AUSTRALASIAN RAILWAY ASSOCIATION

Association Number A03958 | ABN 64 217 302 489

AUSTRALASIAN RAILWAY ASSOCIATION APPLICATION

To

The Australian Human Rights Commission

For

Temporary Exemptions to the *Disability Standards for Accessible Public Transport 2002 (Cth)* and the *Disability (Access to Premises – Buildings) Standards 2010 (Cth)*

Contents

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1. EXECUTIVE SUMMARY

The Australasian Railway Association (**ARA**) is a not-for-profit member-based association that represents the rail industry throughout Australia and New Zealand. Our members include rail operators, track owners and managers, manufacturers, construction companies and other entities that form part of the rail sector. We contribute to the development of industry and government policies to ensure Australia's passenger and freight transport systems are well represented and continue to provide improved services for Australia's growing population.

The ARA applies to the Australian Human Rights Commission (**AHRC**) for temporary exemptions pursuant to section 55(1) of the *Disability Discrimination Act 1992 (Cth)* (**DDA**), section 33A.1 of the *Disability Standards for Accessible Public Transport 2002 (Cth)* (**DSAPT**) and section 5.1 of the *Disability (Access to Premises-Buildings) Standards 2010 (Cth)* (**Premises Standards**). Specifically, the ARA seeks temporary exemptions to the following clauses of the DSAPT and the Premises Standards:

1. **Clause 2.1 'Access paths – Unhindered passage' and Clause H2.2(1) of the Premises Standards 'Accessways':** For a period of five years, flange gaps of up to 75mm are permitted where a level crossing forms part of an access path on rail premises or rail infrastructure.
2. **Clause 2.6 'Access paths — conveyances':** For a period of five years, an access path is only required at a single door of existing rail conveyances.
3. **Clause 6.4 'Slope of external boarding ramps':** For a period of five years, where the relationship between the platform and rail carriage means that an external board ramp can only be provided at a gradient greater than 1 in 8 and less than 1 in 4, ARA members are not required to provide staff assistance to customers to ascend or descend the ramp.
4. **Clause 8.2 'Boarding – When boarding devices must be provided':** For a period of five years, a manual or power assisted boarding device is only required at a single door rather than all doors of a rail conveyance.

The temporary exemptions sought in this application are a significantly reduced list of the current temporary exemptions held by the ARA in accordance with the decision of the AHRC given on 1 October 2015 (**2015 Exemptions**).

The ARA has made a consolidated application for temporary exemptions to the Australian Human Rights Commission (AHRC) to minimise the burden of multiple requests from our members. We make this application on behalf of the following ARA members:

- Head, Transport for Victoria (Department of Transport Victoria - **DoT Victoria**);
- Metro Trains Melbourne Pty Ltd (**MTM**);
- Public Transport Authority of Western Australia (**PTAWA**) which includes
    - TransPerth and
    - TransWA;
- Transport for New South Wales (**TfNSW**) which includes
    - Sydney Trains and
    - New South Wales TrainLink;
- Transport Asset Holding Entity of New South Wales; and
- V/Line Corporation (**V/Line**).

The ARA will formally write to the AHRC should there be a request to expand this application to other or new ARA members

For further information regarding this application, please contact Emma Woods, Director Corporate Services at ewoods@ara.net.au or 02 6270 4507.

2. BACKGROUND

Rail networks have been operating in Australian cities since the mid to late 1800's. As a result, Australian rail networks operate with substantial legacy infrastructure. Since the introduction of the DSAPT in 2002 and the Premises Standards in 2010, the rail industry has been on a progressive journey to holistically improve accessibility and achieve compliance with the DDA objectives. The introduction of the DSAPT and the Premises Standards put a positive spotlight on accessibility, driving significant accessibility improvements to rail infrastructure, rolling stock, rail services and the overall customer experience.

The DSAPT has not been modernised since its introduction in 2002. This is important as various technologies which have revolutionised accessibility (such as smart devices) have been developed but are yet to be incorporated into the DSAPT, effectively retaining redundant technologies. In addition, the DSAPT does not clearly set out requirements for operators. As recognised by the Commonwealth Government's 2012 review, the DSAPT requires long overdue modernisation. This led to the DSAPT modernisation process commencing in 2015 in which the ARA and its members positively participated.

When the 2015 Exemptions were requested, the DSAPT modernisation was scheduled to be completed by 30 June 2017. On 1 October 2015, the ARA was granted the 2015 Exemptions, being 21 temporary exemptions to elements within the DSAPT (27 were sought) and 9 in relation to the Premises Standards (10 were sought). Many of the temporary exemptions included annual reporting requirements to the AHRC. ARA members have met all annual reporting requirements, submitting annual reports to the AHRC and loading the same reports to the ARA website so they are publicly available.

Whilst the ARA and its members positively participated in the DSAPT modernisation process led by the Commonwealth Government, it was abandoned in late 2019when Transport Ministers formally endorsed a Transport and Main Roads Queensland (**TMR**) proposal to co-lead the DSAPT modernisation with the Commonwealth Government. Under the revised approach, initial legislative amendments are expected to be ready in late 2021, with reforms expected by 2023.

As a result, the 2015 Exemptions held by the ARA will expire on 30 September 2020 with the DSAPT modernisation incomplete. Whilst the DSAPT remains unchanged, the many issues and challenges for rail operators to comply with the DSAPT remain. Since 2015, significant accessibility improvements have been made on Australian rail networks. These enhancements are detailed in member reports to the AHRC annually to demonstrate the industry's ongoing efforts and commitment to progressively improve accessibility.

As the DSAPT and the Premises Standards have not been modernised, the ARA again seeks temporary exemptions to four clauses of the DSAPT (2.1, 2.6, 6.4 and 8.2) and clause H2,2(1) of the Premises Standards. Importantly, the temporary exemptions which are sought in this application are a significantly reduced selection of the 2015 Exemptions. No new temporary exemptions to the DSAPT or the Premises Standards have been sought. The reduction in the temporary exemptions sought is testament to the ongoing commitment of the ARA and its members to improve accessibility.

ARA members engaged their respective Customer Reference Groups regarding this temporary exemption application, providing information, reasoning and seeking their feedback regarding each request.

Should these temporary exemptions be granted, the ARA and its members will continue to implement a holistic approach to enhance rail accessibility and engage with their customers on their accessibility requirements. ARA members will continue to consult their customer reference groups on accessibility-related matters. In addition, each ARA member will continue to receive and act upon customer feedback on an individual basis, in line with their complaints process when required.

3. THE RAIL INDUSTRY'S COMMITMENT TO ACCESSIBILITY

Accessible rail can increase inclusion in our communities and provide independence for people with disability, thereby ensuring people with disability are able to participate in all areas of life.

As a mode of public transport, the rail industry recognises that its purpose is to provide transport for society and therefore, the Rail network and its services need to be accessible to all.

Recognising that providing accessible rail is much more than complying with the DSAPT, ARA members approach accessibility in a holistic manner.

3.1 Accessibility improvements since 2015

In the five years since the ARA obtained the 2015 exemptions, significant improvements have been achieved nationally.

In addition, **in New South Wales (NSW)**, Sydney Metro, the first fully automated passenger rail line in Australia opened on 26 May 2019 as a fully accessible, roll-on-roll-off 36km metro rail line. Work is currently underway to expand this to a total of 66km with 31 stations, all of which will be fully accessible.

The NSW Government remains committed to providing accessible, modern and integrated infrastructure where it is needed most. Since 2011, more than $2 billion has been invested via the NSW Transport Access Program. Projects within the program include accessibility upgrades such as lifts and ramps, improved interchanges and commuter car parks. To date, more than 470 Transport Access Program projects have been completed or underway across NSW.

In Victoria, the State Government has invested extensively in public transport infrastructure, conveyances and service accessibility improvements as a result of consultation with the disability community. The Victorian Government is improving accessibility by investing in an ongoing program of works on existing rural and regional rail stations, tram and bus stops to deliver upgrades that comply with the DSAPT and introduce best practice and innovative solutions. This includes the installation of Changing Places facilities in several key stations, Assistance Animal Relief Areas, beacons to help passengers with low vision and blindness to navigate stations and the deployment of mechanical wheelchair movers at stations to allow staff to safely assist passengers using wheelchairs.

The Victorian Government is delivering new stations through the Cranbourne Line Upgrade and the Level Crossing Removal Program, which has upgraded 15 stations and removed 35 of a total of 75 level crossings from the

Melbourne metropolitan rail network. The Metro Tunnel will include five modern fully accessible underground stations with Changing Places facilities and a fully accessible tram interchange at Anzac Station.

The Victorian Government is upgrading existing trains and trams to ensure patronage growth is met without compromising progress towards improving accessibility. The Victorian Government is also procuring new, modern and accessible rolling stock fleets. Specifically, this includes 65 high capacity metro trains to service the Metro Tunnel, for which, the Victorian Government undertook extensive consultation with the public and disability sector. This has resulted in many accessibility enhancements, including 28 allocated spaces for people with disability. This consultation is acknowledged by the disability sector as best practice engagement.

In addition, the Minister for Public Transport in Victoria receives independent user-focused advice on public transport accessibility by the Public Transport Access Committee and Victorian Rail Operators run their own Accessibility Reference Groups.

In Western Australia (WA), all Perth train stations have been audited for DDA/DSAPT compliance to guide current and future programs to improve accessibility. All rolling stock is relatively modern and accessible.

Since 2015, 13 train stations have undergone DDA upgrades at a cost of $68 million, with a further $71 million allocated for the 2020 - 2025 period.

In addition to the train station upgrades, Public Transport Authority (PTA)WA has completed a $7.1 million Lift Improvement Program, replacing lifts at seven stations. Lift design has been improved with enhanced lift buttons and bollards to protect lifts from damage whilst allowing customers in wheelchairs and mobility devices to easily and independently request the lift.

The PTA plans to remove all 100 pedestrian level crossings across the Perth metropolitan area on the Fremantle, Midland and Armadale lines. All crossings within the electrified Transperth network are fitted with the highest level of control, known as active controls, which include boom barriers, flashing lights and audible alarms to alert pedestrians to approaching trains and prevent access onto the tracks. The PTA will continue to ensure the safe management, maintenance, operation and compliance of level crossings with the DSAPT. To help achieve this aim, work is underway to ensure that all pedestrian level crossings across the Transperth network are fully accessible. Work will involve upgrading crossing features including lighting, pathways, manoeuvring and passing areas and tactile paving. As of March 2020, 35 crossings have been upgraded.

In addition, a permanent PTA Access and Inclusion Reference Group has been established to consult and ensure new facilities (stations, station surrounds and rolling stock) are accessible.

3.2 Rail industry initiatives to improve accessibility

Recognising that DSAPT compliance would not be achieved overnight and that genuine accessibility is broader than standards compliance, the rail industry has adopted a holistic, multi-pronged approach to actively and progressively improve accessibility on and around Australian rail networks. Some initiatives are conducted or led at a whole-of-industry level whilst others are implemented or led by ARA members within their respective organisations.

Whole-of-industry accessibility initiatives

At a high level, whole-of-industry initiatives implemented to improve accessibility and remove discrimination against people with disability include:

- **Industry collaboration – Accessibility Working Group (AWG):** In 2013, through the ARA, the industry established the AWG to bring together Accessibility advisors from all Australian passenger rail operators. Since then, the AWG has continued to meet regularly, providing a platform for Australian passenger rail Accessibility advisors to share ideas and lessons learned to continue improving the accessibility of passenger railways throughout Australia.
- **Rail Accessibility Forums:** In 2019, the ARA, in partnership with the AWG, held an inaugural Rail Accessibility Forum. The Forum united more than 80 individuals including people with lived experience, representatives from disability sector organisations, Commonwealth, State and Territory governments and the Australian rail industry to discuss accessibility in rail transport. People with lived experience and key stakeholders from the accessibility, government and transport sectors shared insights on how to progress rail's accessibility into the future and the importance of doing so. A second Rail Accessibility Forum was planned for June 2020 but due to COVID-19 was cancelled with the intention of rescheduling to 2021 once safe to do so.
- **Research:** In 2019, to contribute constructively to the DSAPT modernisation, the ARA engaged Monash University's Institute of Railway Technology to conduct a desk-top review of the DSAPT and the Premises Standard. This provided the ARA with a detailed report and included recommendations for the Standards as a whole, as well as clause-specific recommendations. The report was distributed widely to relevant stakeholders to ensure the research is available and useful to as many relevant bodies as possible. The report summary is attached (Appendix A).
- **DSAPT modernisation:** The ARA and its members advocate for the need to modernise the DSAPT and have been engaged in both iterations of this, continuing to be highly engaged in the current DSAPT modernisation process.
- **DSAPT five-yearly legislative reviews:** Drawing on input from the AWG, the ARA has provided detailed submissions to the Commonwealth Department to provide the rail industry's views, experience and recommendations for improvement to the three DSAPT reviews that have been completed.
- **Input to various inquiries / submissions / reviews:** Through the AWG, the ARA has prepared numerous submissions to provide the rail industry's perspective and highlight relevant considerations to ensure a positive accessibility outcome. Recent examples of input include participating in workshops, providing a submission and reviewing a draft as the AHRC developed an Equivalent Access Guideline and providing written submissions to the NTC's '*Barriers to the safe use of innovative vehicles and mobility devices*' review.
- **Technical reviews:** In addition to the DSAPT and the Premises Standards, other standards and technical specifications reference or are relevant to rail and accessibility. Through the AWG, the ARA provides input on the development and/or review of such documents to ensure a positive outcome for rail and accessibility alike.

ARA member accessibility initiatives

The compliance of hard infrastructure, train and tram upgrades with the DSAPT are supported by a variety of other accessibility-focused initiatives. Appendix B provides a detailed list of some of the many initiatives ARA members implement to improve accessibility holistically. At a high level, these initiatives are summarised as follows:

- **Customer service:** ARA members collectively employ thousands of customer-focused front-line staff to actively improve the overall customer experience by providing personalised support to assist customers to navigate the rail system. All relevant staff are trained to assist people with disability to travel safely and confidently by rail.
- **Consultation and engagement:** ARA members regularly consult customers with disability individually and collectively. This ensures accessibility and inclusion plans; investment decisions and accessibility improvements are developed in collaboration with those with disability and their representative organisations. ARA members hold information and consultation sessions for new initiatives or projects that

may impact on accessibility to ensure the needs of the disability community are appropriately considered and met. The rail industry values engagement and input from the disability sector to assist in better meeting the needs of these stakeholders. Feedback from ongoing consultation is actively fed into jurisdictional Disability Action Plans to facilitate Industry's focus on continuous improvement and ensure the voice of the disability sector is heard and acted upon.

- **Operator-specific customer accessibility reference groups:** All ARA passenger rail operators convene regular forums to obtain community input into the development of non-discriminatory and accessible procedures, design work, construction and customer service.
- **Information and communication:** ARA members prepare and distribute educational campaigns, information materials and community engagement initiatives to provide clarity and information for customers with disability to travel safely in the rail environment and to engage customers with disability on improvement initiatives.
- **Practical trial initiatives:** Operators hold Rail Safety and Orientation Days for customers with disability to familiarise themselves with rail travel, providing practical assistance and guidance to safely board and alight a train or light rail vehicle. Staff also regularly present to older people and disability sector organisations to provide information on how members of the community can safely and confidently travel by rail.
- **Infrastructure and rolling stock:** The rail industry continue to purchase new rolling stock, retrofit existing rollingstock rolling stock and upgrade train stations to comply with the DSAPT. Due to the historic nature of some rail assets, infrastructure upgrades can be challenging to deliver and extremely costly, impacting the timeframe in which rail networks, including rolling stock can achieve DSAPT compliance. The need to maintain the safety and structural integrity of existing rolling stock limits the opportunities for major changes such as redesign of internal layouts to create compliant access paths. As a result, existing rolling stock are typically upgraded with modern audio and display systems, increased allocated spaces, wider doors and other accessible features in line with DSAPT where practicable.
- **Technology:** ARA members continue to look to modern technologies as innovative ways to enhance the service and customer experience rail offers people with disability. For example, operators have developed mobile phone apps to assist customers with disability to travel confidently on rail. Although rail is investing in technologies, industry also recognises that whilst assistive technologies can enhance the customer experience of people with disability, they cannot bridge all accessibility gaps.
- **Specialist accessibility advisors:** As part of the rail industry's commitment to continuous improvement, all passenger rail ARA members have created specialist roles to advise on access issues and broaden the focus beyond compliance to ensure an integrated whole-of-network approach to accessibility. These teams are a dedicated accessibility function who are responsible for the implementation of their operator's Accessibility Action Plans or Disability Inclusion Action Plans and provide specialist, strategic, cross-functional advice to ensure accessibility needs of customers are considered and met as far as possible.
- **Partnerships:** Operators regularly partner with community groups to ensure widespread safety and access messaging as well as partnering with organisations such as Travellers Aid Australia (**TAA**) to provide additional support services to access public transport. Operators also provide information to hospitals, disability sector organisations and suppliers of devices such as Motorised Mobility Devices (MMDs) to assist in disseminating messages about how to safely travel by rail.
- **Travel assistance:** Operators offer a variety of travel assistance options for people with disability. For instance, where a platform gap exists, rail employees provide platform-to-train boarding ramps for customers with mobility aids. Depending on the station or network, these are provided by station staff, a train driver or guard/conductor.

- **Research and trials of new technology or products:** Recognising that technology and/or new products can assist in improving accessibility, ARA members monitor technology and product developments and when an option is considered viable, trial these to test their suitability for the rail environment. An example of this is the use of beacon technology which has been trialled to assist passengers who are blind or have low vision to navigate the train network. In addition, ARA members independently and collaboratively commission accessibility-related research to better understand challenges, identify potential solutions and test new concepts as they continue their accessibility improvement journeys.
- **Education of the public:** ARA members run etiquette and courtesy campaigns to educate customers on the importance of ensuring accessible facilities are available for customers who may need them, to give up seats for others and be aware of hidden disabilities.
- **Accessibility specific communication:** Operators maintain databases of disability sector organisations and individual customers with disability who nominate to be notified about track closures, planned lift maintenance, changes to station access etc. These dedicated communication channels such as 'accessibility bulletins' aim to ensure customers are notified of changes and alternative options available to them to complete their journey. Some operators are accredited or are in the process of becoming accredited with the Communication Access Symbol[1].
- **Passenger announcements:** Operators continue to train staff in passenger announcements and some operators include which side the exit will be on in their 'next stop' announcements. This was introduced in response to requests from peak disability organisations and customers and is beneficial for all travellers.
- **Disability accessibility plans:** Operators have either developed or are developing formalised plans which outline the process they will take to improve accessibility, including upgrades to infrastructure and rolling stock to comply with DSAPT and/or provide functional access outcomes.
- **Improved disruption management:** Operators recognise that disruptions are particularly challenging for customers with disability and have made efforts to better communicate and engage with customers with disabilities to improve their experience when disruptions occur.
- **DSAPT modernisation:** ARA members have been actively involved in the previous and current DSAPT modernisation processes.

4. THE DSAPT

The DSAPT have been the instigator of the rail industry's accessibility journey, creating an awareness, respect and commitment to achieve accessible rail in Australia. The rail industry recognises that the introduction of the DSAPT in 2002 has resulted in an improved rail network and customer experience for all.

Rail networks in Australia have been operational for up to 165 years. The release of the DSAPT in 2002 triggered the development of many strategies, implementation plans and significant funding to boost accessibility levels and achieve compliance with the standards. However, due to the scale of change and investment required, it is highly

[1] The Communication Access Symbol is an access symbol developed by Scope Australia. For more information, visit: www.scopeaust.org.au/services-for-organisations/access-and-inclusion-for-businesses/communication-access/

challenging for any rail network that was operational when the DSAPT was released eighteen years ago to achieve full network compliance with the current targets legislated in Schedule 1.

4.1 Complexities within the Rail environment

Whilst the objective of the DSAPT is clear and significant accessibility improvements have been realised, the application of the DSAPT into the rail environment is complex.

Rail operators are regulated by multiple Regulators and must comply with the Rail Safety National Law (RSNL) and applicable State Occupational Health and Safety Laws to maintain accreditation to operate. Competing obligations sometimes make it difficult to fully comply with some aspects of DSAPT. In addition, Rail relies on standards for construction and operation and therefore strongly supports the use of standards, particularly national standards to improve accessibility on public transport. However, some elements of the DSAPT draw from standards that are not appropriate for public transport and do not recognise the unique operating environment of passenger rail networks. For example, the current requirements for stairs on conveyances (trains) have been taken from standards that apply to the built environment. As a result, they are not practically applicable for stairs on a train which are constrained by the width of the rail corridor. In addition, a smaller stair width with handrails that can be reached on both sides provides safety advantages for customers, allowing customers to steady themselves whilst utilising the stairs.

Many elements of the DSAPT are highly complex and costly to achieve compliance with. In addition, the prescriptive nature of the DSAPT does not recognise the value of innovative or technological alternatives that can provide accessibility outcomes for people with disability to travel by rail. For example, smart devices and apps did not exist when the DSAPT was released in 2002. As a result, the use of apps to communicate with customers and provide navigation assistance is not recognised within the current DSAPT. Similarly, the DSAPT references static signage and displays but is very limited on guidance for suitable digital or dynamic displays.

These multiple layers of complexity impact the ability for Australian passenger rail operators to comply with the DSAPT. The following outlines some of these challenges:

- **Legacy infrastructure and rolling stock:** Australian passenger rail services first began operating in Sydney, Melbourne and Adelaide in the mid-1850's, Brisbane in 1865 and Perth in 1881. As a result, Australian passenger train and tram networks include many heritage assets that were built a considerable time before the DSAPT was introduced in 2002. Legacy infrastructure such as existing narrow, low, underground and curved platforms present significant challenges to fully comply with DSAPT. The Standards that existed when rail networks were first built sought to mitigate strikes between trains and platforms. Customer safety and the customer interface were lower priority considerations. Today however, Standards continue to manage the risk of platform strikes but safety and the customer experience are also an equal priority. In addition to this, the introduction of new stations and rolling stock to older networks does not always allow for full compliance to be achieved. For example, there may be multiple previous platform standards on an existing network and a new rolling stock type may not be consistent with all of these legacy standards.
- **Patronage growth:** Australian passenger rail networks are experiencing significant growth. As an example:
    - over the past decade, patronage on the V/Line regional rail network in Victoria has surged from 12.6 million passenger trips in 2009-10 to 21 million passenger trips in 2018-19, a 67.5% increase in 10 years.
    - rail patronage on Sydney's metropolitan rail services have increased from 328.2 million in 2014-15 to 424.1 million in 2018-19, growth of 95.9 million trips or a 29% increase in just four years.
    - patronage on the Perth network doubled, increasing by 102% between 2001–02 and 2015–16.

New rolling stock is being purchased to meet this significant patronage growth nationally. At the same time, rather than retire older rolling stock and offer fewer services, operators run rolling stock longer than planned to meet customer demand, particularly during peak AM and PM periods. When rail networks were first built, patronage levels were a fraction of what they are today.

- **Rolling stock life:** Australian passenger rail operators currently run multiple types of rolling stock (trains and trams). The average life for rolling stock is 30 years, considerably longer than other public transport modes.[2] However, due to patronage growth and the need to meet demand, rolling stock life is often extended and can be in use for more than 50 years.[3] Retrofitting non-DSAPT compliant fleets typically requires significant modifications, which are not always economically viable or sometimes, technically feasible to achieve 100% compliance. Works are underway around the country to improve access where possible. As new rolling stock is phased in, old trains and trams are transitioned out. However, the timelines around phasing is heavily influenced by growing patronage and the need to maintain service level to meet demand, whilst continuing to meet customer need and expectations for the regularity and comfort of services.
- **Local government and community support:** Rail infrastructure upgrades are disruptive and can have a major impact on the productivity of cities, businesses and local economies. Upgrades of infrastructure such as train stations and tram stops impact road space, bike lanes and potentially remove car parks. In addition, these works can affect the architecture and historical aspects of rail buildings and members of the community often have a romantic affinity with older railway stations. As a result, operators have experienced opposition to proposed infrastructure upgrades. Unfortunately, a lack of community support during public consultation processes can stop accessibility-related upgrades from proceeding, limiting rail's ability to comply with the DSAPT.
- **Operational constraints:** The ARA estimates $150 billion is being invested in rail infrastructure projects over the next decade. This unprecedented investment is vital to meet the needs of our growing population. However, these considerable works have absorbed the rail industry's available engineering and construction resources, leading to capacity constraints. In addition, aspects of construction are conducted under full 'possession' which requires services to be halted whilst works are completed. These construction windows are limited to ensure minimal impact on customers, our cities and their economies and can limit the ability for operators to upgrade legacy infrastructure.
- **Workforce skills shortage:** The significant investment occurring in rail around Australia has created a skilled workforce shortage. Operators use planned infrastructure works to improve accessibility, but the workforce must be available.
- **Network widths:** The width of the rail corridor (or gauge) creates challenges for operators. PTAWA operates on a narrow-gauge network, further exacerbating these restrictions. The width of track restricts the width of rolling stock carriages, which, depending on train carriage layouts, can lead to additional challenges for narrow gauge rolling stock to comply with the DSAPT.

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2 Monash ITR Report, page 55

3 Monash ITR Report, page 57

4.2 Funding of accessibility improvements

The DSAPT is Commonwealth legislation. When transport ministers considered the DSAPT and its Regulatory Impact Statement in 1999, state governments sought Commonwealth funding to support the investment required to achieve compliance with the proposed legislation.

The DSAPT was legislated in 2002. To date, no Commonwealth funding has been provided to support compliance. As a result, meeting the DSAPT requirements has and continues to require significant funding from state governments and rail operators. Transport is just one of many competing priorities for state governments. Whilst operators, both government and non-government, actively seek funding to support accessibility upgrades to achieve compliance, the balance of state-wide priorities means that funding requests from rail operators for accessibility upgrades are not always fulfilled.

In pre-budget submissions to the Commonwealth Government, the ARA specifically sought Commonwealth Government funding in 2018-19 and 2019-20 to increase accessibility-related upgrades. No funding was forthcoming. The ARA has provided a request to the Commonwealth Government for accessibility-related funding for FY 2020-21.

Without access to Commonwealth funding, networks that existed when the DSAPT was released will continue to find it challenging to achieve full compliance by the legislated timeframes.

4.3 DSAPT modernisation

It is a legislative requirement that the DSAPT is reviewed every five years. The second review, completed in 2012, led to the Commonwealth Government supporting a recommendation for the DSAPT to be modernised. At the time, Deputy Prime Minister, Warren Truss, AC made the following statement:

> *"A crucial issue identified in the second review was the need to modernise the DSAPT to be able to respond to rapidly changing technology. This may provide more flexibility for transport operators and improved provision of information."*

The Commonwealth Government response was:

> *The Australian Government recognises that 10 years after inception, some parts of the DSAPT may not be meeting the current and future needs of people with disability or provide sufficient flexibility or guidance to providers and operators in their efforts to fulfil their obligations under the Disability Discrimination Act.*
>
> *The Australian Government will commence a process for updating the DSAPT which will involve close consultation with industry, all levels of government and the disability sector.*[4]

As well as confirming amendments to the DSAPT were required, the Commonwealth Government stated that the modernisation process, and any relevant regulatory impact statement, was to be completed by 30 June 2017.

[4] 2012 Australian Government Response to the 2012 Review of the Disability Transport Standards for Accessible Public Transport

The ARA and its members actively participated in the process but unfortunately, DSAPT modernisation is yet to be achieved. In late 2019, a revised approach was initiated. On 2 August 2019, transport ministers formally endorsed a TMR proposal to co-lead the DSAPT modernisation with the Commonwealth Government. Under the revised approach, initial legislative amendments are expected to be ready in late 2021, with reforms expected by 2023. In addition to this application, ARA members are actively participating in the revised DSAPT modernisation to improve the standards, including in relation to the four exemptions being sought.

The ARA and its members welcome the revised approach to modernise the DSAPT and the opportunity to contribute.

5. TEMPORARY EXEMPTIONS APPLICATION

The ARA applies to the AHRC for temporary exemptions pursuant to section 55(1) of the DDA, section 33A.1 of the DSAPT and section 5.1 of the Premises Standards.

This application relates to exemptions from compliance with four clauses of the DSAPT and one equivalent clause in the Premises Standards. The compliance requirements, to which the application seeks temporary exemptions, are detailed in section A of each of the four exemption applications.

In each instance, where an application is made, an exemption for the maximum allowable period of five years is sought. This is to recognise that the revised DSAPT modernisation underway is working towards a proposed timeframe of 2023 but unfortunately, experience shows that there is no guarantee that this will be achieved and, additionally, a transition period to the new DSAPT will also be required.

Each of the temporary exemptions being sought are existing temporary exemptions currently held by the ARA that are being reapplied for. The ARA and its members sought to minimise the potential impact on people with disability by not requesting any new temporary exemptions or temporary exemptions that have previously been denied.

It is important to note that each ARA member will continue to engage with their customers on their accessibility requirements. ARA members will continue to consult their customer reference groups on accessibility-related matters. In addition, each ARA member will continue to receive and acct upon customer feedback on an individual basis, in line with their complaints process when required. The ARA and its members recognise that temporary exemptions are not a mechanism to remove the industry's responsibility to provide accessible transport. ARA members will continue improving compliance with the DSAPT and the overall accessibility of rail networks.

The ARA seeks the following four temporary exemptions to clauses within the DSAPT and one clause within the Premises Standards:

1. **DSAPT Clause 2.1 'Access paths – Unhindered passage' and Premises Standards Clause H2.2(1) 'Accessways':** For a period of five years, flange gaps of up to 75mm are permitted where a level crossing forms part of an access path on rail premises or rail infrastructure.

2. **DSAPT Clause 2.6 'Access paths — conveyances':** For a period of five years, an access path is only required at a single door of existing rail conveyances.

3. **DSAPT Clause 6.4 'Slope of external boarding ramps':** For a period of five years, where the relationship between the platform and rail carriage means that an external board ramp can only be provided at a gradient greater than 1 in 8 and less than 1 in 4, ARA members are not required to provide staff assistance to customers to ascend or descend the ramp.

4. **DSAPT Clause 8.2 'Boarding – When boarding devices must be provided':** For a period of five years, a manual or power assisted boarding device is only required at a single door rather than all doors of a rail conveyance.

Further detail for each of these is set out below.

5.1 DSAPT Clause 2.1 'Access paths – Unhindered passage' and Premises Standards Clause H2.2(1): 'Accessways'

5.1A. Section of the DSAPT and Premises Standards

DSAPT
2.1 Unhindered passage
(1) An access path that allows unhindered passage must be provided along a walkway, ramp or landing.
(2) An access path must comply with AS1428.2 (1992) Clause 8.1.
Premises – except premises to which the Premises Standards apply
Infrastructure - except airports that do not accept regular public transport services

Premises Standards
Clause H2.2 Accessways
(1) An accessway must comply with AS 1428.2.

5.1B. Current temporary exemption: rail premises and rail infrastructure

For a period of five years, flange gaps of up to 75mm are permitted where a level crossing forms part of an access path on rail premises or rail infrastructure. This exemption is subject to the following conditions:

- the member concerned provides a written report to the Commission and the ARA within 12 months of this exemption, and provides an updated version of this report every 12 months on:
  - action taken to improve safe use of level crossings where they form part of an access path;
  - progress made in the removal of level crossings;
  - any developments in research into possible technical solutions for bridging flange gaps;
- the ARA makes these reports available to the public through its website.

ARA members have met the reporting requirements of this current temporary exemption, providing the AHRC with annual reports in September 2016, 2017, 2018 and 2019 and making these publicly available on the ARA website. ARA members plan to submit September 2020 reports to the AHRC and will make these reports publicly available on the ARA website.

5.1C. Temporary exemption sought

Rail premises and rail infrastructure: For a period of five years, flange gaps of up to 75mm are permitted where a level crossing forms part of an access path on rail premises or rail infrastructure.

5.1D. Summary of request

- There are 23,500 level crossings around Australia where the road and rail networks intersect. Many of these form part of an access path for customers to cross the tracks.
- Level crossings include a flange gap which is a gap between the rail track and road that permits train wheels to safely travel through a level crossing.
- The DSAPT specifies that accessways, walkways, ramps and landings shall be constructed with no lip or step at joints between abutting surfaces, with a construction tolerance of up to 3mm acceptable using rounded or bevelled edges.
- The DSAPT is silent on flange gaps and where level crossings form part of the access path.
- AS1742.7 includes detail on flange gaps at level crossings, stipulating that they should be constructed to 65mm for newly constructed level crossings and maintained to a maximum of 75mm.
- Whilst a flange gap can be minimised with 'gap fillers', numerous trials to date have not found one suitable for the universal rail environment in Australia.
- Due to the nature of railways, a flange gap is likely to always form part of a rail network when it intersects a road network. As a result, a flange gap will need to remain. Rail operators will continue to upgrade and remove railway level crossings where possible as well as trial new products and technologies to minimise the gap.
- Providing this exemption will align the requirement for flange gaps to an existing standard; AS1742.7 and provide ARA members with a defined standard to achieve a safe, functional outcome for people traversing level crossings.

5.1E. Why is this temporary exemption sought?

The DSAPT, by referencing AS1428.1 and AS1428.2, refers to an access path (or continuous accessible path of travel) as being an uninterrupted and unhindered path that allows independent travel for people with a disability to and within public transport facilities.

There are several parts of AS1428.1 and AS1428.2 that accept some barriers along access paths, such as:

- paving bricks with bevelled or chamfered edges being up to 3mm high, and
- grates with spaces up to 13mm wide is deemed acceptable when transverse to the dominant direction of travel.

Flange gaps at level crossings as part of an access path are not currently recognised within the DSAPT.

A 'flange gap' is the small gap that exists between the road and steel rail track to allow rolling stock (train) wheels to travel through a road and rail intersection or level crossing. As a result, flange gaps at level crossings have always existed and are required to safely move rolling stock through locations where a road and rail intersect at the same level, also known as 'at grade'.

Rubber gap fillers at the Charman Road Level Crossing, Cheltenham

Due to the nature of road and rail networks, level crossings form part of the broader rail landscape and will continue to exist where there is a cross-corridor connection at grade between road and rail.

There are more than 23,500 level crossings around Australia, of which, many form part of the access path for people to cross the railway tracks.[5] Although level crossings continue to be gradually removed through underpasses and overpasses, level crossings will continue to exist and may never be removed completely from access paths, particularly in regional and rural areas.

Whilst the DSAPT doesn't provide requirements for flange gaps at level crossings, AS1742.7, '*Manual of uniform traffic control devices*' does. AS1742.7 stipulates that where footpaths cross railway tracks, the flange gap shall be 65mm for newly constructed level crossings and maintained to a maximum of 75mm. This is in direct conflict with the unhindered passage for access paths in the DSAPT. Additionally, clause 8.2 of the DSAPT permits an unassisted gap of 40mm for boarding, a further conflict regarding acceptable gaps.

Currently, although various products have been trialled, no universal solution exists within the Australian environment to safely reduce flange gaps at level crossings to comply with the above DSAPT referenced gap dimensions. As noted in section 1G below, various research and trials have found that there are limited suitable tried and tested products or 'gap fillers' to reduce or remove flange gaps that are appropriate in the Australian rail environment. Those that are available can only be used at certain locations. The remaining option is grade separation which requires an overbridge or underpass to separate road and rail. In remote or regional locations, large scale infrastructure upgrades to separate the networks are not always appropriate. In addition, feedback from some customers is that although an overbridge removes the need to cross the rail tracks, they create longer travel times and require greater physical effort than a direct path across railway tracks. Experience across the industry shows that customers prefer a more direct route and when overbridges are introduced, customers often continue to cross the tracks at the level crossing as they seek a shorter, more direct route.

Trials will continue in the pursuit of a suitable flange gap filler. As well as better aligning to customer preferences, this is likely to be a more cost and time-effective solution than grade separation to enable accessible paths of travel via at-grade level crossings.

Until a tested and researched safe product is available, flange gaps cannot easily be safely reduced or eliminated. Further research, development and trial of new products are still required. Therefore, the ARA proposes that the same requirements as outlined in AS1742.7 should be considered acceptable; a flange gap of

5 www.artc.com.au/uploads/J003816-ARTC-fact-sheet_LevelCrossings_web.pdf

65mm for newly constructed level crossings and maintained to a maximum of 75mm where a level crossing forms part of the access path. The ARA will actively seek this addition within the DSAPT modernisation to ensure consistency with AS1742.7.

5.1F. Rail industry action since 2015

As part of regular maintenance, rail operators conduct ongoing civil inspections of their infrastructure. Where level crossings form part of an access path, particular attention is paid to identify uneven surfaces or repairs that may impact safety. Rectification or maintenance work is actioned according to priority and risk.

Since 2015, various products have been trialled to 'fill' the flange gap. Unfortunately, as noted above, no products to date have been found to be suitable within the Australian rail context. See section 1G.

The rail industry has actively removed many railway level crossings, with 75 removals committed in Victoria alone (at a cost of $2.4 billion to remove the first 20 and estimated at a further $6.6 billion to remove the next 30)[6]. However, without a complete station rebuild, pedestrian crossings will continue to form parts of access paths. Without direct reference to a standard flange gap width within the DSAPT, the temporary exemption provides operators with a defined standard to achieve a safe, functional outcome for people travelling across level crossings.

As part of their commitment to safety, ARA members conduct various rail safety initiatives to increase education and awareness of safety around railways and railway level crossings. In partnership with the ARA's charity, the TrackSAFE Foundation ARA members participate in Rail Safety Week each year. Now in its 14th year, Rail Safety Week aims to improve education and awareness around railway level crossing and track safety.

Since 2015, examples of work undertaken by ARA members to address flange gaps at level crossings include:

- **VIC**: As noted above, the Victorian Government Level Crossing Removal Authority will oversee the removal of 75 level crossings by 2025, with 35 already removed as at June 2020. There are currently 37 level crossing removals in planning and a further seven removals under construction.

  A State-wide program upgrade of pedestrian crossings across Victoria is also underway annually with a focus on accessibility upgrades to widths and Tactile Ground Surface Indicators.

  For MTM**,** upgrades have been carried out at a further 15 pedestrian crossing locations. Harnessing the findings of the ACRI Research Report (see section 1G), MTM installed VeloSTRAIL at Keon Parade, Keon Park in October 2018 and commenced a 12-month trial. This trial was extended and a final report will be prepared in late 2020.

  Since 2015, as at September 2019, V/Line had upgraded 82 crossings and removed 47 pedestrian and level crossings. Significant investment is occurring to improve access across all five of V/Line's rail lines. In particular, the Ballarat Line Upgrade Project is seeing improvements to access paths at Rockbank, Bacchus Marsh, Benalla and Wendouree stations with overbridges installed at all four stations. V/Line has installed VeloSTRAIL at a trial site at North Shore station. Due to the speed that trains travel along parts of the V/Line network (160km/hr) it is not possible to install VeloSTRAIL at all pedestrian crossings. V/Line is monitoring the VeloSTRAIL at North Shore to inform future crossing upgrades. In addition, V/Line will continue to collaborate with industry to identify technologies that are suitable in high-speed environments.

  WA: The PTA has established its 'Crossing the Network' program which is upgrading all pedestrian crossings to minimise the flange gap to less than 75 mm, with an aim of achieving a gap of 55mm. The PTA has also

[6] https://levelcrossings.vic.gov.au

upgraded signals, TGSIs and surfaces, including increasing the width of all pedestrian crossings to improve accessibility and safety for all passengers. The PTA's 'Crossing the Network' Committee continues to monitor Australian and overseas developments on flange gap fillers. Of the $18 million allocated to the program, which will run from 2019 to 2025, $2.34 million worth of work has been completed.

Significant work has been done to ensure the designs of the pedestrian crossings comply including seeking input from the Crossing the Network Committee, as well as independent access consultancy. For each project, the project manager ensures there is a consultation process with local government, disability organisations and other individuals/groups at various stages of the project.

- **NSW:** The Level Crossing Improvement Program (LCIP) managed by TfNSW, provides funding to accelerate improvements to level crossings at priority sites across NSW. Between 2014/15 and 2018/19, LCIP spent $35.53 million on level crossing safety improvements in NSW. In addition, the TfNSW Transport Infrastructure Plan will continue LCIP funding of $7.3 million a year until 2025-26. Some locations have had significant works done to improve access paths at level crossings. However, these locations would not be deemed as forming an access path directly to a passenger railway facility. A project has also commenced to improve audible warnings for pedestrians. It is expected to be implemented over the next two years with the first sites completed in the 2019/20 financial year. Internally, discussions are progressing to facilitate a level crossing trial of possible technical solutions within NSW. TfNSW has also continued to monitor trials and research conducted in improvements to level crossings by other rail networks and industry in Australia and contribute where possible.

5.1G. Research and / or reviews since 2015

Australian Centre for Rail Innovation

In 2018, rail industry research body, the Australasian Centre for Rail Innovation (ACRI) released a Research Report evaluating the effectiveness of products marketed as solutions for flange gaps in Australia and internationally.

The report identified that;

- the majority are made for low speed tracks (<40km/hr) not high track speeds;
- there is an inspection and maintenance requirement to ensure the product does not become dislodged and create further tripping hazards;
- compressible products can strip grease from the wheels of rolling stock, creating slip hazards for people walking over the site;
- further research and testing are required for most products.

Introduction of a product that has not been tested, researched or proven successful in all situations, would create further risk in an already high-risk environment. Whilst the best outcome is gap elimination, without an adequately tested and researched product, that is suitable in all environments (high and low pedestrian movement, high speed and low speed tracks and all weather), the implementation of a flange gap filler has the potential to create additional risks, at the most extreme, potential train derailment.

Monash University's Institute of Railway Technology DSAPT review

In 2019, the ARA commissioned Monash University's Institute of Railway Technology to conduct a desktop review of the DSAPT and Premises Standards.

In relation to Clause 2.1 'Access paths – unhindered passage', Monash University recommended 'future revisions to the Standards to adopt a provision for flange gaps that is in line with the European Union (EU) Standards'. According to Monash, as outlined in the EU's 'Persons with reduced mobility technical specifications',

wheelchairs being used around railways should be able to accommodate a horizontal gap of 75mm and a vertical gap of 50mm. This aligns with the ARA's recommendation that flange gaps at level crossings that form part of an access path are maintained to a gap of 75mm in line with AS1742.7.

Victorian Railway Crossing Safety Steering Commission (VRCSSC) – Human Factors Studies

In 2019, the VRCSSC engaged a third-party to carry out user consultation on the usability of electromagnetic gate latches. The research engaged users' various disabilities across two separate sites to better understand how pedestrian crossing safety could be improved. As of May 2020, this study is being expanded to further engagement with users with disability to review safety at all elements of pedestrian crossings.

5.1H. Accessibility Reference Group Engagement

ARA members maintain records of all customer complaints as they strive to continually improve the customer experience. These complaint records are also used to identify common themes, issues and opportunities for improvement. Since 2015, there have been few customer complaints relating to flange gaps.

As noted above (see page 8 - rail industry initiatives to improve accessibility), ARA members have each established Accessibility Customer Reference Groups to engage and consult on accessibility matters.

MTM, TfNSW and V/Line's Accessibility Reference Groups were engaged on this temporary exemption application.

A summary of feedback regarding this request and / or general feedback on this area included:

- **MTM's Accessibility Reference Group**: it was agreed that a commitment to maintain the 75mm gap met the expectations of users, as level crossings also continue to be progressively removed.
- **TfNSW's Accessibility Reference Group**: TfNSW advised the Accessible Transport Advisory Committee on the position to apply for further exemptions on 6 May 2020. The Committee discussed the purpose of flange gaps in level crossing environments and how the gap may impact the ability to use level crossings. There was no opposition from the Committee.
- **V/Line's Accessibility Reference Group:** The V/Line ARG acknowledged that the flange gap poses accessibility challenges to a range of users including people who use mobility aids, long canes, parents with prams or those carrying luggage. The ARG emphasised it is important to keep exploring options for technological solutions and removal of crossings where possible through grade separation along with exploring clarity in standards for safe movement over gaps on access paths. Whilst this is occurring it was agreed that continuing to maintain the 75mm was appropriate.

5.1I. Potential impact on people with disability if this exemption is granted

The rail industry believes that the priority is ensuring that the flange gap is safely maintained to a consistent width for all customers and will continue to strive to address the inconsistency between standards to achieve an agreed acceptable standard for flange gaps at level crossings within the DSAPT.

As the safest form of land transport[7], the Australian rail industry is committed to continually improving the safety of its network. This includes ensuring level crossings are safe for customers whilst meeting the safety and

[7] https://ara.net.au/sites/default/files/u647/ARA-Deloitte_Value%20of%20Rail_full%20report.pdf

operational requirement to safely run trains. It also includes the continued removal and upgrade of level crossings in a prioritised manner.

As level crossings are removed and upgraded, the potential impact on people with disability is decreasing.

Granting this exemption will maintain the measurement used by industry as per the current temporary exemption, comply with AS1742.7 as well as European standards whilst the rail industry works to achieve this change in the modernised DSAPT.

In view of the above, the rail industry believes the impact on people with disability is decreasing as the industry continues its commitment to improving the safety and access of level crossings.

5.2 DSAPT Clause 2.6 'Access paths – conveyances'

5.2A. Section of the DSAPT

2.6 Access paths — conveyances

(1) Subject to subsection (3) and section 2.7, an access path that allows continuous and unhindered passage must be provided with a minimum width of at least 850 mm.
(2) Subsection (1) applies to doorways and stairs, and between entrances, exits, allocated spaces and other essential facilities for passengers using wheelchairs and other mobility aids.
(3) If the conveyance exists or is ordered before the commencement of this section, the minimum width may be reduced to 800 mm at any doorway restriction.
Conveyances: Buses, Ferries, Trains, Trams, Light rail

5.2B. Current temporary exemption: existing rail conveyances

For a period of five years, an access path is only required at a single door rather than all doors of existing rail conveyances, subject to the following conditions:

- equivalent access is provided at an alternative door of the rail conveyance in the following circumstances:
  - if an allocated space is not available; or
  - to ensure access to unique facilities; or
  - to ensure a passenger can both board and alight the rail conveyance;
- the ARA member concerned provides a written report to the Commission and the ARA within 12 months of this exemption on measures taken to ensure that staff and passengers are adequately informed of both the access paths available at the doors of existing rail conveyances and the equivalent access measures available; and
- the ARA makes such reports available to the public through its website.

ARA members have met the reporting requirements of this current temporary exemption, providing the AHRC with annual reports in September 2016, 2017, 2018 and 2019 and making these publicly available on the ARA website. ARA members plan to submit September 2020 reports to the AHRC and will make these reports publicly available on the ARA website.

5.2C. Temporary exemption sought

Temporary exemption sought: Access paths - existing rail conveyances: For a period of five years, an access path is only required to a single door of existing rail conveyances.

Whilst a separate request, it should be noted that Clause 6.4 and 8.2 relate to similar parts of the customer journey for a person with disability.

5.2D. Summary of request

- This request does not seek an exemption to the internal access path requirements or door widths. Rather, it is seeking a temporary exemption to allow the nomination of a primary boarding point on the platform to align with onboard facilities. Further, this temporary exemption provides clarity for customers who require direct assistance for boarding (noting that not all customers require direct assistance).
- The DSAPT does not clearly define what an accessible doorway is or whether all doorways should be accessible, but it does encourage the consolidation of onboard accessible amenities. As a result, not all rail carriages have accessible facilities onboard and therefore operators nominate a primary boarding point on all platforms where a boarding device is made available to provide an access path from the platform to the consolidated onboard accessible amenities.
- If boarding cannot be made at the primary boarding point, a secondary option is provided. This practice does not stop customers boarding or alighting at other boarding points.
- From a customer perspective, as well as providing certainty and consistency on where direct customer assistance will be provided if required, nominated primary boarding points direct customers to onboard accessible amenities.
- Providing this exemption will continue to ensure consistency and clarity for customers who may require direct assistance and continue to guide customers who require onboard accessible facilities to the appropriate boarding location.

5.2E. Why is this exemption required?

This request does not seek an exemption to the internal access path requirements or door widths. Rather, it is seeking a temporary exemption to allow operators to nominate a primary boarding point on the platform to align with onboard facilities.

The DSAPT encourages the consolidation of onboard accessible facilities and amenities such as allocated spaces, priority seating, accessible toilets, call buttons etc. As a result, onboard accessible facilities and spaces are consolidated and not provided in all rail carriages. To direct customers who require onboard accessible amenities to a carriage with accessible features, most Australian operators implement boarding policies that nominate a primary boarding point on each train platform. These are positioned to align with the consolidated accessible facilities onboard and provide an access path from the platform, via a ramp if required to the onboard accessible amenities. If boarding cannot be made at the first nominated accessible boarding point, a second option is provided.

The rail industry believes an identified primary boarding point for all customers who may require direct assistance is consistent with the DSAPT but has sought confirmation of this through the DSAPT modernisation process. The rail industry is of the view that this practice provides customer and operational certainty.

Nominated primary boarding points aligned to accessible onboard facilities ensure that customers who use these areas are directed to the onboard accessible facilities they may require. Customers who do not require direct assistance are not prevented from using other boarding points. For customers who do require direct assistance, nominated primary boarding points assist in providing consistent accessible boarding at a dedicated location across the entire network, providing familiarity for customers.

Onboard allocated spaces provide safety benefits for customers using mobility devices by guiding customers to stop front-to-back so that if a train or tram must stop urgently, customers are not sitting side-on which can

present a tip-risk. As allocated spaces are not provided in all carriages, it is important that customers who may require an allocated space can easily identify where they should board.

From an operator perspective, nominated primary boarding points aligned to onboard accessible facilities provide similar benefits of certainty, allowing rail customer service staff to identify customers who may require direct assistance and in the interests of providing a reliable service, allow quick deployment of a ramp and customer assistance to meet the needs of customers.

5.2F. Rail industry action since 2015

Since 2015, ARA members have undertaken the following relevant actions:

- **MTM:** MTM has introduced a new platform standard to mitigate the gap between the train and platform as far as possible, while still meeting the technical needs of a network catering for diverse rolling stock. Existing platforms have been progressively upgraded to allow unassisted boarding, with the driver still trained and available to provide assistance as needed. Facilities at boarding points are also being progressively improved. This includes additional shelter, lighting and customer help points, to ensure passengers have direct access to staff assistance.

  V/Line: All new V/Line trains provide access via more than one door on the train providing access to the accessible features of the vehicle. All V/Line platforms have a Boarding Assistance Zone (BAZ) where customers are able to wait to identify that they require support to board the service. Station staff and conductors are trained to identify any customers within the BAZ and will provide support as required. All accessible doors on all fleet types are identified by the International Symbol of Disability so customers know which doors lead to the accessible features on board. Conductors and station staff are trained to deploy a portable boarding ramp when required to provide access to services. In 2018 V/Line completed a DSAPT audit of fleet constructed prior to 2002 to understand the levels of compliance and identify gaps. V/Line then developed a proposal to meet the compliance gaps for its Classic Fleets (N & H sets) built in the 1960's and the Sprinter Fleet built in the 1990's. This proposal has been provided to the Victorian DoT and is awaiting funding approval. To complete works to bring all three fleet types to full compliance is estimated to cost in excess of $44million. As these fleets are reaching their end of life, making this level of investment may be difficult amongst competing funding requirements.
- **NSW:** Sydney Trains and NSW TrainLink provide line markings on platforms to indicate the most suitable boarding point for people using mobility aids. External decals on trains also assist in ensuring customers board from areas that have accessible features including allocated spaces and help points. Frontline staff are trained to provide direct assistance to customers using a portable boarding ramp and by identifying the most suitable boarding points on the platform for people using mobility aids or requiring assistance.

  Trials have also been undertaken to raise localised sections of platforms using modular products to minimise the platform to train gap interface.

5.2G. Accessibility sector engagement

In 2015, MTM carried out a trial with over 20 participants using mobility devices. The trial aimed to understand user needs to inform MTM platform standards and provide technical evidence surrounding traversable gaps in the rail environment. Findings from the trial have now been included in the Technical Specification *TS 3695.3.2018 Requirements for designation of powered wheelchairs and mobility scooters for public transport and/or road-related area users*.

Key conclusions from the trial and subsequent paper, *Providing Unassisted Access at Train Stations for Passengers with Mobility Restrictions* follows (a copy of the full report is available on request):

1. The ability for a user with a disability to navigate a platform gap is generally governed by their physical comfort levels and not the ability of the mobility device or a user's physical/mental aptitude. Defining a gap that can be navigated by mobility users is therefore not straight forward. Determining what "most" mobility aid users find acceptable is dependent on how their disability impacts their comfort levels and therefore consultation with user groups is required.
2. Vertical steps are more critical than horizontal gaps when defining an appropriate maximum gap size. This is driven by the users' comfort levels and a vertical step creating a "bumpy" ride. While a 40mm vertical gap was acceptable to some, there were other users who indicated they were not, or would not be, comfortable with that gap at a station platform.
3. If a decision is made to adopt a gap greater than DSAPT, it needs to be understood and communicated effectively that vertical gaps, for example 40mm, will remain inaccessible to some users. Therefore, regardless of what infrastructure solutions are applied, there will always be a need for a ramp to be deployed in some cases.
4. An 80mm maximum horizontal gap appears to be acceptable based on the trial data and MTM's experience installing RBPs across the network, providing the vertical gaps are not too large. This is consistent with the results from European studies.
5. While it is important for a vertical step to be considered when defining a maximum horizontal gap, it is difficult for the 80mm dimension to be reduced on the MTM network with the current infrastructure standards and rolling stock. Any reductions in the horizontal gap would require a combination of increased maintenance, higher infrastructure standards, and strict segregation of rolling stock, including V/Line rolling stock.
6. While the DSAPT does not distinguish between mobility devices, consideration should be made to the type of mobility devices to which the Standard applies. Some devices are more suitable than others for independently accessing the public transport network. Given infrastructure does not meet DSAPT gap requirements and will not consistently meet them in the short term, users of mobility devices may benefit from this understanding when hiring/purchasing these devices.
7. The comfort level for users when negotiating a vertical step can be increased by providing a flexible material, such as a platform gap filler (PGF), on the higher side of a boarding surface. The rubber PGF deflects to reduce the vertical step and provide additional traction to the mobility device.

5.2H. Accessibility Reference Group Engagement

Feedback from ARA member refence groups regarding this request includes:

- **MTM's Accessibility Reference Group:** The MTM ARG noted the constraints of providing assistance at multiple doors for the length of the train. While boarding cannot be provided for the length of the train, there is agreement that the provision of the ramp by the driver provides certainty. Difficulties were noted at locations where there is bi-directional running, meaning passengers, in limited circumstances, don't always know where to wait for assistance at the first door. Dynamic information is required to ensure passengers are in the correct location to receive assistance. MTM is investigating innovative solutions to address these concerns for passengers. It was also noted that facilities at boarding points should continue to be upgraded, and with a strong pipeline of work across the MTM network, these facilities will be progressively addressed.

- **TfNSW's Accessibility Reference Group**: TfNSW advised the Accessible Transport Advisory Committee on the position to apply for further exemptions on 6 May 2020. In relation to operations, the Committee discussed how single door boarding aligns to current practices and has both operational and customer benefits regarding a consistent location for people who require additional assistance. There was no opposition from the Committee.

- **V/Line's Accessibility Reference Group:** The V/Line ARG noted that the ability to have independent boarding at multiple points along a conveyance (note: not all doors) should continue to be the ultimate goal of a new build station/rolling stock project. When direct assistance is required from customer service staff the use of nominated accessible doorways that are easy to identify and provide access to the accessible features on board services is preferred. This provides certainty and a consistent, known process for boarding.

5.2I. Potential impact on people with disability if this exemption is granted

Due to the ability to consolidate accessible facilities as per the DSAPT, use of nominated primary boarding points assists in guiding customers to the location where they can receive direct assistance, should they require it, as well as being guided to the accessible onboard facilities. In the majority of circumstances, nominated primary boarding points ensure customers know where to wait on the platform to find staff and seek information or assistance, should they require it. This consistency is also important for many people with hidden disabilities, for example those with cognitive disabilities or severe anxiety.

Similarly, for customers who require a boarding ramp, the use of nominated primary boarding points to provide a ramp will continue to provide consistency and certainty when they travel on the rail network and assist in their boarding being aligned to the onboard accessible facilities.

Whilst operators apply nominated primary boarding points differently according to their network and staffing structure, the continuation of nominated primary boarding points will provide a national level of consistency and certainty for customers who may require direct assistance or guidance to the onboard accessible amenities.

5.3. DSAPT Clause 6.4 'Slope of external boarding ramps'

5.3A. Section of the DSAPT

6.4 Slope of external boarding ramps
The slope of an external boarding ramp must not exceed:
(a) 1 in 14 for unassisted access (AS/NZS3856.1 (1998) Clause 2.1.8 (e) (including the notes)); and
(b) 1 in 8 for unassisted access where the ramp length is less than 1520 mm (AS1428.2 (1992) Clause 8.4.2 (a) and AS1428.1 (2001) Figure 8; and
(c) 1 in 4 for assisted access (AS/NZS3856.1 (1998) Clause 2.1.8 (e)).
Conveyances - except dedicated school buses and small aircraft

5.3B. Current temporary exemption: rail conveyances

For a period of five years, where the relationship between the platform and rail carriage means that an external board ramp can only be provided at a gradient greater than 1 in 8 and less than 1 in 4, ARA members are not required to provide staff assistance in ascending or descending the ramp.
This exemption is granted subject to the following conditions:

- the ARA member concerned provides a written report to the Commission and the ARA within 12 months of this decision on:
  - the number of locations where boarding ramp slopes of 1 in 8 or better cannot currently be achieved;
  - measures to be taken to increase the number of locations where external boarding ramp slopes of 1 in 8 or better will be achieved; and
  - results of examination by the operator of alternative methods for achieving accessible boarding;
- the ARA member concerned provides an updated version of the report to the Commission and the ARA every 12 months;
- the ARA makes the reports available on its website;
- the ARA member concerned ensures that service users can obtain information about restricted access at any particular rail station or infrastructure:
  - at the location of the restriction; and
  - via the ARA member's websites and downloadable fact sheets; and
  - in person at Travel Centres where they exist; and
  - via a telephone call to the Customer Contact Centre where available; and
- the ARA member concerned provides free travel for any assistant accompanying a person with disability who requires assistance boarding a train as a result of non-compliance with clause 6.4.

ARA members have met the reporting requirements of this current temporary exemption, providing the AHRC with annual reports in September 2016, 2017, 2018 and 2019 and making these publicly available on the ARA website. ARA members plan to submit September 2020 reports to the AHRC and will make these reports publicly available on the ARA website.

5.3C. Temporary exemption sought

Temporary exemption: rail conveyances: For a period of five years, where the relationship between the platform and rail carriage means that an external board ramp can only be provided at a gradient greater than 1 in 8 and less than 1 in 4, ARA members are not required to provide staff assistance to customers to ascend or descend the ramp.

5.3D. Summary of request

- This temporary exemption request relates to the safety of customers and staff, noting the obligations under relevant state-based occupational health and safety laws.
- Most rail networks around Australia currently run a variety of rolling stock. The mix of rolling stock coupled with different platform heights and other network variables, creates gaps of varying degrees that can require a boarding ramp for customers to board and/or alight.
- The slope of ramps remains a challenge at stations with large vertical gaps. The larger the gap, the larger the gradient of the ramp required.
- As mobility devices manoeuvre differently, staff assisting customers to ascend or descend a ramp can put both the customer and staff at risk.
- Noting the different manoeuvrability of different mobility devices and that staff cannot be familiar with how individual devices manoeuvre, customer feedback has indicated a preference is not to be not pushed up a ramp by staff. Customers have advised they prefer support from a carer who is familiar with their device. All operators accept companion cards which provides free travel to carers to support this preference.
- Providing this temporary exemption will maintain current practices that staff are not required to physically assist customers using a boarding ramp when the gradient is larger than 1 in 8 and less than 1 in 4, a safety requirement for customers and staff alike.

5.3E. Why is this exemption required?

Apart from the recently opened Sydney Metro network, rail networks in Australia operate a variety of rolling stock (trains and trams) on their networks and operate along platforms of varied heights, and shapes. The different designs of the vehicles and platforms mean the gap between the train and platform can differ with different rolling stock. This can be exacerbated at regional train stations where tracks are shared with freight trains. See section 4 below for further detail.

Rail infrastructure such as curved train platforms and legacy rolling stock can exacerbate the gap between trains and trams and the platform resulting in the need for continued reliance on direct assistance and provision of ramps to board services for some customers.

Whilst level and compliant gradient access for all doors of a conveyance is the optimum goal, site constraints and legacy infrastructure at many stations require significant structural and track works, with significant impact on the network, and in many cases, platform raising may require total rebuilds which impacts on heritage requirements. Rather than raise the height of the full platform which has significant cost implications, localised solutions, such as raising sections of a platform are being explored and invested in to improve accessibility and support independent boarding as a cost-effective alternative.

ARA members are focused on providing a safe travel experience for customers and a safe working environment for staff. Mobility devices manoeuvre differently. As a result, risks to the customer and staff can arise if staff provide assistance to a customer in a mobility device ascending or descending a ramp. Staff who are unfamiliar with the specific way a customer's mobility device manoeuvres could unintentionally put the customer and staff member at risk of an accident.

State-based occupational health and safety legislation mandates the provision of safe work environments. When the Rail Industry first sought this temporary exemption, staff back injuries were an Industrial Relations / Work, Health & Safety issue. Customer and staff injury resulting from manual handling is a significant risk for any employer, and the cost associated with customer or workplace injury must be considered when requiring staff to engage in manual tasks that would involve movement of unknown weights.

All Australian rail operators accept the Companion Card issued by the Department of Health and Human Services to people who may require assistance. This provides free travel for the carer/companion of the card holder on all public transport services to support customers travelling by public transport services.

As new rolling stock are introduced and station upgrades continue, progress to reduce the gap between rolling stock and the station platform is being achieved but currently, this exemption requirement is ongoing and must be balanced against the safety of customers and staff.

5.3F. Rail industry action since 2015

Since 2015, specific examples of work undertaken by ARA members include:

- **VIC:** Upgrades have been carried out at 50 MTM platforms since 2015 to comply with the slope of an external boarding ramp. For new fleet being introduced in 2020, this issue was specifically addressed across two lines through a balance of platform upgrades and the adjustment of the length of boarding ramps to allow sufficient manoeuvring areas on existing platforms. MTM has also introduced seven wheelchair movers around the network. These devices allow staff to connect to a manual wheelchair and assist passengers with no manual output. Due to the weight of the device, they are not able to be used on portable ramps, but are

used within station precincts. MTM is also carrying out a Platform Gap Mitigation Project, which will reduce horizontal and vertical gaps at prioritised locations.

V/Line completed an assessment of its platforms against each rolling stock type (*Platform Geometry Platform Height and Clearance Determination for DDA Compliance in Unassisted Boarding*). This assessment provided a number of insights into the requirements of rolling stock and platforms to meet the 1 in 8 required slope for unassisted boarding. V/Line is working with the Victorian DoT to incorporate this learning in infrastructure projects and in developing appropriate boarding solutions for the regional network.

- **WA**: Since 2015, previously non-compliant regional stations have been upgraded to ensure the gradient is less than 1 in 8 and ramps are less than 1520mm long to remove the need for staff assistance. A program of building high-level platforms at regional train stations is ongoing.
- **NSW**: All trains operating on the Sydney and Intercity networks are accessible for customers using mobility devices with direct assistance from station staff or train crew using a platform to train boarding ramp. Portable ramps have been distributed to Sydney Trains and Intercity stations. Sydney Trains is currently investigating new ramp products to improve safety for customers and staff. A specially designed ramp is in use at Armidale station. It has been designed to overcome specific issues at regional locations e.g. existing curved platforms and cross fall, large platform to train gaps. The new ramp will be made available at other stations on a case by case base if it is found suitable. A trial at Maitland Station is being undertaken to replace the existing four-fold ramps used on Endeavour trains with a bi-fold ramp to provide a more stable and light weight solution for customers and staff respectively. The new Sydney Metro stations opened in 2019 have roll on roll off access to all train doors. This was made possible due to new station construction with straight, level platforms and consistent rolling stock.

5.3G. Research and / or reviews since 2015

Monash University's Institute of Railway Technology DSAPT review

In relation to Clause 6.4 of the DSAPT, 'Slope of external boarding ramps', Monash University noted risk of injury to customers and staff when assisting people with disabilities using mobility devices to board or alight with a ramp. This was noted as a concern for operators needing to meet Worksafe conditions and ensure the safety of customers and staff. Monash highlighted the issue to be a result of infrastructure, namely platforms, not aligning vertically with the conveyance entrance which is further exacerbated by operators running multiple trains and trams on the same network with different height requirements. Monash found rail's difficulty to comply currently is both operational (the physical environment) and economic; ramps are required because there is a significant investment cost in raising platforms to meet the aim of level, accessible boarding. Further operational challenges present with conveyances of differing design specifications operating in the same network.

In addition, Monash noted that the deployment of a longer ramps in order to meet gradient requirements is not always feasible on existing platforms. A longer ramp can create further barriers as ramps impede manoeuvring areas and passengers are unable to safely navigate the ramp. Larger and longer portable ramps also weigh more for staff which can create handling issues and create higher risk of injury.

5.3H. Accessibility Reference Group Engagement

ARA members engaged their respective customer reference groups regarding this temporary exemption request. A summary of feedback from these groups follows:

- **MTM Accessibility Reference Group:** Members of the MTM ARG noted that since the exemption was granted in 2015, they had not experienced a staff member failing to provide assistance when

requested. It was also noted that some passengers could face barriers to accessing certain stations if this assistance was not provided.

- **TfNSW Accessibility Reference Group**: TfNSW advised the Accessible Transport Advisory Committee on the position to apply for further exemptions on 6 May 2020. Committee members sought clarification that this exemption would not negatively impact the assistance they currently receive, such as deploying and stabilising the ramp. This was confirmed by TfNSW that the current practice for boarding assistance would remain. There was no opposition from the Committee.

- **V/Line Accessibility Reference Group:** The V/Line ARG noted that the ability to have independent boarding at multiple points along a conveyance (note: not all doors) should continue to be the ultimate goal of a new build station/rolling stock project. It was agreed that the safety of both staff and customers is the priority and providing physical assistance poses risks to both. It was also noted that some customers may be more impacted than others by this based on their mobility aid and the slope of the boarding ramp.

5.3I. Potential impact on people with disability if this exemption is granted

The ongoing upgrade of platforms, purchase of new rolling stock and localised solutions like partial platform raising will continue to reduce the number of locations where the gradient for a ramp is steeper than 1 in 8. However, due to the different rolling stock in operation and many other variables, the gradient of a ramp at the same location may change depending on the type of train fleet. Currently, limited stations have a rolling stock and platform gap where the gradient for a ramp is greater than 1 in 8.

Customer and staff safety must be the priority. Due to the different manoeuvrability of mobility devices, it is in both customer and staff safety interests that rail staff are not required to manually assist customers in mobility devices up or down a ramp. Rather, all ARA members accept the Companion Card, permitting free travel for customers who may need assistance up or down a ramp and ensuring that assistance can be provided by a companion familiar with their device and how it moves to ensure the customer's safety.

As a result, the rail industry believes the continuation of this temporary exemption would have limited impact on people with disability and rather will ensure their safety when boarding or alighting by a boarding ramp.

5.4. DSAPT Clause 8.2 'Boarding - When boarding devices must be provided'

5.4A. Section of the DSAPT

8.2 Boarding - When boarding devices must be provided
(1) A manual or power assisted boarding device must be available at any accessible entrance to a conveyance that has:
(a) a vertical rise or gap exceeding 12 mm (AS/NZS3856.1 (1998) Clause 2.1.7 (f)); or
(b) a horizontal gap exceeding 40 mm (AS/NZS3856.1 (1998) Clause 2.1.8 (g)).
Conveyances - except dedicated school buses and small aircraft

5.4B. Current temporary exemption: rail conveyances

For a period of five years, a manual or power assisted boarding device is only required at a single door rather than all doors of a rail conveyance, subject to the following conditions:

- equivalent access is provided at an alternative door of the rail conveyance in the following circumstances:
    - if an allocated space is not available; or
    - to ensure access to unique facilities; or
    - to ensure a passenger can both board and alight the rail conveyance;
- the ARA member concerned ensures that service users can obtain information about specified boarding points at any particular rail station or infrastructure:
    - at any platform at which there is a specified boarding point;
    - via the ARA member's websites and downloadable fact sheets; and
    - in person at Travel Centres where they exist; and
    - via a telephone call to the Customer Contact Centre where available;
- the ARA member concerned provides a written report to the Commission and the ARA within 12 months of this decision on measures taken to ensure that staff and passengers are adequately informed of both the doors of rail conveyances at which boarding devices are available and the equivalent access measures available;
- the report is updated every 12 months, and the updated report is provided to the Commission and the ARA; and
- the ARA makes these reports available on its website.

ARA members have met the reporting requirements of this current temporary exemption, providing the AHRC with annual reports in September 2016, 2017, 2018 and 2019 and making these publicly available on the ARA website. ARA members plan to submit September 2020 reports to the AHRC and will make these reports publicly available on the ARA website.

5.4C. Temporary exemption sought

Temporary exemption: rail conveyances: For a period of five years, a manual or power assisted boarding device is only required at a single door.

5.4D. Summary of request

- Multiple elements impact upon how trains align with platforms, resulting in different gaps across rail networks that necessitate a boarding device for some customers to board or alight.
- Similar to section 2, this temporary exemption seeks to allow ARA members to provide an assisted boarding device at a primary nominated boarding point.
- Provision of a boarding device at a primary nominated boarding point provides certainty for customers and operators and assists rail operators to meet their service schedule.
- Providing this exemption will permit the continuation of this practice.

5.4E. Why is this exemption required?

Due to the age of Australian rail networks, all rail systems (apart from Sydney Metro) operate a mix of rolling stock that integrate differently with different platforms.

Multiple elements impact the integration between a train and a platform, necessitating the provision of a boarding device for some customers to board and/or alight. Including:

- **train platforms:** they can be varied heights and curved (a curved platform can mean staff standing at one end of a platform may not be able to see the other end of a train, potentially limiting staff's ability to see that a customer might require assistance).

- **how the track is maintained:** this can impact the height that the track sits at, increasing or decreasing the height of the train when it arrives at the platform.
- **wheel wear:** this can reduce the height of wheels, reducing the level that the train sits at when it arrives at the platform.
- **passenger load:** the loading of the train can cause the train to sit 'lower' against a platform when fully loaded during peak periods due to the weight it is moving or sit 'higher' when empty, again changing the level of the train against a platform.
- **integration with the freight network:** passenger and freight trains share the rail network and whilst freight trains do not stop at rural and regional platforms, they travel through stations and along platforms, often at speed. As a result, rural and regional platforms must be constructed to allow freight train wagons to travel safely past. New networks, such as Inland Rail may result in the use of larger freight trains, which may further encroach on platforms, further impacting the ability to raise platforms.

There are many locations on Australian rail networks where passengers are provided with roll-on/roll-off and therefore unassisted access at any door but depending on where they're travelling, they may or may not be able to disembark unassisted (or vice versa). Recognising this, operators work to provide consistency across the network for customers who require direct assistance through nominated primary boarding points.

As noted in section 2, rail operators consolidate accessible onboard facilities in accordance with the DSAPT. As part of this, operators implement boarding policies that provide a boarding ramp at nominated primary boarding points. This is implemented for all customers who require direct assistance – people in mobility devices, people with luggage, prams etc; anyone who requires direct assistance for any reason. Provision of a boarding ramp at nominated primary boarding points assists customers to receive quicker assistance on and off the train, helping them on their journey.

Rail operators have different procedures for providing a boarding ramp depending on their network, the type of ramp and staffing structures. For example, some train drivers deploy the boarding ramp at the front door whilst other operations have a conductor, guard or customer service staff deploy the boarding ramp. In instances where the platform is un-staffed and the driver is the only operator on the train, the provision of a ramp by the driver at the first door of the train provides assurance to customers that staff assistance will be available at every platform. Providing the ramp at the first door ensures the driver can provide prompt assisted boarding if it is sought.

Provision of a ramp at a nominated primary boarding point ensures the provision of the ramp does not delay the train and impact all users. Due to the nature of railways, a small delay can have a flow on effect and create service delays across the whole network, impacting all customers. This has a negative impact on the reliability of services, again impacting all customers.

As noted on page 10, rail patronage is increasing. This is leading to the need for longer trains and longer platforms. As train lengths are extended, the operational need for boarding ramps to be provided at a nominated primary boarding point rather than any boarding point along the lengthening trains increases.

An alternative to providing boarding ramps is raising entire platforms to meet train doorways which would come at significant cost and is not always practical. As noted in section 3, trials have been undertaken to raise localised sections of platforms using modular products to minimise the platform to train gap.

Similar to the view provided at section 2 regarding Clause 2.6 of the DSAPT, the rail industry believes the ability of rail operators to provide a boarding ramp at nominated primary boarding points benefits customers and operators.

5.4F. Rail industry action since 2015

Rail operators will continue to upgrade platforms to mitigate the gap as far as possible as they strive to support independent boarding.

Since 2015, specific examples of work undertaken by ARA members include:

- **VIC**: Upgrades to 50 MTM platforms around the network have been undertaken to allow unassisted boarding at, at least, one door. MTM trialled the deployment of ramps by station-based staff, however, with less than half of the MTM stations being staffed, this cannot be a consistent offering for passengers around the network. Drivers continue to provide direct assistance and ensure passengers can board and alight at their desired locations

  V/Line trains are equipped with a boarding ramp and conductors onboard provide direct assistance for customers to board or alight via accessible boarding points. All new V/Line trains provide access via more than one door to the accessible features of the vehicle. Of V/Line's older fleets, the N set is the only fleet where boarding occurs via a single door/carriage. Customers are able to book their travel in advance to provide information regarding their accessibility requirements and notify they will use the boarding ramp to board the train.

  Following an assessment of the network (*Platform Geometry - Platform Height and Clearance Determination for DDA Compliance in Unassisted Boarding*), V/Line is working with the Victorian DoT to identify boarding solutions in addition to the on-board ramp, including bespoke solutions to address individual platform gaps.

- **WA**: On booked train services, ramps are always used for passengers boarding and alighting trains. This assists with luggage and general movements and removes any need to consider the size of the gap. Outside main stations, only one door is operational for all passengers. With unbooked services, equal accessibility is available at all doors and direct assistance including boarding devices are available on request.

- **NSW**: When boarding devices must be provided, staff, both station and train crew, are available to assist customers to utilise the portable boarding ramps. Trials of products to complete localised raised platform sections have occurred at stations such as Victoria Street, however, it may not always be practicable to raise platform heights due to several factors including freight train movements.

  Where stations in regional NSW need to accommodate freight movements, the track height level and position is often part of the responsibility under a third-party leasing agreement. In these locations, should platforms be raised to minimise the platform train interface gap to meet compliance, sections of the platform would be struck and damaged by freight rolling stock. To move freight from rail to road would be detrimental to the economic productivity of NSW.

5.4G. Research and / or reviews since 2015

<u>V/Line review of boarding assistance devices</u>

To support decision making for future investment in boarding solutions, V/Line completed a high-level review of various boarding assistance devices utilised around the country to consider their application on the Victorian regional rail network. The review considered Raised Boarding Pads (**RBP**) and alternative commercially available ramp products.

<u>Raised Boarding Pads (RBP):</u> RBPs have been successfully utilised on a number of networks in Australia. RBPs are sections of the platform that have been raised to reduce the vertical gap between platform and train to support

access for customers who use a mobility aid. These are located at a point on the platform that best facilitates boarding and access to onboard accessible amenities.

Factors that contribute to the success of RBP's:

- Fleet type and make up: Provision of consistent fleet type, consist make up (carriage order and number, overall train length) and general door locations as well as consistent locations of allocated spaces for customers who use a mobility aid within trains.
- Process for providing assistance: Where train drivers are the staff member responsible for providing boarding assistance, customers are usually assisted to board at the first door of the train which means a consistent door and location on the platform is used for boarding.
- Fleet stopping points: Use of standardised stopping point on the platform so doors are always in the same position for boarding.

RBPs provide a practical solution to aid boarding in the right circumstances. However, for the V/Line network, the following challenges to implement RBPs have been identified:

- V/Line has four different fleet types all with different door locations, carriage lengths and internal configurations. Each fleet type has a different location for allocated spaces for customers who use a mobility aid e.g. V/Locity trains have allocated spaces in the DMD and TM cars and customers board from the middle doors whereas on a Sprinter, customers can board at one end of every carriage. This would make determining the positioning of the RBP very difficult and potentially not useable by many services.
- Conductors provide boarding assistance to customers who use mobility aids, this enables customers to board at accessible doorways at different points along the train consist.
- V/Line does not have consistent stopping points at each platform. Due to the location of signals, the variation in fleet type and alternating between consist size e.g. three or six car VLocity's, stopping points need to be different depending on each train type.
- Station design on the regional network may impede the installation of an RBP e.g. a number of stations have large heritage listed overpasses located mid platform, potentially where an RBP would ideally be located.

Alternative commercially available ramps: V/Line's North East corridor between Albury and Melbourne currently uses locomotive-hauled trains (N Sets). Due to the larger gap experienced between the train and platforms along the North East line between Seymour and Albury, these trains have been provided with a commercially available ramp that is longer than the standard ramp provided on other fleet types. These ramps are used to reduce the gradient when alighting at stations with a significant gap, most commonly at Albury Station.

From a positive perspective, these are off the shelf products that are easy to source and provide an alternative for customers. However, as these ramps are a set length, they assist with reducing the ramp gradient, but do not address individual station requirements. In addition, the increased length makes the ramp harder for staff to carry and safely deploy due to increased weight and size.

Due to infrastructure and rolling stock variability and complexity, addressing boarding ramp gradient requires a bespoke solution that identifies solutions that best address the need at each station and platform.

Monash University's Institute of Railway Technology DSAPT Review

Monash identified three key considerations that affect compliance with clause 8.2.

Firstly, although an operator can comply with the provision of a boarding device, the operational demands of network service and punctuality mean that provision of a device can be challenging when deployed along the length of the platform.

Secondly, the prescribed dimensions are misaligned with the operational requirements of a rail environment to include, but not limited to, structural gauge envelopes; that prescribe clearance requirements to prevent platform/conveyance collisions and general maintenance tolerances.

Thirdly, the prescribed tolerances are derived from scenarios defined within a static environment with greater control over external parameters. The prescribed gap dimensions when compared internationally are also significantly more restrictive, which invariably increases the instances where a boarding device must be made available. It also does not accommodate the capability of mobility devices and users; as demonstrated in user trials where horizontal gaps 80mm wide and 40mm vertical were evaluated (Palmer-Cannon & Gloster, 2016).

The report recommendations include:

- Undertake progressive upgrades to infrastructure through platform renewals to set a consistent platform coping height within each network limiting vertical step variability.
- Continue to investigate dynamic boarding/alighting systems.
- Review and provide further clarity, identify implications for industry/people with disabilities and those who represent them, on the phrase 'any accessible entrance' within clause 8.2.

5.4H. Accessibility Reference Group Engagement

A summary of feedback from ARA member reference groups regarding this temporary exemption follows:

- **MTM:** The MTM ARG noted the constraints of providing assistance at multiple doors for the length of the train. While boarding cannot be provided for the length of the train, there is agreement that the provision of the ramp by the driver provides certainty. Difficulties were noted at locations where there is bi-directional running, meaning passengers don't always know where to wait for assistance at the first door. It was also noted that facilities at boarding points should continue to be upgraded, and with a strong pipeline of work across the MTM network, these facilities will be progressively addressed.
- **TfNSW Accessibility Reference Group**: TfNSW advised the Accessible Transport Advisory Committee on the position to apply for further exemptions on 6 May 2020. In relation to operations, the Committee discussed how single door boarding aligns to current practices and has both operational and customer benefits regarding a consistent location for people who require additional assistance. There was no opposition from the Committee.
- **V/Line Accessibility Reference Group:** The V/Line ARG noted that the ability to have independent boarding at multiple points along a conveyance (note: not all doors) should continue to be the ultimate goal of a new build station/rolling stock project. When direct assistance is required from customer service staff the use of nominated accessible doorways that are easy to identify and provide access to the accessible features on board services is preferred. This provides certainty and a consistent, known process for boarding.

5.4I. Potential impact on people with disability if this exemption is granted

ARA members seek to provide all customers with independent boarding. However, until this can be achieved, the rail industry's focus is on providing access whilst ensuring all travellers reach their destination safely and on-time.

Similar to section two, continuing the ability for ARA members to provide boarding ramps at a nominated primary boarding point will provide certainty for customers and operators alike.

Further, this will permit the continuation of research and trial of new ramp options to best fit the needs of metropolitan and regional operators and their customers.

6. CONCLUSION

As public transport service providers, ARA members are committed to continuing to improve the accessibility of rail services so that all individuals can safely travel by rail and thereby be engaged members of the community.

The rail industry acknowledges the significant accessibility improvements that the DSAPT has driven following its 2002 release. Infrastructure and transport services are more accessible and there has been a social and cultural shift that rightly recognises the importance of accessibility.

Following the 2012 legislative review of the DSAPT, the Commonwealth Government agreed to modernise the DSAPT. The first attempt was not completed and was replaced with a new approach in late 2019. The rail industry was deeply engaged in the first effort to modernise the DSAPT and is equally committed to contributing to and achieving a modernised DSAPT through the revised approach. However, whilst the DSAPT remains unchanged, the rail industry continues to face challenges to comply with all clauses within the DSAPT.

There are 120 technical clauses within the DSAPT. The ARA, on behalf of its members seeks temporary exemptions for a period of five years to four clauses within the DSAPT and one within the Premises Standards. Whilst the rail industry acknowledges that it is still on its accessibility journey, the ARA is of the view that the limited number of temporary exemptions sought in this request is a demonstration of the progress that the rail industry has achieved in creating accessible rail networks around Australia.

The ARA thanks the AHRC for the ability to submit this request.

APPENDIX A: MONASH UNIVERSITY DSAPT AND THE PREMISES STANDARDS REVIEW SUMMARY REPORT

Monash Institute of Railway Technology

Report No: Monash/RT/2019/1439

THE DISABILITY STANDARDS FOR ACCESSIBLE PUBLIC TRANSPORT (2002) AND DISABILITY (ACCESS TO PREMISES—BUILDINGS) STANDARDS (2010) REVIEW

SUMMARY REPORT

by

Monash Institute of Railway Technology

June 2019

Circulation: Unrestricted.
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LIST OF ACRONYMS:

ABS	Australian Bureau of Statistics
ADA	Americans with Disabilities Act
AHRC	Australian Human Rights Commission
ARA	Australasian Railway Association
BLE	Bluetooth Low Energy
BMI	Body Mass Index
CBD	Central Business District
CMH	Ceramic Metal Halide
COAG	Council of Australian Governments
Cth	Commonwealth of Australia
DDA	Disability Discrimination Act 1992 (Cth)
DSAPT	Disability Standards for Accessible Public Transport 2002 (Cth)
ETA	Electronic Travelling Aid
EUROPA	Publications Office of the European Union
EU	European Union
GNSS	Global Navigation Satellite System
IRT	Institute of Railway Technology at Monash University
LED	Light Emitting Diode
MRT	Mass Rapid Transit
NTC	National Transport Commission
OECD	Organisation for Economic Co-operation and Development
ONRSR	Office of the National Rail Safety Regulator
PID	Passenger Information Display
Premises Standards	Disability (Access to Premises-Buildings) Standards 2010
PRM	Passengers with Reduced Mobility
RFID	Radio Frequency Identification
RSNL	Rail Safety National Law
SWL	Safe Working Load
TGSI	Tactile ground surface indicators
TSI	Technical Specification for Interoperability
TTY	Teletypewriter
UK	United Kingdom
USA	United States of America
WCAG	Web Content Accessibility Guidelines

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DISCLOSURE NOTICE

PLEASE READ THIS NOTICE BEFORE READING REPORT

PURPOSE:

This report is the deliverable for the independent review of two Australian standards:

- The DSAPT; and
- Premises Standards.

AUDIENCE:

The work described in this review was carried out for the ARA and the report is intended for general release.

Circulation: Classification: Unrestricted
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ASSUMPTIONS/QUALIFICATIONS:

All observations, results, conclusions and recommendations made in this report are based on a desktop engineering-based review of the two Australian standards indicated above. National and international data sets were also reviewed which included information from railway operators, organisations, governments and global agencies with relevance to standards and innovations aimed to improve accessibility for those with disabilities.

FURTHER INFORMATION:

Further information can be obtained from Mr. Ravi Ravitharan at the Institute of Railway Technology.

EXTERNAL SOURCE MATERIALS:

The Institute of Railway Technology (IRT) and/or Monash University do not accept responsibility for the validity, accuracy or quality of any source material or data used in this study that was not generated by IRT.

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PREFACE

Background

Standards need to be flexible enough to be responsive to changing passenger needs and technological advancements, which can overcome obstacles, create greater efficiencies and improve safety. In 2010, in the USA, the analysis of space requirements for accommodating wheeled mobility devices in built environments highlighted that standards developed in 1970s, were still in use forty years on. They were out of date, failed to recognise advances in wheeled mobility technology, and did not reflect changes in population demographics. They also failed to address passenger needs relevant to current and future characteristics. The report emphasised the importance of integrating current research with standards development, organising international collaborations, and developing international standards that were relevant and responsive to changing population requirements [Steinfeld E., Maisel J., Feathers D., D'Souza C., 2010]. Similarly in Australia, research in 2018 indicated that standards developed for public accessibility to transport, and in premises access, were not only technically prescriptive, but like the example in the USA, fail to have the flexibility to keep pace with changes in user demographic needs. This in turn influences systems in infrastructure design, manufacturing, safety provision and the primary objective of capacity to provide equal access for all. Other standards, including the *Building Code of Australia,* provide "Performance Solutions" as a mechanism to satisfy the requirements via a route, which does not strictly meet the prescriptive provisions. In these standards, assessment methods are used to prove that the particular building solution can satisfactorily demonstrate compliance with performance requirements [Australian Government, National Construction Code]. This report will highlight the need for standards in Australia to be flexible and outcomes based to meet the objective of an inclusive and accessible public transport system for all in Australia in the future.

Key demographic trends relevant to Future Proofing Australia's Rail Infrastructure

Rail is estimated to provide around 62% of urban public transport needs in the future [Australian Government, National Transport Commission, August 2016]. There are a number of key demographic trends, which are expected to have impacts on Australia's public transport system in the future and some of these include:

Growth in Australia's population

Since the year 2000, Australia's population has grown by more than 25% and is forecast to double by 2070 reaching almost 45 million people [Deloitte Access Economics, 2017]. As the population grows, rail will be the backbone of commuter transport in both dense urban and regional areas. Rail will play a vital role through:

New or extended lines to facilitate land release and housing growth in areas of high demand. Rail corridors are well suited to apartment and townhouse living which

provide higher density living to cater for rapidly expanding population in both an urban and regional landscape.

An efficient way to move people quickly to and from the city CBDs and other employment clusters. An increasing population will generate more employment and even in a world of autonomous vehicles, the sheer volume of people that fit on a train means that rail will remain the most efficient way to move large volumes of people into and out of CBDs [Deloitte Access Economics, 2017]; and

Providing an efficient link to regional areas. The regional communities surrounding a city are closely integrated economically and socially with that city. For example, large sections of the population commute between Geelong and Melbourne, the Blue Mountains and Sydney, and the Sunshine Coast and Brisbane. Some commute five days a week, and others will do a mix of a couple of days in the city and the rest working from home. Better rail connections can help that integration, benefiting the city and its surrounding regional areas [Australian Government, The National Rail Program].

An aging population (aged 65+)

In 2017, there were 3.8 million Australians aged 65 and over (comprising 15% of the total population) -increasing from 319,000 (5%) in 1927 and 1.3 million (9%) in 1977. The number and proportion of older Australians is expected to continue to grow. By 2057, it is projected there will be 8.8 million older people in Australia (22% of the population) and by 2097, 12.8 million people (25%) will be aged 65 and over [ABS, 2014]. The implications for the rail network will be a larger portion of people utilising the network will require a greater focus on providing a seamless, safe and efficient access to public transport for a portion of the population that may have accessibility problems. Additionally:

It is likely, that with an aging population there will also be an increase in the number of people living with disability. The 2015 ABS *Survey of Disability, Ageing and Carers* reported that 50% of men and 52% of women aged 65 and over had some form of disability. This proportion was higher for those aged 85 and over, with 4 in 5 experiencing a disability (78% of men and 80% of women). In 2015, 15% of men and 22% of women aged 65 and over experienced disability as a severe or profound core activity limitation (that, sometimes or always needing help with self-care, mobility or communication). Again, this was higher for those aged 85 and over - 38% for men and 56% for women. The number of people with severe or profound disability is projected to increase over the next 40 years from 1.4 million to 2.9 million [Price Waterhouse Coopers, Disability Investment Group, 2009].

Changing physical nature of Australia's population

According to the World Health Organisation (WHO) in 2010, being overweight or obese is a major factor for a range of chronic diseases, including diabetes, cardiovascular diseases and cancer [WHO]. These diseases are likely to affect a person's mobility and increase the prevalence of disabilities in Australia. The implications for the rail industry include the requirement for innovative wayfinding

technologies, aids and strategies. Conveyance design will also need to be improved to help overcome changing passenger physical dimensions.

Obesity: Almost 2 in 3 Australian adults (63%) were overweight or obese in 2014–15, similar to 2011–12. Rates of obesity are continuing to rise in Australia. Collecting information on these trends is important for managing the associated health problems. The BMI is widely used to monitor body weight [Australian Government, Australian Institute of Health and Welfare].

Height: Australia's population has grown taller and taller over the past century, thanks to improved healthcare, nutrition and hygiene. A global height analysis of 200 countries measured the average growth of global populations from 1914 to 2014. Australian men are the only non-Europeans in the top 25, coming in at number 18, while Australian women jumped from 29th to 15th place [eLife 2016].

In addition to population changes, other impacts, which will affect the rail industry in the future, will include (but not limited to):

- Changes due to new technologies which will disrupt current thinking and ways of doing things;
- Challenges in shared infrastructure where freight and passenger services require access to the same infrastructure (track, signalling, stations etc.);
- Impacts of emerging environmental factors such as the need for more efficient fuels to minimise the effect on the environment as emissions targets receive greater attention;
- Changes to where and the ways employment is undertaken (at home, online and in shared offices);
- Housing location and affordability for those who are working, and those that have retired and make up the proportion of older Australians; and
- Changes due to the way we shop (impacts of the online environment) and emerging demands through greater globalisation and integration in economies.

Rail Industry Challenges

This report is an independent review of two Standards relevant to people with disability. They are the DSAPT and the Premises Standards. There are a number of issues noted by the rail industry to be affecting their ability to meet compliance to the Standards, which govern provision of accessible and inclusive transport to people with disability. A good proportion of the issues stem from the speed required for the DSAPT modernisation for the industry to meet the desired outcomes for access by people with disability. It is noted the prescriptive nature of the DSAPT may also stifle the ability for the rail industry to introduce innovation or technological alternatives that would provide 'best practice' to deliver the desired accessibility outcomes for people travelling with a disability. There are a number of specific industry concerns raised. These include:

Legacy networks and heritage issues

A number of DSAPT requirements conflict with statutory heritage specifications. These conflicts create significant challenges for the rail industry making some requirements under the DSAPT and Premises Standards expectations, impossible to meet in their current form, which may include as one example, significant changes to the existing heritage structures. Undertaking these changes would be cost prohibitive and would require support through a major works program.

Growth in patronage

As indicated in the key demographic trends above, Australia's population is expected to double by 2070. This population increase will also include a much greater proportion of people who will be travelling with a disability. With rail providing almost two-thirds of urban public transport, these trends will add significant pressure to the rail industry in how they will provide accessible transport to meet increased needs.

Historic Underinvestment in Rail

According to Deloitte Access Economics, there has been a prolonged period of underinvestment in rail infrastructure in Australia. [Deloitte Access Economics, 2017] This underinvestment is also illustrated by rankings in the "quality of railroad infrastructure"- produced by the World Economic Forum. Australia ranks 34th from 108 countries surveyed, well down the scale from its benchmarked peers in other developed nations [The Global Economy, Railroad Infrastructure Quality – Country Rankings, 2015]. Deloitte Access Economics also concluded that "sustained investment in transport infrastructure (and rail more specifically), will not only allow the country to manage the challenges posed by population and economic growth, but it will also allow the development of a better integrated and prosperous society", critical to ensure that the needs can be fulfilled of future national development [Deloitte Access Economics, 2017].

As noted earlier, a number of DSAPT requirements conflict with statutory heritage specifications. The historic underinvestment in rail has also meant that any permitted changes to heritage infrastructure has been limited (if any) because it has not been included in costing in major works program. This has become a significant issue for the industry to comply with the standards and will be discussed further in sections of this report.

New Investment in Rail

The historic underinvestment in rail has posed its own challenges but new investment in rail at levels unprecedented both in Australia and around the world, also present new challenges. Deloitte Access Economics (2017) estimated for Australia:

- The rail industry directly contributes $13.3 billion in value add and employed 53,490 FTE workers in 2016;
- The total contribution of the rail industry to GDP (direct and indirect) was $26 billion and 142,288 FTE workers – making up to 1.6% of the Australian economy; and

- Rail generates significant benefits for society in terms of reduced accidents, carbon emissions and congestion and improvements in health and social inclusion.

The Australasian Railway Association (ARA) noted in 2017, the investment in rail by the Australian Governments will be around AUD $100 billion through to 2030. [ARA, 2017, National Industry Plan]. Whilst the new investment is long overdue and welcomed by industry, it also presents a number of challenges, including most importantly the issue in how to address the current workforce gaps both in numbers and in skills required to operate efficiently and effectively now and into the future.

The rapid development in new technologies has disrupted and changed the way railways operate especially in regards to the digitisation revolution. One of the greatest challenges for the railway industry is in how to build capacity in numbers and capabilities of a workforce that will enable industry to respond to changing market and environmental needs. This will be exacerbated in the future as the need to shift more passengers and freight from road to rail will prevail. In order to reduce road congestion and to have a greater focus on lessening the impact of transport on the environment, and to create greater efficiencies, transport solutions will need to have greater integration and use technology and innovation to provide an intelligent railway system ready for the future. The new investment in rail is ready to position the industry for an exciting future that can meet the requirements of all stakeholders, but the challenge will be in co-ordination, planning, governance, research, innovation and in education and training a workforce knowledgeable and enabled to respond to the continued rapid change that will prevail into the future.

Accreditation and Safety Obligations

Adherence to the Rail Safety National Law (RSNL) is recognised as essential by operators. It is however noted that there can in some instances be conflicts within the operator's safety management systems to meet accreditation needs under the RSNL that are contrary to the requirements of elements of the DSAPT and Premises Standards. This has been noted by industry as one of the challenges they are facing.

These concerns and others are detailed in each area of this report where there have been exemptions which were granted in some cases, and not granted in others to elements within the standards.

Executive Summary

Monash University's Institute of Railway Technology (IRT) was engaged by the ARA to conduct an independent review of the following two Standards:

- DSAPT; and the
- Premises Standards.

The content of this report identifies where elements were drawn from in the standards, why they may be or may not be practical for rail from a compliance perspective and proposes outcome based alternative solutions for rail passengers with disabilities. Primarily the research focuses on the areas within the standards that the industry has identified as both challenging to comply with and that may not necessarily provide the best outcome for passengers.

The Australian Government is currently leading the modernisation of the DSAPT. This report provides recommendations that Monash University believes will benefit people with disability and rail operators and providers alike.

Methodology

This project involved a desktop engineering-based review of the DSAPT and the Premises Standards, and a review of relevant global research to arrive at the recommendations. National and international data sets were also reviewed which included information from railway operators, organisations, governments and global agencies with relevance to standards and innovations aimed to improve accessibility for people with disability.

Of particular relevance to the study is the current Australian standards for design for access and mobility [AS 1428 Parts 1 to Parts 5], as per the following:

- AS 1428.1-2009-Design for access and mobility – General requirements for access – New building work;
- AS 1428.1-2009 Amendment 1 – 2010;
- AS 1428.2-1992-Design for access and mobility – Enhanced and additional requirements – Buildings and facilities;
- AS 1428.3-1992-Design for access and mobility – Requirements for children and adolescents with physical disabilities;
- AS/NZS 1428.4.1:2009-Design for access and mobility – Part 4.1: Means to assist the orientation of people with vision impairment: Tactile ground surface indicators; and
- AS 1428.5:2010-Communication for people who are deaf or hearing impaired.

Terminology

The following terminology is applied throughout this report to be consistent with the DSAPT and Premises Standards:

- "People with disability" represents the user group under each of the Standards;

- "Conveyance" is used in replacement of train, tram and coaches throughout this report; and
- "Premises" and "Infrastructure" refer to both train or tram premises and infrastructure.

Legislative Instruments

The following legislative instruments are relevant to people with disability to enable them to have seamless transition on rail conveyances and infrastructure.

- DDA;
- DSAPT; and
- Premises Standards.

This report acknowledges adherence to the Rail Safety National Law (RSNL) as fundamental in any of the recommendations put forward, identifying safety as paramount in each of the outcomes.[1] The recommendations provided also acknowledge the synergies, which exist between the DSAPT and the Premises Standards. There is also the need for a consistent approach across all states of Australia, duty holders and the Regulator, to future planning, highlighting the stipulated objective of the RSNL "is to develop a seamless and coordinated national approach to rail safety regulation."[2]

Exemptions

The Commission may grant exemptions from compliance. The ARA has previously made application, on behalf of its members for temporary exemptions, which have been granted.

Identified issues in reviewing the DSAPT and Premises Standards

How standards interact with each other is one of a number of overarching issues that have emerged as findings of this report, also noting the fundamental principles of *Universal Design* and the potential conflicts that may exist in determining what may be best for one group, if too prescriptive, may not be the best option for all.

It is also important to note a significant issue this research highlights is the difficulty of compliance for industry when infrastructure and conveyances pre-date the DSAPT and Premises Standards. The conflict in some instances with heritage requirements and adjoining road and building infrastructure, makes compliance impractical. This is discussed further in this report in each of the areas of the standards where a request for exemption was made, and where compliance in the short term is not practical.

[1] In December 2009, the COAG agreed to implement a national single rail safety regulator and develop a rail safety national law, which the regulator would administer. The National Transport Commission (NTC) was tasked with developing RSNL, based on the National Transport Commission Model Rail Safety Bill (2007) and Model Regulations (Model Law). The RSNL would also address areas where states and territories had varied from the model bill and regulations. Following an extensive consultation period with industry, governments and unions, a final version of the National Law was submitted to and subsequently approved by the Transport Ministers in November 2011. The RSNL was first enacted in South Australia in 2012 with the other states and territories to either replicate that law or pass a law explaining that the RSNL (being the schedule to the South Australian law) is the rail safety law in that state or territory. Retrieved from the National Transport Commission, https://www.ntc.gov.au/rail/safety/rail-safety-national-law/

[2] Ibid

The following issues are identified as a result of the research, which require consideration:

Timelines for implementation

The DSAPT has 120 sections containing requirements for compliance and there are currently 21 temporary exemptions in place for ARA members. Under part 32.1 of DSAPT, the standards apply to all new premises or infrastructure and conveyances entering service after the date the standards come into effect. Under part 32.2, the Legislation allows for progressive compliance to pre-existing infrastructure and conveyances and outlines target dates. They do not however distinguish the different target dates for infrastructure and conveyances, and there is no national measure to determine compliance with the standards which compares state against state.

The percentage completion requirement is different for each type of service (e.g. coaches, trains etc.). Table 1 below relates to trains and trams. Whilst there has been significant progress in meeting compliance targets, the restructuring of the calculation may have better outcomes for people with disability.

For example, Schedule 1 of the DSAPT stipulates:

- Requirement: Compliance with the relevant Standards by the nominated *percentage* of *each type of service* in relation to: e.g. resting points; and
- Application: Conveyances, premises, infrastructure.

It is interpreted that *the percentage* uses the *quantity of train stations* rather than the *number of people with disability using those stations* to determine compliance. The daily patronage (all users) of Metro train stations in Melbourne, for example, varies from less than 200 to over 90,000. People with disability would also broadly reflect the variation in use. This raises the questions of "*Are all stations considered of equal significance in calculating compliance*" or "*Should there be a mechanism to enable priorities to be established for better overall outcomes*?"

DSAPT Part 32 on adoption requires that premises, infrastructure or conveyances that have undergone substantial refurbishment or alteration are to adhere to the standards. "Substantial" could provide large variations in interpretation. The ADA standard defines disproportionate costs as those that exceed 20% of the cost of the alteration. In this situation, standards only need to be complied with to the extent of 20%, an effective ceiling on costs. Prescriptive definitions, whilst providing certainty for rail operators, also influence outcomes, which may not be in the best interests of people with disability.

Whilst it is accepted that all new infrastructure and conveyances are expected to comply with the DSAPT, it is not practical to expect all legacy infrastructure to be upgraded to meet this requirement without a multi-billion dollar injection of funding per jurisdiction to support this. The upgrades, themselves, may require significant (temporary) network closures. Given these economic realities, the DSAPT should also include a timeline for implementation that is realistic and achievable with appropriate

operational and financial considerations that stipulate principles to assist providers in appropriately prioritising upgrades.

Table 1 – DSAPT Compliance Targets Requirements

DSAPT				Target Compliance level				
Part	Standard	No. of sections	No. of Temp Exempt.	2007	2012	2017	2022	2032
2	Access paths	9	3	25%	55%	90%		100%
3	Manoeuvring areas	3	0	25%	55%	90%		100%
4	Passing area	3	1	25%	55%	90%		100%
	Resting points	1	1	25%	55%	90%		100%
6	Ramps	5	1	25%	55%	90%		100%
7	Waiting areas	2	0	100%	100%	100%	100%	100%
8	Boarding	8	2	25%	55%	90%		100%
9	Allocated space	11	0	25%	55%	90%		100%
	Surfaces	1	0		100%	100%	100%	100%
11	Handrails and grabrails	7	1		100%	100%	100%	100%
12	Doorways and doors	6	2	25%	55%	90%		100%
13	Lifts	1	0	25%	55%	90%		100%
14	Stairs	4	1	25%	55%	90%		100%
	Toilets	6	3	25%	55%	90%		100%
16	Symbols	5	0	100%	100%	100%	100%	100%
17	Signs	7	1	100%	100%	100%	100%	100%
18	Tactile indicators	5	1	25%	55%	90%		100%
19	Alarms	1	0	100%	100%	100%	100%	100%
	Lighting	3	1	100%	100%	100%	100%	100%
21	Controls	4	1	25%	55%	90%		100%
22	Furniture and fitments	6	0	100%	100%	100%	100%	100%
23	Street furniture	1	0	25%	55%	90%		100%
24	Gateways	1	0		100%	100%	100%	100%
	Payment of fares	4	0					100%
26	Hearing augmentation	2	0	100%	100%	100%	100%	100%
27	Information	4	1	100%	100%	100%	100%	100%
28	Booked services	4	1	100%	100%	100%	100%	100%
29	Food and drink services	3	0	100%	100%	100%	100%	100%
	Belongings	1	0	100%	100%	100%	100%	100%
31	Priority	2	0	100%	100%	100%	100%	100%
		120	21					

Source - Target Compliance Level: DSAPT Schedule 1 (Parts 1-5)

Conflicts with other standards

It was apparent when considering the DSAPT in some situations, that the requirements were not compatible with other regulations or standards. The dimensions of land currently available to the rail provider, for example, does not allow the layout changes to the station required by the DSAPT, unless the operator was able to acquire neighbouring properties. Revisions to the DSAPT need to clearly articulate how operators and providers are to proceed when requirements are in conflict. It is an industry view that often the best accessibility outcomes will be achieved by considering such cases on a site-by-site basis, rather than a rigid principle. It is noted that this is a point requiring further research and consultation with stakeholder groups.

Gaps in Standards

Reading the DSAPT alongside the Americans with Disability Act (ADA) and UK/EU standards it is clear that DSAPT fails to consider – or gives scant attention to – a number of areas discussed in depth in these other documents. These are identified throughout this report. DSAPT requires a holistic, rather than a line-by-line review, as there is a danger that these gaps will not be spotted or dealt with adequately and the opportunity for better outcomes will be missed.

The international standards cited in this report provide useful comparisons with the current DSAPT and Premises Standards requirements, and the examples listed can guide best practice for how to address certain issues. Those included for comparisons are from Singapore, the US, the UK and Europe, as it has been deemed that these countries offer some good practices and may provide useful guidelines in how they are responding to changing demographic needs and managing this in the context of the age, design and heritage value of infrastructure, including how they handle upgrading or replacement, or construction of new infrastructure.
In some areas we also encourage the review of the Standards to consider deeply the role of online technology in the provision of information to people with disability, which is not considered at all in the Standards - but is becoming increasingly prominent in daily life.

Difference between mobility and informational accessibility issues

In reviewing the DSAPT, a loose distinction emerges between requirements that address accessibility issues that relate to mobility (e.g. can a wheelchair user board this conveyance) and those that relate to information (e.g. can a blind person find out what stop this is?). Mobility requirements are generally well suited to being addressed through the principles of *Universal Design* and the same accessible environment can be effectively utilised by people with various disabilities. However, information requirements can be diametrically opposed. People who are blind or have low vision can access an announcement but not a scrolling notice while the reverse is true of people who are deaf or have hearing impairment.

People with different disabilities will often have very different requirements for text to be accessible. The best solution is often to provide information electronically, so

that the individual with various devices including magnifiers, screen readers or Braille displays can modify it. By extension, it is also good practice to provide information in a range of formats including spoken announcements, passenger information displays, smart phone apps and real-time online updates on delays and conveyance location. These concerns also flow into the area of wayfinding, where the need for TGSI is in part a function of other environmental information that is also present - such as sonic beacons.

The DSAPT should acknowledge that providers deliver information across a range of formats, and that not all formats will be (or should be) accessible to all passengers. For each format (e.g. fixed signage), it is appropriate to provide guidance around maximising accessibility, but ultimately whether providers are meeting accessibility requirements in this area needs to be assessed as a totality across all information channels. The DSAPT should provide guidelines around the accessible provision of information online.

Providers should also be required to express their spoken and written information in ways that are simple, clear and easy to follow for people with intellectual disabilities or from non-English speaking backgrounds. The *UK Code of Practice for Operators* provides general tips around writing in plain English, which could serve as a model. While it is not possible to write prescriptive standards on what is or is not 'plain English' operators should remove jargon from their communications with passengers, to ensure that messages such as "this train is late or cancelled" can be understood by as many passengers as possible.

Parallel-Services

Parallel-transit[3] solutions are not widespread (particularly in some regional areas), but play an important role in improving accessibility in situations where legacy infrastructure is yet to receive capital upgrades. An obligation to provide parallel-services where accessibility requirements are not met underpins the American ADA and could serve as a model for implementation in Australia. This is another area where DSAPT would be better served with performance-based outcomes – on a site-by-site basis.

A major advantage of a parallel-service obligation is that they provide immediate options to customers with a disability, rather than having to (potentially) wait years for upgrades to infrastructure or conveyances. It also means that providers have a clear understanding of demand and cost implications of inaccessible environments and may provide an incentive for upgrading legacy infrastructure in high use areas. A downside is naturally the increased cost that parallel-services would incur as well as the need to carefully stipulate the conditions under which such services are available. Care also needs to be taken to ensure that the day-to-day cost of parallel-services does not take away from money allocated to capital upgrades of inaccessible infrastructure.

[3] Paratransit is alternative transport services provided at no extra cost to consumers when mainstream public transport is inaccessible - e.g. taxi service; dedicated wheelchair mini-buses.

This report should not be read as advocating the widespread adoption of parallel-service solutions to accessibility issues, but invites the review of the DSAPT to consider the role that they might play, especially in situations like train and tram replacement coaches, tram stops in narrow environments or certain heritage-listed stations where it is extremely difficult to overcome accessibility challenges.

Management of Heritage Requirements

A number of DSAPT requirements conflict with statutory heritage requirements. These conflicts create significant challenges making some requirements impossible in their current form or requiring significant changes to the existing structures. Conducting these changes are cost prohibitive outside of a major works program. The methodologies utilised by the USA and UK in working with this constraint can provide guidance on ways to manage these restrictions.

The ADA standard [USA 2010, ADA, Standards for Accessible Design] has allowances for disproportional costs, which includes:

- Alterations made to provide an accessible path of travel to an altered area will be *deemed disproportionate* to the overall alteration when the *cost exceeds 20% of the cost of the alteration* to the primary function area.
- When the cost of alterations necessary to make the path of travel to the altered area fully accessible is disproportionate to the cost of the overall alteration, the path of travel shall be made accessible to the extent that it can be made accessible without incurring disproportionate costs as outlined above.

The UK Code of Practice (2015), *DoT, Design Standards for Accessible Railway Stations, Version 04* looks to focus on only bringing stations and other rail buildings up to the standard if they are undergoing major works, renewals, or replacements. The Code identifies European and national standards relevant for all passenger train and station operators in Great Britain. Licensed operators, including Network Rail, must follow the Code, a condition of their licence, whenever they install, renew or replace infrastructure or facilities. This includes the requirement to establish and comply with a *Disabled People's Protection Policy* (DPPP), paying due regard to this Code. The Code contains mandatory European Standards (from the Persons with Reduced Mobility Technical Specification for Interoperability) which must be applied when any "major work" is being undertaken; mandatory national standards, which must be applied to all other installations, renewals or replacements; and best practice guidance which should be applied wherever possible.

It can be interpreted that these documents intend to apply the standard in full as part of a general works program, to within a reasonable cost expectation. Neither document states a deadline for completion of these works, however it is well understood that whilst full compliance to the standard is the objective, alternative access options are suitable until upgrade programs are conducted. This looks to try and achieve a balance between providing accessibility and understanding practical and financial limitations on upgrading a major part of national infrastructure.

The issues associated with retrofitting are widespread. This is illustrated in the following case study:

The London Underground opened in 1863 and now carries around 5 million passenger per day. Access for people with a disability was not considered when most of the system was built. The stations on the Jubilee line extension opened in 1999, were designed for accessibility, but retrofitting accessibility features to the older stations is a major investment that is planned to take over twenty years. In 2016, an extra £200m (AUD$366m) was committed to help "fast-track" a step-free access on the Tube. This is envisaged to take the total number of step-free Tube stations to over 100 – By 2024, 38% of the Tube network will be step-free - compared to 28% in 2018 – an increase of only 10%. Even with a considerable budget and modern engineering techniques, retrofitting takes time. [Transport for London, 2019]

Key Findings

The research has identified there are two key approaches to standards development:

- Prescriptive; and
- Outcomes or functional based.

The former may allow greater mitigation of risk, but arguably will not deliver solutions relative to needs. The latter, an outcomes-based approach, will enable greater capacity for ongoing consultation and offers a much more inclusive, collaborative approach with user groups and key stakeholders such as the AHRC.

Where there are concerns about the extent of latitude on specifics, benchmarks could be built into standards that allow some flexibility in approach through indicative acceptable specification ranges. An expert panel could review functional solutions in a similar way to which surveyors assess performance-based solutions under building codes. Outcomes based standards can also be solutions-based which allow then for adaptation as new technologies become available such as Smart Phone Apps. In comparison prescriptive based standards reduce the capacity for innovation, and consideration of best practice solutions which become available in real-time, potentially providing a declining benefit over time.

Conclusions

This report provides an independent analysis of the DSAPT and the Premises Standards relevant to people with disability. It considers the industry challenges as presented to the Consultants in what they have determined are some of the issues they are experiencing in their capacity to meet the compliance requirements outlaid for the future to provide accessible and inclusive transport to Australia's changing population needs. Compliance is a problem for the industry as both standards were reviewed or written quite some time ago, and the biggest concern is the way and rate in which the Standards are expected to be applied given the challenges which have been outlined in this section of the paper and which are detailed in the full report.

There have been significant changes in the way people move around, and how they manage and access facilities and information. This is likely to continue to change at a rapid rate due to technology and new innovative practices and having standards that are too prescriptive in nature will limit the industry's capacity to respond quickly taking consideration of the most easily and relevant 'best practice' mechanisms that support inclusive and accessibility to public transport to meet changing demographic needs. A significant issue for industry is also in how to manage standards that are prescriptive in infrastructure that has in most instances competing requirement in addressing heritage needs in protecting the history within the infrastructure.

This study was conducted through a review of literature without any specific research. The information provides some options that are practical for consideration, and some will require further research. The recommendations are provided in good faith using the available information that has been sourced from the public domain. It is the intention that the recommendations will be explored further with a range of stakeholder groups, to determine outcomes-based approaches which will best meet the expectations of a range of users in the future who identify as having some form of disability or who are aging and require special considerations in how they access and use public transport.

Appendix 1 of this report provides a table of future opportunities that can be considered for further research.

Recommendations

This review suggests an outcomes-based approach in its recommendations. Table 2 following provides a summary of general outcomes-based recommendations. Table 3 provides the recommendations put forward as a result of the research findings.

The recommendations provided take account of the application made by the ARA on behalf of its members for a number of temporary exemptions from the DDA, the DSAPT and the Premises Standards to the Australian Human Rights Commission.

TABLE 2: GENERAL RECOMMENDATIONS

R. NO.	RECOMMENDATION
GR1	An outcomes-based approach to Standards is developed and adopted, in consultation with experts and disability support groups (with suitable benchmarking used, and/or a specified range determined and agreed where prescription is required).
GR2	Where prescription is required in the Standards compliance measures should be clear and structured in a way that will improve outcomes for people with disability.
GR3	Language used in the Standards should provide clear distinction on expectations and definition on terminology.
GR4	Flexibility should be allowed within the Standards for different types of structures, including some discretion for heritage sites, where on a case by case basis, a clear definition is offered.
GR5	Clear distinction on requirements between different modes of transport is provided in the revisions to the Standards.
GR6	Rail sector representation in any committees/working groups for revisions to Standards should be considered (subject to Standards Australia procedure for revising standards).
GR7	The latest revision of any Standards should always be the most applicable (unless by specification of exception).

TABLE 3: SUMMARY STANDARDS RECOMMENDATIONS

No.	REFERENCE	R. NO.	RECOMMENDATION
A1	(2.1) ACCESS PATHS – UNHINDERED PASSAGE	R1.1	Provide a clear definition on the extent of the accessible path and/or what constitutes an accessible path in terms of what operators need to provide at different premises.
		R1.2	Future revisions to the Standards to adopt a provision for flange gaps that is in line with EU Standards.
		R1.3	Focusing on a 'primary' access path should only apply to existing infrastructure/premises or sites that have restraints to allow full access. New infrastructure/ premises should have compliant accessible access paths as required.
		R1.4	Provide detailed information about available access paths as part of the standard pre-planning/journey-planning tools.
A2	(2.4) ACCESS PATHS-MINIMUM UNOBSTRUCTED WIDTH	R2.1	Accessibility requirements for people with disability should provide an updated analysis and data for the built environment in 2019.
		R2.2	Incorporate the inclusion or exclusion of TGSI (where sufficient space is available) into the definition of an access path.

No.	REFERENCE	R. NO.	RECOMMENDATION
		R2.3	The provision of a clause in DSAPT that identifies and caters for different types of structures, that offers varying requirements for the minimum obstructed width of access paths suitable for each of these. Additionally, offer a case-by-case basis definition for heritage buildings.
		R2.4	Where it is not feasible to provide equal access for all passengers, priority is given to achieving required widths on a primary path of travel through premises where possible.
		R2.5	The inclusion of a clause that outlines the frequency and requirements of passing locations along a primary accessible path as set out in equivalent international standards.
A3	(2.6) ACCESS PATHS - CONVEYANCES	R3.1	Clarify the context of when an accessible access path is required.
		R3.2	Identify establishing 'primary path/s of travel' from a whole of journey approach.
A4	(4.2) PASSING AREAS – TWO-WAY ACCESS PATHS AND AEROBRIDGES	R4.1	Include in the Standards provisions for upgrade of existing infrastructure (or new infrastructure in developed areas) to maximise access to a reasonable scope and cost for development works.
		R4.2	Outcomes-based standards be developed in consultation with disability support groups (and potentially with suitable benchmarking), taking into consideration the constraints associated with existing infrastructure and opportunities that arise with new infrastructure (where prescriptive standard may apply).
		R4.3	Railways to provide improved access information on pathing for passengers with limited mobility.
A5	(5.1) RESTING POINTS – WHEN RESTING POINTS MUST BE PROVIDED	R5.1	Determine the appropriate distance required between resting points through further research.
		R5.2	Further consultation undertaken to determine the best functional outcomes for all passengers when identifying locations for resting points.
A6	(6.4) SLOPE OF EXTERNAL	R6.1	Industry upgrades infrastructure/conveyances to limit the occurrence of external ramp deployment

No.	REFERENCE	R. NO.	RECOMMENDATION
	BOARDING RAMPS		and/or reduce the slope of external boarding ramps.
		R6.2	Review of industry performance penalties to acknowledge impact of extended dwell times to safely assist people with disabilities.
A7	(8.2) BOARDING – WHEN BOARDING DEVICES MUST BE PROVIDED	R7.1	Undertake progressive upgrades to infrastructure through platform renewals to set a consistent platform coping height within each network limiting vertical step height variability. Predominant rolling stock to inform coping height and include this as a critical design specification for vestibule floor height of future rolling stock tenders.
		R7.2	Continue to investigate dynamic boarding/alighting systems.
		R7.3	Review and provide further clarity, identify implications for industry/people with disabilities and those who represent them, on the phrase 'any accessible entrance' within clause 8.2.
A8	(8.7) BOARDING – SIGNALS REQUESTING USE OF BOARDING DEVICE	R8.1	Standard to remain unchanged.
A9	(11.2) HANDRAILS AND GRABRAILS – HANDRAILS TO BE PROVIDED ON ACCESS PATHS	R9.1	Provide handrails on graded walkways and ramps where people with disabilities may require additional support.
		R9.2	Consult with disability access groups regarding handrail needs on graded walkways and ramps.
		R9.3	Provide alternate passive guidance using wayfinding, signage and directional TGSI.
A10	(12.2) DOORWAYS AND DOORS – COMPLIANCE WITH AUSTRALIAN STANDARD — PREMISES AND INFRASTRUCTURE	R10.1	Update references to the latest AS 1428.1 within the DSAPT.
A11	(12.4) DOORWAYS AND DOORS – CLEAR	R11.1	Standard to remain unchanged.
		R11.2	Update AS references to more recent and accessible anthropometric data sources.

No.	REFERENCE	R. NO.	RECOMMENDATION
	OPENING OF DOORWAYS	R11.3	A retrospective consideration clause (particularly relevant for narrow gauge operators and existing operational conveyance designs) accommodated in DSAPT modernisation.
A12	(14.3) STAIRS – COMPLIANCE WITH AUSTRALIAN STANDARDS — CONVEYANCES	R12.1	Provide priority seating for less mobile passengers.
		R12.2	Consult with disability access groups to identify improved seating options for multi-level conveyances.
A13	15.2) TOILETS – LOCATION OF ACCESSIBLE TOILETS	R13.1	When undertaking an access upgrade, the scope of work should focus on providing the best possible outcomes for passengers, which includes providing adequate numbers and accessible toilets in each station precinct.
		R13.2	Utilise current technology, localization, and mapping services to map accessible toilets as part of standard journey planning.
A14	(15.3) TOILETS – UNISEX ACCESSIBLE TOILET — FERRIES AND ACCESSIBLE RAIL CARS	R14.1	Develop an assessment method between industry/key stakeholders to determine hierarchy of needs in relation to new conveyances and retrospectively (if applicable).
		R14.2	A comprehensive stakeholder engagement (people with disability) undertaken to evaluate AS 1428.1, both 2001 & 2009.
		R14.3	With acknowledged constraints on the dimension of conveyances, a rail-based standard drawing upon the previous study developed as an industry benchmark. Stakeholder agreed design amendments for existing conveyances appended to the rail-based standard.
A15	(15.4) TOILETS – REQUIREMENTS FOR ACCESSIBLE TOILETS — FERRIES AND ACCESSIBLE RAIL CARS	A15.1	Adopt Recommendation 14.2 and 14.3.
A16	(17.5) SIGNS –	R16.1	Minimum display times be allowed to vary depending on the number of words being

No.	REFERENCE	R. NO.	RECOMMENDATION
	ELECTRONIC NOTICES		displayed (as per UK standards) – allowing a minimum of 2 seconds display time per word.
		R16.2	Changes to this standard be made in conjunction with more general revisions to A20 (27.3) Information – size and format of printing.
A17	(18.1) TACTILE GROUND SURFACE INDICATORS – LOCATION	R17.1	The DSAPT must clearly distinguish between hazard and directional TGSI and provide different requirements for each.
		R17.2	Hazard TGSI requirements taken from AS 1428.4 (2009).
		R17.3	In addition to AS 1428.4 (2009), there should be a note that Hazard TGSI are not required where physical barriers make the edge of the platform not directly accessible to passengers.
		R17.4	Further research is required on if/ how directional TGSIs should interact with passive wayfinding cues to guide blind/ low vision consumers through complex rail environments to inform the practice in the installation of directional TGSIs.
A18	(20.1) LIGHTING – ILLUMINATION LEVELS — PREMISES AND INFRASTRUCTURE	R18.1	Revised standards should include a rider clause that allows for the use of motion-activated lighting.
		R18.2	Providers should consider ambient lighting in determining overall lighting levels.
		R18.3	UK Standards and Code of Practice serve as a model for revising the DSAPT treatment of lighting, but there is a need to consider different types of rail environments encountered in Australia.
		R18.4	Clear guidance on specific lighting requirements is required on how to manage any conflicts between lighting standards and applicable technical standards around signalling.
A19	(21.1) CONTROLS – COMPLIANCE WITH AUSTRALIAN STANDARD — PREMISES AND INFRASTRUCTURE	R19.1	Align DSAPT with current Australian Standard (AS 1428-1 – 2009).

No.	REFERENCE	R. NO.	RECOMMENDATION
A20	(27.3) INFORMATION – SIZE AND FORMAT OF PRINTING	R20.1	Revised standards must distinguish between fixed signage and other text types.
		R20.2	Standards for printed signage need to give much more information about graphic design details – including size relative to reading distance; colour/ luminance contrast and glare. The US, Singaporean and UK standards all provide potential model texts that could be used to this end.
		R20.3	Develop separate standards for electronic signs/ notices and touch-screens. This is an emerging area internationally – the UK standards cited above provide some guidance, but will need further development.
		R20.4	Develop minimum requirements for the presentation of information online in consultation with consumer groups. At a minimum this should require online information to be provided through at least one channel that meets at least level A Web Content Accessibility Guidelines (WCAG) 2.1 standards; or through a range of complementary channels that collectively offer an equivalently accessible experience.
		R20.5	A means of initiating contact with a member of railway staff (for example help button, station staff, contact phone number, twitter handle) at all stations must be provided.
A21	(28.2) BOOKED SERVICES – PERIOD OF NOTICE OF REQUIREMENT FOR ACCESSIBLE TRAVEL	R21.1	Develop guidelines on what obligations providers have to offer assistance to passengers with disabilities, and how these interface with other operational requirements and conditions (e.g. unmanned stations). EU regulations cited above provide a potential model text for this area, but need to be adapted to Australian operating conditions in consultation with consumer groups.
		R21.2	Passengers who require complex assistance be encouraged, but not required, to pre-book their assistance requests in order to ensure someone is available to help them. Leave the length of notice periods for pre-booking to providers to determine, with a 48 hour maximum.

No.	REFERENCE	R. NO.	RECOMMENDATION
		R21.3	The review should consult widely with consumer groups around if, when and how parallel-services might be used to provide alternative transport when legacy or replacement infrastructure is inaccessible.
		R21.4	Accessible seating be fully integrated into the dynamic ticketing marketplace negating the need for a different notice period for the sale of accessible seating.

EXEMPTIONS NOT GRANTED

No.	REFERENCE	R. NO.	RECOMMENDATION
A22	(3.1) CIRCULATION SPACE FOR WHEELCHAIRS TO TURN IN	R22.1	Standard to remain unchanged.
		R22.2	Industry to quantify within rail networks instances where limited circulation space impacts on meeting compliance and/or operational performance and address through DSAPT provided discretionary clauses.
A23	(11.2) HANDRAILS AND GRABRAILS	R23.1	Provide handrails where passengers may require additional support.
		R23.2	Consult with users regarding handrail needs.
A24	(21.2) PASSENGER OPERATED DEVICES FOR OPENING AND CLOSING DOORS	R24.1	Standard to remain unchanged.
A25	(21.3) LOCATION OF PASSENGER OPERATED CONTROLS FOR OPENING AND LOCKING DOORS	R25.1	Standard to remain unchanged.
A26	(26.2) HEARING AUGMENTATION – LISTENING SYSTEMS — PUBLIC ADDRESS SYSTEMS – CONVEYANCES	R26.1	Remove reference to AS 1428.2 (1992) and replace with the current standard (AS 1428.5, 2010).
		R26.2	Allow where it proves impractical to install assisted listening devices on conveyances to the standards outlined in AS 1428.5 (2010), providers to provide equivalent access to real-time information via non-aural channels (e.g. PIDs).
		R26.3	Clarify when hearing augmentation is provided operators still have an obligation to

No.	REFERENCE	R. NO.	RECOMMENDATION
			provide access to real-time information via non-aural channels (e.g. PIDs).

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APPENDIX 1: FUTURE OPPORTUNITIES

DSAPT AND PREMISES STANDARDS		
A1	(2.1) Access paths – Unhindered Passage	• In order to keep pace with technological progress, innovative solutions for enhanced accessibility may be required, which do not comply with current standards. In that case, new specifications and/or new assessment methods associated with these innovative solutions will need be developed. New methods of assessment may include creating virtual experiences for people to assess, test and validate a proposed access path or unobstructed route. Virtual and augmented reality tools and capabilities to create a virtual environment to undertake such assessments are potentially already in existence. This technology may be extended further than as an assessment tool, and could provide all public transport users with a means by which to familiarize themselves with various public transport locations, conveyances and environments prior to travel (see spatial computing part of MIVP Showreel 2018 https://vimeo.com/298508915) which would enable users to quickly and more confidently traverse accessible paths and routes at locations they intend to visit.
A2	(2.4) Access paths- Minimum Unobstructed width	• It is highly likely that advances in restorative and therapeutic treatments together with technological advances in robotics and complex motion systems have the potential to revolutionize the way in which people with disabilities interact with the world around them. At the same time, it is likely that transportation facilities will also become “smarter” and more interactive. • An example of an enhanced mobility aid, that already exists, is a modified exoskeleton. The ReWalk exoskeleton (ReWalk exoskeleton https://rewalk.com/rewalk-exoskeleton-puts-disabled-back-on-their-feet/) has already enabled a number of people who cannot use their legs to walk with the aid of a robotic machine that uses computers and electric motors to power their paralysed limbs. Such technologies are likely to become more prevalent as advanced artificially intelligence systems allow these systems to rapidly learn what users are capable of and compensate and adapt accordingly. The use of such devices in the public transport environment will introduce other challenges, but it is expected that standards based on outcomes and service delivery are likely to be best placed to deal with these, as opposed to prescriptive standards that lock in constraints for mobility aids that may themselves soon be considered redundant.

DSAPT AND PREMISES STANDARDS		
		• In addition, such systems can be configured to interoperate with smart systems that are being developed for people with visual impairments that use an array of sensors, including cameras, LiDAR and navigation sensors, together with artificial intelligence systems to alert the user of obstacles that may exist in front of them and report this back as either audio descriptions and/or vibrations on either a belt or wrist band. The ability to signal intention, provide updates on status and order/request services will also help streamline services for all passengers and in particular for those with increased accessibility requirements.
A3	(2.6) Access paths-conveyances	• Undertake virtual modelling of existing/potential conveyance layouts against DSAPT requirements and stakeholder requirements to determine optimal design arrangements of seating vs access paths vs allocated spaces vs accessible facilities to inform industry.
A4	(4.2)Passing areas – Two-way access paths and aerobridges	• It is highly likely that advances in restorative and therapeutic treatments together with technological advances in robotics and complex motion systems have the potential to improve the way in which people with disabilities access services. As such it is quite likely that the functional anthropometry of disabled people will change. At the same time, it is likely that transportation facilities will also become “smarter” and more interactive. • As the world becomes more connected, it is likely that transport facilities will increasingly interact with the public and such advancements are likely to facilitate significant opportunities for enhanced accessibility. The rail industry should work to provide design standards relevant for use of the conveyance to accessibility equipment designers and manufactures to ensure the equipment available to people with disabilities is suitably designed.
A5	(5.1) Resting points – When resting points must be provided	• The original research used to determine the distance for resting points predates the original DDA by some years – the data could be over 40 years old. • Given the advances in both medicine, technology and mobility aids over the last few decades, additional research to assess the distances that can be covered by people with a disability could be undertaken.

DSAPT AND PREMISES STANDARDS		
A6	(6.4) Slope of external boarding ramps	• A review of network conditions to identify and build a database of (a) problematic platforms and (b) location of remediated platforms, could be undertaken and made available to develop pre-journey planning applications taking advantage of digital technologies/ distribution and as general public information.
A7	(8.2) Boarding – When boarding devices must be provided	• Investigate innovative, adaptive gap fillers – within the field of architecture this could include digitally informed responsive surfaces, within automation design self-identifying and self-aligning components. • A complete survey of Australia's rail networks is recommended to provide baseline data from which to measure and benchmark the efforts towards compliancy. It would also highlight the extent of remediation that may/may not be required. There seems to be insufficient data from which to draw conclusions or understand the full extent of the issue currently. • Develop a standard to include the use of a gap-mitigating device to be included in product design specifications for future rolling stock tenders – while maintaining design continuity as close as possible with existing stock.
A8	(8.7) Boarding – Signals requesting use of boarding device	• A review of applied digital technology integration in order to identify other passive methods of pre-empting passengers signalling the request of a boarding device.
A9	(11.2) Handrails and grabrails – Handrails to be provided on access paths	• Equivalent access may also be sufficiently provided with other solutions such as lower ticket counter. A review of alternate measures to handrails along access paths may be appropriate •
A10	(12.2) Doorways and doors – Compliance with Australian Standard — premises and infrastructure	• None identified.

DSAPT AND PREMISES STANDARDS		
A11	(12.4) Doorways and doors – Clear opening of doorways	• Update of Anthropometric resources seems appropriate with any modernisation of the DSAPT.
A12	(14.3) Stairs – Compliance with Australian Standards — conveyances	• Several options have been identified for innovative new wheelchairs that may be capable of negotiating stairs within conveyances. It is however noted that large-scale adoption of the technologies seem unlikely in the short term.
A13	(15.2) Toilets – Location of accessible toilets	• As the world becomes more connected it is likely that transport facilities will increasingly interact with the public and such advancements are likely to facilitate significant opportunities for enhanced accessibility to toilets through the use of technology mapping and a consistent approach to building and construction of toilets in the future.
A14	(15.3) Toilets – Unisex accessible toilet — ferries and accessible rail cars	• A broad scoping report on dual purpose architectural spaces may provide insight in resolve of spatial restrictions imposed by the network.
A15	(15.4) Toilets – Requirements for accessible toilets — ferries and accessible rail cars	• A collaborative design study undertaken at an industry level with key stakeholders to determine the baseline spatial requirements or whether AS 1428.1 recommendations are appropriate for rail is suggested. This will provide a clear benchmark for design and procurement of rollingstock for standard and narrow gauge operators.
A16	(17.5) Signs – Electronic notices	• As technologies for presenting information change there is a need for applied research that explores how rail users (with and without disabilities) are accessing real-time information about services and the accessibility implications of various design decisions. This could feed into the development of more comprehensive and nuanced recommendations around the presentation of information in a rail environment.

DSAPT AND PREMISES STANDARDS		
A17	(18.1) Tactile ground surface indicators – Location	• There is a genuine lack of research internationally on the efficacy of TGSIs as wayfinding tools in real-world environments; as well as the cost-benefit trade-off of allowing TGSIs to be collocated on accessible paths. Before operators are asked to invest heavily in directional TGSI installation, consideration should be given to undertaking research to assess the value of this wayfinding tool.
A18	(20.1) Lighting – Illumination levels — premises and infrastructure	• While our recommendation is for a functional standard, if prescriptive standards are to be employed there is arguably a need to conduct research to verify or update the lighting levels recommended in the Webb report given recent developments in CEH/ LED lighting technologies and attendant changes in lighting technology. An update could also consider whether different approaches to lighting are required for outdoor elevated stations as distinct to those at ground level.
A19	(21.1) Controls – Compliance with Australian Standard — premises and infrastructure	• It has been noted by suppliers that the ability to produce doors capable of achieving the 2001 standards has proven difficult. In the future, technology has the ability to assist in many aspects relating to control (and in fact in many cases already does). Examples may include: ➢ Proximity sensors for door opening; ➢ Auto-locking doors; ➢ Bluetooth operation through registered devices; ➢ RFID tags to detect proximity; and ➢ Voice activated control (may include smart phone activation via Siri, Google etc.).
A20	(27.3) Information – Size and format of printing	• As technologies for presenting information change there is a need for applied research that explores how rail users (with and without disabilities) are accessing static and real-time information about services and the accessibility implications of various design decisions. This could feed into the development of more comprehensive and nuanced recommendations around the presentation of information in a rail environment.
A21	(28.2) Booked services – Period of notice of requirement for accessible travel	• If operators are to offer parallel-service services as a potential resolution to inaccessible rail environments/ conveyances extensive consultation with affected patrons and rail providers should take place to ensure all parties have input into how the policy is implemented in practice and the circumstances under which it is appropriate to be used.

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Further information

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APPENDIX B: ARA MEMBER INITIATIVES TO IMPROVE ACCESSIBILITY

ARA members recognise that improving accessibility on rail networks requires a multi-faceted approach and actively engage the disability sector and implement various initiatives to make heavy and light rail services more accessible.

A list of some, but not all, of the initiatives implemented by ARA members included in this application follows:

Information and communication

DoT Victoria: To improve communication and information around accessibility and to raise awareness around accessibility issues through training and education, Victoria's Department of Transport is investing in the following programs:

- Installing Passenger Information Displays (**PIDs**) and automated/manual announcements across the metropolitan rail, tram and bus networks, as well as on conveyances to improve wayfinding for passengers of all abilities.
- Upgrading the DoT website and Journey Planner to improve accessibility for users of all abilities across various platforms and devices.
- Reaccrediting the DoT Hubs and Call Centre with the Scope Communication Access Symbol to ensure staff are trained and equipped to communicate with people with communication difficulties.
- Supporting and monitoring operators to ensure all drivers and customer-facing staff are provided with training and communications tools to support passengers with disabilities and accessibility needs. This includes supporting V/Line's reaccreditation with the Scope Communication Access Symbol and the Metro Trains Melbourne's accreditation awarded in late 2019.
- Delivering the "Travelling in the Shoes of Others Program", which is a state-of-the-art training aimed at building awareness and understanding of the challenges that people with disabilities, including vision loss, are facing when using public transport. This half-a-day training is offering participants from DoT and operators an opportunity to navigate the network with a simulated disability to understand the users' needs and experiences. Session attendees travel on all public transport modes using a mobility device or with a simulated vision impairment. They do this in small groups with support by experienced occupational therapists who ensure everyone's safety. Based on ratings by all previous years' attendees, this program has been identified as a flagship training program for the Department, which has now secured multiple sessions for all its executives to participate in 2020. The Major Transport Infrastructure Authority's agencies, including Rail Projects Victoria and the Level Crossing Removal Project alliances, have also secured exclusive sessions for their staff to experience the workshop, reflect on issues and opportunities for improvement and on their role in this process.

MTM: MTM has a dedicated team to engage with community groups and increase their knowledge and confidence around the network. The Community Education Unit routinely delivers travel training on the network in partnership with disability service providers.

MTM is continually working to improve access to information. This includes introducing new ways to receive travel alerts through Twitter, the availability of a Text Messaging Assistance Service and the review of available online information. MTM has also developed an Accessibility Register, which allows passengers to receive information about impacts to their service, as well as opportunities to provide feedback, direct to their email.

V/Line: V/Line continues to improve the accessibility of information available to customers, on its website and in print. V/Line's website is compliant to WCAG 2.0 and improvements being made to meet the requirements under WCAG 2.1. In 2018 V/Line Virtual Tours of V/Line trains to support customers to better plan their travel and understand the accessibility of the regional train fleet. In addition, the Journey Planner tool on the V/Line website provides train or coach consist information, including details on accessible features of each train/coach type, to customers to aid their planning pre-travel. Station accessibility maps of hub stations on the network are also available online, every V/Line station has Easy English signage and information, such as timetables, is provided in preferred formats to customers on request. V/Line provides service specific information via V/Line Inform and the V/Line website and app.

PTAWA: The PTA has a dedicated community education team with a goal to increase access to the network for people with a disability. This is achieved through significant face-to-face interactions, online resources, education and training onsite. In addition, the TransPerth Accessibility Information Kit has been developed to help people with disability travelling on the TransPerth network.

The PTA has also partnered with local councils and Australian Red Cross to deliver transport training to their volunteers working with people to help them access public transport.

The PTA also delivers training sessions through the TransPerth Accessibility Kit designed for trainers, carers, support workers and families to help people with disabilities travel on the TransPerth network.

TfNSW: The TfNSW website - www.transportnsw.info - is compliant with WCAG 2.0 and includes visual displays for people planning trips. The Customer Hotline; 131 500 is accessible for hearing impaired people via the National Relay Service and through a TTY telephone. The Accessible Travel brochure also is available to assist customers with trip planning and also provides a list of accessible stations and facilities for the Sydney Trains and Intercity networks.

Transport for NSW is currently undertaking an accessibility audit across 421 train stations and ferry wharves. In addition to informing planning and investment activities, the audit outputs will enable better customer information provision on accessibility features available at stations.

Engagement and practical trial initiatives

DoT Victoria: The Victorian Department of Transport's Transport Accessibility and Inclusion Unit, organises, in collaboration with Victorian operators, the "Try Before You Ride" event. This is an annual community confidence-building event, providing Victorians with the opportunity to ask questions about travelling on public transport, and practise boarding and alighting from an accessible train, tram, bus, coach or wheelchair accessible taxi, in a static, safe and supported environment.

MTM: MTM has a dedicated Accessibility Team who actively engage localised users and the representative group to understand impacts on upcoming infrastructure, rolling stock and network changes. This has included the Box Hill Trial, in which over 20 people using wheelchair were invited to a practical exercise in testing gaps between the train and platform. Since 2015, MTM has held user trials for various network improvements, including modifications to existing fleet, designs of pedestrian level crossings, design changes to Wheelchair Movers and designs for the first Assistance Animal Relief Areas in the rail environment in Australia.

V/Line: V/Line's dedicated Accessibility Team actively engages with customers with disability, disability organisations and advocacy groups on a regular basis. V/Line hosts regular community Accessibility Forums to gather insight and feedback from the accessibility community. V/Line also conducts specific consultation and trials when required as part of larger fleet or infrastructure projects to assess the functionality of designs and improvements. V/Line hosts regional 'Try Before You Ride' sessions that enable customers (both with or without accessibility needs) to trial getting on and off regional trains and coaches. Local staff are available to

answer questions regarding travelling on particular lines. V/Line also participates in an annual DoT led event in Box Hill.

PTAWA: TransPerth has been undertaking presentations, displays and station tours as part of TransPerth's Get on Board education program for communities. TransPerth delivers this program to a broad range of groups including accessibility groups and other community groups.

TfNSW: Transport for NSW has developed the First Stop Transport Travel Training which is a program designed to assist customers in how to use public transport. Training is currently being offered on behalf of Transport for NSW by a number of Community Transport providers. Travel training can include topics such as getting to and from public transport, using trip planning services, types of tickets and identifying accessible services.

Customer engagement activities in large scale infrastructure projects such as Sydney Metro or the New Intercity Fleet ensures that people with disability are represented both in targeted and open consultations. This allows for a customer centred design process to optimise solutions to meet the needs of all customers.

Accessibility reference groups

DoT Victoria: The Minister for Public Transport receives independent user focused advice on public transport accessibility from the Public Transport Access Committee (**PTAC**), which comprises people who have lived experience of disability, including lived experience of vision loss. The PTAC's term came to an end in 2019. A recruitment process to appoint a new Committee is underway, with recommendations on appointments to be presented to the Minister for her decision. The Department's Transport Accessibility and Inclusion Unit undertakes the following:

- Provides Secretariat support and closely engages with PTAC.
- Regularly engages accessibility advocacy groups to seek feedback, advice and expertise on a range of public transport matters. Advocacy groups engaged include: All Aboard, Guide Dogs Victoria, Vision Australia, Vicdeaf, Scope, Yooralla and Arthritis Victoria.
- Manages a virtual accessibility community, consisting of a database of customers invited to participate in events, surveys and trials, and provide feedback regarding the accessibility of the public transport network.
- Chairs the Accessible Public Transport Operations Committee (**APTOC**), which meets on a regular basis to identify, discuss and resolve issues affecting accessibility. APTOC membership includes public transport operators, service providers and key stakeholders.
- Works in close partnership with Traveller's Aid to support the provision of tailored and effective support to passengers with accessibility needs, and with Guide Dogs Victoria to organise events and campaigns raising awareness around public transport accessibility.

MTM: MTM has a dedicated Accessibility Reference Group who provides strategic advice and direction to the organisation to address emerging access issues. The group also acts as a key point of contact when inviting passengers with disability to engage in consultation for potential modifications to the network.

V/Line: V/Line has an Accessibility Reference Group consisting of people with disability from across the state. The group provide insight and feedback into the experiences of people with disability using the V/Line network, provide specific feedback to infrastructure and rollingstock projects and customer service improvement projects. The group actively engage with their local communities to raise region specific feedback and share accessibility improvements back to their networks.

PTAWA: The PTA undertakes consultation to ensure a consultative process on accessibility issues for key projects such as the East Perth Train Station upgrade, the new Perth Stadium and Forrestfield Airport Link. The PTA has also established a permanent Accessibility and Inclusion Reference Groups who meet

throughout all stages of the project, to provide advice on universal design features and impacts during the construction of new infrastructure.

TfNSW: Transport for NSW continues to hold regular meetings with Accessible Transport Advisory Committee. The committee has representatives from disability and ageing organisations, who provide expert guidance on access and inclusion to Transport for NSW. Working groups are created as required to provide advice on specific, major upgrades to public transport infrastructure and services.

In addition, Transport for NSW runs extensive user testing in relation to new infrastructure projects and upgrades. For example, a prototype testing vehicle, station and platform for the Sydney Metro project was constructed for user testing. User testing was conducted by customers including people with vision impairment, mobility restrictions, older people and people with cognitive disability to make rolling stock and infrastructure as accessible and functional as possible.

Prototype testing, both low fidelity and high fidelity, forms part of the iterative design process and assists in user acceptance and validation. Transport for NSW continues to adopt this approach on projects such as the New Intercity Fleet, Regional Rail Project and Parramatta Light Rail.

Infrastructure and rolling stock

DoT Victoria: DoT Victoria has invested extensively in providing accessibility improvements to public transport infrastructure, conveyances and services, and in consulting with the disability community to ensure their needs are understood and catered for. Infrastructure projects that are resulting in improved accessibility are being delivered across the rail and tram network in Victoria. DoT is also making the most of Victoria's Big Build program of works to apply best practice in consulting with the disability community and designing and constructing accessible new infrastructure that improves the accessibility of our network. DoT is improving accessibility through the following:

- A program of works to enhance accessibility on existing rural and regional rail stations, tram and bus stops, by delivering upgrades that are compliant with the DSAPT and by introducing best practice and innovative accessibility solutions, such as the establishment of Changing Places facilities and Assistance Animal Relief Areas, the installation of beacons to help passengers with low vision and blindness to navigate stations, the deployment of mechanical wheelchair movers at rail stations to allow staff to safely assist passengers using wheelchairs to traverse steep ramps and more.
- New stations for the Level Crossing Removal Program, Cranbourne to Pakenham Line Upgrade, and Metro Tunnel, which will include Changing Places Facilities at new underground stations and a fully accessible tram interchange at Anzac station.
- The procurement of new, modern and accessible rolling stock and bus fleets, and the upgrade of existing trains and trams to ensure that the growth in demand for public transport services is met without compromising progress towards improving accessibility. To design 65 new high capacity metro trains (**HCMTs**) that will service the Metro Tunnel, the Government has undertaken an extensive consultation with the public and the disability sector, which resulted in many accessibility enhancements, such as including 28 allocated spaces throughout the new train for people with a disability. This consultation is commended by the disability sector as best practice engagement.

As a snapshot of recent investment in accessibility enhancements, note that the 2019-20 Victorian Budget provides funds to undertake the following:

- Upgrade stations on the Sunbury, Hurstbridge and Cranbourne lines to deliver accessibility improvements.
- Purchase ten additional low-floor high-capacity E-Class trams, bringing the total number of E-Class trams to 100. Together with the 50 new E-Class trams ordered since 2015, the new trams will bring the total number of low-floor accessible trams of all types on the network to 174.

- Start design work for new regional trains and trams, to cater to future needs of our growing communities and provide better accessibility.
- Procure up to 18 new VLocity trains, replacing older trains on some of Victorian busiest regional lines.
- Build three new stations in and around Bendigo, at Goornong, Raywood, and Huntly, alongside planning to re-establish a station at Harcourt.
- Develop a Tram Stop Accessibility Strategy that will investigate options to streamline the design and construction of accessible tram stops and to prioritise construction of tram stop upgrades across the network. This work is now underway.

MTM: Unassisted boarding is now available at 77 stations around the MTM network. All trains operating on the metropolitan rail network are accessible via assisted boarding (ramp deployed by the driver/ customer service staff). New PIDs have been installed in 144 stations. Works have been carried out to upgrade accessible parking, TGSIs, ramps, toilets, shelters, waiting rooms, lift installation and handrails and 19 stations have been completely rebuilt, addressing accessibility barriers as the stations are brought up to current standard. With unprecedented investment in rail continuing over the five years, passengers will see a dramatic uplift at many more stations around the network.

V/Line: All V/Line stations are accessible via a step free entrance. Significant work has been completed to improve pedestrian crossings and remove level crossings, to increase safety. This includes a trial of VeloSTRAIL, to increase safety. Investment into a variety of projects has and will continue to increase accessibility, including but not limited to the Regional Rail Revival (**RRR**) works delivering upgrades along all 5 of V/Line's corridors (including station facility and accessibility upgrades, as well as track and signalling works) and station facilities and carpark upgrades projects outside of RRR projects.

PTAWA: In Western Australia, a significant portion of the PTA's facilities comply with the DSAPT. The PTA has progressively upgraded its existing infrastructure to ensure it complies with the DSAPT, including:

- PTA operates an ongoing DDA upgrade program with 13 train stations upgraded at a cost of $68 million, with a further $71 million allocated for the 2020 to 2025 period. In addition to these funds, specific programs to improve at-grade pedestrian crossing and lifts have been implemented.
- Better Stations Program Upgrade – Fremantle and Maddington stations, Mirrabooka Bus Station.
- All train stations have been audited for DDA/DSAPT compliance and this work will guide future programs to improve accessibility across the network.
- DDA Upgrade Project Stage 1 – regional rail stations, tactile ground surface indicators and seating at selected stations.
- DDA Minor Stations Upgrade Project Stage 2 – Beckenham, Meltham, Mt Lawley, Kenwick and Queens Park stations and track works at 13 stations.
- During 2017/2018, the PTA completed the upgrade of East Perth station and completed the construction of the Optus Stadium station.

To improve accessibility of public rail transport in the regional area of Western Australia, the PTA plans to upgrade key regional train stations over the next three years. The upgrade will include a high-level platform, ramps, stairs and handrails in accordance with the DSAPT. Yarloop and Carrabin Train Stations were upgraded in 2018/2019 and the upgrade of North Dandalup and Cookernup train stations and Carrabin completed in 2019/2020.

TfNSW: New transport infrastructure and services in NSW, for example Sydney Metro and Sydney Light Rail both opened in 2019, continue to be delivered to the highest standards of accessibility as a result of extensive customer testing and engagement activities. Further, the Fleet Delivery Program is providing new trains for a more comfortable, reliable, efficient and accessible journey. This includes new suburban, intercity and regional trains to replace older fleet.

For legacy infrastructure, Transport for NSW has a number of programs which are investing in the retrofit of rolling stock and upgrade of train stations to comply with the DSAPT. The Fleet Delivery Program is delivering an upgrade of the existing Tangara fleet to extend their life and align the rolling stock with the latest generation of trains on the Sydney network. This includes an improvement of accessibility features such as on-board audio and visual passenger information systems, colour contrast doors and handrails, priority seating and emergency help points

Currently, 212 stations on the Sydney Trains and NSW TrainLink network are wheelchair accessible out of a total of 362. The Transport Access Program is an initiative to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure. To date, total investment in the Transport Access Program has resulted in an investment of over $2 billion since 2011 making more than 90 percent of customer journeys accessible.

Technology

DoT Victoria: The Victorian Department of Transport has worked with the operators to support the following innovative solutions:

- Introducing mechanical wheelchair movers at six metropolitan stations in Caulfield, Werribee, Richmond, South Yarra, Heidelberg and Box Hill, and a roving device at Moorabbin, for station staff to safely provide assistance to passengers in wheelchairs.
- Installing beacons in seven of Melbourne's most popular stations: Southern Cross, Flinders Street, Flagstaff, Parliament, Melbourne Central, Richmond and Footscray, to help passengers with vision impairment to navigate the network.

Also, DoT has introduced Mobile Myki on Android devices and undertook investigations to enable the roll out of Mobile Myki on Apple devices. DoT is working in partnership with the Central Queensland University to establish evidence-based approaches to the usability around the world and effectiveness of Wheelchair Tiedown And Occupant Restraint Systems (**WTORS**) for mobility devices on public route buses.

MTM: MTM has developed apps such as 'Metro Notify' and 'Stop Here', which give passengers with sensory disabilities another option to receive notification of their arrival at their next station straight to their smart device. MTM has also employed new technologies such as 'wheelchair movers' to create more opportunity for direct assistance at locations with steep ramps. These devices allow staff the ability to assist passengers using manual wheelchairs up and down steep gradients, with no risk to staff or passenger safety.

V/Line: V/Line's online journey planning tool and app have been upgraded to include what fleet type is scheduled on each service and provide customers with information regarding the availability of accessible features on board each service. This, along with Virtual Tours available on the website supports customers to plan their journey effectively and develop a greater understanding of V/Line's fleet. At Southern Cross Station V/Line has introduced a portable Passenger Information Display at the busiest entrance to provide greater information to customers at this busy station. Further portable and fixed displays will be installed in 2020.

PTAWA: TransPerth and TransWA have developed alternative passenger information display systems including an accessibility bulletin and My Alert notifications, a TransPerth Assist app, My Alert subscription service and dedicated TransPerth and TransWA webpages for accessible services.

TfNSW: Transport for NSW has released a number of smart phone apps to provide customers with real time information of transport services. Some real-time travel apps have improved their accessibility features. For example, Arrivo Sydney provides next stop audio announcements and is optimised for android accessibility, support of screen readers and large text. Transport for NSW also supports innovation by allowing 3rd party app developers access to real-time information through its Open Data Hub.

New technology products are also being trialled to identify other mechanisms to communicate with people with disability. Trials of products such as digital screens and digital wayfinding will continue to be researched and tested by people with different abilities to ensure they are as functional as possible, or to look at alternative design solutions that might address their needs. For example, currently Transport for NSW is trialling a digital touch screen kiosk. To address the needs of people with vision impairment this system also includes a mode that enables the user to navigate the interface using a series of hand movements. For people with limited mobility, there are options to adjust the location of the touch screen operable components to consider the limited reach ranges of seated customers versus standing customers.

Specialist accessibility advisors

DoT Victoria: The Department of Transport has a dedicated Transport Accessibility and Inclusion Unit, with accessibility experts and accredited access auditors working to ensure that accessibility is a core consideration in all departmental policies, projects and initiatives. The Unit's policy and strategy experts are working with transport professionals to ensure that accessibility is always considered in state policies and strategies and operator business plans, they are engaging with disability advocates and stakeholders to ensure good engagement, and are organising staff training and awareness raising activities to enable a better understanding of disability and accessibility issues. The Unit's technical and assurance SMEs are working with the operators to support continuous public transport accessibility improvement and are providing assurance and technical support to project agencies designing, building and procuring new infrastructure and fleets.

V/Line: V/Line has a dedicated Accessibility team within the Customer Experience function of the organisation. This team works closely with all areas of the business to drive accessibility improvements, conducts customer engagement and consultation, liaises with the Victorian DoT and advocates for accessibility across the network.

Partnerships

DoT Victoria: The Department of Transport works in partnership with Traveller's Aid to support the provision of tailored and effective support to passengers with accessibility needs, and with Guide Dogs Victoria to organise events and campaigns raising awareness around public transport accessibility.

V/Line: V/Line partners with Travellers Aid Australia to support regional Victorians to access public transport through a number of programs including funding the provision of a buggy service at Seymour Station. V/Line also works closely with the other public transport providers, key disability service providers such as Scope Australia and advocacy groups.

Travel assistance

MTM: MTM's Community Education Unit carries out regular travel training for people requiring additional confidence in accessing services. An annual Try Before You Ride gives passengers an opportunity to understand the Metro network within a static environment.

MTM also partners with Travellers Aid, a community organisation who provides travel assistance such as companion service and personal care.

V/Line: Conductors on board V/Line services provide direct assistance to customers to support customers to access services. Direct assistances include deployment of boarding ramps, and support to access café facilities on services equipped with food services. Customers are able to make an Accessibility Booking with V/Line to notify in advance of their travel plans and access needs. V/Line staff are able to make alternative travel arrangements if services are not accessible in advance to ensure customers are able to get to their destination.

PTAWA: TransPerth provides agreed assistance to people with disability to access the TransPerth network, including but not limited to providing ramps and assisting a passenger to embark and disembark from a train. Many passengers have permanent bookings for direct assistance. Alternatively, all passengers are able to request assistance by contacting TransPerth Customer Service.

TfNSW: Due to the variances between platforms, portable boarding ramps are provided to assist customers from the platform to the train. Portable ramps have been rolled out to Sydney Trains and Intercity stations. There are currently two lengths of boarding ramp utilised by station staff, 165cm and 125cm, to assist managing the variation between different platforms. Regional services have ramps on board the service to assist customers. The Sydney Metro and new light rail networks in Sydney and Newcastle offers customers roll-on roll-off independent access.

Education of staff and the public

DoT Victoria: To improve staff awareness around disability and capability to ensure accessibility, Victoria's Department of Transport is delivering the "Travelling in the Shoes of Others Program", which is a state-of-the-art training aimed at building awareness and understanding of the challenges that people with disabilities, including vision loss, are facing when using public transport. This half-a-day training is offering participants from DoT and operators the opportunity to navigate the network with a simulated disability to understand users' needs and experiences. Session attendees travel on all public transport modes using a mobility device or with a simulated vision impairment. They do this in small groups with support by experienced occupational therapists who ensure everyone's safety. Based on ratings by all previous years' attendees, this program has been identified as a flagship training program for the Department, which has now secured multiple sessions for all its executives to participate in 2020. The Major Transport Infrastructure Authority's agencies, including Rail Projects Victoria and the Level Crossing Removal Project alliances, have also secured exclusive sessions for their staff to experience the workshop, reflect on issues and opportunities for improvement and on their role in this process.

MTM: Disability training is provided to all MTM frontline staff. MTM has been accredited with the Communication Access Symbol, meaning that staff have the skills and tools to assist people with communication difficulties. Staff receive regular refresher training informed by passenger feedback or any emerging trends.

MTM has a dedicated team to engage with community groups and increase their knowledge and confidence around services provided by the operator. The Community Education Unit routinely delivers travel training on the network in partnership with disability service providers.

V/Line: All frontline staff participate in Disability Awareness training provided by Scope Australia that is delivered by a person with lived experience of disability. This is supported by eLearning refresher training also developed by Scope. In 2016 V/Line became the first public transport operator to become accredited with the Communication Access Symbol. This included training and a variety of tailored communication tool kits for both station staff and conductors. V/Line undergoes annual assessment against the Communication Access Symbol to ensure that staff knowledge is retained, and continual improvement opportunities realised.

PTAWA: The PTA has developed a staff training DVD titled "Disability Awareness Training for Frontline Staff" delivered to all frontline staff including drivers and customer service personnel. PTA also runs regular program to promote the importance of courtesy to all other passengers with programs tilted "Give a Hoot" and the current "Be a Good Egg" campaign, which includes consideration of people with disability as well as the seniors and people with small children.

TfNSW: Transport for NSW worked collaboratively with NSW Trains and disability service provider Northcott to deliver Communication Access Training in 2019 as a trial across the Wollongong line. The training enables staff to communicate successfully with people with communication difficulties and provides them with the

tools to help people get their message across. Due to the success of this trial a future planned roll out of the training is now being considered.

All frontline customer service staff undertake disability awareness training as part of on-boarding procedures.

Accessibility specific communication

DoT Victoria: The Department's Transport Accessibility and Inclusion Unit manages a virtual accessibility community, consisting of a database of customers invited to participate in events, surveys and trials, and provide feedback regarding the accessibility of the public transport network.

MTM: MTM maintains a database for passengers with accessibility needs to receive email updates about changes to the network and opportunities to be involved in consultations. Changes to accessible travel, such as temporary lift unavailability, are communicated through real-time apps and remote announcements.

V/Line: V/Line distributes a regular Accessibility-specific eNewsletter that provides details of improvements and key projects. The V/Line Accessibility Reference Group members are provided with key messages following each meeting to support them to share key information with their networks.

PTAWA: Accessibility Bulletins are sent to individuals and groups who sign up for the Accessibility Group via TravelEasy. Accessibility specific information is also provided on the dedicated TransPerth and TransWA webpages for accessible services.

TfNSW: Transport for NSW offers customers a range of options for staying up to date with service changes. The Trip Planner app allows customers to get real-time service information and save trip information. A range of transport apps also allow for up to date travel information and travel alerts which will include information such as out-of-order lifts and toilets. This is complemented with a range of traditional information sources and contact options for customers. In addition, a database of contacts in the disability sector organisations is maintained. Information regarding service changes or major projects is also sent to these groups on a regular basis.

Passenger announcements

DoT Victoria: To improve communication and information around accessibility, Victoria's Department of Transport is investing in installing Passenger Information Displays (**PIDs**) and automated/manual announcements across the metropolitan rail, tram and bus networks, as well as on conveyances to improve wayfinding for passengers of all abilities.

MTM: Automated announcement technology is available on all MTM trains. A remote announcement system allows the Customer Control Centre to give announcements to specific lines or singular trains. In addition, stations are fitted with automated announcements as well as the ability for staff manual announcements. Where possible, staff announcers are available on platform to provide additional assistance.

V/Line: V/Line staff complete specific announcement training to ensure that all announcements are clear and effective, including signposting important messages from announcements and repeating messages to customers. Conductors are also required to move through the train to ensure that customers understand the announcement and address any concerns. Station staff are also required to make announcements from the platform to assist customers where required. Remote and automated announcements are also available at stations across the V/Line network.

PTAWA: TransWA provides public announcements and signage indicating coach departure and arrival points. TransPerth provides audio arrival and departure information announcements via a Long-Line Public Address

System (**LLPA**) at train stations. Lift outages are communicated with on-train announcements and at station platforms on the overhead screens.

TfNSW: Transport for NSW invests in training on board staff in making clear announcements on services through its "radio school" program. In addition, through procurement of new trains such as the Waratah fleet, automated audio announcements and visual customer information is now available which at some locations includes side exit information. Digital passenger announcement systems being progressively rolled out also allow for much more targeted and localised messages to minimise noise spill.

Operator accessibility plans

DoT Victoria: All Victorian operators, under their operating agreements, are required to submit to the Department annual reports tracking their progress towards their accessibility targets and success measures, and to bring forward proposals to improve the provision of accessible services and their strategies for compliance. The metropolitan rail and tram refranchising contracts, in place for almost a year now, have implemented a tighter management and performance regime for operators, and have had operators submit implementation plans for their Accessibility Action Plans. As a requirement of their operating agreements, Victorian operators and the ticketing service provider have all developed Accessibility Action Plans and report annually to DoT on implementation of and progress against these plans, tracking progress against goals and KPIs.

MTM: MTM has an Accessibility Action Plan 2019 – 2021 which is available on the MTM and Australian Human Rights Commission website. The plan was developed in consultation with MTM users and went through several stages of feedback before being finalised with approval from the MTM Accessibility Reference Group.

V/Line: V/Line released its third Accessibility Action Plan in 2019 for 2019-2022. This plan outlines the organisations key priority areas for 2019-2022 and the initiatives that will be explored to achieve theses. This plan is also available in Easy English and text only on the V/Line website.

PTAWA: The PTA's Disability Access and Inclusion Plan 2017-2022 is available on both the PTA and the Australian Human Rights Commission websites. The PTA submits annual reports on the level of implementation of this plan to the state's disability regulator. A summary of this report is aggregated with those of other organisations into a state report that is tabled with the State Parliament every year.

TfNSW: The Transport for NSW Disability Inclusion Action Plan 2018-2022 includes more than 160 new actions to reduce transport disadvantage ranging from journey planning, to staff training, customer services and the interaction between transport modes. As part of the plan, programs such as the Transport Access Program and Fleet Delivery will continue to upgrade railway stations and deliver new rolling stock in order to become fully accessible. This is building on the success of the previous plan which resulted in 165 railway stations becoming fully accessible.

Improved disruption management

DoT Victoria: The Department has worked on developing a set of customer experience standards to improve passenger experience during planned and unplanned disruptions. These have been informed by feedback received from the Public Transport Access Committee and via targeted surveys on accessibility.

The Victorian Government is also delivering the Multi-Purpose Taxi Program (**MPTP**), which is covering up to half the cost of each commercial passenger vehicle (**CPV**) trip by eligible people with disabilities and is also paying CPV operators a 'lifting fee' per trip for wheelchair trips. The program, which is run by Commercial Passenger Vehicles Victoria (**CPVV**), supported 5.3 million trips in 2018-19.

MTM: Supporting passengers during network changes is a key priority in the MTM Accessibility Action Plan. MTM has developed Good Practice Guidelines for Accessibility during Disruption. This document outlines considerations such as temporary stops, alternative transport, staff availability and communication.

V/Line: V/Line has disruption management procedures for supporting customers with accessibility requirements. Disruption procedures are regularly reviewed and updated for improvement. As part of the Accessibility Action Plan 2019-2022, V/Line will be developing a guideline for how to assist customers with accessibility needs during disruptions.

PTAWA: The PTA provides direct information dissemination via My Alert and Accessibility Bulletins, including any disruption to services. The PTA has also improved access for people with disability, in the event a lift is 'not in service' at a train station or bus interchange by:

- providing consistent signage outside the lift,
- providing an emergency call button inside the lift which connects to the Central Monitoring Room,
- allowing passengers to travel by train to an alternate station (in reasonable proximity), at no further cost, if their desired destination station has interim works affecting accessibility, arranging for passengers to travel by taxi from the station to an agreed destination at no further cost, if their desired station has interim works affecting accessibility.

TfNSW: Through the development of new transport apps, Transport for NSW is ensuring that people with disability have the same access to real-time travel information as other customers. For example, transport apps are now able to be used with screen readers. In addition, through the Service Alerts project, service disruption alerts are available via push notifications through Twitter and Facebook.