Austroads

Annual Report 2020–21

Contents

Austroads Annual Report 2020–21

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Introduction

Who We Are

Austroads is the collective of the Australian and New Zealand transport agencies, representing all levels of government. We are a not-for-profit, nonpartisan organisation. We are funded by Australian and New Zealand government transport agencies, but our work impacts a wide range of agencies including planning, service, infrastructure, health and safety, public health and policing.

Our Members

Transport for New South Wales

Department of Transport Victoria

Queensland Department of Transport and Main Roads

Main Roads Western Australia

Department for Infrastructure and Transport South Australia

Department of State Growth Tasmania

Department of Infrastructure, Planning and Logistics Northern Territory

Transport Canberra and City Services Directorate, Australian Capital Territory

Commonwealth Department of Infrastructure, Transport, Regional Development and Communications

Australian Local Government Association

Waka Kotahi NZ Transport Agency

Message from the Chair

The past year Austroads has continued to deliver for the present, while preparing for the future.

In 2020–21, our efforts continued to be directed towards improving the safety of road users and workers, delivering affordable transport infrastructure that meets community needs, optimising transport investment and improving the reliability and efficiency of end-to-end journeys.

Austroads has continued to improve our products – guides, software and other tools and services – to ensure they are up to date with national and international best-practice and relevant to the work of our member agencies and the industry. We have also progressed new research that will support our members to identify and prepare for technologies that could significantly impact on their operations and the services they provide.

Transport agencies are in the process of continuous organisational, technological and environmental change. The Austroads' 2020-2024 Strategic Plan recalibrated our organisation's strategic objectives focusing our work on identifying and solving problems for transport agencies in Australia and New Zealand. The Board has overseen the alignment of projects with the strategic focus areas – infrastructure, technology, data, sustainability, investment, safety, journeys and customers – to ensure we are responding to the pressing current and emerging challenges our member agencies face.

> **“Transport agencies are in the process of continuous organisational, technological and environmental change.**

New areas of focus include managing and harnessing the decision-making power of data, optimising the benefits of new technologies, understanding and meeting customer needs, and reusing materials, reducing emissions and mitigating the impacts of climate change.

Sustainability continues to shape road transport decision making. The Task Force of a newly established Environment and Sustainability Program is working in unison with other Austroads' programs to develop a pipeline of projects that will address climate change, biodiversity, human health and the circular economy.

Over the coming years we will continue to readjust and refocus to meet the challenges that transport agencies across Australia and New Zealand face. We will continue to make our superb association better every year.

Neil Scales, OBE
Chair, Austroads

Message from the CEO

While 2020-21 is a year that many of us would like to put behind us, the challenges have helped us transform to prepare us for the future. The Board delivered a new Strategic Plan. As part of the implementation, we have introduced a new performance planning and review process. It will help us track our performance in line with the strategic goals and boost our organisation's engagement and productivity. We are also developing an Austroads information technology strategy to unite the capabilities of Austroads, Transport Certification Australia (TCA) and National Exchange of Vehicle and Driver Information System (NEVDIS) and provide new services using the data resources available through all three units.

The COVID-19 pandemic has changed where we work but not our values, our professionalism and our commitment. The Austroads team has been impressive. Despite the challenges of working from home, in sometimes quite trying circumstances, our team were resilient and responsible. We adapted and continued to support one another and our member agencies.

Our colleagues in Austroads member agencies have been indefatigable in their commitment to improve roads and transport services across Australia and New Zealand. While unexpected 18 months ago, online meetings and collaboration have produced a greater level of attendance and delivered lasting benefits. While the progress of some projects has been slowed, most have not been impacted.

Thank you to everyone who has contributed to the Austroads achievements over the last 12 months. Your impeccable work, commitment and determination keeps steering our organisation to success through these unprecedented times.

Dr Geoff Allan

Chief Executive, Austroads

> **“The COVID-19 pandemic has changed where we work but not our values, our professionalism and our commitment.**

Our Objective

Austroads solves problems for transport agencies in Australia and New Zealand. We focus on making mobility safer and more reliable for all users and our transport infrastructure sustainable and future proof.

Our Work

We provide high-quality, practical and impartial advice, information, tools and services to help our members to deliver efficient, reliable and safe mobility to their customers.

We also provide national services that help transport agencies to operate seamlessly across state borders and bring national efficiencies to their operations.

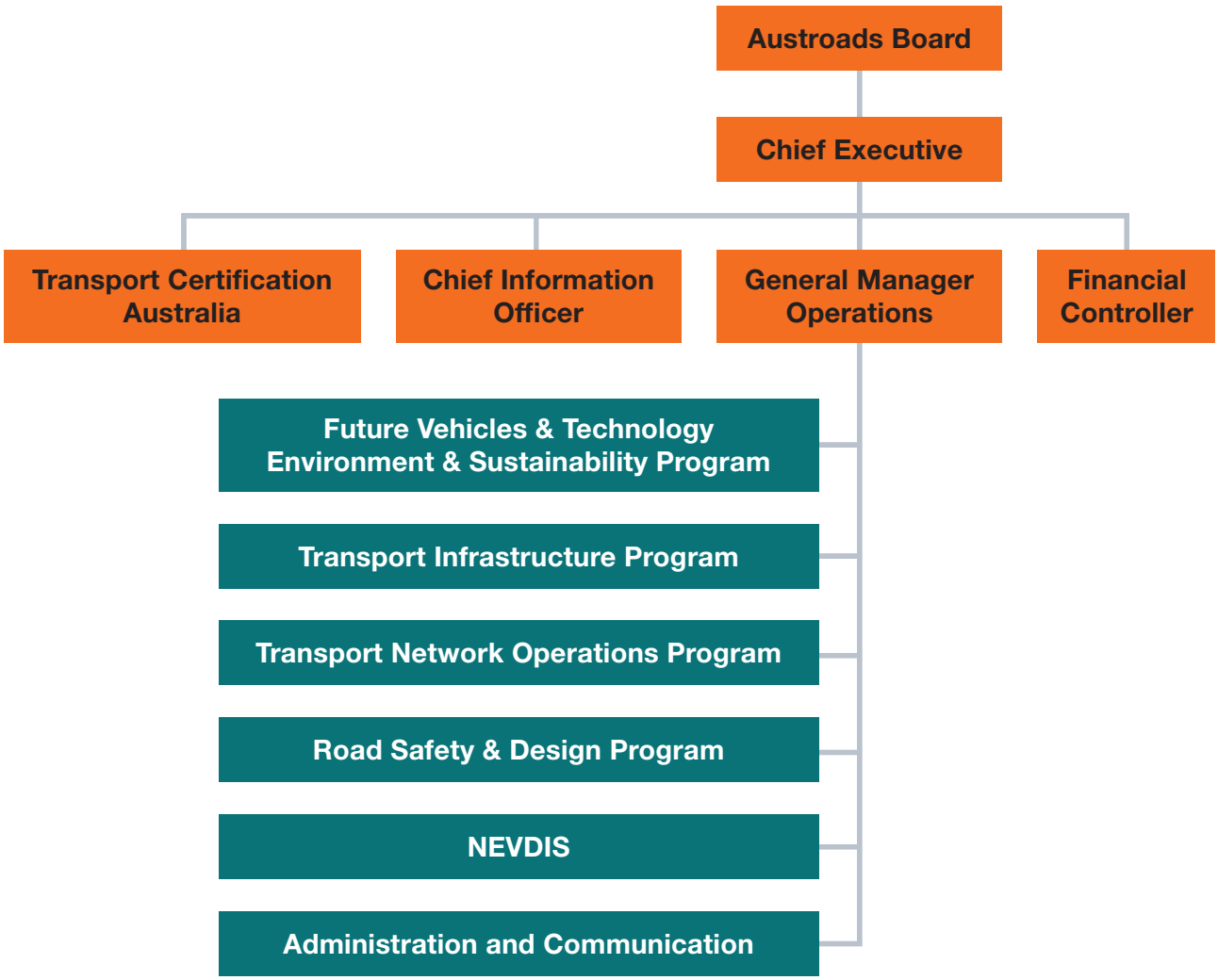
We value agility, collaboration, objectivity, and knowledge sharing. Our Guides, which provide practical advice on the design, management and operation of road transport networks, are globally respected and continually updated.

We coordinate international collaboration activities that broadly share Australasian transport knowledge and expose our local practitioners to world-wide best-practice. This includes coordinating Australian representation on the World Road Association's (PIARC) expert committees of practice, and active engagement with the Association of European Vehicle and Driver Registration Authorities (EReg), the American Association of Motor Vehicle Administrators (AAMVA), and the International Transport Forum (ITF).

Our People

Austroads is governed by a Board of directors. There is currently one chief executive or a senior executive officer from each member organisation.

We employ about 60 people, with a national office and the National Exchange of Vehicle and Driver Information System (NEVDIS) based in Sydney, staff based in Brisbane and Perth, and Transport Certification Australia (TCA) and some program managers based in Melbourne. We rely on the participation of transport agency staff to direct our work via our Board and subject specific task forces and the expertise of consultants and researchers to complete our projects.



Protecting the health and well-being of our people is a priority. During the year we implemented a staff assistance program to help staff members and their families stay safe and adapt to the life and work during the pandemic.

Project Delivery

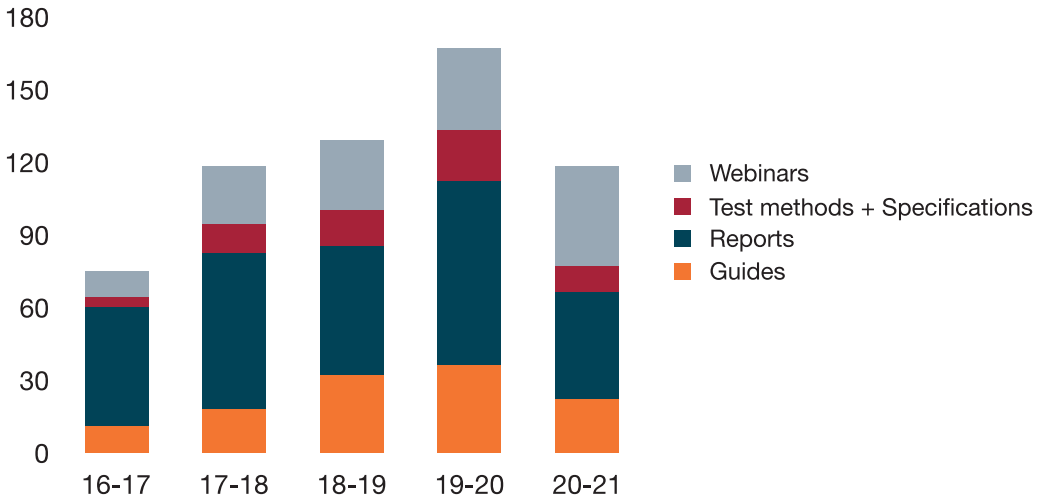
We use a Program Management approach to deliver a schedule of projects that continually evolves to meet the needs of our members. During the year we completed 39 projects. Of the 62 projects active at the end of the year, 59 were running on time, three were less than six months late and three were between 6-12 months late. A small number of projects have been delayed by the COVID-19 pandemic which has restricted the ability of researchers to cross borders to undertake site inspections and, in some cases, prevented researchers from working in laboratories.

Number of projects

Year	Completed	Cancelled or deferred	> 12 months + late	6–12 months late	< 6 months late	On time	Total active projects
2016–17	46	1	1	3	14	60	125
2017–18	43	1	0	0	4	66	114
2018–19	32	0	2	3	12	55	104
2019–20	43	3	3	3	9	49	110
2020–21	39	0	0	3	3	56	101

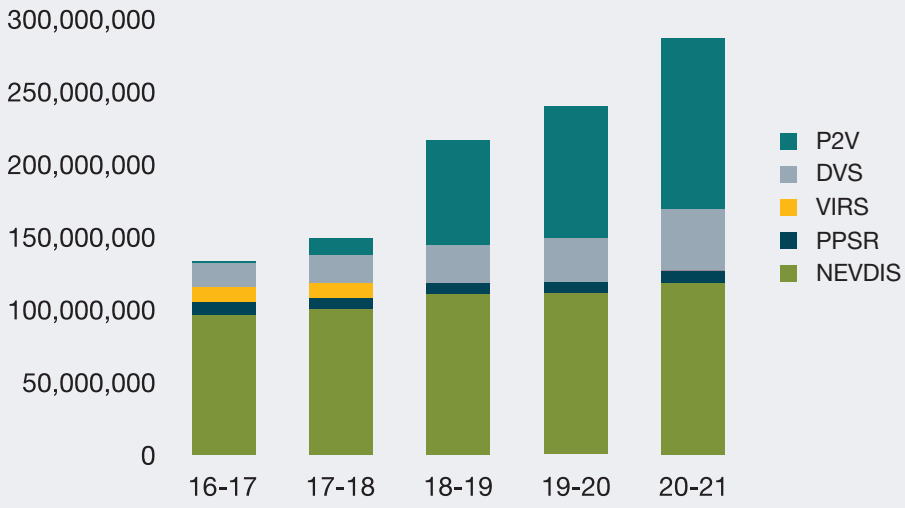
Project Outputs

During the year we published 77 publications and produced 41 webinars. The reduction in publication production in comparison to the previous year was largely due to a change in the timing of project delivery, with the start of projects staggered across the financial year. In the first quarter of 2021-22 we have published 40 publications and so expect to see production levels significantly increase next year.



NEVDIS Transactions

More than 286 million transactions were made through the National Exchange of Vehicle and Driver Information System (NEVDIS), a 19% increase on the previous year and a 115% increase on 2016-17 transactions. The transactions include queries to the system made by jurisdictions, the Personal Property Securities Register (PPSR), the Document Verification Service (DVS) and our Plate to VIN (P2V) service.



Note: VIRS was decommissioned 30 June 2018.

Our Impact

Our work directly benefits our member agencies, the community and the Australian and New Zealand economy. Austroads primary purpose is to improve the practices and capability of staff employed by our member agencies. The collective delivery of research and technical guidance and tools reduces costs for each agency and encourages the sharing of knowledge and expertise. Austroads work helps to ensure road users experience a largely consistent road environment across jurisdictional boarders.

Austroads is in a unique position to deliver national services that reduce the administrative burden of contractors and manufacturers working across borders. The National Prequalification System for Civil (Road and Bridge) Construction Contracts creates a framework for roadworks and bridgeworks construction contracts. The system qualifies more than 500 companies and partnerships to submit tenders for construction contracts of varying technical and financial levels. The Safety Barrier Assessment Panel assesses the crashworthiness and suitability of road safety barriers, systems and devices for deployment on Australian and New Zealand roads. During the year the panel assessed 96 products and recommended 73 for deployment.

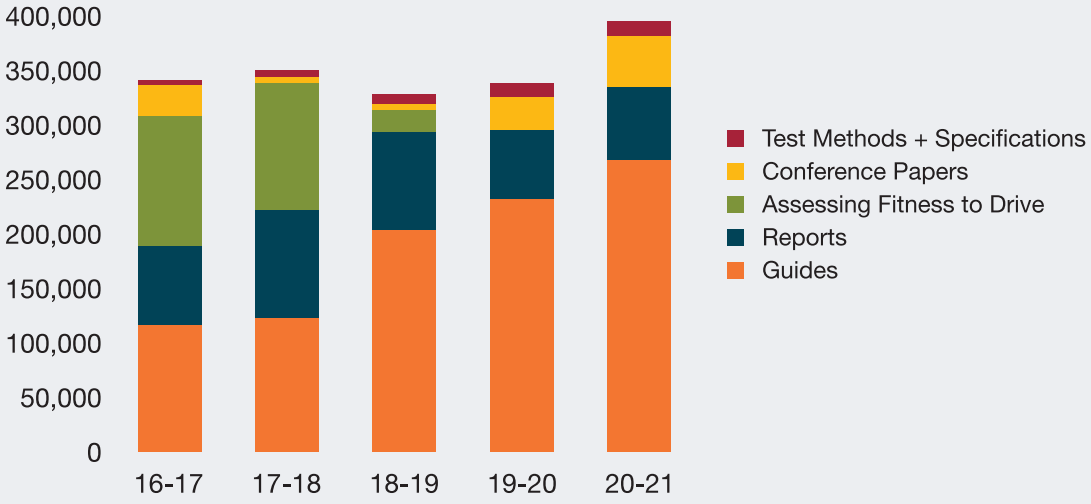
The NEVDIS Administration Unit enables vehicle imports into Australia and issues World Manufacturer Identifiers to Australian vehicle manufacturers. The NEVDIS system also provides information to public and private sector organisations to facilitate provenance checking on vehicles, matching of biographic details on licenses, motor insurance underwriting and vehicle safety recalls.

Austroads projects have the potential to deliver significant economic benefit to government and the community. The Austroads Technical Specifications are expected to deliver lower construction prices, savings in contract surveillance costs, and fewer disputes. A business case for investment in a future work program associated with the Austroads Data Standard estimated the project could deliver a net benefit of approximately $470 million in present value terms over 20 years with a benefit cost ratio of approximately 3.75:1.

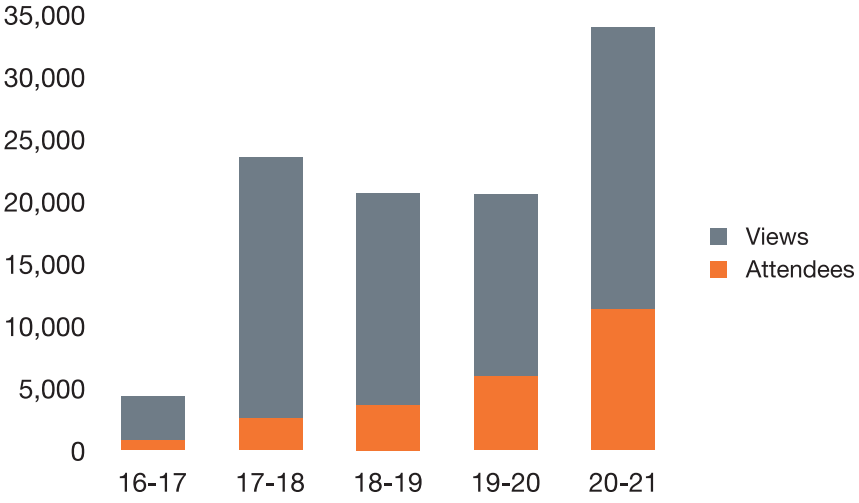
The use of Austroads' products is an indication of the value of our work and its influence on practice. During the year more than 520,000 people visited the Austroads website and accessed over 394,000 publications. More than 11,000 people attended our webinars and recorded sessions were viewed 22,700 times.

> **“Austroads work helps to ensure road users experience a largely consistent road environment across jurisdictional boarders.**

Publications accessed



People attending webinars and viewing recorded presentations



The expertise of Austroads staff and quality of the research we commission is recognised by government, national policy bodies, industry and academia. During the year Austroads staff were invited to present evidence to the Australian Senate's Rural and Regional Affairs and Transport References Committee and Joint Select Committee on Road Safety, and the Queensland Parliamentary Inquiry into Vehicle Standards and Technology. Staff also represent Austroads members on industry and education association boards and committees including CPEE, ABAB, Building Smart International, SPARC Hub, ITS Australia, ATAP Steering Committee, Cycling and Walking ANZ, Roads Australia's Road Workers Safety Working Group, the National Research Committee on Roadside Advertising and APCC-Austroads Environmentally Sustainable Procurement Roundtable. Austroads' publications are regularly referenced in journal articles, books chapters, conference papers and academic theses.

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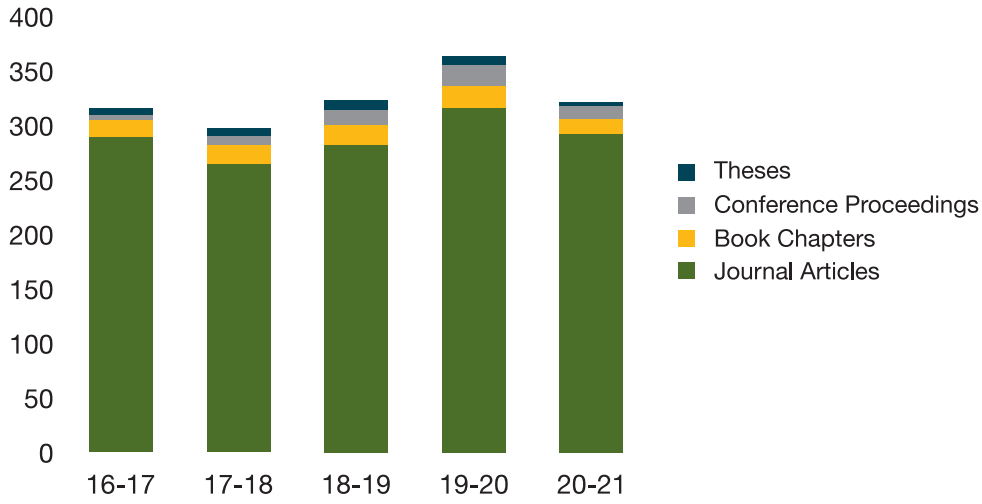
Number of references to Austroads research



As a member of the World Road Association (PIARC), Austroads contributes to the global exchange of knowledge on roads and road transport policy and practices within an integrated sustainable transport context. Austroads currently has 24 full or corresponding representatives on the committees.

Delivering affordale infrastructure that meets community needs

Strategic focus area

Infrastructure

Australian and New Zealand agencies manage around 974,000 km of roads, 55,000 road bridges and 100 kilometres of paved road tunnels. Effectively managing transport infrastructure throughout its lifecycle is essential for our economic development and the success of our communities. As the pressures and demands on our infrastructure increases, the need to improve its resilience grows.

Enhancing pavement performance is a major focus of Austroads' work. This year we published an evaluation framework and supporting tools to help road asset managers choose the most appropriate road surfacing and rehabilitation treatments for their network. We also published the results of research undertaken to improve the procedure for pavement rehabilitation and strengthening treatment design in Austroads' *Guide to Pavement Technology*. The new approach is being developed to ensure pavement rehabilitation design performs well under future traffic and loading conditions. A future project will enable pavement design to be based on actual manufactured asphalt mixes in Australia and New Zealand.

As reserves of high-quality materials are becoming exhausted and haulage costs increase, Austroads is exploring the use of new materials in pavement construction. During the year we finalised a project designed to increase the use of low-cost modified granular materials in new and rehabilitated pavements by delivering a new process for pavement designers. An ongoing Austroads project will provide guidance on the performance of plant-mixed foamed bitumen materials in combination with reclaimed asphalt pavement (RAP) and other marginal materials. Further innovative solutions are being explored in a project which aims to improve our understanding of the appropriate use of thin asphalt surfaced gravel pavements and designs for increased reliability or lower cost.

Future work is planned to maximise the potential of existing pavements. Next year a project considering the remaining life in the design of pavement rehabilitation treatments will identify ways to improve the sustainability of existing bound pavement layers, rather than simply removing them as waste. Another project aims to reduce rehabilitation costs by increasing the use of anti-reflective cracking interlayers and more resilient asphalts. Further work will identify binders that are more resistant to cracking and refine Austroads' polymer modified binders specification, which has the potential to increase pavement life and provide significant savings in maintenance and whole-of-life costs.

Infrastructure assets such as roads, bridges and tunnels are built to last for many decades. Austroads continues to deliver on its commitment to assist practitioners in adopting sound asset management processes. During the year we published *Engineering Guideline to Bridge Asset Management* which gives practical guidance on applying the ISO 55000 principles of asset management to address the unique characteristics and needs of bridges. This guideline was developed to provide specific asset management guidance for road bridges, and promotes an engineering approach (engineering principles, knowledge, experience and modelling tools) as being the only robust method for understanding the current and future condition and needs of a bridge network. About 1500 copies of the guideline have been downloaded.

Over recent years there have been a number of incidents of structural failures of sign and high mast lighting structures across Australia and New Zealand. These failures often result in fatalities, injuries, asset damage or significant disruption to road users. Aiming to reduce the risk to the relevant authorities, road users and community, we published a new guideline documenting national and international best-practice advice for the design and construction of these structures.

A revised edition of Austroads *Guide to Road Tunnels Part 2: Planning, Design and Commissioning* was released. It introduces systems engineering techniques to help road managers deliver new tunnels. Next year we will embark on new projects examining the best-practice approaches to design, deliver and test road tunnel aesthetic features and road tunnel wall panels.

Managing the increasing road freight task is a significant challenge for infrastructure managers. To protect pavement infrastructure from wear and damage, a nationally consistent approach for understanding and comparing the pavement impacts of Performance Based Standards (PBS) vehicles is being developed. We are also examining ways to optimise freight access by developing detailed guidance for assessing the structural capacity of road bridges to carry heavy vehicular loads and maximise safety.

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Austroads continues to deliver on its commitment to assist practitioners in adopting sound asset management processes.

Austroads is also seeking a way to better manage the impacts of works associated with utilities located in the road reserve. A future strategy will improve safety for road users and provide Austroads member jurisdictions and third parties with opportunities for innovation, adaptability, and cost savings.

To keep abreast of all the most recent and important information relating to the quality, efficiency and resilience of road transport infrastructure, Austroads participates in and contributes to the global exchange of knowledge as a member of the World Road Association (PIARC) with representatives on the Road Infrastructure and Transport Security Task Force as well as on Asset Management, Pavements, Bridges and Tunnels technical committees.

Optimising the benefits of new technologies

Strategic focus area

Technology

Transport agencies need to manage a continual disruptive flow of new technologies; assessing their potential benefits, mitigating risks and upskilling staff to effectively oversee their implementation and lifecycle management. Austroads continues to support its members to identify and prepare for technologies that could significantly impact on their businesses and customers.

Vehicles with more automated features are gradually being introduced into Australia and New Zealand. To help agencies prepare, we published an online library of detailed case studies of technology trials conducted around Australia and New Zealand. Each case study offers lessons to be learned and allows road agencies to better focus their research investment and inform policy and strategy decisions. The library will be updated as information about new trials becomes available.

To support new trials of AVs, the National Transport Commission and Austroads jointly published an update to the *Guidelines for trials of automated vehicles in Australia*. The guidelines set out criteria that must be addressed in any application for an automated vehicle trial. They are intended to promote Australia as a testbed for automated vehicle technology.

During the year we prepared an update to the Future Vehicles 2030 forecasts released in 2020, which indicates a more rapid adoption of safety technology but a slowing of the introduction of highly automated driving. The update forecasts the proportion of new light vehicles sold and in the fleet with advanced safety technology, automation, connectivity, and electric power sources. The forecasts are used by transport agencies and Austroads Future Vehicles Program to inform priorities in research, policy development and planning.

Automated steering functions, which have been shown to have road safety benefits, rely on machine-vision systems which use pavement markings and roadside features, such as kerbs and shoulders, to align the vehicle to the road. We published research examining how longitudinal pavement markings affect automated steering functions and whether changes to current design and maintenance practices could improve the support lane markings provide for advanced drivers assistance systems and in the future automated vehicles. A cost-benefit analysis found that when longitudinal pavement markings are improved, the potential discounted crash benefits exceed the discounted capital and maintenance costs by 3.28 benefits-to-costs ratio.

We also published electronic sign readability criteria for use by jurisdictions in the design and testing of electronic signs. It considers the requirements of traffic sign recognition systems in current vehicles and those soon to enter the market.

We will be developing an analysis model to help road operators understand the benefits and costs of improving their road and roadside infrastructure, versus having vehicle manufacturers to develop more vehicles that can automatically navigate roads, regardless of the quality of road and roadside infrastructure.

To address the lack of information and clarity around the use of 5G technology in vehicle and infrastructure connectivity and its impact on road agencies' operations, new research will explore 5G use-cases in transport and requirements for developing and reviewing legislation that accommodates automated driving systems.

Australian and New Zealand transport agencies are responsible for safely and efficiently operating smart motorways schemes with increasingly complex technology and operational scenarios. To support jurisdictions and enhance their smart motorways operations, we are developing a nationally consistent capability framework for agency staff and scoping potential training materials.

As part of the efforts to assist road transport agencies in their deployment of consistent and interoperable intelligent transport systems (ITS), we will be developing practical guidance on how to apply the Austroads National ITS Architecture Framework (NIAF) to multimodal incident management. We will also review and capture learnings from all the member agencies to produce guidelines for best-practice in ITS testing, asset management and maintenance.

We are developing a *Guide to Digital Engineering* to accelerate the adoption of digital engineering to enable more productive methods of planning, design, construction, operation and maintenance of assets.

We are also working on a range of sustainable and value-for-money software solutions. Digital platforms will help deliver a new Guide to Transport Operations Management, new safety toolkits, and an online system to improve the design, efficiency and performance of treatments that extend the life of existing road assets. Additionally, the functionalities of Austroads Pavement Analysis Design Software AustPADS will be updated to resolve capacity and user issues.

The Austroads vehicle classification scheme was published in 1994. Since then, vehicles and detection solutions have evolved significantly. Some vehicle types, such as motorcycles and bicycles, are grouped into a single classification but the detection technology can identify these vehicles separately. Some commonly used heavy vehicle combinations are not included in the classification scheme. The classification scheme is being updated and extended to better represent current and future vehicles for the needs of traffic surveys.

Austroads is collaborating with SPARC Hub at the Monash University Department of Civil Engineering to lead the effort in implementing intelligent compaction (IC) technology across Australia. Austroads is also a partner in SmartCrete Cooperative Research Centre, a program to facilitate research about the concrete supply chain. The program is investigating a range of innovative technologies, including 3D printed concrete structures, bio-concrete and CO2 absorbing, luminescent and energy producing concrete.

We are also active on the international scene contributing to MAX: Michigan Australia Exchange In Mobility – a partnership between the Australian Government and the State of Michigan. It aims to enhance cooperation in transport research, technology, entrepreneurship and innovation to accelerate potential social and economic benefits for future generations and vulnerable sectors of society around the world.

As a member of the World Road Association (PIARC), Austroads shares its expertise in the fields of new technologies and digitalisation on two committees – the Road Network Operation/ITS and Automated Vehicles – Challenges and Opportunities for Road Operators and Road Authorities.

Strategic focus area

Managing and harnessing the decision-making power of data

Data

Data can be the greatest asset that an organisation holds, but data simply held in a system has no value. It is through use that data becomes valuable in providing insights to support decisions and potentially gain competitive or operating advantage. To build value across an organisation, data must be available and trusted.

In road asset management, data is often siloed, of poor quality, held in varied, disparate systems and collected intermittently. As a result, the value of data is not well understood or leveraged to support decisions and forward planning around road maintenance.

Research shows national, state and local road managers can achieve significant benefits and cost savings by being able to share common data. To enable collaboration and the adoption of best-practice approaches across jurisdictions, Austroads is undertaking a multi-stage project to standardise and automate ways of recording and sharing road asset information.

To date, the project has delivered the *Data Standard for Road Management and Investment in Australia and New Zealand* which caters for different levels of road asset complexity and asset management planning. The Data Standard contains nearly 1,000 data fields and so to support its implementation a smaller core priority dataset has been identified. Austroads is now building a knowledge sharing platform where road managers can report activities, collaborate and share insights. A reporting portal will supplement the knowledge sharing platform. It aims to increase the adoption of the priority dataset across both local and state government.

During the year Austroads completed an evaluation of emerging technology designed to collect road pavement performance data. The report summarises current and emerging data collection technologies and proposes and tests a technology evaluation framework. Each technology was evaluated for accuracy, spatial coverage, conformity, affordability, accessibility, local availability and maturity.

Connected and automated vehicles are expected to provide an opportunity to continually collect a range of data in the future. A new project will investigate and potentially pilot a vehicle-generated data exchange allowing transport agencies to explore the value of vehicle generated data for improving road safety, network efficiency, maintenance, infrastructure investment and environmental sustainability.

Over time, there is an expectation that emerging data collection technologies will become more accurate as machine learning algorithms improve and even more affordable. Austroads is developing a proof-of-concept decision-support system that applies machine learning to network condition and inventory data.

Smart transport is based on data sharing. A project examining how might road agencies provide agency-owned high priority data to map makers, connected and automated vehicles and C-ITS devices is well progressed. The project will define the target conceptual reference architecture and requirements for the provision of the selected static and dynamic data for a set of agreed data sets.

We are also researching cloud connectivity data provision business models and practices as well as trends that may potentially affect these models and practices over the next 10 years.

During the year Austroads completed a project documenting the registration data requirements for automated vehicles and electric vehicles. The project found that most of the registration requirements are covered adequately by existing registration data sets but that a small number of additional data items and definitions are required to effectively manage their subsequent road access and use. The project proposed a system-to-system approach to data capture and sharing between third-party data creators, the National Exchange of Vehicle and Driver Information System (NEVDIS), jurisdiction registration systems and end users. A new project will prepare for the addition of electric, hybrid and automated vehicle attributes into NEVDIS.

Austroads will soon publish the results of a three-year project which has investigated different aspects of the requirements, gaps, and opportunities for supplying infrastructure data suitable for supporting a future heavy vehicle cost recovery and investment process. Increasing the amount and improving the quality of nationally consistent information about the nature and condition of Australia's roads, is a critical component of building a more efficient, fairer system for making decisions about road spending.

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The Asset Register, Heavy Vehicle Infrastructure Ratings, and investigations of data availability, quality, and structure that were the focus of this project are all part of a package of measures that aim to establish an openly available baseline of information required to transition to the provision of heavy vehicle infrastructure as an economic service over the longer term. A future project will investigate developing a pilot web-portal to provide access to integrated heavy vehicle movement and road infrastructure data.

As road tunnels form an important part of the road network, establishment of tunnel safety measures is a high priority. We are developing an information system using modern database technologies to allow road agencies and tunnel operators to efficiently store and access fire incident safety data for tunnels across Australia.

We are also undertaking work to improve the measurement and reporting of non-fatal and disabling injury crashes. Crash data collected by Australian states and territories is currently being aggregated to develop a suitable national injury measure. There are clear potential benefits to using hospital data to supplement crash data, and international research supports the data linkage approach. The development of nationally consistent non-fatal crash data is vital to our understanding of the nature and impact of serious injury crashes on the Australian community and trends over time. This information will underpin the development of the shared policy response of Australian governments.

Reusing materials, reducing emissions and mitigating the impacts of climate change

Strategic focus area

Sustainability

We are supporting our member agencies as they transform transport systems to be environmentally, economically and socially sustainable. This work is essential to tackle climate change, create liveable places, support the better health and wellbeing of our communities, and protect our unique flora and fauna.

During the year the Board approved the establishment of an Environment and Sustainability Program. The Program's vision is that environment and sustainability outcomes are at the heart of transport decision-making. The Environment and Sustainability Task Force, which has representatives from all Australian and New Zealand transport agencies, is a trans-Tasman collaboration providing leadership and best-practice guidance and driving improvements in environment and sustainability in transport.

The work of the Program is focused around five key themes: climate change resilience; biodiversity; human health; circular economy outcomes; and greenhouse gas emissions. The Task Force is developing a pipeline of projects. The first, which will start next financial year, will examine best-practice environment and sustainability reporting and consider changes to the *Austroads Guide to Environmental Reporting*.

A significant focus of Austroads' work is to help members understand the performance of reused materials, provide standards that support sustainable material use and waste reduction in project delivery, and extend the performance of existing infrastructure.

We are currently managing a series of projects examining the sustainable use of recycled materials in roads and road assets. This includes the use of road-grade recycled plastics in asphalt pavements, crushed glass in road infrastructure and crumb rubber in asphalt and seals.

Only 11.5% of the 3.5 million tonnes of plastics consumed in Australia in 2018-19 were recycled. During the year Austroads prepared interim guidance on the use of recycled waste plastic in surfacing applications on local roads. The guidelines focus on how plastics could be incorporated into asphalt or sealing work and include flow charts, forms and examples that will provide support in assessing products and technology. The interim guidelines are intended for use by local government for the surfacing of local roads. These are roads that primarily provide access to properties and do not experience heavy traffic volumes or a high proportion of heavy vehicles.

Crumb rubber is predominantly obtained from vehicle tyres. Every year Australia and New Zealand produce more than 510,000 tonnes of end-of-life tyres. The use of crumb rubber binders in road construction allows tyres which have reached their end-of-life to be used for productive outcomes, rather than sent to landfill or sent overseas where they are often burned. Austroads is working towards including crumb rubber binders in the Austroads polymer modified binder specification. This will be a significant step towards enabling increased use of crumb rubber in road pavements.

During the year Austroads published research undertaken to identify opportunities to improve the pavement rehabilitation and strengthening treatment design procedures included in Austroads *Guide to Pavement Technology*. The evolution from the empirical methods to mechanistic-empirical approaches provides a real advantage, allowing designs to be adjusted so that they perform well under future traffic and loading conditions. It also encourages the use of new materials, which is essential in these times of budget pressures and scarcity of raw materials.

In many countries, including Australia, reclaimed asphalt pavement (RAP) is by far the most recycled construction waste product. A current project is investigating the properties of binder rejuvenators for use in asphalt containing RAP and the performance of mixes containing these materials. This is expected to lead to an increased acceptance of rejuvenators and increase the RAP content in new asphalt.

An update to the *Guide to Road Tunnels* is also underway. This project will develop guidance on how to consider and address sustainability throughout the lifecycle of a road tunnel. This will include the efficient use of energy, water and natural resources in construction and operation of tunnels.

Another focus of our sustainability work is on the reduction of vehicle emissions which has the potential to significantly reduce the carbon footprint of road transport.

Australia and New Zealand have old truck fleets, with an average age of 15 and 18 years respectively. Pre-1996 trucks operating in urban areas impose an average pollution-related health cost on the community of between 37 cents and 91 cents for every kilometre they travel in urban areas. Austroads released research during the year that identified measures that have been effective in other jurisdictions to influence the use of older trucks. It assessed these options for their likely effectiveness in Australia and New Zealand.

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Another focus of our sustainability work is on the reduction of vehicle emissions which has the potential to significantly reduce the carbon footprint of road transport.

Current projects are preparing standardised signage and pavement symbols for low and zero emission vehicles and guidelines for the installation of low and zero emission vehicle charging infrastructure.

Our collaboration with the World Road Association is helping to develop uniform and holistic approaches to climate change and other hazards resilience and updating the PIARC Climate Change Adaptation Framework. We also have a representative working towards real-time evaluation of pollution and mitigation measures during operations, noise mitigation, and reducing the impact of road and road transport on wildlife habitats.

We are also in the process of establishing a formal environmental collaboration with the US. Federal Highway Administration, the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications and RMIT.

Improving safety for road users and workers

Strategic focus area

Safety

Around 1,500 people lose their lives each year in road crashes in Australia and NZ. Another 40,000 people suffer serious injuries each year. Australia and New Zealand have committed to the elimination of road deaths. With a growing number of states, territories, cities, shires and municipalities announcing ambitious harm reduction targets, Austroads members and other safety agencies are working together to find solutions to tough policy and implementation challenges.

Austroads has been at the forefront of developing the guidance and evidence to support the implementation of life saving initiatives and road designs. Austroads has representatives on two committees of the World Road Association (PIARC) assessing and identifying the best-practice for road safety activities and analysing the reliability of current road design standards. Our completed and ongoing projects are focused on developing a path to zero deaths and serious injuries through a holistic approach to the safety of all people using the road.

The safety of workers and road users at road worksites is a key area of concern for Austroads member agencies. In 2019, we published the *Guide to Temporary Traffic Management* and are working towards a technical update that will be published in the second half of 2021 as part of the continuous improvement of the guidance. In August 2021, a dedicated Task Force was established to lead the operationalisation of the training, prequalification and traffic control device assessment schemes.

A prequalification industry consultative group and a registered training organisation working group have been established to help inform the ongoing development of the harmonised approach to temporary traffic control at road worksites. In December 2020, Austroads brought together over 100 representatives from local councils to provide an update on the national prequalification and training schemes and explore impacts and interest from a local government perspective. More consultation will take place in 2021 prior to the schemes being launched in operations.

During the year we finalised a project to restructure the *Guide to Road Safety* to reflect Safe System principles. The restructure identified further updates to the guide are necessary, particularly, the inclusion of contemporary guidance on integration of Safe System approach into Movement and Place, linkages with Network and Corridor Planning and Operation, recent innovations in road safety and best-practice practitioner training. An upcoming project will update *Guide to Road Safety Part 2: Safe Roads* to address these recommendations. We are also expecting to publish an update to *Part 6: Road Safety Auditing*. To support the updates, a parallel project will optimise Austroads' online road safety tools and applications.

The *Guide to Road Design* was also updated. The former parts 1, 2 and 8 were consolidated into a new Part 1 to provide practitioners with a detailed description of the critical aspects of road design. A new Part 7 was created to include design-related knowledge, findings from research and practical experiences about new and emerging treatments.

More improvements to the *Guide to Road Design* will be coming in the next year. A practical and consistent risk-based methodology for implementing extended design domain or design exception solutions that are required where local constraints prevent the adoption of normal design dimensions and features will be included in the new Part 2 of the guide. An update to Part 3 will provide expanded information to assist designers where they are considering compromises to normal, desirable geometric standards and when they need to make informed decisions related to the design of barrier and other median safety treatments.

In addition, we will review supplementary guidance that currently exists outside the *Guide to Road Design* and will make changes to ensure that information that is available to practitioners is up to date and applied consistently across member agencies.

We invested in a series of research projects during the year which examined specific treatments and their impacts on road safety. We assessed the attributes of overtaking lanes in New Zealand, South Australia and Western Australia and determined which features of the lanes and the environment into which they are installed are associated with an increase or decrease in crashes. We also published research detailing the application of raised safety platforms used to reduce the maximum comfortable operating speed for vehicles to Safe System collision speeds, particularly at signalised intersections above 50 km/h. Next year we will be conducting a pilot of innovative road design treatments with the aim of reducing the number of motorcyclist casualties on high-risk sections of road through mountainous terrain.

Austroads is also investing in projects to encourage safer driving behaviours and promote national consistency in licensing practices.

Walking is a critical component of our transport system, and the safety and security of pedestrians is an important focus for Austroads member agencies. During the year Austroads released a report providing up-to-date guidance on pedestrian planning and design in line with national and international best-practice. Five webinars on the subject attracted more than 2,000 attendees. During the year the Pedestrian Facility Selection Tool was updated with content from the Australian Transport Assessment and Planning Guidelines and revised New Zealand economic parameters. The tool is designed to help Australian and New Zealand practitioners select the most appropriate type of pedestrian crossing based on walkability, safety and economic outcomes.

Austroads is also investing in projects to encourage safer driving behaviours and promote national consistency in licensing practices. We have been working with the National Transport Commission on an update of *Assessing Fitness to Drive*. We are focused on helping our members to implement the standards and are working to improve online access to the new edition which is planned for release in early 2022.

To produce safe and competent heavy vehicle drivers, we are developing harmonised standards for heavy vehicle licence training and assessment as part of the final stage of the review of the existing National Heavy Vehicle Competency Framework. This will include the design and production of hazard perception test film clips and related user and psychometric testing resources for use by jurisdictions for training and testing purposes.

Stage 2 of the review of the current arrangements and policy settings relating to the recognition of overseas driver licences in Australia is also well underway.

Our future project to enhance the Learner Approved Motorcycle Scheme will update the base criteria for assessing motorcycles for novice riders, address electric motorcycles and provide flexibility to accommodate future technological changes.

We are also planning for future projects that will address driver distraction and provide road transport authorities and the driving community with a single consolidated reference of agreed policies, processes and future directions in Australian and New Zealand driver licencing operations. Furthermore, in the pipeline is a project to propose a national standardised methodology for assessing risks associated with routing dangerous goods through tunnels.

During the year NEVDIS continued to work closely with the Australian Competition and Consumer Commission on the most significant recall in Australia's history, with more than three million vehicles recalled with faulty Takata airbag inflators. To support the recall efforts, for the period from 1 July 2017 to 31 December 2020, NEVDIS extracted data for a total of 23,289,736 (non-unique) vehicles and waived an associated $6 million in fees.


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Strategic focus area

Customers and Journeys

Austroads has a priority area to help our members understand and meet customer needs. Many road users value smooth, reliable, and safe road networks that apply consistent and reasonable conditions on using those roads. Road agency customers are users of the road network including motorists, cyclists and pedestrians, many of whom have their use regulated to enhance safety or the value of the road assets. Australians and New Zealanders together travel more than 300 billion km on roads each year. Austroads is working with agencies to help them ensure their customers' experiences and their end-to-end journeys are seamless and supported by technology and data.

The management of urban congestion is important to road users and the economy.

During the year Austroads released a research report which presents a practical process to guide practitioners through the selection of treatments that prioritise public transport on roads. On-road public transport is an efficient way of moving people between their homes, employment, recreation and services, with less road space required per passenger than private car use. This step-by-step process can be used to assess options on existing or new roads. It considers all forms of priority treatments, ranging from road space, stop design and location, traffic signal priority, and traffic signal gating.

Network operation planning aims to guide the operation and development of the road network while considering competing transport and land use priorities. These management activities are regularly completed and documented through the development of Network Operation Plans (NOPs), which link policy objectives and the wide range of short-term initiatives and services that are implemented as a part of day-to-day road network management. During the year Austroads reviewed the current network operations planning practices across its member agencies and developed an online library of network operations planning guidance and case studies to support the practice going forward.

An evaluation of established and emerging methodologies in freeway capacity analysis recommended practitioners consider adopting the maximum sustainable flow rate and the flow rate at maximum productivity methodologies which are currently used by Victoria Department of Transport. Freeway capacity analysis is an important process undertaken at the planning stage of freeway construction or upgrade projects to determine the number of lanes for mainlines and entry or exit ramps, as well as for anticipating levels of service along the route. Freeway capacity analysis is also important for managing freeway operations to ensure peak flows are kept below capacity, reducing the probability of flow breakdown and congestion.

Road transport agencies play a key role in road incident management, in coordination with other emergency services, and most road transport agencies now consider multimodal responses for resilient mobility of people. An upcoming project will reinforce the need for multimodal considerations in road incident management and will provide best-practice guidance supported by practical examples. The guidelines for incident response vehicles and Truck-Mounted Attenuators will support the road transport agencies in their current procurement approaches.

As jurisdictions prepare for digital driver licences, we have started a project to document their current use and identify ways to ensure practice aligns with international standards, and systems are secure, effective and interoperable. Digital licences are becoming the first widespread application of digital credential technology. Their value cannot be fully realised unless all users, including those across jurisdictional boundaries, can read and validate the document presented to them. Austroads has been working with the United States (AAMVA) and Europe (EReg) to establish the International Standard (ISO 18013-5) for recognition of digital credentials between countries.

> **Efficient heavy vehicle operations underpin Australia's competitiveness and productivity.**

Efficient heavy vehicle operations underpin Australia's competitiveness and productivity. During the year Austroads published guideline for measuring and weighing special purpose vehicles (SPV) in Australia and New Zealand. These large vehicles, including mobile cranes, concrete pumps and drill rigs, are measured and weighed differently in different jurisdictions. Consequently, SPV operators crossing state borders require additional supervised measuring and weighing after their initial registration which increases complexity, costs and timeframes. The research team led field trials to support the development of a practical guideline for performing supervised measuring and weighing for use throughout Australasia. The procedures can be used prior to registration and for access.

Bridge assessment for heavy vehicles is highly complex but critically important for road safety and infrastructure protection. Currently, at a national level, bridge assessment processes are acting as a key constraint in delivering reliable and timely heavy vehicle access. This impacts on the freight and logistics industry and the sectors they support. Austroads is working on a business case that details the implementation and operational costs of a national Heavy Vehicle Bridge Assessment System. The system will increase the transparency and timeliness of access decisions and provide transport operators greater confidence in their fleet and commercial decisions.

Optimising transport investment

Strategic focus area

Investment

The road network is valued at more than $250 billion, representing the single largest community asset in Australia and New Zealand. More than $8 billion is spent each year maintaining our road networks. Transport agencies are under increasing budgetary pressure when maintaining existing or delivering new road infrastructure projects. Austroads has been developing guidance to help its member agencies find the most effective ways to identify, select and prioritise investment opportunities for the road network.

We published a risk-based prioritisation framework and tool that support investment decision-making across and within service groups, asset classes and expenditure categories. Assessing various user-defined funding scenarios, the tool compares and contrasts the investments undertaken in each scenario and provides non-technical decision-makers with easy-to-understand outputs that help evaluate the benefits, costs and risks of those scenarios, highlighting which projects must occur and outcomes that must be delivered.

The project was further supported with three investment prioritisation templates. Designed for road surfaces, bridges and traffic lights and signs, the templates cover economic metrics (net present value and benefit cost ratio of an investment); performance outcomes, fatalities avoided and hours of travel time saved; risk outcomes, measured through risk scores with and without investment; and asset condition rating, as defined by the road authority with and without the investment.

To reduce costs and improve efficiency when managing third-party assets, Austroads is assessing the full impact of third-party works in road projects (particularly utilities). The project will provide evidence to substantiate issues, highlight areas for


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change, and identify practical solutions to reduce the negative impacts of third-party assets on the delivery of road infrastructure projects.

Heavy vehicle access approval conditions vary across Australia. During the year we reviewed existing heavy vehicle road access guidelines and tools used by jurisdictional and local government road managers in Australia and New Zealand and selected international countries and created a framework and resource repository to assist road asset owners and heavy vehicle operators seeking consistent and timely decision making with respect to access assessment and compliance.

> **We will focus on project planning and controls with an emphasis on improving quality outputs and value for money in project delivery.**

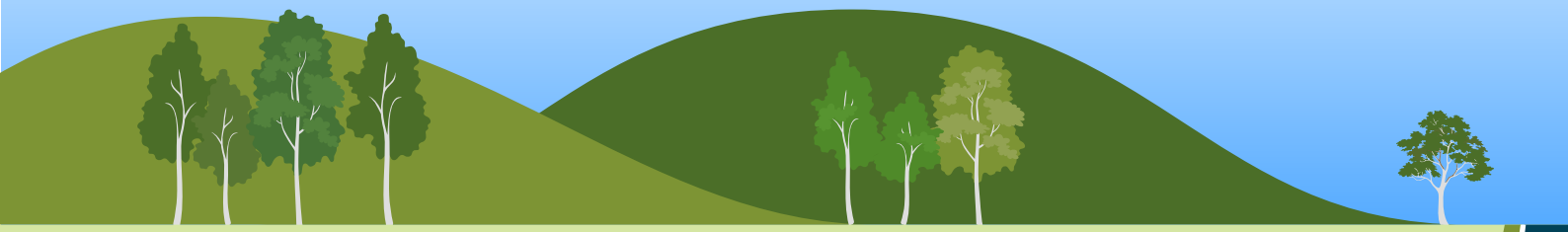
We are working to update parts 2 and 3 of the *Guide to Project Delivery* to incorporate new industry best-practice opportunities and techniques that have become available since the guide was published in 2014. We will focus on project planning and controls with an emphasis on improving quality outputs and value for money in project delivery. In updating Part 2 we will also add the tendering and contract award provisions which currently sit in Part 3 of the guide.

In 2020 we investigated the current challenges and issues affecting the delivery of 'smaller scale' transport infrastructure projects (between $1 million and $100 million) and the consequential impacts on value for money, timeliness of delivery, agency and political reputation. In continuation of this work, we are now focusing on the implementation of the two main recommendations of the project. We will develop best-practice guidance on understanding and mitigating the impacts of accelerating projects and will collaborate with transport agencies to promote best-practice and lessons learnt in areas such as planning, scoping, consultation, design, investigations and pre-works.

In consultation with Austroads members and industry, we produced a comprehensive suite of specifications for the construction of roads and bridges known as Austroads Technical Specifications. There have been 17 specifications published to date and there are a further eight in approval and 26 in consultation. The documents specify requirements for the supply of materials, treatments and infrastructure. They reflect contemporary construction practice and wherever possible, they are consistent with the relevant Australian and New Zealand standards. Industry organisations are highly supportive of standardising specifications. Different requirements can make it difficult for companies tendering for projects to standardise construction techniques or management processes. This increases costs for contractors. Lack of consistency can also lead to requirements being overlooked or misunderstood which can lead to disputes. Staff working across borders may need additional training to manage the increased risk for contractors. A set of uniform technical specifications adopted by Australia and New Zealand will lead to long-term cost savings by delivering efficiencies for industry and government. It will make contract and tendering processes easier, reduce the potential for disagreements during project delivery as well as encourage consistent skills development for construction workers.

A formal review of the National Prequalification System for Civil (Road and Bridge) Construction Contracts (NPS) in 2019 identified that mutual recognition was not occurring as it was intended because the different agencies were applying different financial criteria to determine a company's financial capacity and were not always accepting the financial prequalification levels granted by other agencies. We are working on a project to establish criteria for the financial assessment of prequalification applications which can be consistently and confidently applied by all financial assessors across all jurisdictions. The project will bring greater efficiencies for Austroads members and industry by eliminating the time and cost of duplicated financial assessments, reducing challenges to financial assessment decisions, and improving the ability for appropriately prequalified companies to tender in multiple jurisdictions.

12 Months of Milestones



JUL 2020

Tactical urbanism webinar attracts 1,300 participants

Specification for the supply and placement of steel for concrete reinforcement published (400 downloads)

Austroads technical expertise informs **update of four Australian standards for bitumen** and related products used in road construction

Classifying, Measuring and Valuing the Benefits of Place on the Transport System published (1,000+ downloads)

AUG 2020

Updated edition of **Guide to Road Design Part 6: Roadside Design, Safety and Barriers** published (13,000 downloads)

Project documenting the registration data requirements for automated and electric vehicles completed

SEP 2020

Implications of Pavement Markings for Machine Vision report published (800 downloads)

Harmonised procedures for weighing and measuring special purpose vehicles or mobile plant released (250 downloads)

OCT 2020

New priority datasets for local government of the **Data Standard** released

Austroads **road infrastructure audit specification** shortlisted as a finalist in the ITS Australia's Connected and Automated Vehicle Award

NOV 2020

Updating Austroads Pedestrian Planning and Design Guidance in line with International Best-practice published (1,200 downloads)

DEC 2020

Joint NTC and Austroads **Guidelines for trials of automated vehicles in Australia** published (500 downloads)

Traffic management online training resource published (4,000+ video views)

JAN 2021

Engineering Guideline to Bridge Asset Management published (1,400+ downloads)

Design and Construction Guidelines for the Delivery of Large Cantilever and Gantry Structures published (900 downloads)

FEB 2021

2,000+ practitioners attend a series of **5 webinars** about designing and planning for pedestrians

Online **Network Operation Planning library** launched (3,500 page views)

Updated **Guide to Road Tunnels Part 2: Planning, Designing and Commissioning** published (1,000+ downloads)

MAR 2021

New **Guide to Road Design Part 7: New and Emerging Treatments** published (900+ downloads)

Updated **Guide to Road Design Part 1: Objectives of Road Design** published (1,000+ downloads)

APR 2021

Analysis of the impacts of an aging heavy vehicle fleet published (600 downloads)

Overview of the type, volume, and price of recycled plastics and their possible uses in asphalt published (850 downloads)

MAY 2021

Web library launched of curated lessons learned from Connected Vehicle, Automated Vehicle and Low Emission Vehicle trial projects (2,500 page views)

JUN 2021

New Environment and Sustainability Program announced

28 new projects approved for 2021-22

Thank You

Task Force Members

We are grateful for the ongoing support, dedication and professionalism of our task force members. We rely on their knowledge and expertise and are thankful for their exceptional service to Austroads that they provide in addition to their day-to-day work.

They contribute their time providing expert advice and technical guidance, attending meetings and managing projects as well as representing Austroads member agencies' position when negotiating projects and identifying opportunities. We greatly appreciate their generosity and commitment.

We also acknowledge David Bobbermen, who retired from the position of Road Safety and Design Program Manager in this financial year, and John Wall who returned to his role at Transport for New South Wales after leading the Future Vehicles and Technology Program. Their leadership was invaluable to Austroads.

Transport Infrastructure Program

Assets Task Force		
Andrew Cooper, TfNSW	David Jansen, DoT VIC	Ian Roberts, DoT VIC
Vineta Risteski, DoT VIC	Andrew Golding, QLD DTMR	Michelle Baran, QLD DTMR
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Nelson Mendoza, DIT SA	David Darwin, NZTA	John MacDonald, NZTA
Fiona McLeod, DSG TAS	Gareth Prosser, DITRDC	Georgia O'Cianain, DITRDC
Tarique Memon, DIPL NT	Bryan Matyorauta, DIPL NT	George Diamand, TCCS ACT
Kym Foster, ALGA	Murray Erbs, IPWEA	Ramon Staheli, NTC
Dr Michael Moffatt, ARRB	Eliz Esteban, Austroads	Ross Guppy, Austroads

Pavements Task Force		
Hugo van Loon, DIT SA	Les Marchant, MRWA	Adam Leslie, NZTA
David Alabaster, NZTA	Mike Pickering, QLD DTMR	Andrew Papacostas, DoT VIC
Sam Henwood, TfNSW	Barry Walker, DSG TAS	Philip Stacey, DIPL NT
Paul Keech, ALGA	Anna D'Angelo, AfPA	Kym Neaylon, CPEE
Stuart Dack, AustStab	Jason Nairn, CCAA	John Nichols, CCAA
Bryan Pidwerbesky, CC NZ	Stacy Goldsworthy CC NZ	Phil Herrington, WSP
Dr Robert Urquhart, ARRB	Dr Didier Bodin, ARRB	
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Bridges Task Force

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Road Tunnels Task Force

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John Hawes, AFAC	George Mavroyeni, AECOM	Dr Richard Yeo, ARRB
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Project Delivery Task Force

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Austroads Technical Advisory Group (ATAG)

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Chris Harrison, TfNSW	Mark Smith, TfNSW	Dr Christian Christodoulou, TfNSW
Richard Underhill, DIPL NT	Eliz Esteban, Austroads	Ross Guppy, Austroads

Road Safety and Design Program

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Frances Stanford, JACS Directorate ACT Government	Adrian Ison, JACS Directorate ACT Government	

Environment and Sustainability Program

Environment and Sustainability Task Force		
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Future Vehicles and Technology Program

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Transport Network Operations Program

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Freight Task Force		
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Peter Caprioli, NHVR	Mandi Mees, NTC	Richard Delplace, Austroads
Jose Arredondo, NHVR	Gavin Hill, TCA	Norah Disha, Austroads

Temporary Traffic Management Task Force		
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Benjamin Hubbard, TCCS ACT	Gabby O'Neill, DITRDC	Richard Delplace, Austroads
Craig Walker, TfNSW	Ian Smith, DIPL NT	Norah Disha, Austroads
Denise McIntyre, DSG TAS	Les Marchant, MRWA	Chris Koniditsiotis, Austroads
Dennis Walsh, QLD DTMR	Stephen Pascale, DIT SA	

Austroads Awards

Each year, Austroads Awards recognise the contribution of individuals from member organisations to our work program.

The people managing Austroads projects and serving on task forces and working groups often undertake that work in addition to their every-day duties. The awards acknowledge their efforts and commitment on which our success depends. In 2020-21, Austroads recognised the following people for their exceptional service.

Outstanding Service Awards

David Bobbermen, Austroads/QLD DTMR

For his leadership as the Road Safety and Design Program Manager for more than five years. Prior to taking up the role, he worked in Queensland Department of Transport and Main Roads. David's work led to significant improvements on the Bruce Highway and a reduction in serious crashes.

Jon Douglas, QLD DTMR

For his contribution to Austroads as a former Safety Program Manager, his leadership and expertise in the Traffic Management area over a long period of time and his contribution to PIARC.

Kym Foster, ALGA

For his application of the work of Austroads in the development of ALGA Local Government Road Policy and the promotion of the resources of Austroads to councils across Australia.

Bob Allen, Sydney Harbour Tunnel

For his outstanding contribution to Austroads and tunnel technology throughout Australasia over many years.

Robert Vos, AfPA/AAPA

For his outstanding drive, work ethic, and ability to steer industry to a better future and contribution to Austroads for over 20 years.

Peter Ellis, TfNSW

For his leadership and exceptional contributions to the Road Design Task Force over a long period of time.

Cheryl Richey, TfNSW

For her leadership and exceptional contributions to the Registration & Licensing Task Force over a long period of time.

Special Commendation

Geoff Hughes, NMVTRC

For his contribution to the Registration & Licensing Task Force over many years and for his long-term commitment to vehicle theft reform through involvement in initiatives such as the National Written Off Vehicle Register (WOVR) for both light and heavy vehicles.

Stuart Dack, AustStab

Outstanding contribution to Austroads and pavement technology throughout Australasia over many years.

Achievement Awards

Graham Hobbs, QLD DTMR

In recognition of his ongoing contribution to the Project Delivery Task Force in terms of participation and commitment to the objectives of Austroads and through his exceptional work on and management of an important project for the Transport Infrastructure Program: *Optimising Project Delivery Performance* (APD6174).

Andrew Wong, QLD DTMR

In recognition of his management of an important project for the Transport Infrastructure Program: *Design and Construction Guidelines for the Delivery of Large Cantilever and Gantry Structures* (ABT6196).

Shashi Lakshminarasimhaiah, Waka Kotahi (NZTA)

In recognition of his management of Network project NTM6189 on passing/overtaking lanes throughout FY19/20 and FY20/21.

Jason Venz, QLD DTMR

For his exceptional work in coordinating Austroads' efforts in the definition and development of the national ITS architecture between 2011 and 2020.

Alex Hendricks, MR WA

For his leadership of the newly formed Transport Management Centre Technical Reference Group under the Network Task Force.

Geoffrey McDonald, QLD DTMR

For his contribution and expertise to the Future Vehicles and Technology Program and its predecessor the Connected and Automated Vehicles Program over many years.

Publications and Webinars

1 July 2020 – 30 June 2021

Research reports	
AP-R653-21	Investment Prioritisation Templates User Guide
AP-R652-21	Australasian Pedestrian Facility Selection Tool version 2.2.1: User Guide
AP-R651-21	Next Generation Asset Data Collection: Road Pavement Performance
AP-R650-21	Strategy for an Improved Mechanistic-empirical Flexible Pavement Treatment Design
AP-R649-21	Prolonging the Life of Road Assets Under Increasing Demand
AP-R648-21	Use of road-grade recycled plastics for sustainable asphalt pavement – Overview of the recycled plastic industry and recycled plastic types
AP-R647-21	Management of Traffic Modelling Processes and Applications
AP-R646-21	Network Operation Planning – Case Studies and Capability Building
AP-R645-20	On-Road Public Transport Priority Tool
AP-R644-20	Improved Traffic Management Guidance: Freeway Capacity Analysis
AP-R643-20	Opportunities to Build Capacity in Traffic Management
AP-R642-20	Effectiveness and implementation of raised safety platforms
AP-R640-20	Development of Design Procedures for Lightly Bound Cemented Materials in Flexible Pavements
AP-R639-20	Updating Austroads Pedestrian Planning and Design Guidance in line with International Best-practice
AP-R638-20	Innovation and Best-practice in Performance Measurement and Transport Outcomes
AP-R637-21	Options for Managing the Impacts of Aged Heavy Vehicles
AP-R636-20	Best-practice approaches to road freight and communities
AP-R635-20	Improved Guidance on Interrupted Traffic Flow Theory
AP-R634-20	Scoping Study for a National Heavy Vehicle Bridge Assessment System
AP-R633-20	Implications of Pavement Markings for Machine Vision
AP-R632-20	Harmonisation of Measurement and Mass Assessment Procedures for Special Purpose Vehicles (SPVs) in Australasia
AP-R631-20	A Holistic Investment Prioritisation Framework for Road Assets
AP-R630-20	Optimising Project Delivery Performance
AP-R629-20	Decision Making Framework and Tools for Road Freight Access Decisions
AP-R628-20	Background to the Development of the 2020 Edition of Guide to Road Design Part 6
AP-R627-20	Guidance and Readability Criteria for Traffic Sign Recognition (TSR) Systems Reading Electronic Signs

Guides (minor edition updates)	
AGPT03-09	Guide to Pavement Technology Part 3: Pavement Surfacings
AGPT04C-17	Guide to Pavement Technology Part 4C: Materials for Concrete Road Pavements
AGRD03-16	Guide to Road Design Part 3: Geometric Design
AGRD04-17	Guide to Road Design Part 4: Intersections and Crossings – General
AGRD04A-17	Guide to Road Design Part 4A: Unsignalised and Signalised Intersections
AGRD05-13	Guide to Road Design Part 5: Drainage – General and Hydrology Considerations
AGRD05A-13	Guide to Road Design Part 5A: Drainage – Road Surface, Networks, Basins and Subsurface
AGRD06A-17	Guide to Road Design Part 6A: Paths for Walking and Cycling
AGRD06B-15	Guide to Road Design Part 6B: Roadside Environment
AGRT02-21	Guide to Road Tunnels Part 2: Planning, Design and Commissioning

Guides (major edition updates and new Guides)	
AGRD01-21	Guide to Road Design Part 1: Objectives of Road Design
AGRD06-20	Guide to Road Design Part 6: Roadside Design, Safety and Barriers
AGRD07-21	Guide to Road Design Part 7: New and Emerging Treatments and Supplements
AGRS01-21	Guide to Road Safety Part 1: Introduction & The Safe System
AGRS02-21	Guide to Road Safety Part 2: Safe Roads
AGRS03-21	Guide to Road Safety Part 3: Safe Speed
AGRS04-21	Guide to Road Safety Part 4: Safe People
AGRS05-21	Guide to Road Safety Part 5: Safe Vehicles
AGRS07-21	Guide to Road Safety Part 7: Road Safety Strategy and Management

Guidelines	
AP-G96-21	Interim Guidelines for the Use of Recycled Plastics in Local Government Road Surfacing Applications
AP-G95-21	Design and Construction Guidelines for the Delivery of Large Cantilever and Gantry Structures
AP-G94-21	Engineering Guideline to Bridge Asset Management

Technical Reports	
AP-T357-21	Technical Basis of Austroads Guide to Pavement Technology Part 5: Pavement Evaluation and Treatment Design
AP-T356-21	Technical Basis of Austroads Guide to Pavement Technology Part 2: Pavement Structural Design
AP-T355-20	Austroads Data Standard: Priority Data Sets and Metrics
AP-T354-20	Inspections of Polymer Modified Binder Trial Sites and Ageing Properties of Binders

Internal Reports	
IR-315-21	Review of the Guide to Road Safety
IR-314-21	Austroads Data Standard: Report Mapping
IR-313-21	Austroads Data Standard: Standards Mapping
IR-312-21	Project Report Guide to Road Design Parts 1, 2, 8 and Minor Updates
IR-311-21	Use of Recyclable Material in Roads and Related Assets
IR-310-20	Passing Lane Investigations: Design, Safety and Placement
IR-309-20	Road Asset Data Standard Implementation: Data Quality Report
IR-308-20	Collating lessons learned from CAV & EV trials and pilot deployments
IR-307-20	Transitions between Steel Beam and Concrete Barriers
IR-306-20	Data Requirements to Support the Registration of Automated and Electric Vehicles
IR-305-20	Road Safety Management Tool: Scoping Study
IR-304-20	Background to the Development of the 2020 Edition of Guide to Road Design Part 6

Corporate Reports	
AP-C20-20	Austroads Annual Report 2019-20
AP-C29-20	Austroads Strategic Plan 2020-2024

Test Methods	
AGPT-T108-21	Segregation of Polymer Modified Binders
AGBT-T701-20	Alkali Silica Reactivity – Accelerated Mortar Bar
AGBT-T702-20	Alkali Silica Reactivity – Concrete Prism
AGPT-T800-21	Assessment of Retroreflectivity of Pavement Markings

Technical Specifications	
ATS 1120	Quality Management Requirements
ATS 3460	Sprayed Bituminous Surfacing
ATS 4110	Longitudinal Pavement Marking
ATS 5310	Supply and Placement of Steel for the Reinforcement of Concrete
ATS 5820	Anti-Graffiti Coatings

Webinars	
WEB-R649C-21	Development and Justification of Asset Preservation and Renewal: Investment Decision Making
WEB-R649B-21	Development and Justification of Asset Preservation and Renewal: Framework and Tools
WEB-G95-21	Design and Construction Guidelines for the Delivery of Large Cantilever and Gantry Structures
WEB-R649A-21	Development and Justification of Asset Preservation and Renewal: Report Overview
WEB-R637-21	Options for Managing the Impacts of Aged Heavy Vehicles

Webinars	
WEB-AGRD0107-21	An Overview of the New Guide to Road Design Parts 1 and 7
WEB-POW-21	Paving our ways
WEB-ATS-21	Austroads Technical Specifications for Roadworks and Bridgeworks
WEB-R646-21	Network Operation Planning – Case Studies and Capability Building
WEB-AGRT02-21	Revision of Austroads Guide to Road Tunnels Part 2: Planning, Design and Commissioning
WEB-G94-21	Engineering Guideline to Bridge Asset Management
WEB-R645-21	Improved Traffic Management Guidance: On-Road Public Transport Priority Tool
WEB-R644-20	Improved Traffic Management Guidance: Freeway Capacity Analysis
WEB-R642-21	Effectiveness and implementation of raised safety platforms
WEB-R639E-21	Pedestrian Planning and Design for Residential Areas
WEB-R638-21	Innovation and best-practice in performance measurement and transport outcomes
WEB-R619-21	Road Cross-Section Design for Road Stereotypes and a Safe System
WEB-R639D-21	Pedestrian Planning and Design for Activity Centres
WEB-R639C-21	Pedestrian Planning and Design at Intersections
WEB-R639B-21	Midblock Crossings for Pedestrians
WEB-6156	Transitions Between Steel Beam and Concrete Barriers
WEB-R639A-21	Road Space Allocation for Pedestrians
WEB-R637-21	Options for Managing the Impacts of Aged Heavy Vehicles
WEB-R643-20	Opportunities to Build Capacity in Traffic Management
WEB-R640-20	Development of Design Procedures for Lightly Bound Cemented Materials in Flexible Pavements
WEB-R635-20	Improved Guidance on Interrupted Traffic Flow Theory
WEB-R636-20	Best-Practice Approaches to Road Freight and Communities
WEB-T354-20	Inspections of Polymer Modified Binder Trial Sites and Ageing Properties of Binders (Webinar name: Outcomes from the Long-term Austroads Sprayed Seal Sites)
WEB-R632-20	Harmonisation of Measurement and Mass Assessment Procedures for Special Purpose Vehicles (SPVs) in Australasia
WEB-R633-20	Implications of Pavement Markings for Machine Vision
WEB-R631-20	A Holistic Investment Prioritisation Framework for Road Assets
WEB-R628b-20	Updated Roadside Design Guidance – Crach Risk Evaluation Procedure (2020 Edition of Guide to Road Design Part 6)
WEB-R630-20	Optimising Project Delivery Performance
WEB-R628a-20	Updated Roadside Design Guidance – Crach Risk Evaluation (2020 Edition of Guide to Road Design Part 6)
WEB-R629-20	Decision Making Framework and Tools for Road Freight Access Decisions
WEB-R626-20	Classifying, Measuring and Valuing the Benefits of Place on the Transport System
WEB-ASB-20	Standards Australia – Bitumen and Related Materials for Roads
WEB-R623-20	Future Vehicles 2030
WEB-R624-20	Procurement Decision Tool: A Case Study of the Toowoomba Second Range Crossing
WEB-TUSP-20	Tactical Urbanism – Streets for People
WEB-R621-20	Transport Modelling for Project Managers

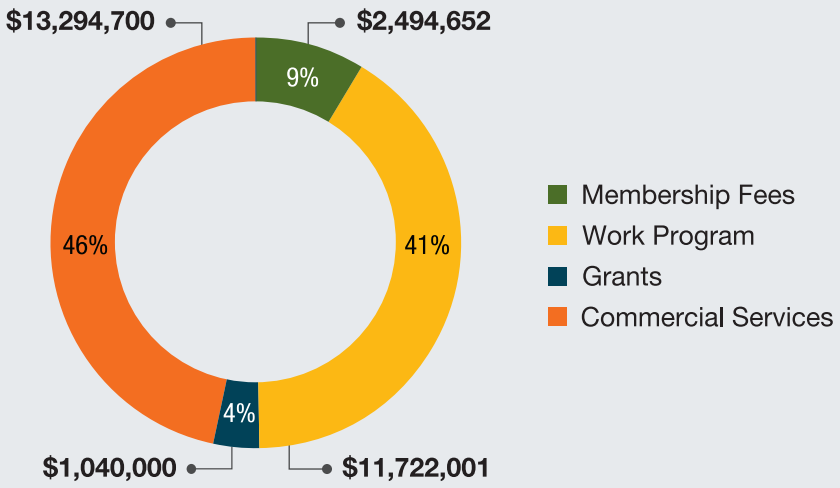
Financial Snapshot

OPERATING SURPLUS
$2.9M

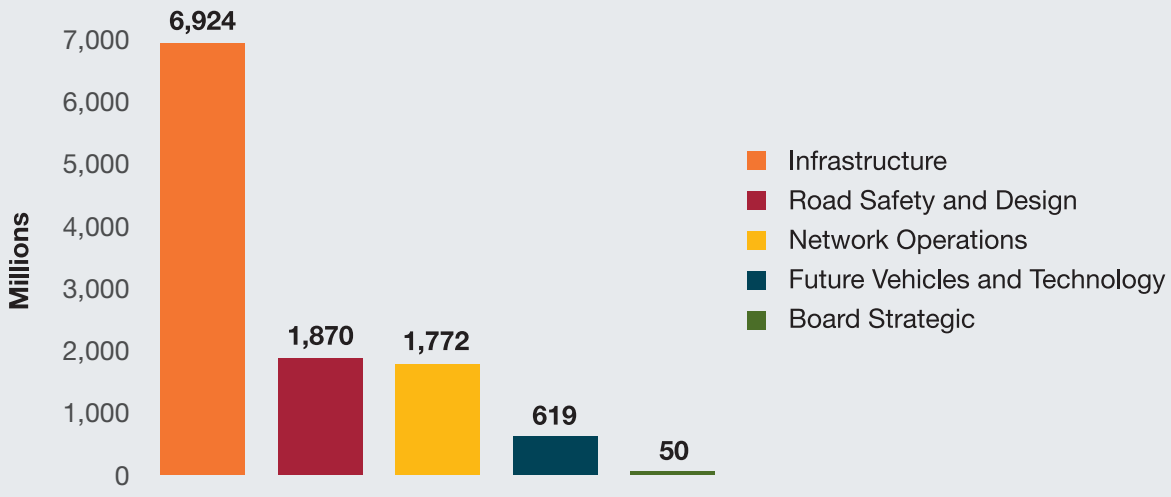
GENERATED REVENUE
$28.5M

NET ASSETS
$40M

INCOME 2020–21



PROJECT EXPENDITURE 2020–21



Financials and Directors' Reports

Table of Contents

The directors of Austroads Ltd ("the Company") present this report on the Company for the financial year ended 30 June 2021.

Directors

The names of each person who has been a director during the year and to the date of this report are:

- Neil Scales OBE
- Adrian Beresford-Wylie
- Peter Woronzow
- Louise McCormick
- Brett Gliddon
- Tony Braxton-Smith
- James Corrigan
- Gary Swain
- John Hardwick
- Robyn Seymour
- Jessica Hall (ended 2 February 2021)
- Maree Bridger (commenced 2 February 2021)

Directors have been in office since the start of the financial year and are still directors to the date of this report unless otherwise stated.

Information on Directors

Neil Scales OBE | ONC (Eng), HNC (EEng), DMS, BSc (Eng), MSc (Control Engineering and Computer Systems), MBA, CEng (UK), FIEAust, FIET, FIMechE, FICE, FCILT, FCIT, FLJMU, FRSA, FSOE, MAICD

Neil Scales is Director-General of Queensland Department of Transport and Main Roads. He was previously CEO of TransLink, the public transport operator across Queensland. Prior to joining TransLink, Neil was the Chief Executive and Director General of Merseytravel; the transport authority for Merseyside in the north of England. Along with almost 40 years experience in the transport industry, he is a Fellow of three major UK engineering institutions. He received an OBE for services to public transport in 2005 and in 2011 he was awarded an honorary Fellowship from Liverpool John Moores University for his services to the region.

Adrian Beresford-Wylie | BA(Hons) LLB

Adrian Beresford-Wylie was appointed Executive Director of the Australian Local Government Association (ALGA) in 2006. He was previously a senior public servant in the Australian Public Service and headed the area dealing with local government and natural disasters in the Federal Department of Transport and Regional Services. Other roles include head of the road safety area of the Australian Transport Safety Bureau in 2000-2002 and advisor on maritime and land transport issues to the Hon. John Anderson MP, Deputy Prime Minister and Minister for Transport and Regional Services. He began his public service career in 1984 as a Foreign Affairs Officer with the Department of Foreign Affairs. He has also worked in corporate sales in Telstra and for a large law firm in Sydney.

Peter Woronzow | BA (Economics), Grad Dip Public Sector Management, CPA

In March 2020, Peter Woronzow was appointed to the position of Acting Director General – Department of Transport, which also sees him hold the concurrent roles of Acting Chief Executive Officer of the Public Transport Authority and Acting Commissioner of Main Roads. Peter is responsible for setting the strategic direction of transport for the State, shaping the development of all major integrated transport plans and leading the implementation of some of WA's most transformational capital projects. Peter was appointed as the Managing Director Main Roads in 2018 but had been undertaking the role since 2016.

Peter is a member of CPA Australia, Chairman of the Australian Road Research Board, Director on the Board of Austroads Ltd, and is an ex officio Board Member of Infrastructure WA.

Louise McCormick | B. Eng – Civil Engineering, Dip. Project Management

Louise McCormick is an Executive Engineer, Chartered Fellow and Senior Civil/Structural Engineer with 19 years' experience in the public and private sectors. In 2021, Louise was appointed Interim Infrastructure Commissioner, Infrastructure NT within the Department of Infrastructure, Planning and Logistics. Louise has managed some of the largest transport infrastructure projects in the Territory. Louise has played an active role in Engineers Australia, and her work has been recognised through industry awards for projects and individual awards including Young Professional Engineer of the Year for the NT in 2007; Winner of the 2010 NT Telstra Business Women's Award for Innovation; National Finalist for the 2010 Telstra Business Women's Award for Innovation.

Brett Gliddon

Brett Gliddon joined the Waka Kotahi NZ Transport Agency when it was previously known as Trust New Zealand. Brett is the General Manager System Design and Delivery and is responsible for overseeing design, delivery and management of a single integrated transport system. Brett is a qualified Civil Engineer and has more than 18 years' experience in infrastructure planning, design and delivery including maintenance and operations. Brett has been involved in the development of some of New Zealand's largest infrastructure projects including the

$200M Multi Modal Northern Busway project, the $360M Northern Gateway Toll Road project (New Zealand's first Electronic Toll road), the $1.4B Waterview Tunnel Project.

Tony Braxton-Smith | MBA

Tony Braxton-Smith became Chief Executive of the Department of Planning, Transport and Infrastructure in October 2018. He is also the South Australian Rail Commissioner and Commissioner for Highways. His role encompasses overseeing a broad range of government objectives ensuring the effective delivery of services involving planning, transport and valuable social and economic infrastructure throughout the State of South Australia. Formerly the Deputy Secretary Customer Services at Transport for New South Wales for seven years, Tony's prior career spans 20 years in senior executive roles in the private sector with Great Southern Rail and Serco; Dreamworld and the P&O Group.

James Corrigan

Jim Corrigan has qualifications in urban and regional planning and environmental design and has over 25 years public sector experience in a range of positions within the ACT and NSW Governments. Jim is currently the Deputy Director-General City Services for the ACT Government which has responsibility for managing the public areas of Canberra and provision of core services including waste management, civil infrastructure such as roads and stormwater system, urban parks and associated capital works delivery.

Jessica Hall

Jessica Hall was the First Assistant Secretary, COVID Surface Transport, for the Australian Government's Department of Infrastructure, Transport, Regional Development and Communications. Prior to this, Jessica held a number of senior positions in the infrastructure, science and education portfolios, having worked on economic and social policy issues in the Australian Public Service for over 15 years. She has undertaken an executive program in infrastructure financing at Harvard Kennedy School, and has masters degree in international law and Asian studies.

Robyn Seymour

Up until 1 July 2021, Robyn Seymour was Deputy Secretary, Network Planning, and Head of Road Safety Victoria both within the Department of Transport (Victoria). Working across all transport modes, in an integrated manner, Robyn is responsible for the Department's outputs on transport strategy, system design and service planning. As inaugural head of Road Safety Victoria, Robyn is leading the consolidation and strengthening of the work of Victoria's road safety partners to reduce the road toll as part of Towards Zero strategy while also developing the next Road Safety Strategy. Robyn has worked in road safety for 20 years and is committed to reducing trauma on the roads. She held a number of senior positions most recently serving as the Chief Executive of VicRoads.

Gary Swain

Gary currently holds the positions of Deputy Secretary, Transport and Infrastructure, Department of State Growth, Transport Commissioner for Tasmania and Interim CEO of Infrastructure Tasmania. As Deputy Secretary Transport and Infrastructure, Gary's role spans network planning, capital program delivery, asset management, passenger transport policy, procurement, regulation, road safety and registration and licensing. As Commissioner for Transport he makes complex statutory decisions, and supports coordinated outcomes between road managers, particularly state and local government. Through his Interim CEO responsibilities, Gary plays a broad strategic infrastructure policy and planning role within Tasmania. Gary has more than 25 years experience, primarily in the infrastructure sectors of transport, electricity, natural gas and water and sewerage. He is Director of Austroads, Chair of Transport Certification Australia and a member of the Road Safety Advisory Council for Tasmania.

John Hardwick

John Hardwick is the Executive Director of the Asset Management Branch at Transport for NSW and is responsible for leading and enabling transport service outcomes for customers and communities through effective whole of life asset management. John was previously the Executive Director, Sydney Division for the former Roads and Maritime Services. John has a background of over 30 years in asset management within the electricity and transport industries. He is a graduate of the Australian Institute of Company Directors and serves as a board member for numerous global and Australian asset management organisations and co-authored the book Living Asset Management. In 2018 John was awarded the MESA medal by the Asset Management Council.

Maree Bridger

Maree Bridger is the First Assistant Secretary, Surface Transport Policy for the Australian Government's Department of Infrastructure, Transport, Regional Development and Communications. She is responsible for progressing the Australian Government's national reforms in surface transport policy, market reform and regulation (road, rail, and maritime), vehicle design standards and road safety. Prior to this Maree worked at Services Australia where she led a number of reforms including delivery of COVID-19 related social welfare payments and the delivery of aged care and child support services. Maree has worked in a variety of Australian Public Service senior roles including at the Department of Immigration and Border Protection and the Australian Customs Service. Prior to her time in the public sector Maree worked in a variety of private sector organisations that spanned the oil, IT and pay television/communications sectors. Maree holds an Executive Master of Business Administration from the University of New South Wales and a Bachelor of Economics from Australian National University. She is also a Certified Practicing Accountant.

Company Secretary

The following person held the position of entity Secretary at the end of the financial year:

Dr Geoff Allan

Dr Allan holds a PhD in public sector management. He commenced with Austroads Ltd on 21 October 2019 as Chief Operating Officer and was appointed Company Secretary on 2 April 2020. He was appointed as the Chief Executive in June 2020 and is also a member of the Executive Committee.

Meetings of Directors

During the financial year, four meetings of directors were held.

Attendances by each director were as follows:

Director	Eligible meetings	Meetings attended
Adrian Beresford-Wylie	4	4
Brett Gliddon	4	4
Gary Swain	4	3
James Corrigan	4	3
John Hardwick	4	4
Louise McCormick	4	4
Neil Scales	4	4
Peter Woronzow	4	3
Robyn Seymour	4	4
Tony Braxton-Smith	4	3
Jessica Hall	2	2
Maree Bridger	2	2

Alternate directors attended meetings as follows:

Alternate director	Alternate for	Meetings attended
Dennis Walsh	Neil Scales	-
Desmond Snook	Peter Woronzow	-
Emma Kokar	Tony Braxton-Smith	1
Jeff McCarthy	John Hardwick	-
Kym Foster	Adrian Beresford-Wylie	1
Nicholas Papandonakis	Louise McCormick	-

The Company is limited by guarantee and is incorporated under the *Corporations Act 2001*. If the Company is wound up, the constitution states that each member is required to contribute a maximum of $10 each towards meeting any outstanding obligations of the Company. At 30 June 2021, the total amount that members of the Company are liable to contribute if the Company is wound up is $110 (2021: $110).

Principal Activities

The principal activities of the Company during the financial year were to coordinate road transport related research and projects and to produce publications related to road transport.

The Company's short-term objectives are to:

- conduct strategic research that assists road agencies to address current and emerging issues
- develop guides to establish national consistency on technical and operational aspects of road networks
- facilitate knowledge sharing by promoting the wide dissemination of outputs and technology, conducting seminars and promoting the use of the Company's work
- maintain and develop NEVDIS on behalf of road agencies as an essential national vehicle and driver licence information exchange
- foster international involvement by engaging with and supporting international road organisations.

The Company's long-term objectives are to:

- promote improved Australian and New Zealand transport outcomes
- provide expert technical input to national policy development on road and road transport issues
- promote improved practice and capability by road agencies
- promote consistency in road and road agency operations.

Strategies

The Company uses a program management approach to the delivery of the strategic plan. Each program focuses on an operational area of the road system but in doing so they address the Company's strategic priorities by undertaking a range of projects and contribute to improving transport outcomes in Australia and New Zealand. Austroads utilises the expertise of its member organisations to develop and deliver its research programs. This encourages a collaborative approach and facilitates learning, development, knowledge sharing and a high level of consistency across jurisdictions. An Operational Plan, which is monitored and reviewed by the Board, includes a number of proposed outputs for each program and an indicative four-year work plan with projects to produce these outputs.

Key Performance Measures

The Company's Outputs

The following measures have been developed to assess performance and progress against the delivery of actions identified in each of the Company programs:

Projects completed on time and on budget

This is a quantitative measure. Austroads had 101 projects underway or commence in 2020-21 financial year and 39 projects were completed. At the end of the financial year, 56 projects were progressing in line with estimated schedule, six were more than six months late but none were three were running more than twelve months late. Projects were completed within the total project budget.

Adoption of Austroads guides by road agencies

At the start of the financial year, Austroads had 10 guides:

- Guide to Road Design
- Guide to Traffic Management
- Guide to Asset Management
- Guide to Pavement Technology
- Guide to Project Delivery
- Guide to Road Safety
- Guide to Smart Motorways

- Guide to Road Tunnels
- Guide to Bridge Technology
- Guide to Temporary Traffic Management.

Nine of the 10 guides have been adopted Australian state and territory members and the New Zealand Transport Agency.

Austroads is continuing with the Safety at Road Worksites project. This project had four main elements.

1. Developing and adopting the *Guide to Temporary Traffic Management.*
2. Developing and implementing a national training framework.
3. Developing and implementing of a national prequalification scheme for the Traffic Management industry.
4. Establishing a registration platform to enable the national training and prequalification schemes.

The Austroads Guide to Temporary Traffic Management (AGTTM) was published in 2019. Adoption and use of the Guide is progressing in line with implementation of all four elements of the project.

Take up of project outputs by road agencies and other stakeholders

This is a quantitative and qualitative performance measure and is demonstrated using a small number of cases.

Case 1: The use of Austroads Guides has increased substantially over the last five years. Last year more than 267,000 Guides were accessed either as PDF downloads or wholly digital editions. This is a 15% increase on last year and an 130% increase in comparison to 2016-17. The maintenance of Guides has been given a higher priority and more frequent updates are made while maintaining the strong research base underpinning their content.

Case 2: In March Austroads finalised a project which produced asset management guidance specific to road bridges. Engineering Guideline to Bridge Asset Management promotes an engineering approach (engineering principles, knowledge, experience and modelling tools) as being the only robust method for understanding the current and future, condition and needs of a bridge network. The guideline has been downloaded more than 1,400 times, 313 people attended the webinar and a further 180 have subsequently viewed it online.

Case 3: In October Austroads published eight online learning units covering the fundamentals of traffic management. The units cover 22 modules, each includes a video with in-session exercises. The videos have been viewed more than 4,000 times.

Case 4: In November Austroads published research into planning and designing for pedestrians. The report was downloaded more than 1,300 times. A series of five webinars on the topic attracted more than 2,200 attendees and the recordings were viewed more than 1,000 times.

Recognition by national policy bodies and road industry as a source of competent, professional research and guidance on road transport

This is a qualitative performance measure and is demonstrated using a small number of cases.

Case 1: During the year Austroads staff were invited to present evidence to the:

- Australian Senate's Rural and Regional Affairs and Transport References Committee which recommended that the Australian government works key stakeholder to undertake a range of initiatives including expediting the Infrastructure and Transport Ministers' Meeting consideration of the Austroads review of the Heavy Vehicle Driver Competency Framework and licensing arrangements and implements the results as a priority.
- Joint Select Committee on Road Safety which recommended that the Australian Government ensure all Commonwealth funded road projects incorporate Network Design for Road Safety principles – the principles came from:
  - Austroads Road Cross-section Design for Road Stereotypes (including Network Safety Plans) and a Safe System, and
  - Network Design for Road Safety (Stereotypes for Cross-sections and Intersections): User Guide.
- The Queensland Parliamentary Transport and Resources Committee's Inquiry into Vehicle Standards and Technology, which called on Austroads submission and evidence in shaping their recommendations.

Case 2: Austroads staff represent our members on industry and education association boards and committees including CPEE, ABAB, Building Smart International, SPARC Hub, ATAP Steering Committee, Cycling and Walking ANZ, Roads Australia's Road Workers Safety Working Group, the National Research Committee on Roadside Advertising and APCC-Austroads Environmentally Sustainable Procurement Roundtable.

Case 3: Austroads' publications are regularly referenced in journal articles, books chapters, conference papers and academic theses. Last year Austroads publications were referenced in more than 300 journal articles, book chapters and theses.

Board member satisfaction with progress delivering the strategic priorities

The Austroads Board expressed its support for work of our organisation. We will continue to work with the Board to develop an appropriate metric for this performance measure.

Auditor's Independence Declaration

The lead auditor's independence declaration for the year ended 30 June 2021 has been received and can be found on page 56 of the financial report.

Signed in accordance with a resolution of the Board of Directors.

Neil Scales OBE
Chair
Dated this 12th day of October 2021

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Sydney NSW 2000

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GPO Box 1615
Sydney NSW 2001

p. +61 2 9221 2099
e. sydneypartners@pitcher.com.au

Auditor's Independence Declaration
To the Directors of Austroads Ltd
ABN 16 245 787 323

In relation to the independent audit for the year ended 30 June 2021, I declare that to the best of my knowledge and belief, there have been:

(i) no contraventions of the auditor independence requirements of the *Corporations Act 2001*; and
(ii) No contraventions of APES 110 *Code of Ethics for Professional Accountants (including Independence Standards)*.

This declaration is in respect of Austroads Ltd during the year.

S WHIDDETT
Partner

PITCHER PARTNERS
Sydney

12 October 2021

Statement of Profit or Loss and Other Comprehensive Income for the Year Ended 30 June 2021

	Notes	2021 $	2020 $
Revenue	2	29,154,674	26,795,457
Expenses			
Corporate Expenses	3(a)	6,256,368	5,854,201
Work Program	3(b)	11,234,904	10,496,610
Specific Projects	3(c)	1,145,363	578,266
Publications	3(d)	13,532	12,763
Other NEVDIS Related Expenses	3(e)	5,641,261	5,199,007
Depreciation and Amortisation Expenses		1,954,547	1,917,904
Total expenses		26,245,975	24,058,751
Surplus for the year		**2,908,699**	**2,736,706**
Other comprehensive income		–	–
Total comprehensive income for the year		**2,908,699**	**2,736,706**
Total comprehensive income attributable to members of the entity		**2,908,699**	**2,736,706**

Statement of Financial Position as at 30 June 2021

	Notes	2021 $	2020 $
ASSETS			
Current assets			
Cash and Cash Equivalents	4	8,989,553	8,388,876
Financial Assets at Amortised Cost – Term Deposits		25,378,605	23,500,000
Trade and Other Receivables	5	3,182,538	2,515,209
Other Assets	6	909,500	101,942
Total current assets		38,460,196	34,506,027
Non-current assets			
Plant and Equipment	7	489,331	86,785
Intangible assets	8	4,268,471	5,831,305
Lease Assets	10	–	304,017
Other Assets	6	54,860	126,635
Total non-current assets		4,812,662	6,348,742
Total assets		**43,272,858**	**40,854,769**
LIABILITIES			
Current liabilities			
Trade and Other Payables	9	2,650,432	2,960,350
Lease Liabilities – Current	10	–	317,425
Provision for Employee Benefits	11	429,005	296,715
Total current liabilities		3,079,437	3,574,490
Non-current liabilities			
Make Good Provision		–	21,840
Provision for Employee Benefits	11	195,954	169,671
Total non-current liabilities		195,954	191,511
Total liabilities		**3,275,391**	**3,766,001**
Net assets		**39,997,467**	**37,088,768**
Equity			
Accumulated Surplus		3,991,608	6,569,113
NEVDIS Reserve	1(m)	36,005,859	30,519,655
Total Equity		**39,997,467**	**37,088,768**

The accompanying notes form part of these financial statements.

Statement of Changes in Equity for the Year Ended 30 June 2021

	NEVDIS Reserve $	Accumulated Surplus $	Total Equity $
Balance at 1 July 2019	27,607,190	6,744,872	34,352,062
Comprehensive income			
Surplus for the year	–	2,736,706	2,736,706
Transfer to Reserve	2,912,465	(2,912,465)	–
	30,519,655	6,569,113	37,088,768
Balance at 30 June 2020	30,519,655	6,569,113	37,088,768
Comprehensive income			
Surplus for the year	–	2,908,699	2,908,699
Transfer to Reserve	5,486,204	(5,486,204)	–
	36,005,859	**3,991,608**	**39,997,467**
Balance at 30 June 2021	**36,005,859**	**3,991,608**	**39,997,467**

Statement of Cash Flows for the Year Ended 30 June 2021

	Notes	2021 $	2020 $
Cash Flows from Operating Activities			
Member Contributions		14,216,653	14,216,652
Receipts from Customers and Other Sources		14,039,220	11,928,147
Payments to Suppliers and Employees		(25,438,938)	(22,056,633)
Interest Received		231,472	641,751
Interest Paid		(8,662)	(21,210)
Net Cash Inflow from Operating Activities	13	**3,039,745**	**4,708,707**
Cash Flow from Investing Activities			
Movement in Term Deposits		(1,878,605)	(150,137)
Purchase of Plant and Equipment		(222,382)	(56,628)
Purchase of Intangible Assets		(20,656)	(424,043)
Net cash used in Investing Activities		**(2,121,643)**	**(630,808)**
Cash Flow from Financing Activities			
Repayment of Lease Liabilities		(317,425)	**(290,609)**
Net cash used in Investing Activities		**(317,425)**	**(290,609)**
Net increase in cash held		600,677	3,787,290
Cash at the beginning of the financial year		8,388,876	4,601,586
Cash at the end of the financial year	4	**8,989,553**	**8,388,876**

Notes to the Financial Statements for the Year Ended 30 June 2021

The financial statements are for Austroads Ltd. ("the Company") as an individual entity. The Company is a public entity limited by guarantee, incorporated and domiciled in Australia.

Note 1 — Summary of Significant Accounting Policies

Basis of Preparation

The directors have prepared the financial statements on the basis that the Company is a non-reporting entity because there are no users who are dependent on general purpose financial statements. These financial statements are therefore special purpose financial statements that have been prepared in order to meet the requirements of the Corporations Act 2001. Consolidation financial statements, including the results and operations of Austroads subsidiary, Transport Certification Australia, have not been prepared as the directors have determined that the group is not a reporting entity.

These financial statements have been prepared in accordance with the recognition and measurement requirements specified by the Australian Accounting Standards and Interpretations issued by the Australian Accounting Standards Board ('AASB') and the disclosure requirements of AASB 101 'Presentation of Financial Statements', AASB 107 'Statement of Cash Flows', AASB 108 'Accounting Policies, Changes in Accounting Estimates and Errors', AASB 1048 'Interpretation of Standards' and AASB 1054 'Australian Additional Disclosures', as appropriate for not-for-profit entities. The principal accounting policies adopted in the preparation of the financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

The financial statements, except for the cash flow information, have been prepared on an accruals basis and are based on historical costs unless otherwise stated in the notes.

The financial statements were authorised for issue on 12th October 2021 by the directors of the Company.

New accounting standards and interpretations adopted

There are no new or amended Accounting Standards and Interpretations issued by the Australian Accounting Standards Board ('AASB") that are mandatory to the Company for the current reporting period.

Any new or amended Accounting Standards or Interpretations that are not mandatory have not been early adopted.

Accounting Policies

(a) Revenue

The company recognises revenue as follows:

Revenue from contracts with customers

Revenue is recognised at an amount that reflects the consideration to which the company is expected to be entitled in exchange for transferring goods or services to a customer. For each contract with a customer, the company: identifies the contract with a customer; identifies the performance obligations in the contract; determines the transaction price which takes into account estimates of variable consideration and the time value of money; allocates the transaction price to the separate performance obligations on the basis of the relative stand-alone selling price of each distinct good or service to be delivered; and recognises revenue when or as each performance obligation is satisfied in a manner that depicts the transfer to the customer of the goods or services promised.

Variable consideration within the transaction price, if any, reflects concessions provided to the customer such as discounts, rebates and refunds, any potential bonuses receivable from the customer and any other contingent events. Such estimates are determined using either the 'expected value' or 'most likely amount' method. The measurement of variable consideration is subject to a constraining principle whereby revenue will only be recognised to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognised will not occur. The measurement constraint continues until the uncertainty associated with the variable consideration is subsequently resolved. Amounts received that are subject to the constraining principle are recognised as a refund liability.

Fees and charges

Fees and charges are recognised over the period to which the provision of services relate.

Contribution revenue

Contribution revenue is recognised at a point in time when received or when the right to receive payment is established.

Grant revenue

Grant funding that contain specific conditions on the use of those funds are recognised as and when the Company satisfies its performance obligations. A contract liability is recognised for unspent grant funds for which a refund obligation exists in relation to the funding period. General grants that do not impose specific performance obligations on the Company are recognised as income when the Company obtains control of those funds, which is usually on receipt.

Interest Income

Interest income is recognised on an accruals basis using the effective interest.

Other Revenue

Other revenue are recognised as income upon receipt of those income.

(b) Currency

The financial statements of the Company are presented in Australian dollars, the Company's functional and presentation currency.

(c) Income tax

The Company has been exempted from income tax under section 50-5 of the *Income Tax Assessment Act 1997*.

(d) Right-of-use assets

A right-of-use asset is recognised at the commencement date of a lease. The right-of-use asset is measured at cost, which comprises the initial amount of the lease liability, adjusted for, as applicable, any lease payments made at or before the commencement date net of any lease incentives received, any initial direct costs incurred, and, except where included in the cost of inventories, an estimate of costs expected to be incurred for dismantling and removing the underlying asset, and restoring the site or asset.

Right-of-use assets are depreciated on a straight-line basis over the unexpired period of the lease or the estimated useful life of the asset, whichever is the shorter. Where the company expects to obtain ownership of the leased asset at the end of the lease term, the depreciation is over its estimated useful life. Right-of use assets are subject to impairment or adjusted for any remeasurement of lease liabilities.

(e) Plant and Equipment

Plant and equipment are measured on the cost basis less depreciation and impairment losses.

The carrying amount of plant and equipment is reviewed annually by directors to ensure it is not in excess of the recoverable amount from these assets. The recoverable amount is assessed on the basis of the expected net cash flows that will be received from the assets employment and subsequent disposal.

Depreciation

The depreciable amount of all fixed assets is depreciated on a straight line basis over the asset's useful life to the entity commencing from the time the asset is held ready for use.

The depreciation rates used for each class of depreciable assets are:

Class of Fixed Asset	Depreciation Rate
Furniture and office equipment	20 – 33.33%

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Gains and losses on disposals are determined by comparing proceeds with the carrying amount. These gains or losses are included in the statement of profit or loss and other comprehensive income.

(f) Cash and cash equivalents

Cash and cash equivalents include cash on hand, deposits held at call with financial institutions, and other short term highly liquid investments with original maturities of three months or less.

(g) Trade receivables

All trade debtors are recognised at the amounts receivable as they are due for settlement no more than 120 days from the date of recognition, and no more than 30 days for other debtors.

There is no provision for expected credit loss allowance, as all receivables are fully recoverable.

(h) Goods and Services Tax (GST)

Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Tax Office. In these circumstances the GST is recognised as part of the cost of acquisition of the asset or as part of an item of expense. Receivables and payables in the statement of financial position are shown inclusive of GST.

Cash flows are presented in the statement of cash flows on a gross basis, except for the GST component of investing and financing activities, which are disclosed as operating cash flows.

(i) Provision for employee entitlements

Provisions for long service leave and annual leave are made for all employees from the date of their commencement and are calculated at current pay rates. Additionally, provision is made for On Costs of 13% on long service leave and annual leave.

Provisions for long service leave for service under six years is treated as a non current liability.

(j) Trade and other payables

These amounts represent liabilities for goods and services provided to the Company prior to the end of financial year which are unpaid. The amounts are unsecured and are usually paid within 30 days of recognition.

(k) Lease liabilities

A lease liability is recognised at the commencement date of a lease. The lease liability is initially recognised at the present value of the lease payments to be made over the term of the lease, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the company's incremental borrowing rate. Lease payments comprise of fixed payments less any lease incentives receivable, variable lease payments that depend on an index or a rate, amounts expected to be paid under residual value guarantees, exercise price of a purchase option when the exercise of the option is reasonably certain to occur, and any anticipated termination penalties. The variable lease payments that do not depend on an index or a rate are expensed in the period in which they are incurred.

Lease liabilities are measured at amortised cost using the effective interest method. The carrying amounts are remeasured if there is a change in the following: future lease payments arising from a change in an index or a rate used; residual guarantee; lease term; certainty of a purchase option and termination penalties. When a lease liability is remeasured, an adjustment is made to

the corresponding right-of use asset, or to profit or loss if the carrying amount of the right-of-use asset is fully written down.

(l) Intangible assets

Intangible assets acquired separately are recorded at cost less accumulated amortisation and impairment. Amortisation is charged on a straight-line basis over their estimated useful lives. The estimated useful life and amortisation method is reviewed at the end of each annual reporting period, with any changes in these accounting estimates being accounted for on a prospective basis.

Software

Significant costs associated with software are deferred and amortised on a straight-line basis over the period of their expected benefit, being their finite life of 5 years.

(m) NEVDIS Reserve

A separate NEVDIS reserve is being shown to highlight profit and loss from NEVDIS activities and historical NEVDIS reserves brought forward. This reserve is separate to the other activities of Austroads.

(n) Comparative figures

Comparative figures have been adjusted to conform to changes in presentation for the current financial year, where required by Accounting Standards.

(o) Financial instruments

Initial recognition and measurement

Financial assets and financial liabilities are recognised when the company becomes a party to the contractual provisions of the instrument. For financial assets, this is equivalent to the date that the company commits itself to either the purchase or sale of the asset. Financial instruments are initially measured at fair value adjusted for transaction costs, except where the instrument is classified as fair value through profit or loss, in which case transaction costs are immediately recognised as expenses in profit or loss.

Classification of financial assets and financial liabilities

Financial assets recognised by the company are subsequently measured in entirety at either amortised cost or fair value, subject to their classification in accordance with the relevant criteria in AASB 9.

Financial liabilities recognised by the company are subsequently measured at amortised cost.

(p) Critical accounting estimates and judgements

The directors evaluate estimates and judgements incorporated into the financial statements based on historical knowledge and best available current information. Estimates assume a reasonable expectation of future events and are based on current trends and economic data, obtained externally and within the Company.

Provision for expected credit loss

Except as disclosed in the financial statements, the directors have assessed each debtor and believe that the full amount of debtors is recoverable.

Estimation of useful lives of assets

The company determines the estimated useful lives and related depreciation and amortisation charges for its property, plant and equipment and finite life intangible assets. The useful lives could change significantly as a result of technical innovations or some other event. The depreciation and amortisation charge will increase where the useful lives are less than previously estimated lives, or technically obsolete or non-strategic assets that have been abandoned or sold will be written off or written down.

Impairment of non-financial assets other than goodwill and other indefinite life intangible assets

The company assesses impairment of non-financial assets other than goodwill and other indefinite life intangible assets at each reporting date by evaluating conditions specific to the company and to the particular asset that may lead to impairment. If an impairment trigger exists, the recoverable amount of the asset is determined. This involves fair value less costs of disposal or value-in-use calculations, which incorporate a number of key estimates and assumptions.

Note 2 — Revenue

	2021 $	2020 $
Revenues from contracts with customers		
Fees and Charges		
NEVDIS		
PPSR Enhancements Recovery	2,500,000	2,500,000
Safety Recalls	431,500	472,596
Data Extracts	312,972	229,590
Document Verification Services	6,774,126	5,498,910
VSA income	30,100	20,300
WMI income	36,400	19,600
Plate to VIN Services	2,195,406	1,911,689
NHVR – Data fee Income	1,014,196	996,696
RAV Project	64,448	–
	13,359,148	11,649,381
Other revenue		
Contributions		
Membership Contributions	2,494,652	2,494,652
Work Program Contributions	11,722,001	11,722,000
	14,216,653	14,216,652

	2021 $	2020 $
Special Programs and Projects		
Australian Transport and Assessment Planning (ATAP)	–	346,000
Tyre Stewardship Australia	200,000	–
Use of Road Grade Recycled Plastics	1,040,000	–
WTP Financing Variation Road Reliability Measurement	43,796	–
	1,283,796	346,000
Publications		
Gross Sales Revenue	6,169	5,545
Royalties	7,426	10,365
	13,595	15,910
Interest Received		
Short Term Investments	225,095	506,378
Rental Bond Deposit	6,377	5,945
	231,472	512,323
Other Income		
Government Subsidy – Cashflow Boost	50,010	50,000
Other income (NEVDIS)	–	5,191
	50,010	55,191
Total Revenue	**29,154,674**	**26,795,457**

Note 3 — Expenses

		2021 $	2020 $
(a)	**Corporate**		
	Salaries and Related Charges	3,476,973	3,150,530
	Program Management	2,009,935	2,077,936
	Corporate Projects	223,188	–
	Administration Expenses	92,617	107,284
	Finance Cost	8,662	21,210
	Other Expenses	444,993	497,241
		6,256,368	**5,854,201**
(b)	**Work Program**		
	Corporate Projects – Board Priorities	101,050	158,971
	Safety	1,870,256	1,493,262
	Assets	6,923,582	5,420,384
	Network	1,720,698	2,957,106
	Future Vehicles and Technology	619,318	466,887
		11,234,904	**10,496,610**
(c)	**Specific Projects**		
	International Participation	4,758	73,156
	NGTSM/ATAP Jurisdictions/ Commonwealth funding carried over	457,472	156,799
	ATAP Road User Cost Models and Parameter Values	44,149	–
	ATAP Environmental Cost Parameter Values	76,000	–
	CPEE Support	19,500	21,000
	Support to ALGA Reps	–	12,048
	Test Methods and Pavement Technology Worktips	–	25,000
	Austroads Standards Development Related Activity	–	21,536
	Value of Travel Time Willingness to Pay	543,484	268,727
		1,145,363	**578,266**
(d)	**Publications**		
	Cost of Sales	**13,532**	**12,763**
(e)	**NEVDIS expenses**		
	Subscription and Operating Costs	3,656,642	3,692,349
	NHVR Maintenance	493,893	413,501
	NEVDIS RAV Project	38,712	–
	NEVDIS Other Projects	888,690	541,737
	Other Rental Related Expenses	71,705	–
	Other Expenses	491,619	551,420
		5,641,261	**5,199,007**
Total Expenditure		**24,291,428**	**22,140,847**

Note 4 — Cash and Cash Equivalents

	2021 $	2020 $
Cash at bank and on hand	3,489,553	4,388,876
Short-term deposits and deposits at call	5,500,000	4,000,000
	8,989,553	**8,388,876**

Cash at the end of the financial year is reconciled to the statement of cash flow as follows:

Cash and cash equivalents	**8,989,553**	**8,388,876**

Note 5 — Trade and Other Receivables

	2021 $	2020 $
Trade debtors	392,476	370,298
Sundry and other debtors (NEVDIS)	2,759,488	2,047,903
Sundry and other debtors	30,574	97,008
	3,182,538	**2,515,209**

Note 6 — Other Assets

	2021 $	2020 $
CURRENT		
Prepayments	782,865	101,942
Rental Deposit Bond	126,635	–
	909,500	**101,942**
NON-CURRENT		
Rental Deposit Bond	**54,860**	**126,635**

Note 7 — Plant and Equipment

NON-CURRENT		
Furniture and Office Equipment		
At Cost	1,026,033	660,755
Accumulated depreciation	(536,702)	(573,970)
	489,331	86,785
Total Plant and Equipment	**489,331**	**86,785**

Note 8 — Intangible Assets

NON-CURRENT		
Software		
At Cost	8,287,463	7,935,738
Accumulated Amortisation	(4,018,992)	(2,435,502)
	4,268,471	5,500,236
Work in Progress – Software	–	331,069
	–	331,069
Total Intangible Assets	**4,268,471**	**5,831,305**

Note 9 — Trade and Other Payables

Trade and Other Payables	2,022,008	1,908,731
Other Payables	65,437	34,391
Accrued Expenses	562,987	1,017,228
	2,650,432	**2,960,350**

Note 10 — Leases

The lease for Austroads National Office expired on 30 June 2021. From 1 July 2021, the lease is on a month to month basis until Austroads moves to new office in September 2021.

(a) Amounts recognised in the Statement of financial position:

Right of Use Assets		
Opening balance as at 1 July	304,017	608,034
Depreciation charge for the year	(304,017)	(304,017)
Carrying amount at end of year	**–**	**304,017**
Lease Liabilities	–	317,425
Current	**–**	**317,425**

	2021 $	2020 $
(b) Amounts recognised in Statement of profit or loss and other comprehensive income		
Lease under AASB 16 – interest on lease liabilities	8,662	21,210
Depreciation expenses on right-of-use assets	304,017	304,017

(c) Amounts recognised of cash flows

The total cash outflow for leases was $326,087 (2020: $311,819).

(d) Extension options

The lease does not have an option to extend and the company does not have an option to purchase the leased premises at the expiry of the rental period.

Note 11 — Provision for Employee Benefits

CURRENT		
Provisions for Employee Benefits	**429,005**	**296,715**
NON-CURRENT		
Provisions for Employee Benefits	**195,954**	**169,671**

Note 12 — Members' Guarantee

The Memorandum of Association of the Company provides that the liability of members is limited and that every member of the Company undertakes to contribute to the assets of the Company, in the event of it being wound up while he is a member, or within one year after he ceases to be a member and of the costs, charges and expenses of winding up and of the adjustment of rights of the members among themselves, such amount as may be required, not exceeding ten dollars ($10) per member.

Note 13 — Cash Flow Information

Reconciliation of profit from ordinary activities to net cash generated from operating activities.

Surplus for the year	2,908,699	2,736,706
Adjustment for non-cash-flow items:		
- Depreciation and amortisation	1,954,547	1,916,856
- Gain/Loss on disposal of plant and equipment	(16,799)	–
Change in operating assets and liabilities:		
- (Increase) in trade and other receivables	(667,329)	(8,907)
- (increase) in other assets	(735,783)	(1,210)
- (Decrease)/increase) in trade and other payables	(540,323)	83,944
- Increase/(Decrease) in provision for employee benefits	136,733	(18,682)
Net Cash Generated from Operating Activities	**3,039,745**	**4,708,707**

	2021 $	2020 $

Note 14 — Renumeration of Directors

No remuneration was paid or payable to directors in respect to or during the financial year.

Note 15 — Renumeration of Auditors

During the year, the auditor of the company earned the following remuneration:

Audit of the financial statements	28,700	28,500
Other services	3,700	2,000
	32,400	**30,500**

Note 16 — Commitments

Capital expenditure commitments contracted for not later than one year.

Contracted amount	881,825	–
Invoiced to date	(418,683)	–
	463,142	–

Note 17 — Contingent Liabilities or Assets

At 30 June 2021, the Company has no contingent liabilities or assets (2020: Nil).

Note 18 — Matters Subsequent to the End of the Financial Year

Subsequent to the reporting date, the State government of New South Wales extended the lockdown which originally commenced 25 June 2021 and further tightened the rules of the lockdown. Other States and Territories have also imposed various lockdown and restrictions. Further extension of these restrictions may delay the company's ability to conduct research activities. The impact of the State/Federal government support packages has yet to be determined. As at the date of the directors' declaration, the directors are unable to determine the long term impact on the company at this time or when operations will return to pre-lockdown levels.

No other matters or circumstances have arisen since 30 June 2021 that significantly affected, or may significantly affect the company's operations, the results of those operations or the company's state of affairs in future financial years.

Note 19 — Company Details

The registered office and principal place of business of the Company is:
Level 9, 570 George Street, SYDNEY NSW 2000

Directors' Declaration for the Year Ended 30 June 2021

The directors of Austroads Ltd. ("the Company") have determined that the Company is not a reporting entity, and that this special purpose financial report should be prepared in accordance with the accounting policies outlined in Note 1 to the financial statements.

The directors declare that the financial reports and notes set out on pages 57 to 64, are in accordance with the *Corporations Act 2001*, and:

1. The financial statements are in accordance with the *Corporations Act 2001* and:
   (a) comply with applicable Accounting Standards; and
   (b) give a true and fair view of the Company's financial position as at 30 June 2021 and of its performance for the financial year ended on that date in accordance with the accounting policies described in Note 1 of the financial statements.
2. In the directors' opinion, there are reasonable grounds to believe that the Company will be able to pay its debts as and when they become due and payable.

This declaration is made in accordance with a resolution of the directors.

Neil Scales OBE, Chairperson
Dated this 12th day of October 2021

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Austroads Ltd
ABN 16 245 787 323

Independent Auditor's Report
To the Members of Austroads Ltd

Report on the Audit of the Financial Report

Opinion

We have audited the special purpose financial report of Austroads Limited "the Company", which comprises the statement of financial position as at 30 June 2021, statement of profit or loss and other comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, notes comprising a summary of significant accounting policies and other explanatory information.

In our opinion, the accompanying financial report of Austroads Limited is in accordance with the *Corporations Act 2001*, including:

(a) giving a true and fair view of the Company's financial position as at 30 June 2021 and of its performance for the year then ended; and
(b) complying with Australian Accounting Standards to the extent described in Note 1, and the *Corporations Regulations 2001*.

Basis for Opinion

We conducted our audit in accordance with Australian Auditing Standards. Our responsibilities under those standards are further described in *the Auditor's Responsibilities for the Audit of the Financial Report* section of our report. We are independent of the Company in accordance with the auditor independence requirements of the *Corporations Act 2001* and the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 *Code of Ethics for Professional Accountants (including Independence Standards)* "the Code" that are relevant to our audit of the financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter – Basis of Accounting

We draw attention to Note 1 to the financial report, which describes the basis of accounting. The financial report has been prepared for the purpose of fulfilling the directors' financial reporting responsibilities under the *Corporations Act 2001*. As a result, the financial report may not be suitable for another purpose. Our opinion is not modified in respect of this matter.

Independent Auditor's Report
To the Members of Austroads Ltd

Other Information

The directors are responsible for the other information. The other information comprises the information included in the Company's annual report and the directors report for the year ended 30 June 2021,but does not include the financial report and the auditor's report thereon.

Our opinion on the financial report does not cover the other information and accordingly we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial report, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial report or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Financial Report

The directors of the Company are responsible for the preparation of the financial report that gives a true and fair view and have determined that the basis of preparation described in Note 1 to the financial report is appropriate to meet the requirements of the *Corporations Act 2001* and is appropriate to meet the needs of the members. The directors' responsibility also includes such internal control as the directors determine is necessary to enable the preparation of a financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

In preparing the financial report, the directors are responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Report

Our objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this financial report.

As part of an audit in accordance with Australian Auditing Standards, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.

- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial report or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial report, including the disclosures, and whether the financial report represents the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

S WHIDDETT
Partner

PITCHER PARTNERS
Sydney

12 October 2021

Abbreviations

AAPA	Australian Asphalt Pavement Association
AfPA	Australian Flexible Pavement Association
AFAC	National Council or Fire and Emergency Services
AS	Australian Standard
ACT	Australian Capital Territory
ALGA	Australian Local Government Association
ARRB	Australian Road Research Board
ATOG	Australasian Tunnel Operators Group
ATS	Australasian Tunnelling Society
AustStab	Pavement Recycling and Stabilisation Association
BITRE	Bureau of Infrastructure, Transport and Regional Economics
CCAA	Cement Concrete & Aggregates Australia
CC NZ	Civil Contractors NZ
CPEE	Centre for Pavement Engineering Education
DSG Tas	Department of State Growth Tasmania
DIPL NT	Department of Infrastructure, Planning and Logistics Northern Territory
DoT Vic	Department of Transport Victoria
DoT WA	Department of Transport Western Australia
DIT SA	Department for Infrastructure and Transport South Australia
DVS	Document Verification Service
IPWEA	Institute of Public Works Engineering Australasia
ITS	Intelligent Transport Systems
MR WA	Main Roads Western Australia
NEVDIS	National Exchange of Vehicle and Driver Information System
NHVR	National Heavy Vehicle Regulator
NMVTRC	National Motor Vehicle Theft Reduction Council
NSW	New South Wales
NTC	National Transport Commission
NZ	New Zealand
NZTA	New Zealand Transport Agency
PBS	Performance Based Standards
PIARC	World Road Association
PPSR	Personal Property Security Register
QLD DTMR	Department of Transport and Main Roads Queensland
SA	South Australia
TCCS ACT	Transport Canberra and City Services Directorate
TfNSW	Transport for NSW
VIC	Victoria
VIN	Vehicle Identification Number
VIRS	Vehicle Information Request System
WA	Western Australia

Photography:

Cover: The Pacific Motorway/Highway is one of the most heavily used road corridors for freight in NSW. The highway is critical to the transport of freight between Sydney and Brisbane. During the year we published policy options for reducing the harmful effects of the oldest trucks operating on Australian and New Zealand roads.

Page 2: *Te Ara I Whiti*, or Lightpath, reuses a motorway offramp to provide separated access for bicycle riders and walkers into Auckland's CBD in New Zealand. During the year our webinars on planning and designing for pedestrians attracted more than 2000 attendees.

Page 6: The Perth to Mandurah railway and the Kwinana Freeway share a busy transport corridor alongside the Swan River in Western Australia. We focus on making mobility safer and more reliable for all users and our transport infrastructure sustainable and future proof.

Page 9: Austroads project to deliver national harmonisation of temporary traffic management practice is aiming to improve the safety of all road workers and users near construction and worksites. Source: Department of Transport Victoria.

Page 14: The Bruce Highway stretches 1700 kilometres between Brisbane and Cairns in Queensland. The Bruce Highway Upgrade Program aims to improve safety, flood resilience, and capacity along its length and breadth. Our safety research and design guidelines are informing the upgrades, which are due to be completed in 2028.

Page 18: Austroads is coordinating a number of projects to support the increased uptake of electric and low emission vehicles. During the year we completed a project documenting the registration data requirements for automated and electric vehicles, and developed a series of online case studies sharing lessons learned from technology trials.

Page 20: The complexity and volume of road asset data is increasing. Our data standard for road management is helping to harmonise the way data is described, which will improve the quality and interoperability of road data.

Page 24: Gabul Way, an elevated walking and cycling track suitable for wheelchair access, runs alongside Arcadia Road on Yunbenun (Magnetic Island). Paths and roads help to control traffic and reduce impact on the sensitive natural environment.

Page 26: Adelaide city centre, in South Australia, bustles with people. Walking is a critical component of our transport system, and the safety and security of pedestrians is an important focus for Austroads member agencies.

Page 29: There are around 750,000 licenced motorcycle riders in Australia. A future project will enhance the Learner Approved Motorcycle Scheme and better accommodate technological changes.

Page 30: Children board a school bus. Practical guidance published during the year will help practitioners to prioritise on-road public transport using road space, stop design and location, traffic signal priority, and traffic signal gating.

Page 34: The Cultural Centre busway station in Brisbane with Victoria Bridge in the background. Australia and New Zealand's complex road network is valued at more than $250 billion and more than $8 billion is invested in its maintenance each year.

Page 49: Australian councils manage more than 500,000km of unsealed roads, such as this one in northern Western Australia

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