National Road Safety Strategy 2021-30

Submission to the Consultation Draft

25 March 2021

Bus Australia Network

Bus Industry Confederation

Contents

Bus Industry Confederation

About the Bus Industry Confederation

The Bus Industry Confederation (BIC) is an organisation uniting bus and coach operators, bus and coach chassis suppliers and manufacturers, bus and coach body manufacturers and associated suppliers and professional services. BIC's vision is to enhance the sustainability and liveability of Australia's cities and regions by *moving people* using bus and coach transportation. We aim to do this by representing the collective interests of our Members and to assist them in promoting the safety, efficiency and effectiveness of bus and coach transport in Australia.

Our Moving People Objectives

Encourage investment in public transport infrastructure and services.

1. Promote policies and actions that are environmentally responsible.
2. Promote the development of a viable and improved bus and coach industry in Australia.
3. Foster and promote a viable Australian bus manufacturing industry.
4. Protect the business interests of operators, manufacturers and suppliers.
5. Promote public understanding of the contribution made by the bus and coach industry to Australia's economy, society and environment.
6. Ensure the accessibility and mobility needs of Australians are met, regardless of where they live or their circumstances.
7. Promote the use of public transport as a viable alternative to the car.
8. Coordinate and make more effective existing Federal, State and Local Government policies and programs that relate to passenger transport.
9. Ensure that buses and coaches operate safely and effectively.

About the Bus and Coach Industry

The bus and coach industry in Australia carry more than 1.5 billion urban public transport passengers per year and makes up 5 per cent of the total urban passenger task. The coach sector of the bus industry, comprising long distance, tourist and charter operators move more than 1.5 million domestic travellers and makes up 8 per cent of the total non-urban passenger task. The school bus is the second most popular mode for travel to school after the car with about one quarter of all school children traveling to school by bus.

Our Industry, which includes bus operators, bus manufacturers and parts and service suppliers, employs more than 85,000 people nationally.

The *Bus Industry Confederation* (BIC) is the federal and peak body of the *Bus Australia Network* (BAN) comprising of the state associations of New South Wales, Victoria, Queensland, Tasmania, South Australia and Western Australia.

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Purpose of Document

The purpose of this document is to provide a response to the Consultation Draft of the National Road Safety Strategy 2021-30 (Strategy) [https://www.officeofroadsafety.gov.au/nrss]. The Strategy is expected to be finalised by end June 2021. Responses from the consultation draft will inform the 5-year National Action Plan.

Responses to the consultation draft close 23 March 2021 (extension approved to 25 March) and are submissible to: roadsafetystrategy@infrastructure.gov.au.

Document prepared by: Madonna Woodhead, National Operations Manager – Bus Industry Confederation. Enquiries relating to this submission can be directed to: admin@bic.asn.au 02 6247 5990.

Better transport options and assistance in regional areas

The BIC has long advocated the importance of regional connectivity between villages, towns and cities and the importance of accessibility for the transport disadvantaged living in regional areas. Intra-regional and Inter-regional connectivity are important contributory mechanisms for the development of regional centres and investment in infrastructure. Good regional connectivity promotes the competitive advantage of regional locations for business as well as supporting social inclusion.

A transport priority for regional centres and remote areas is to better co-ordinate the government resources that are currently in place. There are often funded community transport (CT) providers that cannot or will not offer seats for critical medical or social inclusion trips due to the narrow eligibility criteria of their services. A requirement of receiving federal CT funding should be to offer, wherever possible, spare capacity to the wider community. There are a number of ways this could be implemented practically but will depend on the context of the area in which the services are delivered.

The at-risk groups without access to transport

About 20 per cent of the Australian population live in cities and towns of between 30,000 and 85,000, or in smaller rural towns and remote settlements (DIRD 2015).[1] Population ageing will be a major demographic challenge for Australian regions in coming years, with the numbers aged 65 years or older expected to double nationally.[2]

Relatively poor mobility opportunities, in both urban and regional settings, typically highlights older people, youth, people with a disability, people with language difficulties (e.g. recent arrivals), those on low incomes and those with little or no car access. The higher proportions of older people and the young in regional areas, logically suggest*s*, relatively greater transport disadvantage challenges in the regions than in metropolitan areas. Pre-school children and their carers should also be added to this list of potentially transport disadvantaged groups, particularly in regional areas, because of the demonstrated high lifetime costs for children experiencing disadvantage, which are associated with being unable to attend pre-school.

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[1] The proportion of the population living in smaller rural towns and remote settlements, in particular, has declined continually over the past century but the proportion living in towns of 30,000-85,000, after a small increase, has remained stable (albeit small) over the last two decades.
[2] Regional Australia Institute (2015b), [In]Sights for competitive regions: demography, Canberra: Regional Australia Institute, January.

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Access to services in regional/remote Australia

The core range of essential services to which all Australians should have access can be defined as:

- **education**: from child-care and pre-school through to the various levels of schooling to TAFE and universities
- **health**: the range of services from general practitioners through to local hospitals to major hospitals, medical specialists and allied health services such as dentistry and optometry
- **welfare and related services**: including Centrelink (welfare payments), aged and other residential care, and police services
- **recreational services**.

NIEIR[3] estimates that a typical rural resident in Australia would have to travel over 30 kilometres a day to access essential services which a typical metropolitan resident can reach by travelling an average of 1.4 kilometres a day.

Essential services can be divided into 'widespread services', such as a pharmacy, GP services, child-care; and 'centralised services', such as specialised medical treatment and a university, which need a larger urban centre. People living in country towns are likely to have access to widespread services but poor accessibility to centralised services. People living in townships under 1,000 people are likely to have poor access to both types of services.

Cost shifting takes place when services, such as doctors, schools, hospitals or pharmacies move away from small towns. The cost of transport is moved from the supplier of the service to the user of the service. This cost shifting is happening across many rural and regional communities. Cost shifting 'forces' car ownership on those who are able to drive, at times creating financial stress.[4] **This financial stress is not always obvious, thus leading to less transparency about unmet transport needs.** Those who are struggling to meet car costs tend to save on operational expenses by travelling less. Those who are 'forced' to buy a car tend to use it even when an alternative means of transport becomes available; while they may be struggling to pay for a car, they don't wish to add additional transport costs through public transport.

Regional case study of access to transport - Warrnambool

Warrnambool is located on the Victorian coast about 260 kilometres south-west of Melbourne. It is home to about 35,000 people, who live in one of the fastest growing regional areas of Victoria. The area has a higher population concentration in the older and younger age groups than the rest of the state.

In 2004, younger and older age groups accounted for four out of every five tickets sold on the town's route bus service. Numbers in both age categories have continued to grow, with an associated increase in the requirement for public transport services.

In 2004, Warrnambool had three major local/regional public transport systems:

1. **route bus services**: with about 7.8 service kilometres per capita provided at that time, about three quarters the level then available in outer Melbourne (Figure 1.1). Services did not cater for normal journey to work times because of the heavy service focus on peak school travel
2. **school bus services**: half a million service kilometres per year were provided, with about 500,000

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[3] National Institute of Economic and industry Research [2009]

[4] Currie, G. and Delbosc, A. (2011), 'Transport disadvantage: A review', In Currie, G (Ed.), New perspectives and methods in transport and social exclusion research, Bingley, UK: Emerald Group Publishing.

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student boardings annually. These services were complemented by shuttle services and urban school services that carried an additional half million journeys per year. In total, carriage of school children accounted for five out of every six route plus school service journeys in 2004, showing the importance of the school bus task

3. **regional bus services** (V/Line): 50,000 passengers per year and 450,000 service kms.

> There is also a rail service to Melbourne.

In addition to public passenger transport services, a number of community transport services were identified, usually centred around community health, aged or disability services, some using council-provided vehicles. These services were meeting vital mobility needs for some groups who are in contact with welfare agencies but some of the transport services had poor operating efficiencies. Service availability was found to be restrictive and vehicle use tended to be low. Taxis play a minor but important complementary transport role for those who can afford them or have eligibility for a disability concession.

It is important to note that community transport services are funded based on eligible services and mode type. This means that government funded services are delivered by multiple service providers. The BIC sees this as a fundamental flaw in existing community transport service provision.

Figure 1.1: Public transport service provision in 2004
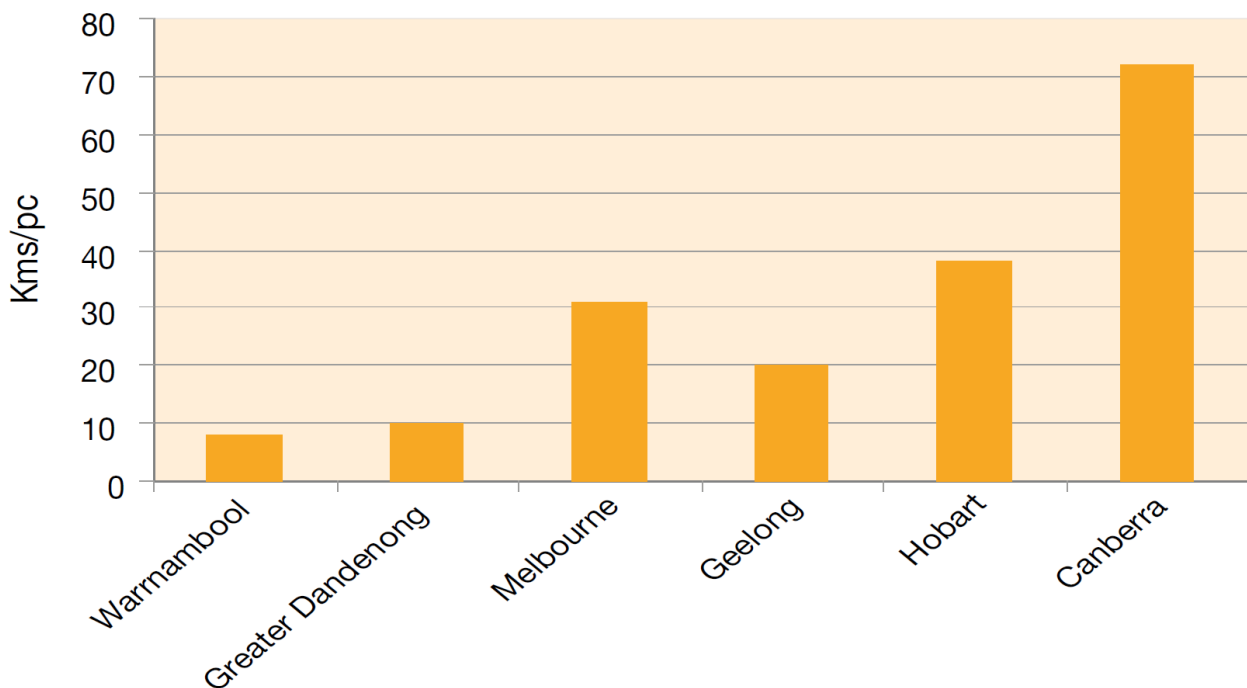
Source: BIC Solutions for Policy Thinkers Series [2019], *The value of getting there: mobility for stronger Australian regions*

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Transport disadvantaged groups and their travel needs

The Warrnambool study focused mainly on travel needs of groups who were identified as potentially being transport disadvantaged but also gathered some comparative information on those without such expected disadvantage. A shopping survey, where car use dominated travel mode choice, together with a small household survey, clearly showed the strong attachment to the car in the region and the high level of mobility it provides for those with a car.

Route bus users tended to see they had no travel alternative, two-thirds having no car available and some others not possessing a drivers' licence. Bus users often travel alone and the travel experience itself can be an important part of social inclusion. The two-hour bus ticket tends to encourage quick trips, which discourages social inclusion (for example, reducing time windows for meeting with friends) and can cause financial difficulties for those on low incomes.

Young people can be both independent and dependent in terms of travel needs. Independence comes from being able to walk or cycle for many trips, with weekends being notable. Dependence comes from reliance on parents/others for car travel, especially during the week and particularly for those living outside urban Warrnambool. Some young people were doubly disadvantaged, by living in non-urban locations and coming from low-income households that are unable to pay for alternative transport (e.g. a second household car or taxi fare). Particular problems were found in relation to youth access to alternative educational programs, work and entertainment, with rural youth seen as facing the greatest relative transport disadvantage.

Deakin University has a campus on the edge of town. Deakin University residential students without a car tended to face transport difficulties, particularly outside (and between) route bus service times. Reliance on others for travel was common and was seen by some as a source of concern. Female international students faced particular problems, being least likely to ask others for lifts. The University saw improved public transport service levels as an important input to increasing its international student numbers.

Seniors are a significant and growing part of the regional population. Car use is high and those with car availability tend to have good accessibility, but at times within a limited range. However, the strong car culture among many seniors is associated with neglect of planning for personal mobility requirements in later years, when car use is less of an option or simply not possible. Road safety issues may arise from this lack of planning. Many older people, no longer driving and living in a form of institutionalized setting, suffered from significant social exclusion.

Many people with a disability have never been part of the car culture and have organized their mobility requirements around using alternatives. These alternatives include public transport (CT), walking, friends'/families' vehicles and subsidized taxis. Those with a disability living outside urban Warrnambool faced particular mobility problems.

Those on low incomes tended to be relatively more reliant on public transport, being less able to afford other transport options. Those living in areas with concentrations of socio- economic disadvantage, and particularly young single mothers, were a group at relatively high risk of social exclusion.

The regional Indigenous community had its own buses that were well utilized. The need for such vehicles was indicative of transport disadvantage faced by many in this community, who also felt uncomfortable using route buses, often due to racist remarks. Many in the Indigenous community experienced multiple sources of transport disadvantage, especially those living just outside the urban area of Warrnambool.

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Sustainable community transport

The BIC contends that existing community transport models are deficient in meeting travel needs despite the existence of many underutilized resources that could have been used more effectively to meet some of these unmet needs. Personal transport is essentially about meeting accessibility needs and fostering social inclusion. However, institutional arrangements for service delivery tend to occur along different (siloed) lines, based around services and modes. This mismatch largely explains the anomaly of unmet travel needs existing alongside no or few public transport services and underused transport vehicles. No entity, government or otherwise, is responsible for accessibility per se. In regional areas, public transport services, school bus services and CT services operate mainly in isolation, rather than being seen as part of a single service delivery system. It is important to acknowledge that complex funding and uncoordinated arrangement of CT, remains a significant barrier for sustainable CT under the new Federal government arrangements around the National Disability Insurance Scheme and My Aged Care program.

Recommendations for sustainable community transport

An effective regional transport system needs to start with the needs of users and look at how to best combine the resources that are already used, (frequently and ineffectively) to meet such needs, adding additional resources when needs demand. The present disaggregated system leads to service overlap and gaps. By bringing together existing transport providers and their resources, together with others who understand community mobility priorities, a 'total transport' approach can be pursued.

1. Remove the current perverse administrative and governance barriers between transport modes (route buses, school buses, community transport, etc), which encourage siloed thinking and behaviour.

2. The needs of the travelling public are made the central focus.

3. Existing assets are worked harder.

4. Funding for additional service provision is needs-based at regional level.

5. Increased public transport service frequency, coverage and service span.

6. Better marketing of public transport services – many local regional bus operators take a strong role in this area but more remains to be done with support from state government.

7. Regulatory reform to increase the flexibility with which services can be provided – more flexible use of school buses as an example.

8. The arrangements for planning of transport systems within the region and state – the development of a stronger partnership between CT and state government. Regional Accessibility Committees (RACs) can play an important regional role here, engaging local people and stakeholder representatives in needs identification, identification of resource availabilities (e.g. people, vehicles and money) that might help better meet outstanding needs and either advising governments on implementation priorities and/or implementing some such priorities themselves.

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National Bus Safety Strategy

A need for a National Bus Safety Strategy was identified at the BIC's Annual Conference in 2019. A national approach would agree a bus safety strategy that would remove duplication, pick up good ideas already in place and agree a national package that delivers national benefits to address the myriad of issues that bus operators deal with on a daily basis that impact on road safety, driver safety, passenger, personal and community safety.

The BIC has developed ten key national recommendations for government to ensure bus safety.

1. A national minimum bus safety accreditation framework that is mutually recognised by all jurisdictions.

2. A national bus safety data set that is collected by police and accident investigators that will better reflect what is happening on the road for accidents, injuries and fatalities involving buses, pedestrians and other vehicles.

3. A national and uniform school bus safety signage and lighting standard and road user education program.

4. A national bus specification safety standard for government contracted services.

5. A national approach to seat belts on buses.

6. A national approach to bus driver penalties and sanctions for driver abuse and violence.

7. A national standard for driver protection on buses and driver training in dealing with violence and abuse.

8. A national bus stop standard for passenger security and protection.

9. Recognition of public transport as an essential service so no passengers are left behind as a result of industrial action.

10. A national bus safety awareness campaign.

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Heavy Vehicle Safety

Buses and coaches are in the business of *moving people* and as such, the development, manufacture and use of safety technology is of paramount concern for the bus and coach industry. In Australia, buses and coaches have traditionally been provided to market with the latest safety and emissions equipment that was available at their time of manufacture. This has partly been due to chassis and bus builders opting to promote safety within this people moving market, but also that the major purchases of buses are the large government fleets and these customers have always specified the highest safety and emissions standards. Therefore, safety features have often been introduced into the market a decade or more ahead of legislation. For example ABS was commonly fitted to buses from the early 1980's and Electronic Braking System (EBS) with disc brakes was available from around the year 2000.

The bus and coach industry is arguably the most heavily regulated sector in the heavy vehicle industry. Generally, this regulation occurs via state-based transport legislation rather than Heavy Vehicle National Law (HVNL). The BIC provided a response [Dec 2020] to the Productivity Commission's National Transport Regulatory Reform Review [Oct 2020] which examines the impact of recent reforms to transport safety regulation and what possible further reforms might lead to a safer and more productive transport sector. The BIC offers, as support to our response to this Strategy, the current transport regulatory reform review and the submission provided by the BIC which can be downloaded here.

Often the bus industry takes the lead in deployment of heavy vehicle safety technology. The stated aim of the Strategy to promote and reduce barriers for the uptake of safe new heavy vehicles is commendable but would need to be considered in HVNL. In general terms, buses, bus drivers and operators are already heavily regulated by the states and we strongly advocate for no second tiers of nationally based regulation on safety. The impacts of imposing any new safety requirements need to be assessed to ensure that there is no duplication of requirements or the need for existing complying organisations to meet different requirements in respect of safe vehicles and associated safe technologies that: a) are already in use or b) an enhancement of technology already in use.

Safety regulations – Heavy Vehicle National Law (HVNL)

HVNL should recognise that one size does not fit all when it comes to heavy vehicle law – different sectors have different needs. There needs to be recognition of the difference between truck and bus and the task undertaken including technical issues with vehicles and contracted operations – including specific recognition of existing national minimum safety standards for accreditation for buses and coaches.

HVNL should embrace stronger performance and risk-based approach that:

- provides operational flexibility

- is less prescriptive

- offers performance based /alternative compliance approaches for operators to meet the law. This should include:

    - incentives to do so and recognise good compliance performance

    - greater acceptance of technology as a compliance tool.

HVNL should not prescribe the technology, only the compliance performance outcome, and establish an appropriate alternative compliance enforcement regime that allows on road enforcement resources to be better targeted and for good operators to get on with the job.

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- HVNL for buses should be considered in the context of the future passenger task and the transport network of our growing cities and regions. HVNL should not be isolated from these broader societal outcomes which seek to provide solutions for traffic congestion and cleaner air.

- HVNL should become more focussed on the use of technology to manage legal access by different productive vehicles using the road network – the current arrangements are inadequate in managing and monitoring access.

Many of the hazards and safety factors in transporting passengers are quite different from the freight task. For example, the personal health of drivers, drug effected passengers and violence and abuse, are not currently dealt with in HVNL. For this reason, for many years state-based passenger transport regulatory requirements have existed outside the scope of HVNL.

A move to industry standards and codes of practice would allow HVNL to more accurately reflect the risks found in one sector of the heavy vehicle industry, which may be absent in others.

The BIC already has an extensive list of industry codes or Advisories on a range of safety, technical and operational issues. These can be downloaded from the BIC website: http://ozebus.com.au/solutions-for-moving-people/guidelines. It should be noted that the process used to develop these Advisories includes review and or active input, from both state and national regulators.

Safety standards

The BIC supports a common and consistent approach to safety for buses and coaches. A consistent (minimum) set of safety standards which would assist purchases by bus and coach businesses and the procurement of buses and coaches and services through government or private tenders/contracts. In overseas markets, the use of standardised bus and coach specifications are common and often results in standards and safety systems being introduced to the market ahead of regulation.

In the United States a Standard Bus Procurement Guidelines RFP was developed by the American Public Transportation Association (APTA) in October 2013. This US system employs a range of options or alternatives within the standard and these are designed so that innovation is not constrained.

As a standardised specification is not currently available, there are instances where buses and coaches are sold that are not fitted or offered with higher order safety systems, but as these buses are still ADR compliant, purchasers can be led to believe that they are purchasing the *safest* vehicles available.

Examples of current safety technology in buses and coaches

Considering the latest innovations, plus the historically available systems, a coach in 2021 would typically have:

- Disk brakes, EBS, ESC and traction control along with Forward Collision Warning (FCW)

- Collision Warning and Emergency Brake (CWEB)

- Lane Keeping Support (LKS)

- Adaptive Cruise Control (ACC)

- Dynamic Steering (VDS)

- Enhanced roll over safety on coaches and intercity buses

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- Driver Alert System (DAS) on coaches.

Suppliers also offer a range of other driver monitoring systems examples being:

- Alcohol locks

- Active Tyre pressure monitoring

- Real time driver monitoring

- Geofencing

- There are also retrofit programs underway such as driver assist systems.

A specific example of an Irizar-Volvo built coach supplied to the mining sector included the following safety specifications as part of the mining contract:

- Passenger seat belt monitoring system

- ABS / EBS and ESC / ECAS

- In-vehicle monitoring system / telematics

- Park brake alarm

- Driver duress system

- Fire-suppression system

- Driver fatigue-monitoring system

- Back-to-base tyre-pressure-monitoring system

- CCTV with remote access.

Crowther's Coaches with Mercedes-Benz OC 500 RF and Volgren Coach body, safety specifications:

- Euro VI

- Lane Departure Warning - SPA 'Lane Assist' system preparation provided on the chassis

- Anti collision system - AEBS 'Advanced Emergency Braking System' provided on the chassis

- EBS 'Electronic Braking System'

- ESP 'Electronic Stability Program'

- ABS 'Antilock Braking System'

- ASR 'Acceleration Skid Control'.

Volvo offer the following features in their Driver Support System on any locally supplied coach:

- EBS 'Electronic Braking System'

- ESP 'Electronic Stability Program'

- ABS 'Antilock Braking System'

- ASR 'Acceleration Skid Control'

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- Volvo also offer as an option DSS

- Lane Keeping System (departure warning)

- Active Cruise Control (keeping a set time gap to the vehicle in front).

- Collision warning System with Automatic Emergency Braking (AEBS).

Safety in bus and coach operations

Buses remain the safest mode of road transport in Australia. This is largely due to the operation of buses by certified drivers, the size and weight of buses (such that each passenger experiences less crash force), and lower average speed, particularly in urban route environments.

Fatalities with bus involvement

Bus safety is backed by statistics showing that the odds of a bus passenger suffering a fatal accident are approximately 1 in 150 million, with deaths arising from crashes involving a bus accounting for just 0.018% of all total road transport fatalities in 2008-2017 (BITRE, 2018). Figure 1.2 offers a cross-modal comparison of fatalities involving heavy and light vehicles. Fatalities linked to traffic accidents are defined as a death within 30 days of a person inside or outside the vehicle, as a result of injuries received in that crash. The data shows fatalities arising from traffic accidents with bus involvement reaching an all-time low of 12 in 2013, whilst in 2017 was at its highest of 31 (although still representing a tiny fraction of all 1,226 fatalities in 2017).

It is also important to consider how these fatalities are distributed amongst road user groups. Figure 1.3 disaggregates traffic fatalities with bus involvement by road user type for the period 1989 to 2019. Around 60% of fatalities occurred to vehicle drivers or passengers (either inside the bus or to occupants of another vehicle), whilst 40% occurred to other road users such as pedestrians, pedal cyclists and motorcyclists. This mix varies significantly by road characteristics. Of the fatalities occurring to these 'vulnerable' road users, around two thirds of them occurred to pedestrians.

The distribution of fatalities involving buses also varies by the speed environment of the road. Figure 1.4 shows how this varies by speed limit and road user type. Data for the period 1989 to 2019 shows around 35% of fatalities involving buses occurring on high-speed roads signposted at 90 km/h or higher, and just 12% on local roads with speed limits 50 km/h or lower. Most fatalities (40%) occur on 60 km/h roads. Traffic accident data also shows far more fatalities occurring outside the vehicle on lower speed roads, as compared with high-speed roads where virtually all deaths were to vehicle occupants (either as drivers or passengers). This is in a large part reflective of the road environment where far less pedestrian and cyclist activities might be expected on high-speed arterials (and indeed none on motorways), whilst lower speed urban streets might see a greater mix of pedestrians, cyclists and other 'vulnerable' transport users.

In Figure 1.5, the distribution of bus-related fatalities are disaggregated by age group and gender. In total terms, those aged 40-64 were most represented, accounting for 28% of all fatalities in the period 1989 to 2019. There were also clear gendered patterns in the age group of fatalities. For those up to 65 years of age, males accounted for a disproportionately higher percentage of fatalities than females. This is most acute in the 17-25 year old range, where males accounted for 75% of all deaths. This likely reflects differences in risk attitude between genders. For those aged 65 years and over, fatalities between males and females were more or less evenly split.

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Figure 1.2: Heavy vehicle fatalities grouped by vehicle type, against total number of road fatalities 2008-2017
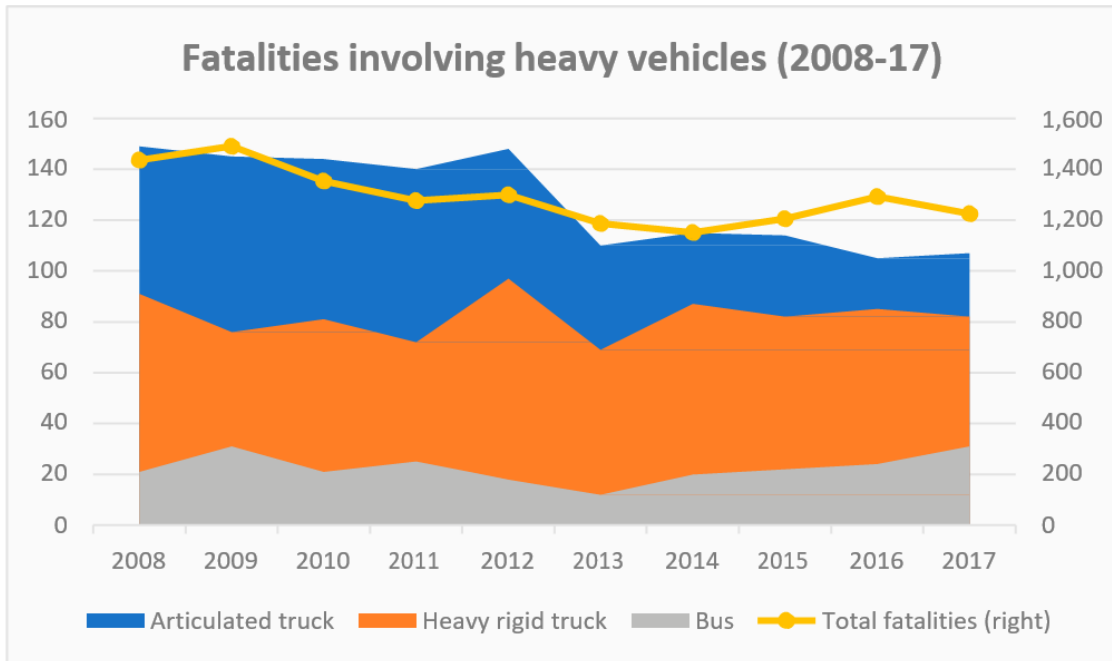
Source: BITRE, 2018

Figure 1.3: Fatalities with bus involvement, segmented by road user type (1989-2019)
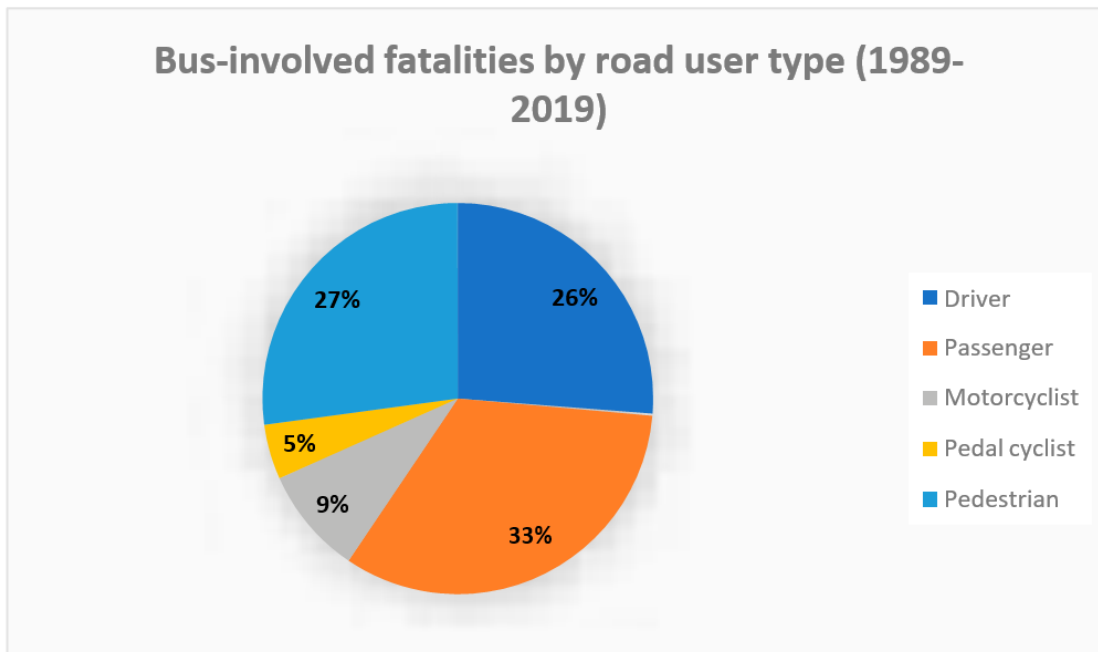
Source: BITRE, 2019

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Figure 1.4 Fatalities with bus involvement, segmented by speed environment (1989-2019)

Bus-involved fatalities by speed environment and road user type (1989-2019)
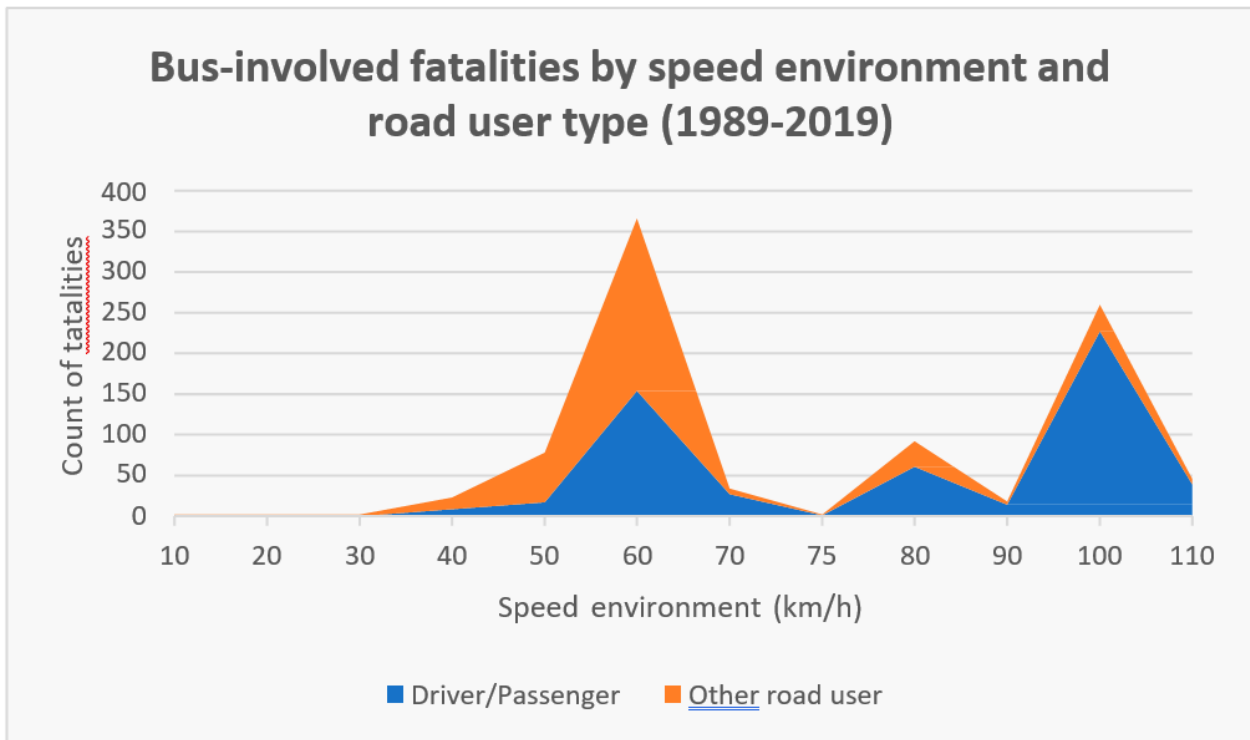
Source: BITRE 2019

Figure 1.5 Fatalities with bus involvement, segmented by age and gender (1989-2019)

Bus-involved fatalities by age and gender (1989-2019)
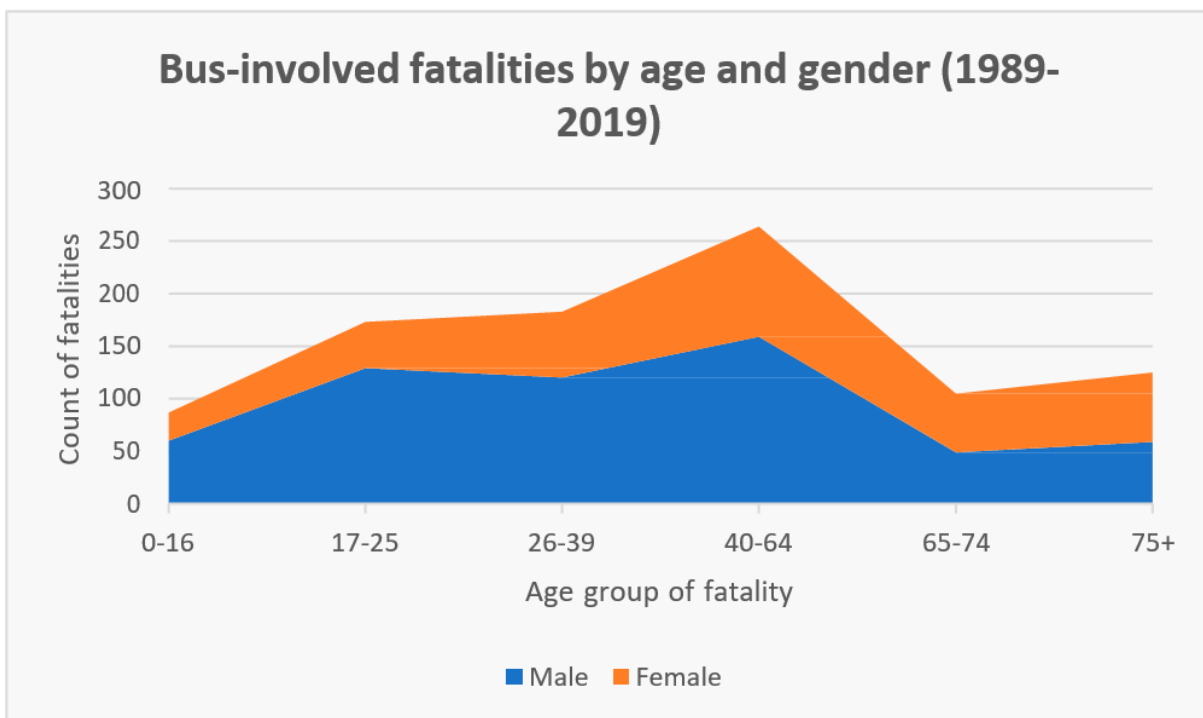
Source: BITRE 2019

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Recommendations for data collation

The Australian Road Deaths Database (BITRE) compiles state/territory agency-provided data each with unique datasets. More consistency between jurisdictions as well as the collection of additional data would be highly valuable for any new system of data such as the National Road Safety Data Hub. The existing ARDD often presents a skewed view of fatalities involving buses as it does not identify the bus being the cause of a fatality rather that a fatality happened on the bus (eg. a passenger experiencing a health episode) or near the bus (eg. other vehicle collision into a stationary bus at a bus stop).

Additional data collation could include:

- type of collision (e.g., rollover)

- type of bus involved (e.g., minibus, school, rigid route bus, articulated route bus, coach)

- task of bus involved (e.g., route/city services, school services, charter, long distance tour, intercity express)

- type of accident (e.g., collision with vehicle or stationary object)

- cause of accident (e.g., speeding or alcohol consumption)

- delineate the injury/death by category, other vehicle, pedestrian, bus passenger, bus driver, cyclist etc.

Industry Advisories and Codes

The BIC has developed and published an extensive list of industry Codes and Advisories on a range of safety, technical and operational issues. The BIC undertook the development of these Codes and Advisories to:

- address the issue of bus safety features being introduced well ahead of regulation and or the ADR's. The BIC has developed Advisories that set bus and coach safety standards for issues such as passenger door safety, bus school light national standards and fire mitigation

- allow a nationally consistent approach to bus/coach-based maintenance and safety management systems - Advisories include: Tyre Safety Advisory and Bus Fire Mitigation Advisory

- allow a nationally consistent approach to bus and coach operational safety as detailed in the BIC Fire Evacuation Protocol Advisory, Incident Management Guidelines and Accessible Transport Standard Compliance - Guidelines for Bus Operators

- allow the BIC to align with Action Number 9 from the National Road Safety Strategy 2011-2020 to promote the market uptake of new vehicle technologies with high safety as detailed in the NRSS Implementation Report of 2017[5].

The process employed by the BIC to determine the need for an Advisory and steps undertaken to develop an industry wide agreed Advisory is provided in Appendix A (presentation to SVSEG on 16 February 2021). All of the BIC Advisory and Codes can be downloaded from the BIC website: http://ozebus.com.au/solutions-for-moving-people/guidelines. It should be noted that the process used to develop these Advisories includes review and or active input, from both state and national regulators.

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[5] National Road Safety Strategy 2011-2020 Implementation status report November

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Recommendations for Industry Advisories and Codes

As stated, the BIC has a number of Advisories and Codes that have allowed the BAN to implement consistent vehicle standards and operational processes that have been successful in setting higher levels of safety across the industry.

The BIC strongly supports the notion that the National Road Safety Strategy 2021-30 continue to promote the development of Industry Advisories and Codes.

Speed Management

The BIC supports **risk-based assessments** of speed limits that support safety benefits of lower speed zones in specific areas with heavy pedestrian traffic (eg., sub-arterial roads). However, any general reduction of speed limits in rural and regional type routes (eg., highways/motorways, major arterials) have potential negative impacts on safe (and practical) operations, particularly long-distance services where the drivers extended time on the road presents a fatigue risk.

It should be noted that buses and coaches have the following speed safety technology:

- speed limiters are standard technology (as opposed to other heavy vehicles) and the BIC has seen no evidence of speed limit tampering in the bus industry. Passengers themselves are also in effect 'speed limiters' as they would complain

- services are precisely timetabled and monitored for both late and early running

- driver shifts (spread of worked hours) are directly linked to the timetables

- an increasing number of new buses and coaches being supplied to the market-place are often fitted with systems that actively monitor operating speeds especially around high-risk operating areas (per case study below).

Case Study Monitoring of Coach Speeds

An increasing number of bus and coach operators use geo-fencing to actively monitor feet location, control individual coach operating speeds and driver safety performance.

> Explanation: a geo-fence is a dynamically generated radius around an intersection, location, or a geo-fence can be a predefined set of boundaries, such as the set bus route. It can send alerts to the operator when a driver / vehicle is outside a fenced geographical area set by the operator. It can also road speed limit the vehicle to a lower speed within set 'fenced' areas.

In such systems the bus operates with an on-board GPS tracking system (a common system is the Navman type dash mounted unit), that provides the driver with directions and timetable information, but also provides warnings when nearing safety critical areas, such as a railway crossing and also advises speed limits based on vehicle location.

Geo-fencing can also send alerts to the operator when a driver/vehicle is outside a fenced geographical area set by the operator and if the operator is exceeding set speeds in 'fenced' areas.

Similar systems are also used by some large urban bus operators to achieve the driver monitoring as described above, but also to monitor fleet operations against timetabled services.

Appendix 1

Bus Evacuation Protocol Advisory and Training Program
SVSEG 16th February 2021

Luke Hardy - BIC Technical Manager

Bus Industry Confederation
MOVING PEOPLE

SVSEG Presentation 2021

Overview of BIC Advisories
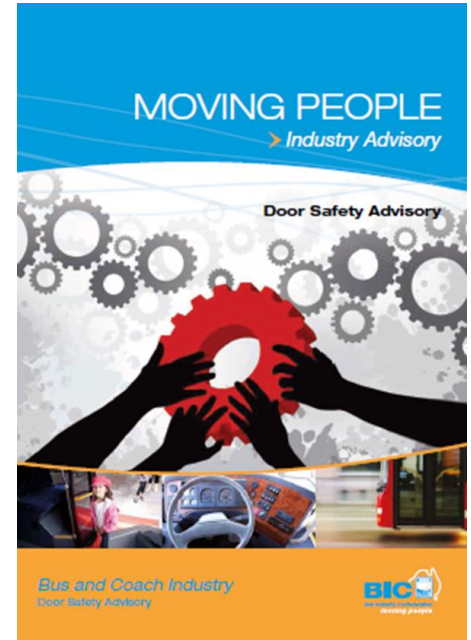
The Australian Bus Industry in Brief:

- *The bus and coach industry in Australia carries more than 1.5 billion urban public transport passengers per year and makes up 5 per cent of the total urban passenger task.*

- *As of the end of 2019, there were 105,331 registered buses in Australia.*

- *Within this fleet, 43,684 buses were in 'commercial-use' providing school, route, long distance and tourist services around Australia.*

- *It is estimated that the bus and coach industry in Australia directly employs more than 85,000 people in a range of jobs including drivers, mechanics, engineers, skilled production workers and transport professionals.*

- *Typically, there are around 1500 new buses delivered to the Australian market annually.*

Bus Industry Representation:

- The Australian bus industry is represented by:

  - State based Operator Associations that focus on their respective states and;

  - The BIC which undertakes the national representation role.

- The BIC is overseen by an elected council made up of;

  - Operators Group.

  - Chassis Supplies and Manufacturers Group.

  - Body Suppliers and Manufactures Group

  - Associated Services Providers Group

  - Operator Association representatives from Qld, NSW, Vic, SA , Tas and WA.

  - Reporting to Council are a range of Functional Committees.

BIC Technical Work Program – Processes:

- *The BIC Functional Committees are arranged to manage issues and initiatives for approval by the BIC Council.*

- *One of these Committees is the Technical Committee.*

- *The Committee is chaired by the BIC Technical Manager and it is made up of chassis suppliers, bus manufacturers and bus operators (both private and government based).*

- *The key role of the Technical Committee is to progress a range of safety and compliance matters within the industry.*

- *One of the main ways of achieving this is via Industry Advisories.*

BIC Industry Advisory Process:

- Advisories are developed under a three step process of:

Industry identifies a current, potential or pending safety or technical related issue.

A review is undertaken to determine potential causes/effects/outcomes plus assess the regulatory status.

An industry position is negotiated through extensive consultation and developed into a published Industry Advisory.

- The Advisories are designed to complement existing regulations.

The status of BIC Published Industry Advisories:

- Currently published BIC Advisories are:

    - National IR and WHS Guide.

    - Health Awareness.

    - Environmental Management and Systems Guidelines.

    - Incident Management (operational and environmental).

    - Accessible Transport Standard Compliance - Guidelines for Bus Operators.

    - Bus Door Safety Advisory.

    - Bus Fire Mitigation Advisory.

    - Tyre Safety Advisory.

    - Fire Evacuation Protocol Advisory (dedicated web page).

    - Recently COVID 19 (dedicated web page).

The BIC Fire Evacuation Protocol and Training Programs:

- *The Advisory was partly funded by the Heavy Vehicle Safety Initiatives (HVSI).*

- *The Working Committee included representatives from the NHVR, government agencies in NSW, Qld, SA, Vic and WA, private bus operators and the state-based operator associations.*

- *This produced;*

  - *A Fire Evacuation Protocol Advisory and;*

  - *A range of training documentation, videos and step-by-step guides (in template form).*

- *There is a dedicated web page;*

- *http://bic.asn.au/solutions-for-moving-people/guidelines*

Dedicated web page:

The Fire Evacuation Protocol:

- *The protocol itself has been downloaded 6870 times since March 2019, plus 601 hard copies where distributed and it is in 13 state libraries.*

- *There are thirteen different step by step guides and in total these have bene downloaded 21,412 times.*

- *There are also 6 videos that are linked to Youtube and these have been viewed 2773 (but there are also soft copies of these circulating).*

- *The videos were provided by BCC and STA plus two were sourced from the US.*

http://bic.asn.au/bus-fire-evac

The Advisory contains:

- Bus Fires – Causes and Risks Awareness.
- Evacuation Protocols.
- Training Documents.
- Templates for Operators to develop their own materials.

Step by Step Guides:

Document 1	In Bus Emergency Response Procedure Sample adapted from Brisbane City Council protocols. This template is a generic example of a one-page sheet accessible to the driver as a reminder of what to do in an emergency.
Document 2	Vehicle Emergency Evacuation Procedures provided by Crown Coaches. This template is a more detailed example of a double-sided sheet to be accessible to the driver that details the emergency evacuation procedures.
Document 3	Evacuation of Accessible Passengers provided by Crown Coaches. This template is a more detailed example of a training document accessible to the driver that details the emergency evacuation procedures to be used when evacuating passengers that may need to be physically carried from the bus.
Document 4	On Road Emergency Procedure provided by the Dyson Group of Companies. This template is a more detailed example of a double-sided sheet to be accessible to the driver that details the emergency evacuation procedures.
Document 5	Bus Fire and Evacuation Procedure Refresher Handout provided by Brisbane City Council. This template a handout aimed at providing refresher training for drivers in fire and evacuation procedures.
Document 6	Generic Driver Pre-Departure and Operational Check Sheet designed by the Bus Industry Confederation in consultation with bus and coach industry representatives when developing an industry advisory on fire mitigation in 2014. This template provides a list of the items that a driver should check before departure so as to mitigate the fire risk.
Document 7	Use of a Fire Extinguisher (Sample) provided by Clark's Logan City Bus Service. This template is a generic instruction sheet for drivers on how to use a fire extinguisher.
Document 8	Fire Extinguisher Standards and Approved Examples designed by the Bus Industry Confederation in consultation with bus and coach industry representatives when developing an industry advisory on fire mitigation in 2014. This template provides the size and type of portable fire extinguisher required for buses, rating and classification standard and maintenance tags.
Document 9	Bus Inspection Sheet designed by the Bus Industry Confederation in consultation with bus and coach industry representatives when developing an industry advisory on fire mitigation in 2014. This template is a list of the items to be checked by maintenance staff so as to mitigate the fire risk.
Document 10	Bus Engine Bay Fire Suppression Equipment provided by Brisbane City Council. This template is an example of suppressions systems and functions.
Document 11	Training Needs Analysis Spreadsheet designed by the Bus Industry Confederation in consultation with bus and coach industry representatives when developing an industry advisory on fire mitigation in 2014.
Document 12	Verbal Assessment Operator Refresher General Evacuation provided by Brisbane City Council.
Document 13	Sample Section from Driver Bus Familiarisation for a Specific Bus Type provided by State Transit Authority NSW. A template that shows an example of driver training/information on the features and operation of a type of bus, highlights emergency systems and bus security.

- *Emergency Response Procedures, Fire Extinguisher standards and maintenance requirements:*

- *Fire mitigation-based bus inspections sheets, driver pre-departure checks:*

• *The Evacuation Protocols themselves.*

12-Step Evacuation Protocol for High Floor Bus or Coach

The following is a 12-step guide that provides a starting point for drivers to learn and practice bus evacuations. The time to practice evacuating a bus is long before a fire happens. The same holds true for a fire suppression system or fire extinguisher.

The time to learn to use this protocol is before the event when drivers have time to think about and integrate the learning process.

1. Pull over as quickly and safely as possible.

2. If possible avoid stopping in tunnels, interchanges, bus stations, outside service stations, schools, hospitals, congested areas or in the middle of an intersection.

3. If the fire is getting out of control, you will have to pull over immediately.

4. If you have to stop in a tunnel, try to stop before one of the emergency exit doors. This is so your passengers will not have to walk past the burning part of the bus to exit the tunnel.

5. Once stopped, apply the park brake, put the bus in neutral, and turn on your hazard lights, open the passenger doors and turn off the ignition and or battery isolated switch and activate any fuel isolation system if fitted.

6. Make an announcement over the intercom system and/or by standing up and in a loud voice telling the group there is a problem and they need to:

EXIT THE BUS VIA THE FRONT DOOR AS QUICKLY AS POSSIBLE....LEAVE ALL LUGGAGE....ASSIST ANYONE AROUND YOU.

If the front door exit is blocked: THERE ARE EMERGENCY EXIT WINDOWS ON EITHER SIDE OF THE BUS...LIFT THE HAMMERS OUT AND SMASH THE GLASS, PUSH OUT THE BROKEN GLASS AND EXIT THE BUS, HELP OTHERS...LEAVE ALL LUGGAGE.

7. Drivers should assist with the evacuation by not being in the doorway but either assist passengers (from the driver's area) or at the base of the door step(s) assisting and directing passengers to the safest spot to gather (preferably 200 m away from the bus).

8. If passengers are attempting to exit via the emergency windows, anyone outside of the bus who is able should be asked to help those using the emergency window exits. (The driver should be trained in how the height of the bus and weight of the windows may be difficult to manage and practice using the windows). The driver should ask for passenger(s) assistance with the evacuation via emergency windows.

9. The driver should assist every passenger out of the bus to the best of their ability and not exit the bus until the evacuation is complete (within reason of the circumstances).

10. The driver should continue to make the announcement as noted in point 6 throughout the evacuation because people in the back, people sleeping, hard of hearing or disabled may not recognise the danger.

11. If there are disabled passengers, generally there is not time to use the lift so "lift and carry" may be an option if you engage other passengers. (Drivers should have some training on the best methods of "lift and carry" if there is a lift door on the bus and it is operable, the driver should open it as soon as possible because it provides another means of escape).

12. Move passengers away from the bus to the safest available location, contact the bus depot and or emergency services.

ONLY ONCE THE PASSENGERS ARE SAFELY AWAY, AND IT IS SAFE TO DO SO, SHOULD YOU TRY TO EXTINGUISH THE FIRE, BUT NEVER OPEN ANY HATCHES TO ACCESS THE FIRE EFFECTED AREA.

12-Step Evacuation Protocol for City Bus

The following is a 12-step guide that provides a starting point for drivers to learn and practice bus evacuations. The time to practice evacuating a bus is long before a fire happens. The same holds true for a fire suppression system or fire extinguisher.

The time to learn to use this protocol is before the event when drivers have time to think about and integrate the learning process.

1. Pull over as quickly and safely as possible.

2. If possible avoid stopping in tunnels, interchanges, bus stations, outside service stations, schools, hospitals, congested areas or in the middle of an intersection.

3. If the fire is getting out of control, you will have to pull over immediately.

4. If you have to stop in a tunnel, try to stop before one of the emergency exit doors. This is so your passengers will not have to walk past the burning part of the bus to exit the tunnel.

5. Once stopped, apply the park brake, put the bus in neutral, and turn on your hazard lights, open the passenger doors and turn off the ignition and or battery isolated switch and activate any fuel isolation system if fitted.

6. Make an announcement over the intercom system and/or by standing up and in a loud voice telling the group there is a problem and they need to:

EXIT THE BUS VIA THE FRONT AND (if fitted) REAR DOORS AS QUICKLY AS POSSIBLE ASSIST ANYONE AROUND YOU.

If the door or doors are blocked: THERE ARE EMERGENCY EXIT WINDOWS ON EITHER SIDE OF THE BUS...LIFT THE HAMMERS OUT AND SMASH THE GLASS, PUSH OUT THE BROKEN GLASS AND EXIT THE BUS, HELP OTHERS....

7. Drivers should assist with the evacuation by from the driver's area and direct passengers to the safest spot to gather (preferably 200 m away from the bus).

8. If passengers are attempting to exit via the emergency windows, anyone outside of the bus who is able should be asked to help those using the emergency window exits. (The driver should be trained in how the height of the bus and weight of the windows may be difficult to manage and practice using the windows). The driver should ask for passenger(s) assistance with the evacuation via emergency windows.

9. The driver should assist every passenger out of the bus to the best of their ability and not exit the bus until the evacuation is complete (within reason of the circumstances).

10. The driver should continue to make the announcement as noted in point 5 throughout the evacuation because people in the back, hard of hearing or disabled may not recognise the danger.

11. If there are disabled passengers, generally there is not time to use the lift so "lift and carry" may be an option if you engage other passengers. (Drivers should have some training on the best methods of "lift and carry" if there is a lift door on the bus and it is operable, the driver should open it as soon as possible because it provides another means of escape).

12. Move passengers away from the bus to the safest available location, contact the bus depot and or emergency services.

ONLY ONCE THE PASSENGERS ARE SAFELY AWAY, AND IT IS SAFE TO DO SO, SHOULD YOU TRY TO EXTINGUISH THE FIRE, BUT NEVER OPEN ANY HATCHES TO ACCESS THE FIRE EFFECTED AREA.

End Presentation