia.com.au/wp-content/uploads/Generic-Taxi-Rank-design-specification.pdf
[17] http://www.atia.com.au/publications/taxi-rank-master-plans/

Clarifying responsibilities

Western Australia's Public Transport Authority has worked closely with local government to clarify roles and responsibilities for planning and designing public transport infrastructure. The authority sought legal clarification to ensure that it understood its responsibilities and that staff were better informed where planning, maintenance, and upgrades were required to the network. This also gave local government confidence in what its scope entailed, and enabled more open dialogue where funding was required to support accessible upgrades.

Figure 4 – Blue Cat Bus in Perth © Public Transport Authority of Western Australia

Complete streets approach for designing safe access for all users

The complete streets approach recognises that streets are destinations, and that good design ensures people who travel as pedestrians, cyclists or on public transport have just as much right to use the streets as drivers. Outcomes of this approach has resulted in streets that are more pedestrian friendly, have improved safety and security through good design and surveillance, provide more permeable and legible street networks, and improve bus operations through appropriate allocation of street space.

Figure 5 – Complete streets approach © ARUP

Cities unlocked

A pilot project undertaken in the UK between Future Cities Catapult, Guide Dogs and Microsoft, is improving mobility and navigation for people with low and no vision.

The project was piloted in London. It uses a headset and smartphone app that provides the wearer with a 3D soundscape to provide a richer understanding of their surroundings.

Figure 6 – Cities Unlocked headset used to navigate the city © Future Cities Catapult

3.3 Public transport stop, station or terminal

The ‘at the stop’ stage of a public transport journey involves a person’s experience at the stop, station or terminal from their arrival, until they board the vehicle or conveyance. During this stage, they:

- enter the stop/station or terminal
- configure information about their journey
- access ticketing, retail or other facilities
- navigate their way to their platform or boarding area
- wait for their service
- board the public transport vehicle or conveyance.

Public transport stops/stations/terminals can be as simple as a sign or stop marker at the side of a road, or as complex as a multi-modal interchange where many services converge.

People with disability have indicated a range of issues at this point in the journey, including:

- a lack of shade to wait under
- space issues associated with mobility devices
- visual and audio ‘clutter’ associated with advertising or general street/road signage
- issues in identifying and hailing their service
- late changes to platforms
- difficulty in boarding a public transport vehicle.

In larger transport premises such as airport terminals and interchange rail stations, moving between drop-off points and boarding points can be a particularly difficult part of the whole journey.

Aspirations for this journey part

- The stop/station/terminal should be easy to identify through visual and audio messaging, be easy to access, provide information about services in a variety of formats, and provide a safe, suitable boarding point for users.
- Public transport users need to locate boarding points from drop-off points and surrounding infrastructure at allotment boundaries.
- Travellers should be safe and comfortable while waiting at the stop/station/terminal for their service.

How can we achieve this?

3.3.1 Consistency

People with disability have highlighted that consistency within the built environment assists with accessibility. If parts of a stop/station are generally consistent with other stops/stations, they are more likely to safely and efficiently navigate the location. This doesn't mean a 'cookie cutter' approach should be taken to planning and designing stops/stations/terminals, but consistency should be a key element in the design process.

3.3.2 Amenity considerations

People with disability have often reported waiting at a public transport node for longer periods of time because they arrive earlier to ensure they can meet their service with the least amount of stress. They sometimes have to wait for more services than planned if the public transport vehicle isn't accessible when it arrives (this is especially relevant to buses and trams in some locations around the country).

Depending on the location and local climate, this may mean waiting in the hot sun or pouring rain, so some form of shelter should be considered. Other amenity considerations depending on the scale of the stop/station should include seating, drinking water and bathrooms.

3.3.3 Real time information

Where relevant and possible, real time information about upcoming arrivals should be provided at the stop/station in a variety of formats. This could be a combination of signage, audio announcements and 'beacon' type technology that interacts with smart devices. Journey planning apps should also access real time information so people can use this to understand the arrival progress of services.

For example, the Perth CAT bus system has visual and audio real-time information concerning the arrival time of the next bus at the bus stop, and Transport for NSW is trialling 'beacon' type technology at its Chatswood train and bus interchange (see figure 15).

3.3.4 Hailing arrangements

Hailing a public transport vehicle can be difficult for people with disability, especially those who are blind or vision-impaired. Hailing points, including taxi ranks, should be easily to identify through a variety of formats and in line with the Transport Standards.

For example, Transport Canberra has made bus hailing kits available for vision impaired passengers. The kit consists of a clear plastic pouch with three slots and a set of numbered inserts, which used together display the required bus route number to bus drivers. The inserts have large, raised print and Braille to help with identification. In some overseas cities, buses broadcast their number and destination through a speaker mounted on the outside of the vehicle.

Drivers should also be trained to recognise when a traveller might be vision impaired (for example, because they use a mobility cane or guide dog), or have a physical disability which affects their capacity to hail a bus. Drivers need to be vigilant and alert for these travellers, and to stop even if they are not hailed.

3.3.5 Drop off/pick up points

People with disability will often use taxis to travel to their chosen stop, station or terminal. Consideration could be given to creating a drop off/pick up point that provides access to the public transport node. This may include locating the area a suitable distance from the public transport node, providing an accessible route (including level footpaths, kerb ramps, wayfinding information and cues), and considering how ticketing, security and other activities at the stop/station/terminal may impact a person's journey to the public transport node.

3.3.6 Customer service

People with disability highlighted the importance of having customer service staff available to assist them, especially in busy, complex environments. Such staff need to be well trained and have information about the accessibility of the location on hand.

For example, this is important for people with disability when they arrive independently at the entry to a terminal or large interchange station (e.g. by taxi or bus), and need to reach

the check-in or boarding point. At airports, collaboration is needed between the arriving vehicle operator, the terminal operator and the airline.

There are examples in retail and banking where the customer service model has shifted to a concierge model. This means people are offered individualised service at the start of their interaction, rather than people seeking customer service staff when they have an enquiry. This is a model that could also be considered for busy stop/stations and airport terminals.

Service staff should be easily identifiable from their uniforms and should be located in consistent and accessible locations within the stop/station, for example at a customer service point.

For stops/stations that aren't staffed, help points should be available for more than just emergency situations, and clear contacts provided for those who need help and assistance. These details should also be provided in Braille for blind or vision impaired customers.

3.3.7 Consider advertising's impact on accessibility

Advertising is common at public transport nodes and for people with disability, this sometimes impacts their capacity to find way-finding information and see approaching public transport vehicles.

For example, audio-based advertising and other sounds can make hearing station announcements difficult. In placing advertising, consideration should be given to its appropriateness and positioning in terms of safety and accessibility for those with disability.

3.3.8 Ticketing

While some people with disability carry travel cards that serve as a valid travel ticket, other people are required to purchase tickets or validate their travel card.

In many locations, paper ticketing is no longer preferred and pricing structures are set to discourage use of these tickets. But some people prefer to hold a paper ticket and this pricing structure—and the reduced number of ticket booths—creates barriers to their use of public transport.

Electronic ticketing systems such as go-card (Queensland), Opal (New South Wales), SmartRider (Western Australia) and *myki* (Victoria) may also prevent people using public transport as they may be unfamiliar with the system or find it difficult to manage. Public transport service providers should consider familiarisation and training sessions for people

who are switching to this form of ticketing to help them understand how to use and top up (including setting automatic top up) their travel cards. The Adelaide Metro website has a series of videos that introduce its new smartcard ticketing system. The information in these is provided in a range of formats including spoken, plain English, subtitles, pictures and photographs with on-screen AUSLAN interpreting of all content. These multiple formats cover a wide range of information needs (see figure 2).

G:Link – Gold Coast light rail

Every service and every station caters for passengers of all mobility levels. When trams pull into a station the door entry is almost level to the platform, though this can alter a few centimetres depending on the number of people on board the tram. The platform and trams have been designed to make it as easy as possible for everyone to board and exit the tram at the platform. Ramps are still available for passengers who feel more confident using them or who need them to board and disembark.

Figure 7 – G:Link tram. Image supplied courtesy of TransLink, Department of Transport and Main Roads

Training bus stops

Guide Dogs Queensland's facility at Bald Hills has three replica TransLink bus stops to familiarise and build the confidence blind and vision-impaired people and their guide dogs with this infrastructure. This is a good example of pre-journey planning focused on building an individual's confidence and capacity.

Figure 8 – TransLink training bus stop at Guide Dogs Queensland © Guide Dogs Queensland

Try before you ride

Public Transport Victoria (PTV) holds an annual *Try before you ride* event to allow people of all abilities to familiarise themselves with its transport system and infrastructure. This includes people with disability, parents with young children and elderly users. Participants have a chance to boost their confidence by practicing how to board and alight a low-floor tram, low-floor bus, train, coach and accessible taxi at the Box Hill Interchange.

Figure 9 – Try before you ride flyer © Public Transport Victoria

3.4 Public transport service

The in-vehicle/conveyance stage of a journey involves the passenger's interaction with the vehicle (bus, train, tram, aeroplane or ferry etc.) and potentially its driver. During this stage, the customer boards the vehicle, travels to their destination stop/station and alights.

Ideally, the customer is able to board independently, quickly and effectively; have a safe, secure and comfortable experience on board the vehicle; is provided with information during the journey; and alights the vehicle easily at their desired stop/station.

People may need assistance with boarding and alighting in the form of ramp deployment and other mobility aids. This is particularly true for coaches and mini buses, and some ferries affected by tides. It is also true for airlines where aero bridges are not in use.

Requirements of the in-vehicle stage may be different depending on the mode of travel and length of the journey.

Aspirations for this journey part

- People using public transport services feel confident, safe and secure knowing they can get on, travel on board and then get off the service.
- Fellow passengers and staff are courteous and respond to requests for assistance from people with disability.

How can we achieve this?

3.4.1 Limit the need for assistance

Wherever possible, planners and designers should aim to eliminate the need for ramps and accessibility aides when people enter and exit a public transport vehicle.

This involves providing appropriate infrastructure, such as consistent platform and vehicle levels, or using vehicles that can adjust to different kerb heights (such as kneeling buses), as well as ensuring a consistent location for accessible boarding points. Minimising boarding gaps is important, however this can be difficult in some situations. For example, on older train systems and ferries, and where there are curved platforms. In such situations suitable mobility aids that maximise potential for independent access and assisted boarding may need to be examined. Consideration of such options needs to take

into acouunt that many people with disability prefer independent boarding that does not require separate processes that draw attention to their needs or delay a journey. This aspiration should be considered during infrastructure planning and when design and procurement decisions are made, as such decisions are likely to impact public transport accessibility for many years.

3.4.2 Audible announcements

Vision impaired people have highlighted that audible announcements within vehicles significantly improve their public transport experience because information on their location is communicated during the journey.[1] The importance of communication increases as routes become more complex, such when stops are frequent (e.g. 300 metres apart), as does the difficulty in using audible announcements. Apps such as the Stop Announcer (NSW)[18] are an effective alternative for transport users who need access to information on their whereabouts.

Similarly, clear, timely and accurate audible announcements within interchanges is also important, particularly where there are dynamic bus bays and users rely on announcements to get to right departure point. This is considered further at Section 3.5.3 ‘boarding points’.

3.4.3 Vehicle fleet consistency

Consistency of essential accessibility features across the whole journey is important. Features such as exit buttons, priority seating and the location of allocated spaces should be as consistent as possible. People with disability have highlighted that vehicles can have significant differences in this regard. For example, exit buttons located in different places. Such differences can significantly impact on people’s ability to travel independently.

This will be increasingly important as transport providers pursue service improvements in response to technology opportunities, including use of different vehicles for different services in the future.

3.4.4 Vehicle livery

Vehicle colours, icons or numbering systems are important identifiers for people who use the public transport system. The symbology and colouring of these should be considered

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[1] Disability Standards for Accessible Public Transport 2002, Part 27, Clause 27.4
18 http://www.transportnsw.info/resources/documents/help/stop-announcer-train-instructions.pdf

to ensure these identifiers are consistent across the fleet and provide clear information for users.

Changes to these symbols or colours should be considered in consultation with relevant user groups to ensure they do not affect accessibility.

3.4.5 Driver and staff training and awareness

A driver's behaviours and actions can make a positive and lasting effect on the relationship with a customer with disability, and their confidence to use public transport again.

Especially relevant to buses, trams, airlines and taxis, drivers should be appropriately trained to enable them to assist people with accessibility requirements to use public transport. This includes identifying signals to stop and pick a person up, assisting with boarding and ticketing, waiting until the person is settled before moving off, driving in a manner that considers passenger safety and comfort, helping to identify a desired stop, and helping travellers alight from the vehicle.

Drivers could also be trained to communicate with people non-verbally, such as writing in notebooks, using communication cards, or using selected Auslan phrases.

For example, V/Line, Victoria's regional public transport operator, has introduced innovative and simple solutions to improve the travel experience for people with disability. It is the first public transport operator in the world to be accredited in the Communication Access Symbol (see figure 12)

Passengers who are travelling on public transport also have a role to play in enabling an accessible journey. People with disability have highlighted that priority seating is often unavailable on busy services, and is also shared with other customers such as parents with prams. To address this issue, education and awareness programs should be considered by transport service providers to reinforce courteous travel behaviours.

3.4.6 Consider advertising's impact on accessibility

Advertising and public information campaigns are common on public transport. But people with disability can find advertising on bus windows makes it more difficult to know where they are in their journey. They also say that audio based advertising makes hearing travel or emergency announcements difficult.

At the same time, there is an opportunity to be inclusive of travellers with disability in general advertising for public transport.

As noted above, advertising placements should consider implications for people with disability in terms of safety and accessibility.

Passenger etiquette campaigns

Fellow travellers have a role to play in creating accessible public transport journeys.

Guide Dogs Victoria, Public Transport Victoria and Yarra Trams launched an education campaign on transport etiquette around travellers with a vision impairment.

Figure 10 – Banner for an educational campaign © McCann Sydney

On-board announcements

State Transit in NSW provides an audible and visible next stop announcement service on its MetroBus services.

All new buses now also feature LED destination signs with strong contrast between the large white writing and black background, making these easier to read for customers with vision impairment.

Figure 11 – It is common for public transport to feature on-board next stop announcements coupled with destination signs and arrival time estimates © Transport for NSW

V/Line disability awareness and communication training

V/Line, Victoria's regional public transport operator, is making it easier for customers with disability to use public transport.

In 2013, it commenced the journey to become communication accessible and in 2016 became the first public transport operator in the world to be accredited under the Communication Access Symbol. More than 550 frontline staff completed disability awareness and communication training to improve their knowledge and skills.

Through a collaborative approach with industry experts, customers and staff, V/Line has introduced innovative and simple solutions to improve the customer experience for people with disability.

Figure 12 – Improving customer experience for people with disability at V/Line © V/Line

3.5 Interchange

People may need to transfer to another transport mode or route at some point during their journey. To do this, they exit the service, navigate their way through an interchange or other environment to the next service, and then board.

Changing services or modes occurs at an interchange. Some of these transfers occur in a purpose built interchange, while others require travellers to exit one service/form of public transport and travel to their next stop or station, usually by the urban street network. Transfers need to be efficient as delays to customers may cause them to miss their next service, or a specific accessible service, impacting their confidence and level of stress.

People with disability have highlighted that they are less likely to embark on public transport journeys that involve interchanges as it adds complexity and uncertainty to their trip.

Aspirations for this journey part

- People are not deterred from a public transport journey because it involves an interchange.
- The interchange experience is as easy, convenient and efficient for a person with disability as it is for other public transport users.

How can we achieve this?

3.5.1 Coordination of different operators

Interchanges are places where different services and modes, sometimes operated by different operators, converge to provide journey options for people. Public transport providers should strive to coordinate services as much as possible to provide a seamless experience for travellers, which will also encourage greater use. For example, wait times between services delivered by different operators should be considered and optimised for customers.

A ‘precinct’ approach should be taken in complex interchange environments, such as airports and major rail/bus stations, where all providers come together to discuss interchange interfaces and find ways to improve these for their customers.

3.5.2 Wayfinding

Wayfinding is important to enable people to exit a transport service, quickly orient themselves and locate the boarding point for their next service or the exit.

Wayfinding takes into account all the cues people use to orient themselves within an environment. This includes looking for known landmarks, knowledge from previous experiences at that (or a similar) location, indicators such as signage or tactile ground surface indicators (TGSIs), maps, apps, sounds, textures, contrasts, temperature, interaction with other people (including customer service staff) and other cues.

People with disability may rely heavily on some of these cues and find others to be of no use. For example, a blind or vision-impaired person may find they rely heavily on sounds, texture, temperature and TGSIs to navigate their way.

Transport interchange design should consider wayfinding from the start and use its design principles to deliver an environment that users can intuitively navigate.

In addition to great design outcomes, wayfinding strategies and plans should be considered, especially in complex, busy interchange environments. These designs and plans should consider multiple means of wayfinding to cater for people's varied information needs. People with disability should be involved in creating wayfinding strategies and plans. For example, for a person with cognitive impairment, pictorial representations as well as signs will be beneficial. These will also assist people whose first language is not English.

3.5.3 Boarding points

Lead stop operations—where multiple services stop in order of arrival rather than having a dedicated stop per service/destination—have been highlighted by people with disability as problematic when it comes to service recognition, moving to the right location on the platform and hailing the driver.

Dynamic stand allocation is a new approach to bus management that is being implemented around the world. It uses real-time information to assign buses to vacant stops based on their route and arrival or departure time. While this approach significantly reduces the space required for the interchange, people's ability to move to the required bus stand also needs to be taken into consideration, and appropriate information provided—and time allowed—for them to complete this movement. The business case for new approaches such as these must include consideration of accessibility implications.

Examples include the use of auditory, visual and touch-based advisory systems to communicate stand locations. Approaching vehicles should also display information to

help travellers navigate between stands and boarding points, and customer service staff, such as a concierge, should also be available. These initiatives need to be underpinned by clear and consistent stand allocation protocols and underscored by passengers having sufficient information and time to access their transport.

As with any new system or approach, a review of the user and operator experience and what has and has not worked is important to inform improvements and other developments.

3.5.4 Vertical transportation

Moving between floors within an interchange can be one of the most difficult aspects of the travel experience. People with accessibility requirements, especially those who rely on mobility devices, have highlighted that there are usually limited opportunities to travel between floors/levels.

Pre-journey planning needs to be supported by tools that identify where lifts, escalators, ramps and assistance are available. This should also consider the need for a different route or use of an alternative entrance/exit at an interchange.

Consideration of the potential impact of disruptions in the middle of a journey is also important, for example, a broken lift can be a major impediment. Contingency information in pre-journey planning tools and real time communications within a facility should also be provided. This should include alternate or additional facilities such as second lifts, ramps or direct assistance.

3.5.5 Platform/stop changes

People with disability have highlighted that late platform or stop changes within an interchange present a significant challenge to them. If a change must be made, this should be announced by both audible and visual means. Consideration also needs to be given to minimising the distance that people need to move to access a new boarding point, and avoiding changes that require vertical transportation to access the new location.

3.5.6 Kiss and ride and taxi facilities

The convenient access to an interchange for people with disability is often from where they are set-down at dedicated drop-off/pick-up zones. These should be located and designed to provide clear and legible access to major interchange entry points and visible when exiting.

3.5.7 Real time information

Information about service arrival and departure times and locations should be provided visually and by audible announcements within the interchange.

3.5.8 Acoustic environment

Interchanges are often noisy, especially during peak travel times. Speaker quality and building acoustics should be tested to ensure audio announcements are high quality.

Announcements should be spoken slowly and clearly to aid understanding. Feedback from people with a hearing impairment is that accents, high pitched voices and quiet voices can all impact their ability to understand announcements.

Audible advertising can also impact people's ability to hear announcements, so limiting this is preferable. This is also discussed at section 3.5.3 (Boarding Points).

3.5.9 Supporting infrastructure

While some people try to reduce the amount of time they need to spend at an interchange, others may use interchanges as a place to break their journey, access amenities and rest before continuing.

Supporting infrastructure such as accessible bathroom facilities and seating should be considered under the Disability Standards for Accessible Public Transport.

As the concept of workplaces become more fluid, infrastructure such as WiFi and mobility aid charging points could be considered to enable the time spent at interchanges to be productive. All such services should be identified visually and audibly, and referenced in journey planning materials.

3.5.10 Customer service staff uniforms

People with disability have highlighted that the symbology and colour of customer service staff uniforms is very important to them when they are in a busy interchange. Being able to easily identify service staff is critical to the accessibility of their journey. When uniform changes are proposed, this should be taken into consideration.

Dynamic stand allocation at Perth's Wellington Street Bus Station

Public Transport Authority Western Australia recently opened Australia's first bus station using dynamic stand allocation. The station has a consolidated passenger waiting lounge, similar to an airport waiting lounge, with passengers boarding buses through sliding glass doors. This follows international developments in bus station design that provide quiet air-conditioned waiting areas, high quality seating and furnishings and real-time information on 116 screens throughout the station.

Accessibility was considered during the new bus station's design and development by adopting a semi-dynamic arrangement where bus route groups would be permanently assigned to groups of stops (so that passengers will always wait in the same area). Individual bus arrivals are dynamically assigned to stops within that group.

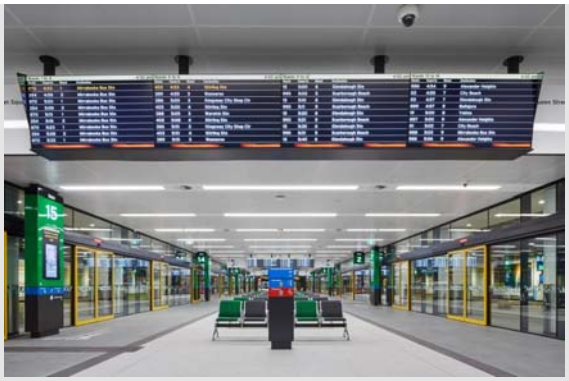

Figure 13 – New waiting lounge at Wellington Street Bus Station, Perth © Public Transport Authority of Western Australia

Christchurch bus interchange

The planning and design of Christchurch's new bus interchange included input from groups including the city's Disability Advisory Group and an audit by the national Barrier Free New Zealand Trust.

Early and regular consultation with disability groups resulted in positive accessibility outcomes for all users, with the interchange featuring walking strips and electronic braille information stands for blind and vision-impaired people, step-free ground-level access and signage heights and types designed with all users in mind. This bus interchange also uses dynamic stop allocation.

outcomes for all users © Otakaro Limited

3.6 Return journey planning

Once people have reached their destination, they usually need to return to their origin. This involves retracing their steps to undertake the return, or journeying on to another location.

People should be able to easily find the start of their return journey by re-tracing their travel path, but this is not always a smooth process, especially for those with accessibility requirements.

People with disability have often arranged their return journey as part of the pre-journey planning. Their travel plans may be fixed on returning on a particular service at a particular time. If their circumstances change while they are out, or if changes are made by the transport provider, it can be difficult to re-plan their return journey.

Aspirations for this journey part

- People can easily re-trace their steps to find the public transport node that takes them back to their origin.
- Return journey planning should be flexible so people don't have to work to a rigid return schedule if they don't want to.

How can we achieve this?

3.6.1 Paired stops

Relevant for bus coach and mini-bus services, bus stops should be paired, meaning that the inbound stop has a corresponding outbound stop that is easily accessible. For example, placing bus stops on opposite sides of the road to each other and having suitable safe crossing points, such as traffic lights, pedestrian refuge islands and kerb ramps depending on the local setting. This will help people to easily find their return bus stop.

3.6.2 Journey planning tools

Journey planning apps should be easy to access and use. For example, return journey functionality should be incorporated so that it is easy to reverse a journey in the app and be guided to the relevant boarding point and service.

Geolocation features should also be incorporated into apps so that people can use this function to locate themselves and plan a return journey. ‘Favourite’ journeys should be saveable so that people can easily access their favourites to get up to date information about service times. Overall, planning information should dynamically adjust to the user’s location and the time of day (including tidal changes for ferries) to assist in identifying a return journey.

3.6.3 Real time information

Information about arriving services should be provided in real time either by signage, audible announcements or via an app to enable people to plan their return journey.

3.6.4 Customer service

As with pre-journey planning, the return journey benefits from the support of customer service advice and direction. This may be more critical where the level of direction and assistance for people with disability may be higher as they are starting from a location which is less familiar.

3.7 Disruption to business as usual

Occasionally, there may be disruptions to the usual operation of the public transport system. Examples are cancellations of services, closure of a train line or busway, weather related disruptions such as severe storms or fog, vehicle breakdown, replacement of a train with a bus service, or evacuation of a vehicle or station due to an emergency.

Disruptions can be planned or unplanned. A planned disruption is generally well managed with advance notice, and alternate transport arrangements can be put in place to minimise disturbance as much as possible.

Unplanned disruptions are generally more difficult to manage as information about the nature of the disruption and alternate arrangements can be difficult to source and communicate.

When disruption occurs, people should be made aware of the situation, how they should respond, and whether there are alternative arrangements in place for them to complete their journey.

People with disability say that disruptions are highly stressful and the possibility of disruption is a significant barrier to their participation in public transport journeys.

Aspirations for this journey part

- People with disability are no more impacted by a disruption than their fellow travellers.
- People with accessibility needs know where to go or who to ask for information and assistance in the event of a disruption.

How can we achieve this?

3.7.1 Disruption management planning

Managing disruption should take into consideration people with accessibility requirements. This includes involving people with disability in planning and training evacuation activities so that management plans appropriately address the range of accessibility needs. This planning, testing, training and evaluating should be undertaken for a range of disruptions, from a lift being broken to a major emergency situation.

Processes should be implemented so that any change to the environment within the vicinity of public transport infrastructure is assessed to determine if this change could impact accessibility.

3.7.2 Communication

Communicating disruptions should be across multiple platforms. For example, a blind or vision-impaired person may not be able to see a sign that provides details about a disruption and may be confused by the situation. A person with a hearing or cognitive impairment may not hear or understand an announcement.

Creating an online space where people can discuss the accessibility of a particular stop/station/interchange can be an effective way to support continued improvement in the whole journey. This can be achieved in partnership with public transport owners and operators.

Where vehicle replacement is needed due to a planned or unplanned disruption, it should be based on prior contingency plans which aim to provide the same level of accessibility as the original vehicle. For example, train replacement bus services should be accessible, not replaced with high floor coaches. Where this is not possible, any change to accessibility should be clearly communicated and aids and assistance provided to enable access that ensures affected passengers are not unduly inconvenienced, for example such as wheelchair accessible taxis.

Vehicle replacement should consider and provide guidance around situations where insufficient low floor buses and coaches are available and how the operator should manage such situations. This would include ensuring a percentage of replacement vehicles were accessible, having taxis on standby, and staff available to manage vehicle access and provide timeframes for the next accessible vehicle to arrive.

3.7.3 Help/meeting point

Providers should consider implementing a help/meeting point (with an accessible path to the area) within major stations, terminals and interchanges so people can seek assistance, especially during disruptive events. This area should have customer service staff or fully accessible help phones, and should be visible, accessible and easy to navigate towards.

3.7.4 Real time information

Real time information about the nature of the disruption and alternate arrangements/expected wait times should be provided via screens, audible announcements and apps.

3.7.5 Customer service

Customer service staff need to be trained on the importance of notifying patrons of changes, disruptions and emergencies, with particular focus on user groups that may require additional assistance.

3.7.6 Acoustic environment

During a disruption, the acoustic environment is likely to be more cluttered than usual, because more people are being clustered together within an area and potentially with other environmental noise (i.e. thunder and rain from a storm). Disruption management planning should also consider this interference within the acoustic environment and have strategies for clear and concise audible announcements during disruption events.

3.7.7 Vertical transportation

Management plans should be prepared for any disruption to lift or vertical transportation access. These plans should identify alternate ways to change floors where possible (see section 3.5.4).

3.8 Supporting infrastructure

People interact with supporting infrastructure during their journey. This includes ‘hard’ infrastructure such as bathroom facilities, drinking fountains, signage, seating, shelter, lighting, maps and timetables. It also includes the ‘soft’ infrastructure of customer service staff, other public transport operator staff and people involved in their journey.

People with disability have highlighted the importance of both hard and soft infrastructure during their journeys.

Hard infrastructure generally provides a framework that they can travel independently within. It includes facilities (bathrooms, seating etc.) and signage to assist them along their journey.

But the soft infrastructure of people is also a key part of a successful journey. Customer service staff, drivers and other support people often make or break the travel experience.

Aspirations for this journey part

- Supporting infrastructure allows people to travel in a safe, informed and comfortable manner.
- Where assistance is required, people are available, trained and eager to provide this help.

How can we achieve this?

3.8.1 Supporting the journey

The Disability Standards for Accessible Public Transport address a number of issues related to supporting infrastructure for public transport users. However, integrated planning and delivery of user needs is necessary to ensure seamless accessibility for the whole public transport journey. This should include, among other things, addressing specific needs in relation to seating, shelter, signage, wayfinding, drinking fountains, Wi-Fi, charging/power points, food and beverage, bathrooms and retail options.

3.8.2 Precinct planning and coordination

Stations/interchanges often function as the centre of many communities, and are important nodes in a neighbourhood. Where public transport nodes sit within a precinct, such as a

retail, health or sporting precinct, planners and managers should consider how supporting facilities can help increase accessibility across the whole journey.

3.8.3 Wayfinding

Wayfinding is important to enable people to complete their journey. Wayfinding strategies and plans should be considered, especially in complex, busy interchange environments. These plans need to consider multiple means of wayfinding to cater for people's varied information needs (including static and dynamic forms). People with disability should be involved in creating wayfinding strategies and plans.

3.8.4 Customer service staff

People with disability have highlighted that access to customer service staff is often very important to their journey. Customer service staff should be available within the station/interchange environment in a relevant, known area, ideally somewhere near an entrance to the public transport node.

There are examples in retail and banking where customer service has shifted to a proactive, concierge model where customers are offered individualised service at the start of their interaction, rather than people just seeking customer service staff when they have an issue.

Staff uniforms should make them easily identifiable in a busy environment. They should be well informed on accessibility in the station/interchange and its surrounding area, and their first task should be to determine the specific access needs of the customer, rather than making assumptions which can often delay or lengthen the journey.

3.8.5 Positive use of feedback

People with disability and other transport users should be encouraged to provide feedback about problems they experience as this will greatly assist transport operators to improve the accessibility of journeys.

Online feedback is quick and current and Sydney Trains' use of feedback through Twitter is an excellent example of this.

Another effective way to gain and collate such feedback is the Snap Send Solve app. Local government authorities use this across the country to identify access issues so that they can be dealt with promptly. The app user takes a picture of the issue, adds any comments, and forwards it to the relevant local government authority. This is determined by the location of the issue logged on the app.

3.8.6 Bathroom facilities

Accessible facilities are required in any location where toilets are provided[19] and should be kept clean, sanitary and safe.

Factors that need to be considered to achieve this may include the bathroom setting (e.g. within a facility, or elsewhere), staffing, maintenance and cleaning, lighting and security arrangements.

Careful consideration needs to be given to the use of Master Locksmith Access Key (MLAK) bathroom facilities. These do not necessarily aid accessibility as not everyone who needs to use these facilities has ready access to a key. If there are justifiable reasons for using MLAK, customer service staff should carry keys to unlock facilities for users and accessible information needs to be provided at the toilet so customers know how to locate customer service staff.

Security considerations can be informed by crime prevention through environmental Design (CPTED[20]). This is a multi-disciplinary approach that looks at the built, social and administrative environment to influence and mitigate potential negative offender decisions.

Quote by Cat Smith, Chief Executive Officer of VCOSS, 2011

"If a journey does not provide a continuously accessible path from beginning to end, then it cannot be used, regardless of how many pieces of compliant infrastructure exist along the way."

[19] Disability Standards for Accessible Public Transport 2002, Part 15.
[20] http://www.cpted.net/

Bluetooth beacons

Bluetooth beacons are being installed and trialled in a range of major transport hubs to guide blind and vision impaired people through these indoor spaces. The beacons interact with apps on people's smart phones and push information to the app as users travel past the beacons.

Transport for NSW has trialled Bluetooth beacon technology as part of its Future Transport Program. Chatswood Station and bus interchange is testing this technology to help customers with vision impairment navigate between trains, buses and places of interest in and adjacent to the interchange. This is done by sending location signals to a mobile phone which then gives the customer audio cues.

Figure 15 – Bluetooth beacons push information to travellers' smart devices © Transport for NSW

Assistance animal toilet facilities

A good example of thinking beyond compliance is Brisbane Airport's assistance animal toilet facilities. People who travel accompanied by an assistance animal have highlighted that transiting through an airport can be difficult if they need to toilet their animal. They need to exit the building, toilet the animal then go through security screening again, a time delay that may not be appropriate within their journey.

Brisbane Airport has dedicated toileting facilities within the sterile area of both its domestic and international terminals for this purpose, allowing the animal to be toileted without leaving the building. It is important to note that sand or real grass be used, as many assistance animals will not toilet on artificial turf.

Figure 16 – Assistance animal toileting facility at Brisbane's International Airport © Brisbane Airport Corporation

4 What does this mean for us?

As users, planners, designers, policy makers, certifiers and operators of public transport services and infrastructure, we all have a role to play in creating accessible public transport journeys.

The Transport Standards provides a set of minimum requirements for compliance, but as can be seen in Part 3 of this guide, there is a great deal more to accessibility than just compliance with the standards.

This section of The Whole Journey: a guide for thinking beyond compliance to create accessible public transport journeys, provides a set of key principles drawn from the journey parts discussion.

4.1 We all influence accessible public transport

It is clear that an accessible public transport journey requires more than just infrastructure and conveyances that comply with the Transport Standards. The success of a journey also relies on accessible surroundings and built environments and positive interactions with people along the way.

Even if you are not directly involved in the planning, design and operation of public transport, you often have an indirect influence on public transport accessibility through planning, design, construction, implementation/operation of policy, public realm, land use planning, roads, buildings, structures, events, customer service and other parts of everyday life.

This puzzle of planning, design and operational elements needs to fit together and complement each other to facilitate accessible journeys.

4.2 Focus on human-centred design

We plan, design and operate public transport for people and the journeys they take. Rather than just focusing on the infrastructure piece we are responsible for, we need to think about the journey it facilitates. This is a change of mindset from just what needs to be done to comply, to what needs to be done to best facilitate accessibility. This means thinking beyond compliance, beyond the boundary and beyond the scope of your project in partnership with transport users.

By taking this approach, accessibility/universal design/human-centred design considerations are brought to the forefront rather than being an afterthought. It's about people and their journeys, not just public transport infrastructure.

4.3 Using data, apps and technology

With technology, we have the opportunity to better document and understand our world. Big Data, the Internet of Things, smart devices and apps are changing the way we consume and create information. As a result, we can expect to see more options to individualise journey planning through richer datasets that communicate more than just public transport information.

Creating and sharing data about the built and natural environment is an important aspect of providing higher quality journey planning, or 'journey management' tools. Some of this information will come from sources outside the public transport environment such as weather authorities, local government or transport authorities. We need to encourage the creation, certification and sharing of data to facilitate accessible journeys.

We also need to address accessibility within the digital realm by ensuring digital tools are accessible by people with varied needs.

Data from transport users can also be used to quickly identify access problems faced during journeys.

4.4 Maintaining the human touch

Digital technologies are influencing lifestyles, providing greater opportunities for access to and exchange of information, and connections to social and online networks. Experiences in our lifestyles are not purely digital, or purely physical. In the public transport system, digital technologies provide the opportunity for public transport staff to shift to 'high value' activities that rely on knowledge, expertise and responsiveness. Human interaction will remain a crucial element to facilitate accessible public transport journeys. We can't just design out the need for customer service people and support by implementing technology based solutions, and expect that this alone will facilitate accessibility.

People like to know there is someone who can help them, either in person or on the phone. That is, a person who understands their needs and can provide the information or assistance required to facilitate the journey. This means taking time to understand your customers' needs at all parts of the journey.

Proactive, individualised, 'concierge' type customer service is proving a successful strategy in other industries (such as retail and banking). These services provide direct human interaction if needed and a degree of confidence and reassurance for customers. Such services can also help maintain customer service standards even if there are fewer staff.

4.5 Accessibility throughout the infrastructure lifecycle

Many designers, planners, engineers and stakeholders play a part in planning, designing, procuring/purchasing, constructing, certifying operation and maintaining/redeveloping public transport systems. These people enter and exit the project lifecycle as appropriate, and are generally focused on the part they have to play. However, they all need to be focused on creating an accessible public transport journey, regardless of the project stage or specific role they play.

Decisions made during planning, such as the choice of rolling stock, the height of platforms, the location and method of vertical transportation, and interface with the precinct, can have a lasting accessibility legacy for future operators and users of the public transport service.

Accessibility needs to be addressed early in the project lifecycle—and consistently throughout the project—through comprehensive engagement with people who will participate in future project stages, including transport user groups. Customer focused performance criteria should also be built into all stages of projects.

4.6 Communicate, don't correspond

Clear and consistent communication is key to understanding and resolving issues, negotiating outcomes and creating more accessible public transport journeys.

Create a dialogue with user groups about their requirements, talk to people who are responsible for environments surrounding your project, engage with people who will inherit your decisions, share lessons learnt and research outcomes with your peers, and discuss user issues before they escalate into major problems.

By communicating and engaging with people, we better understand the issues and opportunities, and can make more informed decisions that take whole-of-journey accessibility into consideration.

We also allow others to understand the issues and opportunities we face and move towards a place of mutual understanding.

4.7 Knowledge capture and sharing

Around the country, and the world, people are doing great work to facilitate accessible public transport journeys. We need to better capture and share the accessibility 'hits' and the 'misses' so people can build from this knowledge rather than starting from scratch.

To do this we need to communicate, build and maintain networks, evaluate and monitor accessibility and work with user groups to understand the success, or not, of an accessibility outcome.

4.8 Accessibility when things go wrong

Planned and unplanned disruptions to the public transport network and the surrounding environment are key barriers to accessible journeys.

We need to better plan for and manage disruption, to ensure accessibility is at the forefront, not an afterthought.

We also need to consider how disruption outside the public transport system impacts people's journeys, and put in place appropriate management strategies to limit this impact.

5 Submissions on the Consultation Draft

5.1 Closing date and lodgment of submissions

Submissions should be lodged by **31 May 2017.** All submissions will be treated as public documents unless the documents are clearly marked on the coversheet as being provided 'IN CONFIDENCE'. Submissions should be sent by either mail or email to one of the following addresses.

Mail

Director – Road Safety Policy and Transport Standards
Road Safety and Productivity Branch
Department of Infrastructure and Regional Development
GPO Box 594, Canberra ACT 2601, Australia

Email

E: dsaptwholejourney@infrastructure.gov.au

5.2 Submission questions

The Department of Infrastructure and Regional Development would appreciate your advice, in particular.

1. **Thinking about influencing factors (Section 2):** Have the key factors been identified and appropriately discussed? Are there any additional influencing factors that should be included?
2. **Thinking about parts of a journey (Section 3):** Does this section fully describe the whole journey and key considerations across the journey? Are there any other opportunities or issues that need further consideration?
3. **Thinking about what does this mean for you (Section 4):** Does this section provide an effective set of key principles to focus stakeholders in creating accessible public transport journeys?
4. **Thinking about stakeholder collaboration to achieve a whole journey:** How can this be best achieved?
5. **Thinking about best practice examples:** Are there any additional best practice examples or case studies you would like to see referenced in an appendix which could further encourage, be used to drawn upon, and potentially facilitate Whole Journey understanding and networking?

5.3 Australian Privacy Principle 5 Notice

Your submission, including any personal information supplied, is being collected by the Department of Infrastructure and Regional Development for the purpose of assisting in the development of *The Whole Journey: a guide for thinking beyond compliance to create accessible public transport journeys* (the guide), in accordance with the *Privacy Act 1988* (the Privacy Act).

Your personal information will be stored securely by the Department. It may be used by the Department to make further contact with you about the consultation process. Your personal information will not be disclosed to any other third parties, except in the circumstances outlined below.

Submissions, in part or full, including the name of the author, may be published on the Department's website or in the Government's response, unless the submission is confidential. Confidential submissions (including author name) will not be published. Private addresses and contact details will not be published or disclosed to any third parties unless required by law.

Submissions will only be treated as confidential if they are expressly stated to be confidential. Automatically generated confidentiality statements or disclaimers appended to an email do not suffice for this purpose. If you wish you make a confidential submission, you should indicate this by ensuring your submission is marked confidential.

Confidential submissions will be kept secure and will only be disclosed in the following circumstances: in response to a request by a Commonwealth Minister; where required by a House or a Committee of the Parliament of the Commonwealth of Australia; or where required by law.

The Department may also disclose confidential submissions within the Commonwealth of Australia, including with other Commonwealth agencies, where necessary in the public interest.

Please note that to protect the personal privacy of individuals in accordance with the Privacy Act, any submissions containing sensitive information, personal information or information which may reasonably be used to identify a person or group of people, may not be published, even if not marked as confidential.

The Department's privacy policy contains information regarding complaint handling processes and how to access and/or seek correction of personal information held by the Department. The Privacy Officer can be contacted on (02) 6274 6495.

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- Attorney–General's Department
- Australian Institute of Landscape Architecture
- Australian Local Government Association
- Australian Taxi Industry Association
- Australian Railways Authority
- Blind Citizens Australia
- Brisbane Airport Corporation
- Brisbane City Council
- Bus Association of Victoria
- Bus Industry Confederation
- Bus SA and Bus and Coach Association SA
- City of Onkarainga
- Consult Australia
- CPL (formerly Cerebral Palsy League)
- Department for Communities, Child Safety and Disability Services, Queensland
- Department of State Growth, Tasmania
- Department of Transport, NT
- Department of Transport and Main Roads, Queensland
- Department of Planning, Transport and Infrastructure, SA
- Disability SA, Department for Communities and Social Inclusion
- Endeavour Foundation
- Engineers Australia
- Equal Opportunity Commission
- Great Southern Rail
- Greater Dandenong City Council
- Guide Dogs NSW /ACT
- Guide Dogs SA/NT
- Harbour City Ferries
- Heart Foundation QLD
- Ipswich City Council
- Local Government Association of Queensland
- Local Government Association of South Australia
- Local Government of New South Wales
- Marrickville Council
- Morris Goding Accessibility Consulting
- MS Society
- National Cross Disability Alliance
- National Ethnic Disability Alliance
- National Disability Services
- Northern Territory Department of Transport
- People with Disability Australia

- Public Transport Victoria
- Public Transport Authority WA
- Queensland Rail
- RACQ
- Royal Society for the Blind of SA Inc
- Spinal Life Australia
- Sunshine Coast Access Advisory Network
- Sydney Airport
- Sydney Trains
- Taxi Council of NSW
- Taxi Council of South Australia
- Transport Canberra and City Services, ACT
- Transport for NSW
- Torrens Transit
- University of the Sunshine Coast
- Victorian Taxi Association
- Vision Australia, Victoria
- Vision Australia, NSW

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