Austroads Annual Report

2013-2014

Austroads is the association of Australasian road transport agencies

Austroads' purpose is 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.

Austroads membership comprises the six state and two territory road transport and traffic authorities, the Commonwealth Department of Infrastructure and Regional Development, the Australian Local Government Association, and the New Zealand Transport Agency. Austroads is governed by a Board consisting of the chief executive officer (or an alternative senior executive officer) of each of its eleven member organisations:

- Roads and Maritime Services New South Wales
- Roads Corporation Victoria
- Department of Transport and Main Roads Queensland
- Main Roads Western Australia
- Department of Planning, Transport and Infrastructure South Australia
- Department of State Growth Tasmania
- Department of Transport Northern Territory
- Territory and Municipal Services Directorate, Australian Capital Territory
- Commonwealth Department of Infrastructure and Regional Development
- Australian Local Government Association
- New Zealand Transport Agency.

The success of Austroads is derived from the collaboration of member organisations and others in the road industry. It aims to be the Australasian leader in providing high quality information, advice and fostering research in the road transport sector.

Contents

2013-14 Overview

$11.1m work program expenditure

8 national office staff

173 active projects, 39 completed in 2013-14

46 research and technical reports published

10 Austroads Guides published

88,000 Austroads Guides sold and downloaded

55,500 research and technical reports downloaded

98.6 million NEVDIS database transactions

Governance

Austroads Ltd is a company limited by guarantee under the *Corporations Act 2001*. Austroads is governed by a Board of directors. There is currently one director from each member organisation. They are the chief executive or a senior executive officer of their organisation.

The Austroads national office, based in Sydney, provides secretariat support to the Board. The Chief Executive is the Company Secretary and Public Officer of Austroads Ltd. There is also an Executive Committee.

At the October 2013 meeting the Board agreed that the Executive Committee should undertake a wide ranging review of Austroads operations. The review was to include the role of the Board, Program Managers and National Office, and the management of the research program to maximise value to member agencies.

In early 2014 it was agreed to implement recommendations which aim to better align the strategic needs of member organisations with Austroads research work program and improve the ability of Austroads to be more responsive to emerging issues.

The main changes relate to:

- Role of the Board – the Board will play a more strategic role in setting overall priorities and oversighting progress in addressing the priorities.
- Structure of Board meetings – observer organisations will no longer attend and Program Managers will attend as required.
- Role of the Chief Executive – will approve individual projects within broader streams of work approved by the Board.
- Project management arrangements – the National Office will report to the Board on the overall implementation of the work program.
- Assessment of project proposals – will be subject to independent assessment before approval.
- Program budgets for 2014-15 – will be restricted and funds retained to meet Board determined priorities.

Activities

- **Austroads conducts strategic research** by undertaking projects which assist road agencies to address current and emerging issues that have the potential to have a major impact on their operation.
- **Austroads develops and publishes Guides** for adoption by road agencies to establish national consistency on the technical and operational aspects of road networks.
- **Austroads facilitates the sharing of knowledge** by promoting the wide dissemination of research outputs, conducting seminars, and promoting the use of Austroads work.
- **Austroads conducts business activities** on behalf of Australasian road agencies.
- **Austroads fosters international collaboration** by engaging with and supporting international road organisations.

Structure

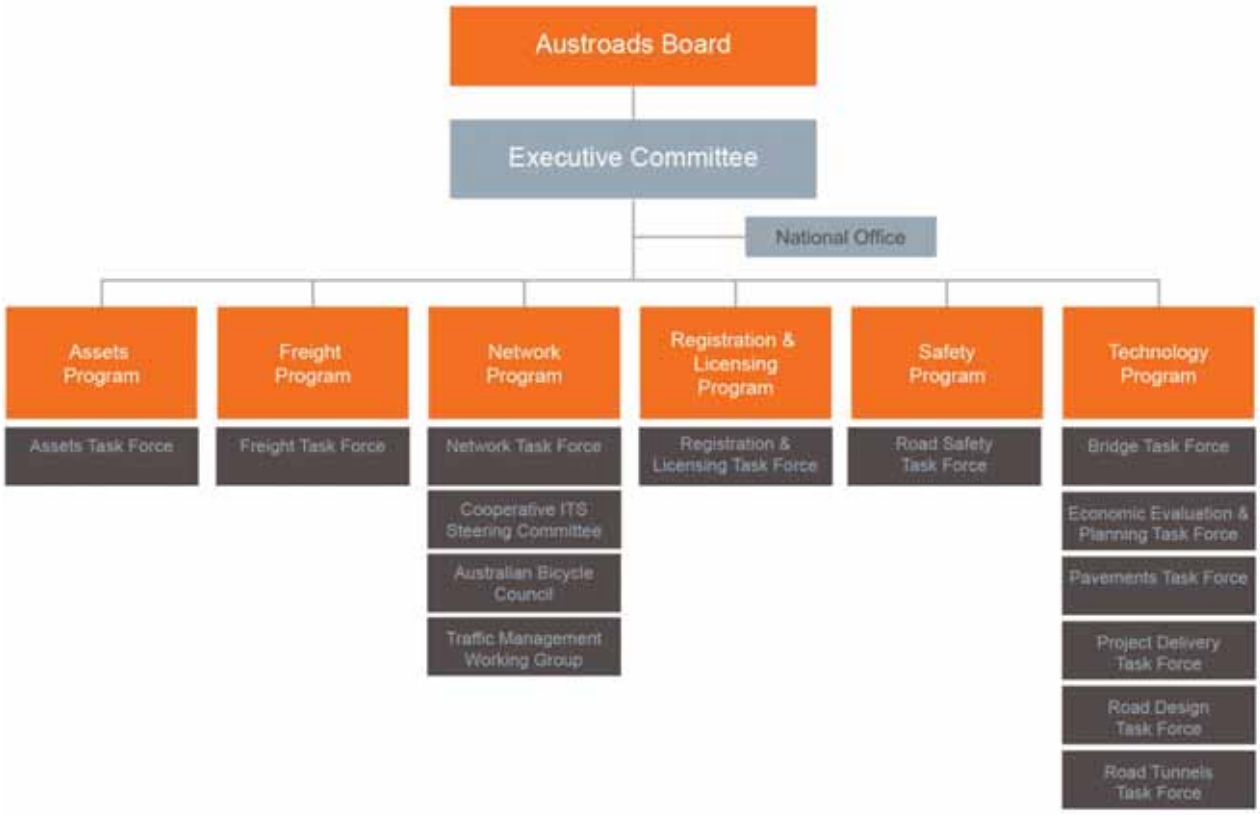
Austroads uses a program management approach to deliver the strategic plan. Each program focuses on an operational area of the road system but in doing so they address the eight strategic priorities of Austroads by undertaking a range of projects and contribute to improving transport in Australia and New Zealand.

Austroads relies on the expertise of its member organisations to achieve its outcomes and member organisation staff play an integral role in Austroads operations. This encourages a collegiate, collaborative approach and facilitates learning, development, sharing and a high level of consistency across jurisdictions.

Program Managers are responsible for the development and management of annual work programs and report to the Board. The Austroads Program hosting arrangements are rotated through the jurisdictions with July 1, 2013 marking the official turnover of the Programs which saw the appointment of new Program Managers and Coordinators for the Network, Registration and Licensing, Safety and Technology Programs and a new Coordinator of the Freight Program.

The Task Forces identify areas of interest and develop project proposals, oversee projects, promote the dissemination of results and provide a forum for the exchange of information between Austroads' member and related organisations.

- **Figure 1 — Austroads structure**



Austroads Chief Engineers' Group
In June 2014 the Board agreed to the establishment of the Austroads Chief Engineers' Group. The group is to be comprised of the chief engineer or equivalent position from each Austroads' member organisation wishing to participate.

The group is to provide ongoing advice and guidance to Austroads on:

- Emerging technical issues which are expected to impact on the Australasian road system and Australasian road agencies where a national response would be appropriate.
- Prioritising the work of Austroads across technical areas and particularly in relation to bridges, pavements, road design and tunnels.
- Providing oversight to the current operation and future development of Austroads work in national product assessment.
- Future development of the Austroads Technology Program including structures, strategic priorities and the relationship with ARRB.

Awards

Each year Austroads Awards recognise the contribution of individuals 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 regular work for member organisations. The awards acknowledge their efforts and commitment on which our success depends.

In 2014 Austroads recognised the following people for Achievement Awards:

- Ian Gould – Transport for NSW | For successful project management and delivery of two Freight Program projects, FS1703: Light Freight –Understanding its role in Urban Logistics and FS1812: Use of Auxiliary Brakes in Heavy Vehicles."
- Peter Croft – ARRB Group | In recognition of his outstanding contribution to the technical content of the Guide to Traffic Management, leadership of Austroads projects and participation on the Traffic Management Working Group.
- Griff Davis – City of Whittlesea, Victoria (ALGA representative) | In recognition of his contribution to the update of the Guide to Traffic Management and liaison with Local Government as the ALGA representative on the Traffic Management Working Group.
- Robert (Bob) O'Keefe – Roads and Maritime Services, NSW | In recognition of his outstanding contribution to the update of the Guide to Traffic Management and to the Traffic Management Working Group's understanding of the Australian Road Rules.
- Deborah Davis – Department of State Growth, Tasmania | In recognition of her significant contribution to the Safety Task Force (2011 to 2014).
- Pam Palmer – Department of Transport and Main Roads, Queensland | In recognition of her significant contribution to the Safety Task Force, management of projects and Safety Program as Program Manager (2012 – 2013).

In early 2014 Austroads conducted a Young Professionals Study Tour which recognised staff from Austroads member organisations who had demonstrated capability in the field of Intelligent Transport Systems (ITS). The international study tour focussed on Cooperative ITS. The four participants were:

- Simon Patterson, Project Engineer (Traffic Systems), Roads and Maritime Services NSW
- Amira Galli, Project Manager (ITS), VicRoads
- William Lee, Engineer (Traffic), Department of Transport and Main Roads, Queensland
- Steve Penman, Senior Advisor, New Zealand Transport Agency.

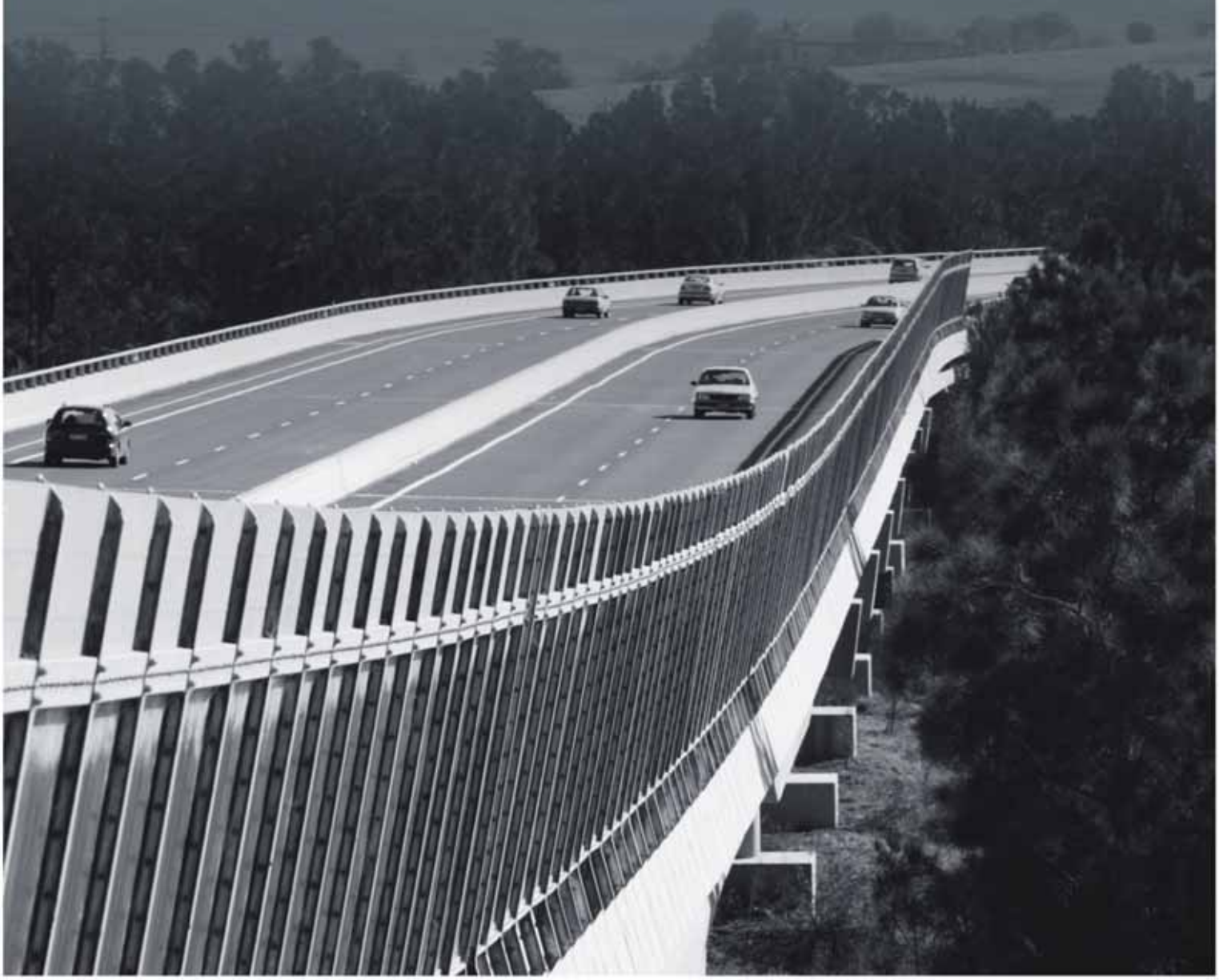
Strategic Direction

Our future direction is outlined in the Austroads Strategic Plan 2012-2016. The plan identifies eight strategic priorities that are the current focus of Austroads efforts. Three of the priorities relate to Austroads directly; the remainder relate to areas in which Austroads will assist its members.

- Leadership
- Relationships
- Knowledge Sharing

Austroads will assist members in relation to:

- Customer Service
- Asset Management
- Productivity
- Road Safety
- Environmentally Sustainable Transport



Leadership | Austroads will play a leadership role in the Australasian transport sector and be a major contributor to the national reform agenda

Heavy Vehicle Road Reform
In 2013-14 the Freight Program delivered projects that provide significant contributions to public policy discussions on priority transport issues, and which are made possible by collaborative Austroads processes. The Program also initiated new projects that will inform policy discussions on heavy vehicle road reform issues:

- A project which for the first time quantified the productivity, safety and environmental benefits delivered by High Productivity Vehicles found that the benefits are significantly greater than initially anticipated.
- Projects to improve access through direct private investment in public roads and improving high productivity vehicles access through potential charging regimes were initiated in 2013-14. The work will investigate the benefits of introducing innovative approaches to heavy vehicle charging and funding, providing significant inputs into broader national policy processes.

Road Safety Leadership and Strategy
From 1 July 2013, the Austroads Board and Transport and Infrastructure Senior Officials' Committee (TISOC) endorsed a new terms of reference and operation of the Austroads Safety Task Force to include the former roles and responsibilities of the National Road Safety Executive Group (NRSEG). This merged arrangement combines the technical and safety research program functions of the Safety Program with the broader road safety policy and strategy development functions formerly undertaken by NRSEG.

The Safety Program is also managing a project to review the National Road Safety Strategy 2011 – 2020 and draft an Action Plan for 2014-2017.The project is being funded from the National Road Safety Trust and managed by the Commonwealth. The project outputs will be available in 2014-15.

Cost Saving Pavement Technology
The introduction of a new technology to any well-established area is always a difficult task especially in the competitive area of asphalt technology. Strong leadership from Austroads members has been demonstrated in a project endeavouring to introduce high modulus high fatigue asphalt from France into the Australasian asphalt industry. This project has already met with success in introducing the technology. A collaborative project involving local and state governments, researchers and industry has seen the laying of a trial pavement to assess its potential and gain first-hand experience in producing and laying the new type of asphalt. Another road trial project is currently being planned. The new technology aims to make significant cost savings in the thick asphalt pavements.

Consistent Procurement Practices
The Austroads Technology Program and the Australasian Procurement and Construction Council (APCC) collaborated to produce the *Building and Construction Procurement Guide – Principles and Options* together with an update to the *Austroads Guide to Project Delivery*. This joint document has been well received by industry.

The Austroads National Prequalification System for Civil (Road and Bridge) Construction has been a highly successful initiative, which is well-supported by industry due to the effect it has had on reducing red-tape, administrative burden and cost overheads to entities wishing to work across borders. A current project is defining new national categories in the areas of 'Steel Fabrication' and 'Precast Concrete Products', for inclusion in the Austroads National Prequalification System.

National Intelligent Transport Systems (ITS) Agenda
As part of the national ITS agenda, the Network Program provides leadership and works collaboratively with a diverse range of industry partners through Co-operative ITS (C-ITS) and ITS Architecture initiatives. The C-ITS initiative is leading the development of a regulatory and operational framework to enable the successful deployment and operation of C-ITS solutions in Australia and New Zealand. The C-ITS Steering Committee and Industry Reference Group are pivotal in ensuring road agencies and industry work collaboratively to achieve this outcome. Austroads leadership in the development of a national ITS architecture, provides the framework for road agencies to improve deployment of ITS solutions in a more consistent and interoperable manner and supports the opening of the market place for local and international ITS solutions.

Relationships | Austroads will build strong relationships with stakeholders in the transport sector and foster a collaborative approach across the sector

Working with Road Transport Agencies and Industry
Austroads' most important relationships are with its member organisations. The resources and expertise contained in member organisations are drawn on extensively. However, Austroads also works closely with other organisations in the road industry and specifically with ARRB, the National Transport Commission (NTC) and the Bureau of Infrastructure, Transport and Regional and Economics (BITRE) and the National Heavy Vehicle Regulator (NHVR).

The Austroads Task Forces and Working Groups provide an important forum for road and transport agencies from Australia and New Zealand to exchange information on national and international projects and issues. The groups regularly collaborate with industry stakeholders – their expertise and advice is drawn on in many Austroads research projects. In 2013-14 this has included the following initiatives:

- The Assets Task Force established a working group to develop the data and cost information required to support the Heavy Vehicle Charging and Investment (HVCI) Reform. The group includes representatives from Austroads member organisation as well as representatives from IPWEA and ALGA and has collaborated with ARRB, HVCI working group and the Austroads Board.
- The Freight Program established an industry consultative group in recognition of the need to ensure close alignment of its work with industry priorities. The group provides a mechanism to progress this goal, as well as providing a forum to discuss the outputs from the Program, and how it relates to broader freight initiatives by governments.
- The Network Program has established relationships with stakeholders across the transport sector. The C- ITS initiative has a close working relationship ITS-Australia and coordinates an industry reference group. The Network Program works collaboratively with a broad range of stakeholders including local government, industry and its research partners. The Network Program industry partners include NBN Co., SkillsDMC, ACMA and the traffic control industry.
- The Registration and Licensing Program continued its collaborative work with the National Transport Commission, National Motor Vehicle Theft Reduction Council, the Federal Chamber of Automotive Industries and Attorney General's Department. This included project development and implementation, collaborative trials of initiatives, and the development of national policy positions on registration and licensing related matters.
- The Safety Task Force invited eight university based research organisations to a meeting in Melbourne to discuss the future of Austroads road safety research and their involvement in the delivery of that research on a competitive basis. The newly formed Austroads Safety Consultants Group is a liaison and information sharing group that will continue to provide advice and support to the Safety Program in the future.

- The development and maintenance of relationships between industry and jurisdictions has been the key to the delivery of a number of Technology projects in 2013-14.
  - The Road Design for Heavy Vehicles project engaged with representatives from the freight industry in workshops to identify key safety issues and solution options.
  - The mix design and field evaluation of foamed bitumen stabilised pavements project team worked closely with the stabilisation industry to develop national test methods to determine optimum binder content and material grading.
  - The Review of Guide to Pavement Technology Part 4B involved extensive consultation and relationship building with the asphalt industry and jurisdictions to harmonise the asphalt mix design procedure and refine the asphalt component of the Guide.

International partnerships

International partnerships are also an important element of Austroads strategic relationships. Austroads coordinates aspects of the international activities of its member organisations, particularly the engagement with the World Road Association. There are also collaboration agreements in place with equivalent organisations in several other countries to keep abreast of emerging trends and to share knowledge and technical good practice.

World Road Association

The World Road Association is the premier international road organisation with 118 member governments and some 2,500 road experts. The work of the Association is undertaken by 17 technical committees which bring together experts from around the world. Austroads currently has full or corresponding representatives on 15 of the 17 committees. The representatives provide regular progress reports on the work being conducted by their technical committee. Contact details of the representatives and committee reports are available on the Austroads website.

Austroads national office also provides input into the Association's strategic planning and editorial support to the magazine Routes/Roads.

Road Engineering Association of Asia and Australasia (REAAA) – Australian Chapter

The Road Engineering Association of Asia and Australasia (REAAA) promotes the science and practice of road engineering and related professions in the Asia Pacific region. Based in Malaysia, it has more than 1,000 members in 26 countries and holds regular events including a triennial international conference, technical visits and study tours, trade displays, seminars, forums and workshops.

There are chapters of the REAAA established in both Australia and New Zealand. The Austroads national office provides secretariat support to the Australian Chapter of the REAAA, which provides opportunities for Australian members to consult with colleagues in other REAAA member countries and from time to time organises technical visits, seminars and information exchange in Australia and Asia.

Knowledge Sharing | Austroads will create improved distribution, sharing, learning and innovation to support decision making

The Austroads Knowledge Sharing Strategy aims to improve the dissemination, use and adoption of Austroads' work and outputs, particularly its publications.

The primary audience for Austroads work is staff working for Australian and New Zealand road and transport agencies, including local government. Road safety, road design, traffic engineering, asset management and road project practitioners are key groups within the Austroads primary audience. The secondary audience for Austroads research and publications include road and urban design contractors and consultants, educational institutions with an interest in civil engineering, urban design or road safety, and overseas road and transport research and membership organisations.

The Austroads Knowledge Sharing Strategy recognises and builds on existing channels of communication across four areas:

- Austroads outreach and promotion
- Publication development and dissemination
- Program and project knowledge sharing activities
- Internal communication

Austroads maintains a comprehensive suite of guides which cover the design, construction, maintenance and operation of the road network for use by road agencies in Australia and New Zealand. There are 97 Guide parts across 10 Guide topic areas: Asset Management, Bridge Technology, Pavement Technology, Project Delivery, Project Evaluation, Road Design, Road Safety, Road Transport Planning, Traffic Management, and Road Tunnels.

The Guides have been adopted as primary references by all member agencies. To ensure the Guides are up-to-date with the latest research developments and harmonised jurisdictional practices, it has been agreed that all guide parts will be reviewed at least every five years from their last date of release.

Achievements in 2013-14 include:

- Publishing 10 Guides and guide type publications, 46 research and technical reports and three technical notes
- Downloads of more than 88,800 Guides and 55,500 research and technical reports. On average, 340 Guides are downloaded by local councils and member organisations every working day.
- 286,000 visitors made 415,700 visits to the Austroads websites – more than 1,100 every working day.
- Six webinars were conducted by ARRB to promote work undertaken in Austroads projects with more than 350 participants.
- Development of a new Austroads website and refreshed templates for all publications, RoadWatch and the Austroads newsletter.
- Delivery of the first Program based newsletter, Network News, and project based newsletter for the update of the National Guidelines for Transport Systems Management
- Surveys of Austroads publication users indicate 90% were satisfied or very satisfied that the publication they had purchased/ downloaded had met their needs, 88% were satisfied or very satisfied with the technical content, 93% with the format and 92% with the website.

Customer Service | Assisting member agencies to identify and understand community needs and achieve social outcomes

An important focus of the Network Program is the national harmonisation of network and traffic management policy and practice to provide road users with a consistent journey experience when travelling the road network in Australia and New Zealand. The program has a strong focus on planning and operating the road network for all road users through its network operations planning and standardised information service initiatives.

The National Exchange of Vehicle and Driver Information System (NEVDIS) is the critical enabler for the delivery of consistent, secure and reliable information to support vehicle registration, driver licensing and identity management business activities across Australia. NEVDIS is a significant platform that allows jurisdictions to pursue initiatives that facilitate convenient and efficient registration and licensing services for their customers.

Asset Management | Assisting member agencies to provide the road network services the community needs at least long term cost

Providing Guidance for Agencies

The Assets Task Force is coordinating a project to review standard methods for measuring road condition. This work will ensure that uniform test methods and specifications for measuring and collecting road condition, including guidelines for collecting digital images and location referencing systems, can be applied across all jurisdictions and road classes and can be used in any type of data collection (pavement and non-pavement).

The Austroads Guide to Asset Management is currently under review. The Guide will be updated to respond to stakeholder needs, reflect modern practice, incorporate the findings of recent research and include guidance on aligning asset management practices with the requirements of the forthcoming Asset Management Standard ISO55000.

Managing for heavy vehicles

The damaging effects of heavily loaded vehicles and their impact on the road pavement structure and its surface layer of asphalt or sprayed seals is being investigated by Austroads in close collaboration with the road freight industry. Quantifying the damage will enable the development of pavements that will reach their design life even when subject to higher loads. The study incorporates laboratory material testing, vehicle load simulators, field trials and the collective experiences of task force and working group members. The research outputs will be captured in a range of reports which will ultimately update the design manuals used by governments as well as the broader road industry.

Extending Bridge Life

The Bridge Task Force is developing guidance to help extend bridge life well beyond 100 years through material selection and better asset management. Ways to use and specify new materials such as geopolymer concrete are being investigated. The rate bridges deteriorate in various environments is being quantified to allow agencies to better predict maintenance budgets and optimum times of maintenance intervention. Techniques to stop ‘concrete cancer’ deteriorating reinforced concrete are being further expanded.

Productivity | Assisting member agencies to maximise the contribution that roads and related infrastructure make to the economy

Australia and New Zealand invest more than $21 billion annually in road construction and maintenance. Austroads plays an important role helping agencies to understand how to maximise their return on this significant investment made on behalf of the community.

Unlocking Freight Productivity

The Freight Program has a particular focus on improving the productivity of heavy freight vehicles. The approach taken by the Program recognises the multi-faceted nature of the challenges involved in meeting this objective, and particularly the need to avoid compromising safety in the delivery of improved productivity. The areas that the Task Force has prioritised include pricing and investment, access for heavy vehicles, planning and route assessment and innovation in design and operation of heavy vehicles. This includes work that will:

- Review the Performance Based Standards for level 3 and level 4 vehicles
- Quantify benefits resulting from use of high productivity vehicles
- Provide Austroads jurisdictions with a roadmap of bridge assessment processes and procedures
- Expand the Performance Based Standards Route Assessment Tool
- Improve access through direct private investment in public roads
- Address process gaps and lack of details in access management ministerial guidelines
- Improve access for High Productivity Vehicles through potential charging regimes.

Efficient Maintenance Planning

A significant proportion of the Assets Program's research is directed towards increasing our understanding of ways to better predict road wear and maintenance. Efficient planning and appropriate funding of road related asset management is an ongoing challenge. Current work includes projects that will:

- Develop nationally consistent pavement performance models, for use at both the network and project level. These models are needed to reliably predict long term performance to estimate and plan maintenance and funding.
- Help agencies understand the impact on pavement surfaces and structures caused by changing configurations and loadings of freight vehicles.
- Provide agencies with an understanding of the service requirements for freight and logistics industries on rural arterial roads. Including ways to improve trade efficiency and the contribution of roads towards the efficient use of other freight transport modes.

Efficient Network and Traffic Management

The efficient operation of the road network has a significant impact on productivity. The Network Programs' continued investment in C- ITS and network operations planning will deliver significant benefits to safety and improve the operational efficiency of the road network. The Guide to Traffic Management provides contemporary technical guidance for road managers and practitioners in improving the safety of all road users while optimising network performance.

Reducing the Economic Cost of Road Crashes

The economic cost of road crashes is enormous, estimated at $27 billion in Australia alone each year. The Safety Program has funded a project to develop the Australian National Risk Assessment Model (ANRAM). The model helps road agencies identify and manage fatal and serious injury crash risk across the road network. The model was developed as an Excel application and the development of the model was captured as a research report: *Australian National Risk Assessment Model*.

Harmonisation of Licensing Practices
The Registration and Licensing Task Force is managing a project to reduce duplication associated with car and motorcycle hazard perception tests (HPT). The project will unlock savings by producing a national package of modernised content that jurisdictions can use to update their existing HPTs for novice drivers and riders. The project contributes to improved management of higher risk drivers and increased consistency and efficiency in licensing practice across jurisdictions.

Road Safety| Assisting member agencies to reduce the impact of road trauma

Strategic Road Safety Research Program
The Safety Program is well placed to understand current and emerging safety challenges facing jurisdictions. Through the Department of Infrastructure and Regional Development the Program reports to TISOC on the implementation of the National Road Safety Strategy 2011-2020 (NRSS). The review of the NRSS will include an analysis of fatal crashes and a projection forward to 2020 to determine which serious crash types are being addressed and which ones are not. This will be an important contributor to safety programs and the accompanying research needed going forward.

The outputs of the Safety Program contribute significantly to reducing the impact of road trauma. Australian states and territories and New Zealand are achieving reductions in serious road trauma with preliminary data showing a number of jurisdictions achieving record low levels of road fatalities in 2013. Good progress has been made in reducing extreme risk taking behaviour through education, enforcement and legislative initiatives to reduce the incidence of speeding, drink and drug driving and to increase the wearing of appropriate restraints.

The implementation of a Safe System requires research to inform and assist road authorities to manage the transformations required in the design, building and operation of road networks. The majority of the Safety Program's research is aimed at supporting this transformational change and to build capacity in road authorities.

Road Design and Safe Systems
More than half of the Road Design projects for 2013-14 focussed on improving the safety aspects of the road corridor and incorporating the Safe Systems approach into the Austroads Guides. In particular, the Road Design Task Force has focussed on improved rural road safety, speed reduction initiatives in high speed environments, safety provisions for floodways, road safety barriers and making the roadside environment safer for motorists who leave the road.

Safer Indigenous Communities
The Indigenous licensing project *Tracking Forward to a Provisional Licence* aims to increase the number of Indigenous people in remote communities driving legally and independently. The project provides remote communities with experienced drivers to supervise learner drivers. The social impact of unlicensed driving, road trauma and associated incarceration among Indigenous Australians is significant. Pilot programs currently being held in Mapoon and Napranum (QLD), Bidgydanga (WA) and Amata APY Lands (SA) are showing promise despite the complexities of the issues and challenges associated with the remote nature of communities and weather.

Heavy Vehicle Safety
The Freight Program recognises that delivering improved freight outcomes cannot be at the expense of safety outcomes. The Program conducts research into safety elements of heavy vehicle operation and surveys ways to improve safety in the movement of freight. Specific projects include:

- Development of a policy framework to support safety, efficiency and productivity of freight in the urban context
- An examination into the use auxiliary brakes in heavy vehicles.

Safe Network Operations
Safety is an integral part of the Network Program. The primary objective of the Program is to improve the efficient, reliable and safe operation of the road network. The evolution of C-ITS and safety benefits of vehicle to vehicle communication are projected to deliver significant road safety benefits. The programs ongoing commitment to improving safety at worksites will deliver a nationally accredited traffic control at worksites scheme of industry training by the end of 2015.

Environmentally Sustainable Transport| Assisting member agencies to manage the delivery of infrastructure services and use of the road network in a more sustainable way

Sustainable Materials
The Technology Program has two projects under way seeking to make roads and related infrastructure more environmentally sustainable. The Bridge Task Force is investigating the use of geopolymer concrete made from various waste or industrial by-product materials for the manufacture of structural and non-structural components. The Pavements Task Force is investigating how to maximise the use of reclaimed asphalt pavement into the Austroads asphalt mix design process.

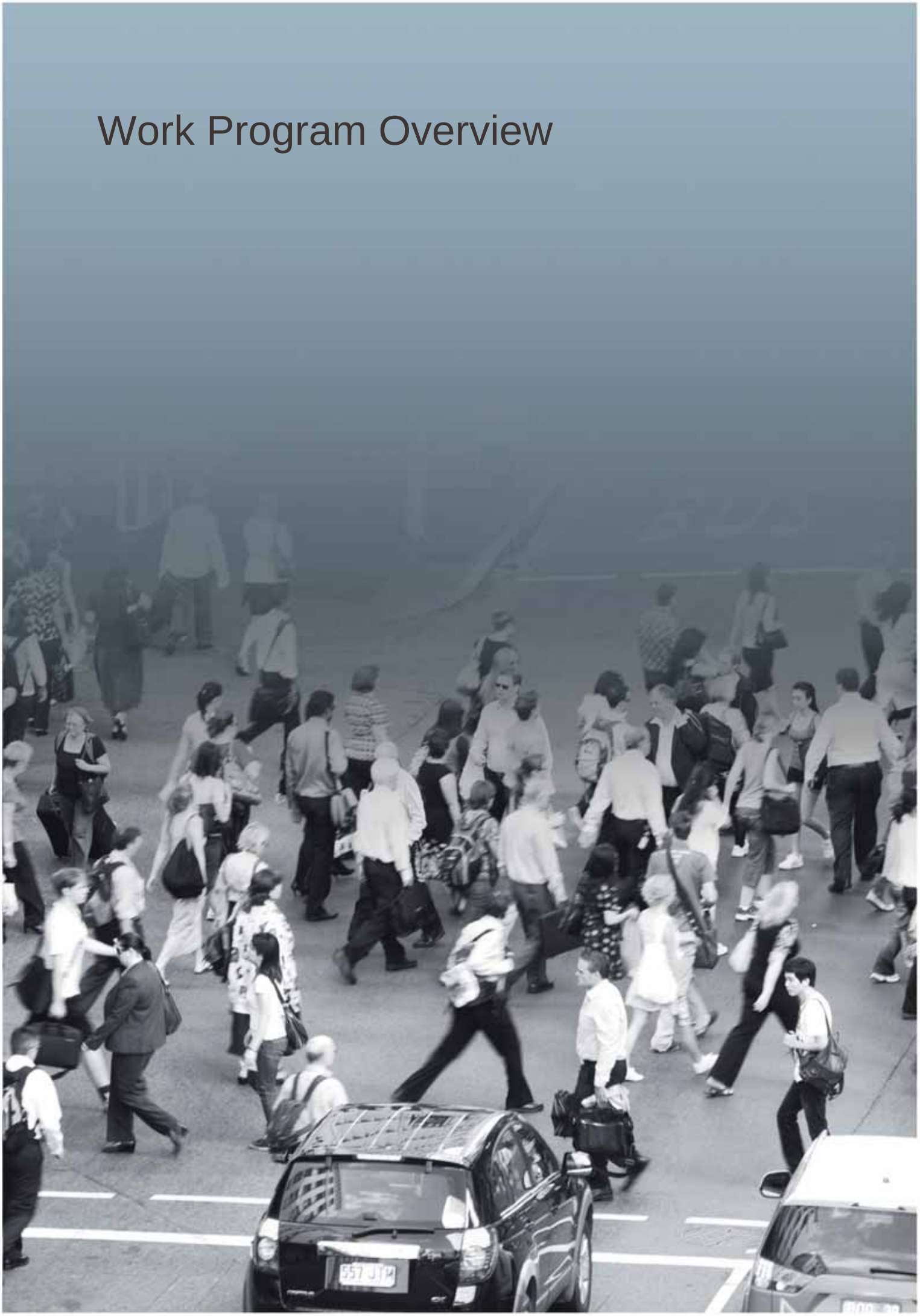
The Assets Program is examining the costs associated with the decreasing availability of traditional road-building materials and future availability and suitability of recycled materials. The project has reviewed use of local and recycled pavement materials by Australian jurisdictions, with particular emphasis on construction and demolition waste. It has also developed detailed local government and industry case studies. The findings will be reported next year.

Encouraging Active Travel
The Network Programs' commitment to Network Operations Planning provides a holistic approach to managing the allocation of road space to meet the needs of all road users. In 2013-14 the development of a pedestrian facility selection tool and case studies to encourage and improve cycling were important initiatives.

The Australian Bicycle Council provides a forum for sharing information between stakeholders involved in the implementation of the National Cycling Strategy 2011-16. The Council reports to TISOC and the Transport and Infrastructure Council annually on the implementation of the Strategy. The Council also maintains a repository of information and resources to promote increased cycling in Australia www.bicyclecouncil.com.au. The Australian Bicycle Council secretariat is funded by the Commonwealth Department of Infrastructure and Regional Development.

In 2013 the Australian Bicycle Council completed the second National Cycling Participation Survey. The survey monitors progress towards the National Cycling Strategy goal of doubling cycling participation. The 2013 survey shows a slight overall decrease in cycling participation which is a surprising result, given the increasing levels of cycling being measured on many inner-city cycle routes. It seems that while cycling is becoming more popular in dense urban areas, there is a general decrease in participation which may be related to the general decrease in activity seen in the wider population.

Work Program Overview



Austroads tracks progress on all projects and reports to the Board at each meeting on the overall delivery of the work program. There were 173 projects approved in the 2013-14 work program, with 113 projects continuing from previous financial years and 60 new projects starting in 2013-14. There were 40 projects scheduled for completion by 30 June 2014. Two were completed by that date.

During 2013-14 a total of 39 projects were completed, five projects were cancelled and one was deferred. At 30 June 2014 there were seven projects which were overdue by more than 12 months and eleven by more than six months.

In 2014-15, 128 projects will carry over from 2013-14 and there will be 30 new projects making a total of 158. Table 1 provides a comparison of work program status figures as at 30 June for the last seven financial years.

- **Table 1 — Status of Austroads work program**

	Completed	Cancelled or Deferred	12 months + late	6 - 12 months late	On time and < 6 months late	Total
2007-08	41	10	3	8	82	144
2008-09	68	7	1	4	77	157
2009-10	39	0	1	3	94	137
2010-11	47	1	0	9	80	137
2011-12	44	5	3	4	81	137
2012-13	46	7	6	0	107	166
2013-14	39	6	7	11	110	173

Total expenditure for the 2013-14 work program was $11.1 million. Table 2 provides a breakdown of the expenditure by program.

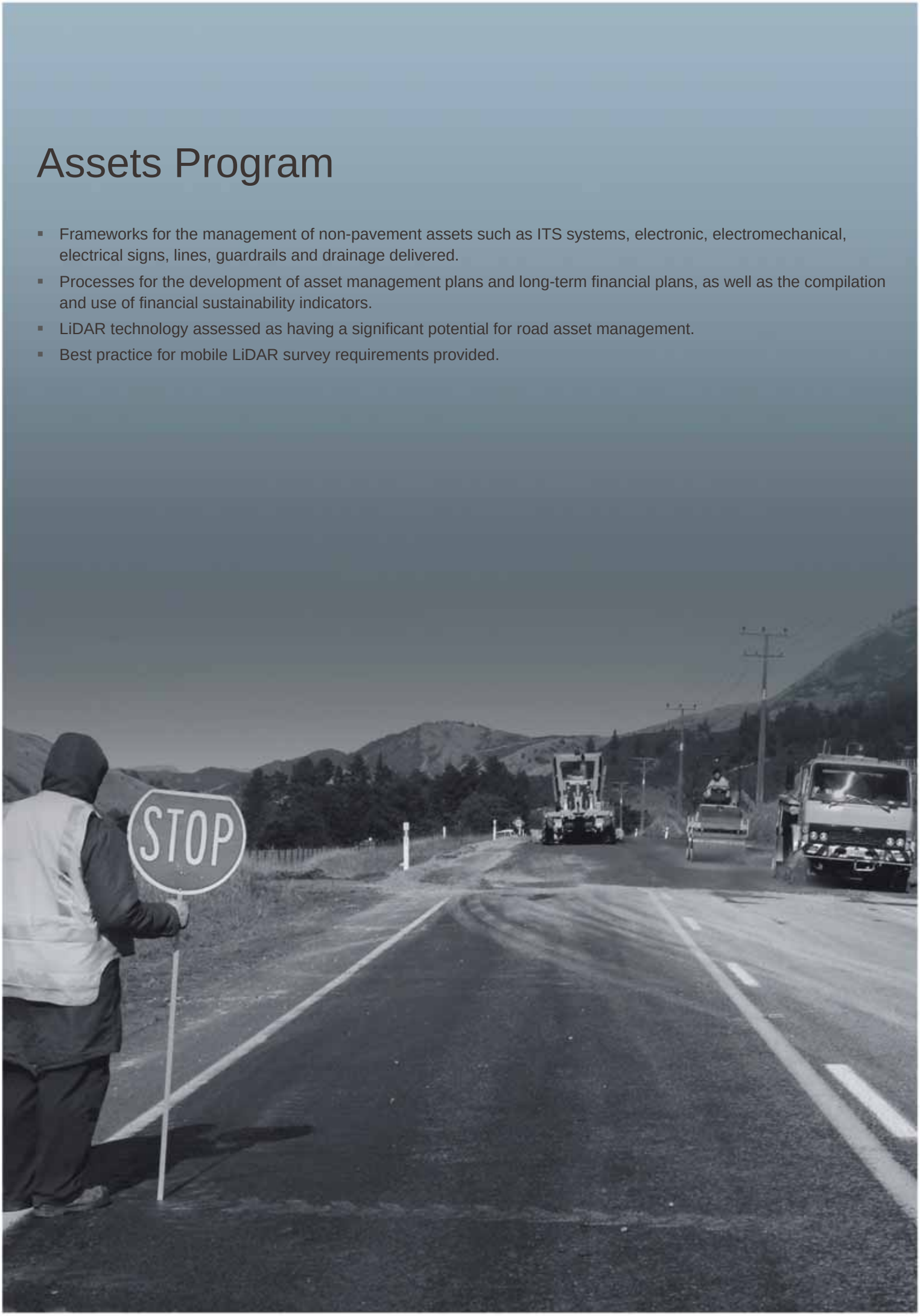
- **Table 2 — Work program expenditure by program**

Program	2013-14 Expenditure
Assets	$2,020,999
Freight	$678,852
Network	$1,135,885
Registration & Licensing	$146,455
Safety	$1,946,440
Technology	$5,182,483
Total	$ 11,111,114

More details on program expenditure are contained in the financial statements.

Assets Program

- Frameworks for the management of non-pavement assets such as ITS systems, electronic, electromechanical, electrical signs, lines, guardrails and drainage delivered.
- Processes for the development of asset management plans and long-term financial plans, as well as the compilation and use of financial sustainability indicators.
- LiDAR technology assessed as having a significant potential for road asset management.
- Best practice for mobile LiDAR survey requirements provided.



Assets Program Overview

The work of the Assets Program aims to provide the road services the community needs at least long term cost.

Australia and New Zealand invest more than $21 billion annually in road construction and maintenance. Austroads plays an important role helping agencies to understand how to maximise their return on this significant investment made on behalf of the community.

Outputs include:

- Customer defined levels of service integrated into asset management practice
- Relationships between road surface characteristics and road safety clearly established
- Road and bridge wear under increased loads quantified
- Guidance on non-pavement asset management
- Guidance on sustainable utilisation of scarce and recycled materials in road maintenance
- Guide to Asset Management updated.

People

Program Manager: David Darwin
State Highway Outcome Delivery Manager
NZTA

Program Coordinator: Sarah Mayne
NZTA

The Program Manager chairs the meetings of the Assets Task Force.

Assets Task Force

Andradi Adhiputro, NTC
Michelle Baran, TMR Qld
Greg Campbell, MR WA
Karl Cloos, TAMS ACT
Alex Foulds, DIRD
Tony Porcaro, DPTI SA
Vince Punaro, VicRoads
Gary Rykers, RMS NSW
Mick Savage, IPWEA
Shane Tepper, DoT NT
Craig Thew, IPWEA

Other technical groups

- National PMS Users Working Group
- Road Authority Pavement Making Working Group
- Telecommunication in Road Reserves Working Group

2013-14 Highlights

- The Assets Task Force established a working group to develop the data and cost information required to support the Heavy Vehicle Charging and Investment (HVCI) Reform.
- Significant progress has been made on the review of the Austroads Guide to Asset Management. The Guide set will be updated to respond to stakeholder needs, reflect modern practice, incorporate the findings of recent research and include guidance on aligning asset management practices with the requirements of the forthcoming Asset Management Standard ISO55000.
- Current work includes projects that will:
  - Develop nationally consistent pavement performance models, for use at both the network and project level. These models are needed to reliably predict long term performance to estimate and plan maintenance and funding.
  - Help agencies understand the impact on pavement surfaces and structures caused by changing configurations and loadings of freight vehicles.
  - Provide agencies with an understanding of the service requirements for freight and logistics industries on rural arterial roads. Including ways to improve trade efficiency and the contribution of roads towards the efficient use of other freight transport modes.

Projects completed

Management of Road Related Assets

Road agencies are now becoming ‘road managers’ rather than ‘road builders’. As a result, they are becoming more responsible for the management of a wide range of non-pavement assets. While road agencies are experts in techniques related to the effective management of pavement-related assets, there is a lack of appreciation and understanding of the need to apply the same principles to other road related assets. The project produced two reports which provided strategies and frameworks for the management of assets such as ITS systems, electronic, electromechanical, electrical signs, lines, guardrails and drainage *Asset Management Strategy for Electrical Assets* and *A Generic Framework for the Management of Road Related Assets*.

Bridge Management through Performance Models

Performance modelling is an asset management tool used to quantify or qualify the performance of a bridge within the context of the overall bridge network. Performance modelling techniques include the use of performance indicators and deterioration modelling. Frequently these new techniques are integrated into bridge management software tools. This project focused on capturing these new techniques and providing guidance for their use in Australia and New Zealand. The research findings were published in the report *Bridge Management through Performance Models*.

Using Financial Data in Asset Management Decision Making

Asset managers require detailed financial data to enable them to manage infrastructure within the budget constraints of their organisation. This project examined Australian asset and financial management requirements and practices and the implications for financial sustainability in key areas such as asset valuation. A common approach to estimating depreciation across these functions is important because it determines how financial sustainability is assessed. There is a clear need to involve Treasury and audit stakeholders in the development of asset management plans (AMP) and long-term financial plans (LTFP) to ensure that performance, productivity and financial measures are useful for all stakeholders of these reports. The findings of this project were published in the report *Using Financial Data in Asset Management Decision-making*.

Application of New Technologies to Improve Risk Management
This project developed guidance for road asset managers on the use of new technologies that have the potential to improve efficiency. The project assessed eleven new technologies, with descriptions of its physical principles, potential use in asset management and any limitations. Conclusions are drawn on how to deploy each technology based on the potential use in asset management, market readiness, the quality of the provided data and the costs and business case considerations.

LiDAR technology, in particular, was assessed to have a significant potential for road asset management. Potential applications and issues have been discussed in dialogue between road agencies and LiDAR industry stakeholders. This resulted in a separate discussion paper describing best practice for mobile LiDAR survey requirements.

The project produced two reports:

- *Application of New Technologies to Improve Risk Management*
- *Best Practice for Mobile LiDAR Survey Requirements (Discussion Paper).*

Future Focus

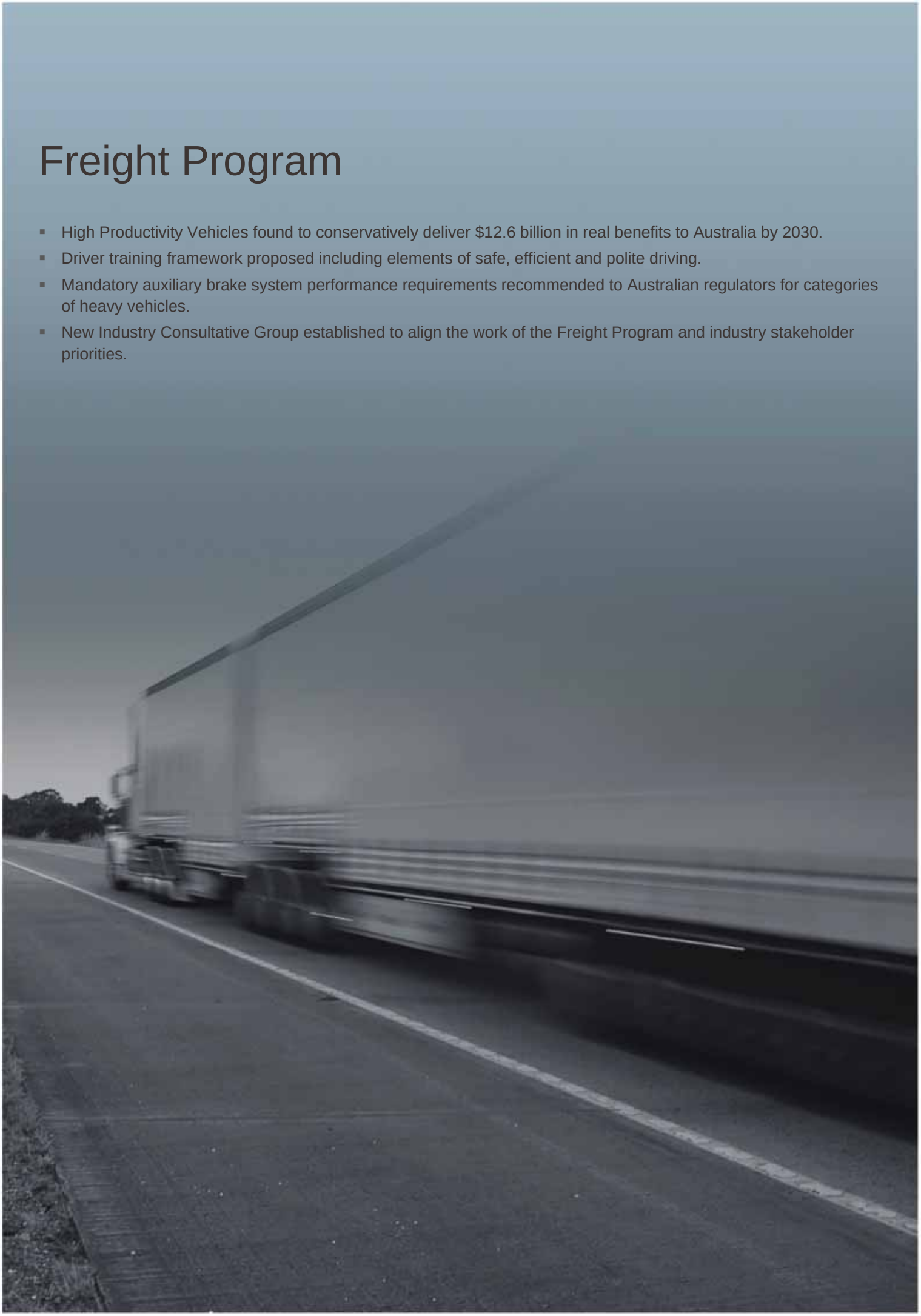
The focus of the Asset Program is on cost effectiveness and efficiency of asset management and supporting productivity enhancements for freight.

Projects starting in 2014-15 include work to:

- Inform managers of the unsealed road network on good practice maintenance, gravel re-sheeting and other road works and to provide evidence to inform policy
- Develop a maintenance strategy and framework for Intelligent Transport Systems based on Reliability Centred Maintenance principles.

Freight Program

- High Productivity Vehicles found to conservatively deliver $12.6 billion in real benefits to Australia by 2030.
- Driver training framework proposed including elements of safe, efficient and polite driving.
- Mandatory auxiliary brake system performance requirements recommended to Australian regulators for categories of heavy vehicles.
- New Industry Consultative Group established to align the work of the Freight Program and industry stakeholder priorities.



Freight Program Overview

The work of the Freight Program aims to improve productivity and safety in meeting the freight task.

The Freight Program enables the Commonwealth and state and territory road agencies to collaborate to improve productivity, sustainability and safety of the movement of freight. The Program provides a unique environment for road agencies, policy officers and research agencies to work towards a common goal.

Integral to the operation of the Freight Program is the coordination of ongoing and new work across relevant agencies to ensure duplication of work is minimised and any gaps can be identified and rectified, as appropriate.

Outputs include:

- National standards and guidelines to improve the productivity and sustainability safety of road freight movement
- Policy framework for light freight
- Research reports, guidelines and tools to improve road relating to freight access and outcomes; including the use of road, bridge and intermodal facilities decision making
- Guidelines and tools to improve bridge access decision making
- National Performance indicators related to heavy vehicles and freight to inform policy development and decision making.
- National competencies and capability framework for road freight regulators
- Best practise guidelines for the management of road access and amenity at freight terminals and facilities.

People

Program Manager: Michael Sutton
General Manager, Land Transport Productivity
DIRD

Program Coordinator: Tracey Wilkinson
DIRD

The Program Manager chairs the meetings of the Freight Task Force.

Freight Task Force

Jose Arredondo, NTC
Anita Curnow, VicRoads
Angus Draheim, NHVR
Pascal Felix, MR WA
Kym Foster, ALGA
Patricia Grunert, RMS NSW
Andrew Hyles, DIRD
Russell Ingham, DTMR Qld
Danny Johnson, DSG Tas
Marinus La Rooij, NZTA
Barbara Littler, DoT NT
Ross Mensforth, DTMR Qld
Lindsay Oxlad, DPTI SA
Rod Paule, DJCS ACT

2013-14 Highlights

The range of projects on the work program reflects the range of issues that are relevant to delivering improved freight outcomes. The finalisation of the project to quantify the benefits from the use of High Productivity Vehicles (HPVs) is a milestone. The project found the HPV initiative is poised to conservatively deliver $12.6 billion in real benefits to Australia by 2030.

Two new projects of critical importance to the national agenda were added to the Freight Program in 2013-14, *Opportunities/ Framework for Direct Private Investment in Public Roads* and *Improving High Productivity Vehicles (HPV) Access through Potential Charging Regimes*. The creation of the new Industry Consultative Group recognised the need for strong alignment between the work of the Freight Program and industry stakeholder priorities to deliver the Program's objectives.

Projects Completed

Use of Auxiliary Brakes in Heavy Vehicles

This project reviewed the use of auxiliary brakes by drivers of heavy vehicles on long and steep descents. The research was in response to a number of serious incidents involving runaway trucks on long, steep grades and continued noise complaints from the community.

The research included a substantial literature review, surveys of truck drivers and local governments, field testing, and the development of a simulation program to assess differential speed limits on long steep grades.

The report proposed a driver training framework which included elements of safe, efficient and polite driving. It also recommended that Australian regulators consider mandatory auxiliary brake system performance requirements for certain categories of heavy vehicles. The project commenced in June 2012 and the report, *Use of Auxiliary Brakes in Heavy Vehicles*, was published in March 2014.

Light Freight - Understanding its Role in Urban Logistics

This project undertook to examine and understand the role of light freight vehicles as a component of the total traffic stream within the urban environment and their impacts on, and contribution to, urban congestion.

The report examined the contribution of light commercial vehicles and light rigid trucks to the urban supply chain. It also considered their impact on traffic capacity, network congestion, the environment and road safety and defined light vehicles (LFVs) as being a Light Commercial Vehicle (LCV) or Light Rigid Truck (LRT) which is used primarily for the carriage of freight.

The project collected traffic flow data and analysis found LFVs comprise 9.1% of more than 2,100 observed LCVs, and 77.3% of the 251 observed LRTs. These findings are substantially supported by the Melbourne Commercial Vehicle Video Study of 2012. LFVs comprise only 4.1% of all the traffic streams observed in four cities. The project findings were detailed in the report, *Light Freight Vehicles and Urban Logistics*.

Quantification of benefits resulting from use of High Productivity Vehicles
This project set out to quantify the safety, productivity and environmental benefits achieved as a result introducing HPVs, such as Performance Based Standards vehicles. The project aimed to promote the uptake of HPV's and reassure community and industry that improved road safety and productivity results from their use.

The project report outlined the direct and indirect benefits of HPVs in Australia. Direct benefits examined include safety, productivity, fuel and environmental savings. An estimate of indirect benefits of the adoption of HPVs was also examined covering the stimulated economic flow-on benefits, lowering community freight exposure and slightly lowering infrastructure maintenance costs.

The report represents the first study of its type to create national heavy vehicle accident benchmarks for Australia and to use those benchmarks to measure the national HPV fleet accident performance rates. Over the last three years the estimates for productivity of HPV have risen significantly as operators have supplied more precise kilometre savings estimates than was available prior to this study.

The HPV initiative is poised to conservatively deliver $12.6 billion in real benefits to Australia by 2030 through $6.9 billion in discounted direct benefits and $5.7 billion in indirect discounted flow-on economic benefits. The full benefits were detailed in the report *Quantifying the Benefits of High Productivity Vehicles*.

Future Focus

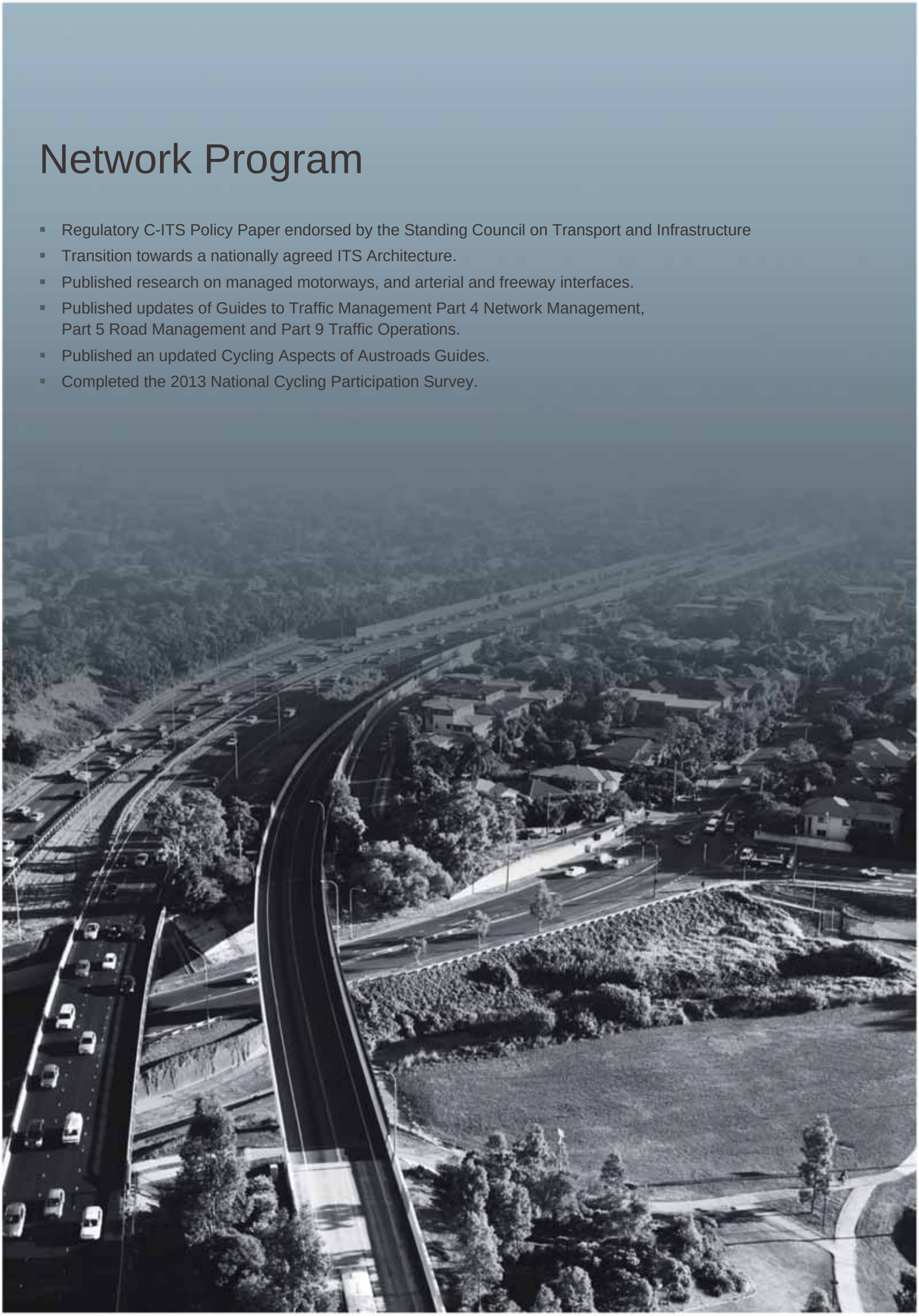
The Freight Program will continue to improve its strategic focus on matters of national importance, utilising the benefit of access to operational and policy officers working in collaboration. The Program will continue to strengthen its relationship with industry through the new industry Consultative Group.

Four new projects have been added to the Freight Program for 2014-15:

- Overcoming barriers to the off-peak movement of freight in urban areas
- Investigating the potential benefits of enhanced end to end supply chain visibility
- National steer axle mass limits
- Heavy vehicle braking standards.

Network Program

- Regulatory C-ITS Policy Paper endorsed by the Standing Council on Transport and Infrastructure
- Transition towards a nationally agreed ITS Architecture.
- Published research on managed motorways, and arterial and freeway interfaces.
- Published updates of Guides to Traffic Management Part 4 Network Management, Part 5 Road Management and Part 9 Traffic Operations.
- Published an updated Cycling Aspects of Austroads Guides.
- Completed the 2013 National Cycling Participation Survey.



Network Program Overview

The objective of the Network Program is to improve the efficient, reliable and safe operation of the road network. The Network Program provides road agencies and practitioners with contemporary technical guidance on managing efficient, safe and reliable road networks for all road users through a national research program and the Guide to Traffic Management. An integral part of the program is to ensure that Australia and New Zealand are positioned to adopt advances in technology and to respond to emerging priorities in managing the road network.

Outputs include:

- ITS architecture adopted nationally
- Standardised traffic system requirements
- Network operating techniques for all modes
- Next generation network operations performance measures
- National Cycling Strategy 2011-16 implementation
- Information services standardised for users
- Guide to Traffic Management updated.

People

Program Manager: Craig J Moran
General Manager, Road Network Operations
Roads and Maritime Services NSW

Program Coordinator: Jill Hislop
Austroads National Office

The Program Manager chairs the meetings of the Network Task Force and the Program's other technical groups.

Network Task Force

Glenn Bunting, NZTA
Paul Gelston, DPTI SA
Craig Hoey, DSG Tas
Geoff Horni, DoT NT
Tom McHugh, MRWA
Rifaat Shoukrallah, TAMS ACT
Andrew Wall, VicRoads
Dennis Walsh, DTMR Qld

Other technical groups

- Australian Bicycle Council
- Traffic Management Working Group
- Cooperative ITS Industry Reference Group
- Cooperative ITS Steering Committee
- System Managers Working Group

2013-14 Highlights

Intelligent Transport Systems
A key deliverable of the Network Program is the development of a nationally agreed Intelligent Transport System (ITS) Architecture. In 2013-14 significant progress was made with a context, vision and business architecture agreed to by road agencies.

Co-operative ITS (C-ITS) involves the use of wireless communications to share information between vehicles, roadside infrastructure, mobile devices and back office centres. This connectivity will enable vehicle and transport applications to work co-operatively together to deliver safety, mobility and environmental outcomes. The primary objective of the Austroads C-ITS project is to ensure Australia and New Zealand have a regulatory and operational framework in place that can support the local deployment of C-ITS. In 2013-14 work to establish this framework included:

- Regulatory C-ITS Policy Paper's key findings and recommendations endorsed by SCOTI and published in December 2013
- Submission to ACMA for the allocation of the 5.9GHz band for ITS in April 2014
- ITS Interoperability between current infrastructure and emerging vehicle applications reviewed.

Network Operations Planning
During the year work progressed on the development of metrics to measure level of service for different road user groups including drivers, public transport, pedestrians, bicycle riders and freight.

Significant progress was also made on the development of a pedestrian facility selection tool. The online tool will provide practitioners with feasibility criteria and economic assessment to improve their decision making.

The Program also delivered improved guidance on managed motorways, and arterial and freeway interfaces.

Guide to Traffic Management
Contemporary technical guidance was provided through the update of Guides to Traffic Management Part 4 Network Management, Part 5 Road Management, Part 9 Traffic Operations and Cycling Aspects of Austroads Guides. Work is also underway to update Part 6 Intersections, Interchanges and Crossings and Part 7 Traffic Management in Activity Centres.

National Cycling Strategy
The Network Program has oversight of the delivery of the National Cycling Strategy 2011-16. Achievements during the year include:

- Submission of the National Cycling Strategy Implementation Report 2013 to TISOC and the Transport and Infrastructure Council
- Completion of the 2013 National Cycling Participation Survey which gauges progress towards the National Cycling Strategies goal to double cycling participation
- Development of case studies to share urban cycling infrastructure and low cost interventions that have encouraged cycling
- Significant progress towards the release of an updated Australian Standard on bicycle parking, the development of tools to assist practitioners to perform cost-benefit analysis of cycling projects, and the development of a "level of service" framework that includes bicycle users
- Completion of project investigating bicycle lanes in roundabouts which will lead to an in-depth study coordinated by the Road Design Task Force.

Projects completed

ITS Procurement

Procurement of ITS is a significant investment for road agencies in Australia and New Zealand. This two year project investigated international ITS procurement practices through a literature review, case studies and interviews with stakeholders. A review of 14 case studies from six selected countries provided road agencies with an improved understanding of ITS procurement practice and enabled the development of a ITS procurement toolkit based on lessons learned. The findings were published in the report *Procurement of ITS (International Practice)*.

Guide to Traffic Management

The Guide to Traffic Management provides comprehensive traffic management guidance for practitioners involved in traffic engineering, road design and road safety. During the year four projects were completed that reviewed the content of seven parts of the Guide.

Minor reviews were undertaken of Part 1 Introduction, Part 2 Traffic Theory and Part 13 Road Environment Safety to ensure these parts provide contemporary guidance. The parts will be updated in the 2014-15 program.

Major reviews were completed of Parts 4, 5 and 9 with new editions of these parts published in February 2014.

The *Guide to Traffic Management Part 4: Network Management* provides guidance on traffic management at a network level. It addresses network needs of the various categories of user, the characteristics of various types of network and, importantly, describes a planning process for balancing or prioritising the competing needs of different users. The 2014 edition updates aspects of the Guide that pertain to network operations and includes current best practice in network operation planning.

The *Guide to Traffic Management Part 5: Road Management* provides technical guidance on traffic management on sections of road between major intersections. Key updates to the 2014 edition include information on the latest practices and guidelines for on-road public transport, high occupancy vehicle lanes, cycling aspects, pedestrian crossing facilities, parking facilities, managed motorway initiatives and Safe System and Safe Speed approaches.

The *Guide to Traffic Management Part 9: Traffic Operations* provides technical guidance on the day-to-day operations that support the provision of road services to road network users. It introduces the concept of traffic operations and outlines the role of intelligent transport systems (ITS) in delivering services. Key updates to the 2014 edition included enhanced information on traffic signals, modal treatments, advancements in systems and procedures for traffic control including ramp metering, lane management systems, variable speed limits and variable message signs.

Development of Guide Content on Managed Motorways

Technological advances in ITS have provided the opportunity to improve the operational efficiency of Australian and New Zealand motorways. This project developed content related to managed motorways for the Austroads Guides. The content focuses on ramp metering as it plays a significant role in controlling the operational characteristics of a managed motorway. Detailed content on other aspects of managed motorways is expected to be compiled in future Austroads projects. The integration of managed motorway content will be included in upcoming Guide updates. The new content is contained in a report *Development of Guide Content on Managed Motorways*.

Operational Management of Arterial/Motorway Interfaces for Network Optimisation
Signalised interchanges and ramp metering are major components of the interface between the arterial road system and the motorway system. This project involved a survey of problematic interface sites throughout Australia and New Zealand. Four specific types of interfaces were studied: arterial roads adjoining motorway on-ramps; motorway off-ramps onto arterial roads; motorway-to-motorway interchanges; and motorways terminating at arterial roads. The study of four case studies developed a set of principles, strategies and treatment options for each of the four interface types. The findings were reported in *Operational Management of Arterial/Managed Motorway Interfaces for Network Optimisation.*

Cycling Aspects of Austroads Guides
Cycling Aspects of Austroads Guides provides guidance to road agencies and practitioners on the planning, design and traffic management of cycling facilities. The content is sourced from Austroads Guides, primarily the Guide to Road Design, the Guide to Traffic Management and the Guide to Road Safety. A new edition, published in April 2014, includes improved cross-references, broader consideration of the Austroads Guides applicable to cycling, and updated content to reflect new editions of the Guide to Traffic Management and Guide to Road Safety.

Assessment of On-Road Bicycle Lanes at Roundabouts
Roundabouts are a relatively safer form of intersection for motorists than signalised intersections, but result in a higher rate of crashes for cyclists. This project reviewed the safety of bicycle lanes on the approach and within roundabouts. This study included an international literature review and an examination of the fundamental differences in roundabout design philosophy in some continental European and English speaking countries including geometric features, visibility management, shared lane markings, separated bicycle facilities, bicycle lanes at lower and higher speed roundabouts. The findings were reported in *Assessment of the Effectiveness of On-road Bicycle Lanes at Roundabouts in Australia and New Zealand*.

Future Focus

The Network Program has an ongoing commitment to invest in C- ITS, ITS architecture, network operations planning, delivering activities that support the National Cycling Strategy and the continued update of the Guide to Traffic Management. This focus will ensure that Australian and New Zealand road agencies are positioned to successfully deploy next generation ITS solutions to improve the operational efficiency of the road network, plan holistically to consider the needs of all road users and provide technical guidance on contemporary network and traffic management practice.

In 2014-15 the Network Program will commence the following new projects:

- ITS Architecture Roadmap
- ITS Architecture Transition Planning
- Options for Reporting Network Performance Indicators
- Bicycle Way Finding Schemes
- Guide to Traffic Management Part 1 Introduction
- Guide to Traffic Management Part 2 Theory
- Guide to Traffic Management Part 4 Network Management
- Guide to Traffic Management Part 13 Road Environment Safety.

Registration and Licensing Program

- 98.6 million transactions processed by the National Exchange of Vehicle and Driver Information System (NEVDIS) database
- NEVDIS upgraded to help prevent drivers from avoiding sanctions by transferring their licences to another jurisdiction and to restrict novice drivers from driving high performance vehicles
- Options considered for replacing the current paper system of learner driver logbooks with electronic devices.
- Successful trials of revised licensing processes for remote Indigenous communities lead to employment opportunities.

Registration and Licensing Program Overview

The Registration and Licensing Program aims to enhance consistency, security and integrity of Australia and New Zealand's driver licensing and vehicle registration systems. Improvements to these systems have the potential to improve economic and social outcomes for the nation, its states and territories, and individuals.

The program works to improve social outcomes specifically for Indigenous Australians and promote national consistency by closing existing gaps through the development of best practice frameworks and policy amendments, and strengthening security and integrity through improved enrolment processes and technology.

The program has a significant touch point with customers through the policy and service delivery models of the Australian road agencies which support most of the Australian population to access vehicle registration and driver licensing services.

The program contributes to the Austroads Productivity and Customer Service strategic priorities through improved business efficiency, removal of duplication, modernisation of systems and harmonisation of practices across jurisdictions. It contributes to road safety outcomes through the management of higher risk drivers.

Outputs include:

- Improved management of overseas driver licences
- Vehicle registration systems which encourage use of safe and fuel efficient vehicles
- Improved integration and efficient utilisation of data
- Enhanced security of Australian driver licences and vehicle registrations
- Improved management of high risk drivers
- Increased consistency and efficiency in registration and licensing practice across jurisdictions
- National policies and registration schemes to deal with changing vehicle types in the Australian fleet
- Improved access to driver licences for indigenous Australians.

People

Program Manager: Peter Welling
Executive Director
Registration and Licensing
VicRoads

Program Coordinator: Leonie Pattinson
Austroads National Office

The Program Manager chairs the meetings of the Registration and Licensing Task Force.

Registration and Licensing Task Force

Martin Crane, DSG Tas
Paul Davies, NTC
Julie Holmes, DPTI SA
Geoff Hughes, NMVTRC
Marcus James, DIRD
Andrew Lee, DoT WA
Chris McNally, VicRoads
Brett Phillips, TAMS ACT
Cate Quinn, NZTA
Paul Rajan, DoT NT
Cheryl Richey, TfNSW
Phil Tout, NAU
John Wroblewski, DTMR Qld

Other technical groups

- Registration and Licensing Working Group

2013-14 Highlights

Tracking Forward to a Provisional Licence
This Indigenous licensing project aims to increase the number of Indigenous people living in remote locations obtaining a provisional driver's licence by designing and developing a culturally appropriate process to progress from holding a learner licence to a provisional licence. Obtaining a driver's licence for Indigenous people in remote communities is essential for gaining employment, accessing services, reducing the incidence of incarceration for unlicensed driving and road trauma. Trials of a revised licensing process have been held in four communities across three jurisdictions (Queensland, Western Australia and South Australia) and have received positive feedback. In Queensland the Remote Jobs and Community Programs provider has been successful in linking participation in the program with employment opportunities at Rio Tinto Alcan.

Alternative Vehicles – Motorised Mobility Devices (MMDs)
This project is working towards a national framework which aims to introduce improved construction and performance requirements for MMDs so that they are less likely to result in unsafe outcomes when using footpaths and other public infrastructure such as inappropriate speeds, loss of stability or loss of control incidents.

Projects Completed

National Arrangements for Managing a Pending Licence Sanction
The focus of this project was to develop a national policy for recording a pending licence sanction on NEVDIS to prevent drivers from avoiding sanctions by transferring their licences to another jurisdiction. The project included changes to the NEVDIS database to enable the agreed policy. During the project its scope was increased to examine the transfer of alcohol interlock devices across jurisdictions. The project will contribute to improved road safety outcomes.

Strategic Direction for NEVDIS
NEVDIS is now a business critical system for the Commonwealth, other government departments and the private sector, providing essential data and/ or data validation for the Commonwealth Document Verification Service (DVS), Personal Property Securities Register (PPSR) and the insurers' Vehicle Information Request System (VIRS) respectively. This project developed a medium to long term strategy for planning the future development of NEVDIS and determined the most appropriate business model for its administration. The project will improve the delivery of registration and licensing information for government service providers.

High Powered Vehicles
This project contributed to a broader initiative to introduce a new national definition of high powered vehicles. The project identified and implemented changes to NEVDIS functionality to support the initiative to restrict novice drivers from driving high performance vehicles. The project involved collaboration with road agencies, the Federal Chamber of Automotive Industries, the Commonwealth Government and CrimTrack and will contribute to improved road safety.

Development of Electronic Logbook Standards for Learner Drivers
This project considered options for replacing the current paper system of learner driver logbooks with electronic devices. The study considered key business and privacy issues, third party provider and vendor engagement models, and technology options. Further work will be undertaken to develop and document the requirements for an Electronic Learner Logbook which will be shared with jurisdictions through the Registration and Licensing Task Force.

Future Focus

In 2014-15 the Program will continue to focus on national registration and licensing frameworks, the harmonisation of policy positions and practices across jurisdictions, Indigenous programs, and identity and vehicle security.

The Program will also focus on opportunities for road agencies to work together to reduce duplication and unlock savings in the delivery of registration and licensing services nationally through a more strategic end to end view of services.

The program recognises that customer behaviours are increasingly driven by the electronic and digital economy and as a consequence customer expectations in the registration and licensing space drive a need to keep pace with changes in technology. A key area the Program will explore will be online service reform which has strong links to the Austroads strategic priorities of Customer Service, Productivity and Road Safety.

National Exchange of Vehicle and Driver Information System (NEVDIS)

NEVDIS contains the details of licensed drivers and vehicles in Australia, including 17.6 million registered vehicles, and is a critical part of the registration and licensing processes in every state and territory. It includes the national Vehicle Identification Number (VIN) database and the national Written Off Vehicle Register (WOVR) database.

In 2013-14 NEVDIS processed around 98.6 million transactions including:

- Processing 1.6 million VINs.
- Providing access to and exchange of driver and vehicle information between states and territories in Australia. Around 7.2 million jurisdictional transactions are made every month – that's 250,000 on an average working day.
- Providing select data to the Personal Property Securities Register (PPSR), Vehicle Information Request System (VIRS) and Document Verification Service (DVS). PPSR usage has been steady at around 500,000 inquiries per month, but VIRS and DVS are increasing. VIRS now provides information to 14 out of 16 major car insurance brands in Australia. VIRS enquiries have increased to 350,000 per month compared to 120,000 for the same period last year. DVS enquiries have increased from a low base primarily due to the expansion in private sector usage to around 33,000 per month.

NEVDIS is managed by the NEVDIS Administration Unit (NAU). The unit has a $5.1 million operating budget and a staff of 12 full time employees. The NAU responds to the day-to-day operational demands of registration and licensing jurisdictions, vehicle manufacturers/importers and police jurisdictions in relation to driver and vehicle management issues.

There is a hosting agreement between Austroads and RMS NSW for the operation of the NAU. Under this agreement RMS provides staff and corporate services to the NAU and the NAU is subject to RMS corporate policies. The Austroads Chief Executive has day-to-day responsibilities for the NAU. Project and strategic oversight are provided by the Registration and Licensing Program Manager and Registration and Licensing Task Force.

Road Safety Program

- Austroads Safety Task Force merged with National Road Safety Executive Group to combine technical and safety research with broader road safety policy and strategy development.
- Proposed measures to reduce the incidence and severity of head-on and run-off-road crashes in urban areas.
- Proposed roadside safety management framework to minimise fatal and serious injuries arising from run-off-road crashes.
- Published compendium of methods to reduce operating speeds in rural areas and national guidelines for setting speed limits at higher-risk locations.
- Delivered the National Risk Assessment Model which helps road agencies to identify fatal and serious injury crash risk across the road network.

Road Safety Program Overview

The work of the Safety Program aims to prevent death and serious injuries using a Safe System approach. The Austroads Safety Program is well placed to understand current and emerging safety challenges facing jurisdictions working together to reduce serious road trauma. Through the Commonwealth Department of Infrastructure and Regional Development the Program reports to TISOC on the implementation of the National Road Safety Strategy (NRSS).

Mid-year the Austroads Board directed the Safety Program to be the first program to transition away from the Austroads-ARRB Partnership Agreement towards a more competitive contracting model. As a result, more than 80% of the new projects scoped in 2013-14 were contracted competitively. The transition to a competitive model was very smooth and the early involvement of research organisations provided useful scrutiny to the projects proposed. This process will continue in future years, providing a direct link to emerging road safety issues and research for the Safety Program.

Australian and New Zealand jurisdictions are achieving reductions in serious road trauma with preliminary data showing a number of jurisdictions achieving record low levels of road fatalities in 2013.

Good progress has been made in reducing extreme risk taking behaviour through education, enforcement and legislative initiatives to reduce the incidence of speeding, drink and drug driving and to increase the wearing of appropriate restraints (seatbelt reminder technology now fitted will make an increasing contribution in the future).

Increasing attention is being given to human error and mistakes including distraction which are largely not enforceable.

Safe System responses to the interaction between safe road and roadside infrastructure, active safety systems in vehicles (including C- ITS) and safe speeds will be increasingly important if further reductions in serious trauma are to be achieved.

As serious trauma is reduced among vehicle occupants it is expected that an increasing proportion of the residual trauma problem will involve vulnerable road users including pedestrians, cyclists and motorcyclists and Safe System responses will remain vital.

The Program is collaborating with the Commonwealth to fund a project to review the National Road Safety Strategy 2011-2020. The review includes an analysis of fatal crashes and a projection forward to 2020 to determine which serious crash types are being addressed and which ones are not. This is an important contributor to safety programs and the accompanying research needed going forward.

Outputs include:

- Austroads guides and other documents incorporating Safe System principles and practices
- National Road Safety Strategy and NZ's 'Safer Journeys' initiatives including;
  - Guidelines for graduated licensing
  - Risk-based speed limit setting methodology
- Initiatives effectively supporting the Global Decade of Action for Road Safety
- Investigation of emerging road safety issues
- Investigation of potential applications of cooperative ITS to produce improved safety outcomes
- Guide to Road Safety updated.

People

Program Manager: Iain Cameron
Executive Director, Office of Road Safety
MR WA

Program Coordinator: Natalie Lockwood
MR WA

The Program Manager chairs the meetings of the Safety Task Force.

Safety Task Force

Colin Brodie, NZTA
Geoff Davidson, DJCS ACT
Deborah Davis, DSG Tas
Robert Hogan, DIRD
Julie Holmes, DPTI SA
Marcus James, DIRD
Leo Mortimer, MoT NZ
Nick Papandonakis, DoT NT
Jeff Potter, NTC
Margaret Prendergast, TfNSW
David Shelton, VicRoads
Mike Stapleton, TMR Qld
Jon White, ANZPAA

2013-14 Highlights

From 1 July 2013, the Austroads Board and Transport and Infrastructure Senior Officials' Committee (TISOC) endorsed a new terms of reference and operation of the Austroads Safety Task Force which now include the former roles and responsibilities of the National Road Safety Executive Group (NRSEG).

This merged arrangement combines the technical and safety research program functions of the Austroads Safety Program with the broader road safety policy and strategy development functions formerly undertaken by NRSEG.

It has been agreed that previous national road safety working arrangements need to change to manage and maximise the effectiveness of the new arrangements that have brought the NRSEG and the Austroads Safety Task Force work (research, policy and strategy) together.

To work more strategically, the Safety Task Force has agreed to new working arrangements and has adopted Safe System framework themes, enabling it to work more effectively and focus on leading the business of the Task Force at a national level. The Program Manager still has overall responsibility for the management of the program, however, it has been agreed that the Task Force will operate more effectively and create leadership opportunities by adopting the new framework. Each theme is led by a theme leader working with a small group of key people at a national level that provide strategic focus and contribute to the work of the Task Force. These theme groups operate out of session in between meetings via email and telephone.

While leaders and groups will focus on their theme, their deliberations will be in the context of the overall national road safety strategies and how the areas of the Safe System work in an integrated and holistic way, keeping in mind the potential cross program linkages for aspects of safety across the various Austroads program areas.

Projects Completed

Mitigating Key Crash Types in Urban Areas

Run off road and head-on collisions are both loss-of-control collisions that have a high incidence and severity in urban environments. This project collated research into factors contributing to the incidence and severity of run off road and head-on collisions on urban roads in Australia and New Zealand. The project also identified possible measures to reduce the incidence and severity of these crashes. Crash data analysis and site investigations were conducted to add to currently available research on this topic. Recommendations based on this research are made on ways to reduce the incidence and severity of these crash types, in order to achieve a Safe System. The project produced a final report: *Investigation of Key Crash Types – Run off road and Head-on Crashes in Urban Areas: Final Report*.

Improving Roadside Safety

Roadside hazards pose a major risk to the occupants of vehicles which run off the road. This project investigated the effectiveness of safety barrier selection and placement, providing more forgiving roadside structures or protecting errant vehicles against impacts with them (clear zones). It also investigated the retrofitting of safety barriers to improve motorcyclist safety. The key outcome of the project was a proposed roadside safety management framework which focusses on minimising fatal and serious injuries arising from run off road crashes. The project produced four interim reports and a final report: *Improving Roadside Safety: Summary Report*.

Reducing Operating Speeds in Rural Areas

This project examined ways to reduce the operating speed of vehicles and the incidence of speed related crashes in rural areas. The final deliverable was a compendium which presented information on speed as a contributor to rural road crashes. It provided information on treatments that can be used to address speed, either at key locations (curves, intersections or the approach to towns) or on routes in general. The main focus of the compendium was on road engineering based treatments, but information was also provided on other approaches such as enforcement and in-vehicle devices. The project produced four interim reports and a final report: *Methods for Reducing Speeds on Rural Roads - Compendium of Good Practice.*

National Guidelines for Setting Speed Limits at Higher-Risk Locations

This project incorporated recent research, best practice examples and jurisdictional inputs to propose a set of model national speed limit guidelines for setting speed limits at high-risk locations. The model guidelines represented a harm reduction approach to speed limits, which is an intermediate step towards Safe System. They can be applied to different road categories and functions typical to Australia, while incorporating criteria for reduced speed limits based on severe crash risk. The model guidelines aim to provide consistent speed limits on roads and intersections which have a higher severe crash risk, while minimising multiple speed zones over short distances. The project produced a final report: *Model National Guidelines for Setting Speed Limits at High-risk Locations.*

National Risk Assessment Model, Program Development and Trials

This project developed the Australian National Risk Assessment Model (ANRAM). The model helps road agencies to identify fatal and serious injury crash risk across the road network. ANRAM also assists in the management of this risk through the development of treatment programs aimed at reducing crashes. The model was developed as an Excel application and the development of the model was captured as a research report: *Australian National Risk Assessment Model*. The project is also supported by four interim reports, which document earlier stages of model development.

Providing for Road User Error in the Safe System
This project investigated the feasibility and cost of moving towards truly Safe System infrastructure. The key feature of such infrastructure is that it be designed to preserve safety in the face of driver fallibility. The project first analysed the actual errors that drivers make. This provided an evidence-based means of assessing how effective different types, numbers and combinations of countermeasures are likely to be in mitigating the impact of driver error. This in turn allowed an estimate to be made of the plausibility and cost of implementing various models that could be applied as various degrees of approximation to an error tolerant system in a particular road environment. The project produced a final report: *Providing for Road User Error in the Safe System.*

Investigating the Impacts of Reduced Speed Limits
This project investigated the impact of changes to speed limits on key safety, operational and environmental indicators along a road network. The road safety indicator used was the change in the number of crashes by severity; the operational indicators included journey time and the mean and 85th percentile speed and the environmental indicators included fuel consumption and CO2 emissions. The aim of the study was to achieve a better understanding of the effect of changes to speed limits on these indicators, to assist the formulation of future speed management policies by jurisdictions.

Future Focus

The Program's future research will address the road safety objective in the Austroads Strategic Plan 2012-16 by setting a program of strategic and technical research addressing each of the four cornerstones of the Safe System (safe roads and roadsides, safe vehicles, safe speeds and safe road users). This will be achieved primarily through its alignment with the National Road Safety Strategy 2011-2020.

In relation to new projects commencing in 2014-15, the Program will focus on infrastructure solutions. The majority of projects support the Safe Roads and Roadsides pillar of Safe System, with other projects in the Safe People and Safe Speed areas.

Technology Program

- Published guidelines for bridge designers, contractors and asset owners in the selection and development of bridge barriers.
- Delivered new asphalt mix design procedures that enable the use of new mix types which deliver improved performance to road users and asset managers.
- Established two field test sites which will be monitored to rate the performance of polymer modified binders (PMBs) used in sprayed bituminous sealing.
- Published revised edition of the Guide to Pavement Technology Part 4B: Asphalt.
- Published best practice infrastructure procurement guidelines with the Australasian Procurement and Construction Council.
- Published revised editions of all four parts of *Guide to Project Delivery*.

Technology Program Overview

The work of the Technology Program aims to develop, implement and promote best practice and innovation in the field of road infrastructure design and construction.

Program outputs include:

- Guidance on improved design and materials management for enhanced pavement structural performance
- Improved understanding of material characteristics and vehicle interactions for improved quality and life of road surfacings including enhanced test methods and delivery techniques
- Guidance on management of scarce and quality resources (particularly in rural locations)
- Improved evaluation methods for bridge load capacity including deterioration models
- Enhanced bridge design guidelines
- Enhanced economic evaluation, methodology and data
- Austroads Guides updated and improved with integration of jurisdictional supplements
- Nationally harmonised project delivery initiatives
- Revision of the Bridge Design Standard AS5100
- National product assessment framework.

2013-14 Highlights

The Technology Program progressed work on 37 new and continuing projects in 2013-14.

Bridge Technology

The Bridge Task Force has progressed projects to develop:

- Specifications for materials and practices to extend the service life of major bridge structures in corrosive environments to beyond 100 years. Corrosion of reinforcement in concrete is the major cause of premature deterioration of structures in these environments with many coastal bridge structures suffering from corrosion at around 30 years.
- The use of geopolymer concrete in the manufacture of bridge and road related structural and non-structural components. The physical and chemical properties of geopolymer concretes are substantially different to conventional concretes and require extensive laboratory testing. The environmental benefit of geopolymer concretes is derived partly from encapsulating the waste material within the concrete and partly in the reduced need for disposal.
- Uniform, robust and fit-for-purpose bridge prediction/deterioration methodologies to determine realistic maintenance and replacement programs.
- Tools to rapidly identify the level of supplementary cementitious materials (SCM), such as fly ash, slag or silica fume, that will suppress damaging expansion caused by alkali-reactive aggregates (AAR), and avoid prohibitive repair costs.
- Standardised bridge assessments and heavy vehicle access rules in Australia.

People

Program Manager: John Spathonis
Principal Manager (Research & Development)
DTMR Qld

Program Coordinator: Craig Smith
DTMR Qld

The Program Manager chairs the meetings of the Technology Program Task Forces.

Bridge Task Force

Jaqueline Bohn, DI NT
Matthieu Bereni, NTC
Phil Molloy, DPTI SA
Nigel Powers, VicRoads
Ross Pritchard, DTMR Qld
Parvez Shah, RMS NSW
Erica Smith, MRWA
Vincent Tang, DSG Tas
Barry Wright, NZTA

Economic Evaluation and Planning Task Force

Sarah Boyle, DSG Tas
Tony Brennand, NZTA
Brett Clifford, DoT NT
Mark Harvey, BITRE
Rolf Lunsmann, TfNSW
Ed McGeehan, VicRoads
Robin Murray, DTMR Qld
Wesley Soet, MRWA
Peter Tisato, DPTI SA

Pavement Task Force

Michael Caltibiano, AAPA
John Donbavand, NZTA
John Esnouf, VicRoads
Paul Keech, ALGA
Les Marchant, MRWA
Paul Morgan, DPTI SA
John Nichols, CCAA
Andrew Papacostas, VicRoads
Bob Pemble, DoI NT
Mike Pickering, DTMR Qld
Bryan Pidwerbesky, Roading NZ
George Vorobieff, RMS NSW
Barry Walker, DSG Tas
Greg White, AustStab

Project Delivery Task Force

Leo Coci, MRWA
Richard Edwards, DPTI SA
Peter Letts, RMS NSW
Colin MacKay, NZTA
George Mavroyeni, VicRoads
Ben Moloney, DSG Tas
Michael Swainston, DTMR Qld

Road Design Task Force

Tom Brock, Consult Australia
Peter Ellis, RMS NSW
Richard Fanning, VicRoads
Rob Grove, MRWA
James Hughes, NZTA
Gemma Kernich, ABC
William Moodie, DoI NT
Noel O'Callaghan, DPTI SA
Mike Whitehead, DTMR Qld

Road Tunnels Task Force

Bob Allen, ATOG
Nigel Casey, RMS NSW
Nigel Lloyd, NZTA
Ross Pritchard, DTMR Qld
Kingsley Noble, DPTI SA
Ted Nye, ATS
Geoff Raynor, Linking Melb Auth
John Venables, MRWA

Other technical working groups

- Bituminous Surfacings Working Group – This group is chaired by a member of the Pavements Task Force but is generally composed of practitioners and industry representatives who have an interest in projects related to bituminous sprayed seals.
- Asphalt Working Group - This group is chaired by a state road authority representative and is generally composed of practitioners and industry representatives who have an interest in projects related to the use of asphalt.
- Pavement Structures Working Group – This group is comprised of jurisdictional representatives and ARRB and reviews in detail, projects relating to pavement design.

Road Design

The Road Design Task Force has progressed projects which:

- Identify road design elements that contribute to crash occurrence and severity. This information will lead to the revision of current road design standards to reduce the potential for road design factors to be attributed as a crash factor.
- Determine the efficacy, including safety performance, of the various treatments used to gradually reduce vehicle speeds in high speed environments.
- Better alert drivers to the dangers of crossing a floodway when under water. Fatalities continue to occur across Australia and New Zealand as a result of poor floodway design and inadequate signage.
- Standardise road design drawing presentation to reduce errors and gain efficiencies in the road construction industry.
- Identify improvements in the current road design standards that will safely accommodate heavy vehicle movements into the future.
- Review the Austroads Guide to Road Design Part 1: Introduction to Road Design, Part 2: Design Considerations, Part 3: Geometric Design, Part 4: Intersections and Crossings - General, Part 4A: Unsignalised and Signalised Intersections, Part 4B: Roundabouts, Part 4C: Interchanges, Part 6: Roadside Design, Safety and Barriers and Part 6B: Roadside Environment.
- Determine the optimum acceleration lengths for entrance ramps onto motorways that take into account the grade and that represent a defendable balance between affordability, operational performance and safety for inclusion in the update of Austroads Guide to Road Design Part 4C.

Pavement Technology

The Pavement Task Force has progressed projects that will:

- Improve understanding of the fundamental relationships between heavy vehicle axle types and loads and pavement wear. This information is vital to new Performance Based Specifications for vehicle design and the introduction of Heavy Vehicle Charging and Investment.
- Maximise the use of reclaimed asphalt pavement in asphalt mix design by providing guidance that makes allowance for the contribution of aged binder in the mix and ensure the expected life of the asphalt is achieved.
- Investigate ways to maximise the use of available materials in road base construction by developing effective methods for evaluating the performance of unbound granular materials, the most widely used material in road construction.
- Deliver a robust long-term aging test for bitumens and polymer modified bitumen (PMB) to maximise the cost effectiveness and life of sprayed seals in an environment of changing bitumen-supply and PMB manufacturing.
- Develop a test to rank cracking-resistance of various sprayed seal binders.

- Monitor, interpret and report on the intermediate term performance of the Austroads Polymer Modified Binder sprayed seal trials and the long term performance of the Gisborne non-modified binder trial.
- Investigate best practice for the use of binders to achieve optimum pavement performance.
- Improve procedures for the design of foamed bituminous stabilised materials for new pavements and structural rehabilitation treatments, identify distress modes of bituminous stabilised pavements and to improve and harmonise national mix design procedures for these materials.
- Improve procedures for the design of asphalt pavements with structural asphalt layers for determining asphalt moduli and evaluating asphalt endurance limits methods.
- Develop guidelines for the design of high modulus asphalt mixes.
- Investigate key performance measures and prediction models for unsealed roads.
- Publish an updated Bitumen Sealing Safety Guide to reflect recent changes to the 7th edition of the Australian Code for the Transport of Dangerous Goods by Road and Rail.
- Deliver robust pavement design software for use and inclusion in the Guide to Pavement Technology.
- Strategically review the Austroads Guide to Pavement Technology to identify areas for improvement and bench mark the Guide procedures in comparison to overseas procedures.

Road Tunnels

The Road Tunnels Task Force has progressed projects that will:

- Update the Austroads Guide to Road Tunnels Part 2: Planning Design and Commissioning, with a specific focus on rehabilitation works for tunnels.
- Identify best practices in tunnel construction and maintenance from overseas experience.

Project Delivery and Evaluation

The Project Delivery Task Force is working towards adding specialist categories to the National Prequalification System. This includes categories for precast concrete products, fabricated steel products, traffic management and control, protective coating of steel products, laboratories and the laying of asphalt and bitumen surfacing.

The Economic Evaluation and Planning Task Force has progressed projects that will:

- Update the Austroads Road User Effects (RUE) unit values which are used in the economic evaluation of road projects.
- Update the environmental externalities unit values used in project evaluation in Australia, to reflect updated ‘base source’ estimates.

Projects Completed

Standardising Bridge Barrier Designs

This project provided guidelines for bridge designers, contractors and asset owners in the selection and development of bridge barriers. The project involved close liaison with the ongoing AS5100 code review committee, jurisdictions and the Bridge Task Force. Obtaining agreement on standard barrier shapes was difficult but jurisdictions have agreed to develop detailed design and specifications. This further work and amendments to the Guide to Bridge Technology is reliant on finalising AS5100. The research was published in a report *Standardised Bridge Barrier Designs*.

Asphalt Properties and Mix Design Procedures
This project enabled Austroads members and industry to implement asphalt mix design procedures and utilise new mix types which deliver improved performance to road users and asset managers. The project delivered recommended laboratory compaction procedures for the Austroads mix design procedure along with the validation of performance tests used in the mix design procedure. It also measured the structural and functional properties of different asphalt surfacing types and reported on the development of 'Standard SMA' mix design procedure as well as reviewing processes and techniques to produce lower temperature asphalt.

The project delivered three technical reports in 2013-14:

- *EME Technology Transfer to Australia: An Explorative Study*
- *Development of a Stone Mastic Asphalt Mix Design Procedure: Selection of Appropriate Compaction Equipment for the Mix Design*
- *Austroads Asphalt Deformation Trial: Dandenong Road.*

Cemented Materials Characterisation
A previous Austroads project identified the need to revise the fatigue relationship in the Austroads Guide to Pavement Technology. This project involved trialling a new flexural fatigue testing procedure incorporating varying degrees of micro-cracking for a single cement treated material. The aim was to improve the design procedure for cement treated flexible pavements by improving the methods to determine the design moduli for cemented materials.

During the project, test methods for preparing and testing of flexural beams were developed. These methods are critical to deriving consistent and repeatable data for any further work on bound granular materials. The project also provided revised pavement design methods that are more in-line with overseas practices. The key material parameter used in the current Austroads design process for cement treated materials is likely to be changed which will be a substantial variation for Australia.

The project delivered two reports in 2013-14:

- *Prediction of Flexural Strength and Breaking Strain of Cemented Materials: Laboratory Study*
- *Cemented Materials Characterisation: Final Report.*

Polymer Modified Binder Sprayed Seal Trials
This project established two field test sites which will be monitored to rate the performance of polymer modified binders (PMBs) used in sprayed bituminous sealing. Field validation of the performance of these current generation PMBs will ensure road agencies select appropriate binders resulting in longer seal life and reduced maintenance costs. Two test sites were developed, one near Coober Peady in South Australia and one near Cooma in New South Wales. The performance of the PMBs will be investigated over time as a crack inhibitor and as a seal.

The construction of the sites and the first 12 months of trials were reported in:

- *PMB Sprayed Seals Trials - Construction Report*
- *PMB Sprayed Seal Trials - 12 Month Summary Report.*

Validation of Enhanced Pavement Design Model
The current Austroads pavement design approach does not separately evaluate the performance of the base, subbase and subgrade which provide different contributions to total pavement deformation. This project analysed potential permanent deformation models which could be used to develop new performance-based approaches for rut-prediction of unbound granular pavements using laboratory wheel-tracking data.

The validation of new pavement performance models is a complex and long process. High quality laboratory tests are required with tight control of the testing conditions. Information from this project will be used in the development of robust pavement design software.

The outcomes of the research were published in *Analytical Study of Performance Models for Unbound Granular Pavements*.

Review of Asphalt Guidelines
In June 2014 Austroads published a new edition of the *Guide to Pavement Technology Part 4B: Asphalt*. The Guide provides an introduction to the nature of asphalt as a material and its application in road pavements. The revised edition includes major structural changes and the outcomes of a thorough review of asphalt mix design levels and design methodology. The project working group included Austroads members, asphalt industry representatives and the ARRB Group.

Best Practice Infrastructure Procurement
In February 2014 Austroads and the Australasian Procurement and Construction Council (APCC) published the *Building and Construction Procurement Guide – Principles and Options.* The Guide was custom-designed for use by Australian state and territory agencies engaged in civil (road and bridge) and non-residential building projects. It outlines a process for the development of procurement strategies, and specifically responds to a range of issues raised by industry by establishing a series of common tendering and contracting principles.

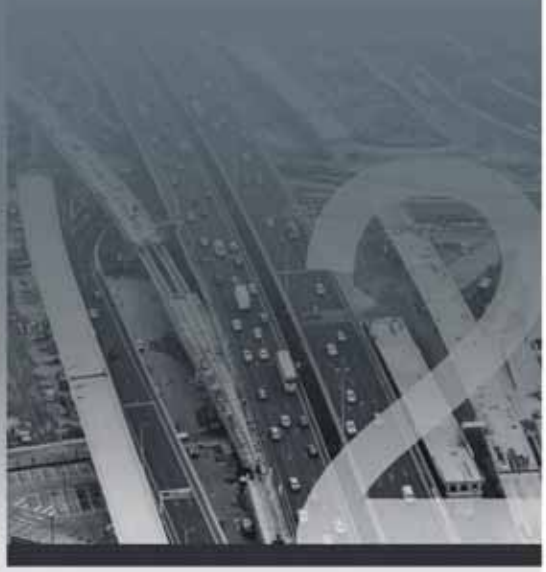
The development of the *Building and Construction Procurement Guide* informed the revision of the Austroads *Guide to Project Delivery*. All four parts of the Guide were updated and republished as a result. *Development of the Building and Construction Procurement Guide* describes how the Guide was developed.

Future Focus

In addition to its continuing work program, the Technology Program plans to start three new projects in 2014-15:

- Modified Granular Materials for Pavements: This four-year project will provide pavement designers with tools that support the confident use of modified granular materials. The project will develop laboratory processes to assess the likely field performance of modified materials and structural design concepts.
- Implementation of a Nationally Consistent Framework for the Assessment of Bridges: This three-year project will finalise a national framework for bridge assessment and develop guidelines for the assessment of heavy vehicle access.
- Bicycle Safety at Roundabouts: This two-year project is designed to reduce the incidence and severity of crashes involving cyclists at roundabouts by employing best practice road design.

Austroads Publications 2013-14



Guide to Traffic Management Part 4
Network Management

Austroads

Investigation of Key Crash Types
Run-off-road and Head-on Crashes
in Urban Areas: Final Report

Methods for Reducing
Speeds on Rural Roads
Compendium of Good Practice

Review of AS 5100.7 Rating of Existing
Bridges and the Bridge Assessment
Group Guidelines

Guides and Corporate Reports

AP-C91-13	Australian Cycling Participation 2013
AP-G88-14	Cycling Aspects of Austroads Guides
AP-G92-14	Building and Construction Procurement Guide – Principles and Options
AGPT04B-14	Guide to Pavement Technology Part 4B: Asphalt
AGPD01-14	Guide to Project Delivery Part 1: Overview
AGPD02-14	Guide to Project Delivery Part 2: Planning and Control
AGPD03-14	Guide to Project Delivery Part 3: Contract Management
AGPD04-14	Guide to Project Delivery Part 4: Direct Management of Construction
AGTM04-14	Guide to Traffic Management Part 4: Network Management
AGTM05-14	Guide to Traffic Management Part 5: Road Management
AGRD09-14	Guide to Traffic Management Part 9: Traffic Operations
AP-C20-13	Austroads Annual Report 2012-13

Research Reports

AP-R436-14	Improving Roadside Safety: Stage 4: Interim Report
AP-R437-14	Improving Roadside Safety: Final Report
AP-R445-13	Standardised Bridge Barrier Designs
AP-R446-13	Asset Management Strategy for Electrical Assets
AP-R447-13	A Generic Framework for the Management of Road-related Assets
AP-R448-14	Procurement of ITS (International Practice)
AP-R449-14	Methods for Reducing Speeds on Rural Roads - Compendium of Good Practice
AP-R450-14	Investigation of Key Crash Types - Head-on and Run-off Road Crashes in Urban Areas
AP-R451-14	Australian National Risk Assessment Model
AP-R452-14	Review of AS 5100.7 Rating of Existing Bridges and the Bridge Assessment Group Guidelines
AP-R454-14	Operational Management of Arterial/Managed Motorway Interfaces for Network Optimisation
AP-R455-14	Model National Guidelines for Setting Speed Limits at High Risk Locations
AP-R456-14	Use of Auxiliary Brakes in Heavy Vehicles
AP-R457-14	Light Freight Vehicles and Urban Logistics
AP-R458-14	C-ITS Interoperability with Existing ITS Infrastructure
AP-R459-14	Using Financial Data in Asset Management
AP-R460-14	Providing for Road User Error in the Safe System
AP-R461-14	Assessment of the Effectiveness of On-road Bicycle Lanes at Roundabouts in Australia and New Zealand
AP-R462-14	Cemented Materials Characterisation: Final Report
AP-R463-14	Framework for the Revision of Austroads Design Procedures for Pavements Containing Cemented Materials
AP-R464-14	Development of Guide Content on Managed Motorways

Technical Reports

AP-T242-13	Polymer Modified Binder Sprayed Seals Trials – Construction Report
AP-T243-13	Future Availability and Assessment of Alternative Surfacing Binders
AP-T244-13	Investigation of Long Term Ageing Characterisation Test Methods for Sprayed Sealing Binders
AP-T245-13	Maximising the Re-use of Reclaimed Asphalt Pavement: Binder Blend Characterisation
AP-T246-13	State-of-the-Art Traffic Speed Deflectometer Practice
AP-T247-13	Design and Performance of Foamed Bitumen Stabilised Pavements: Progress Report 1
AP-T248-13	Improved Design Procedures for Asphalt Pavements: Pavement Temperature and Load Frequency Estimation
AP-T249-13	EME Technology Transfer to Australia: An Explorative Study
AP-T250-13	Development of a Stone Mastic Asphalt Mix Design Procedure: Selection of Appropriate Compaction Equipment for the Mix Design
AP-T251-13	Prediction of Flexural Strength and Breaking Strain of Cemented Materials: Laboratory Study
AP-T252-14	Development of the Building and Construction Procurement Guide - Principles and Options
AP-T253-13	PMB Sprayed Seal Trials: 12 Month Summary Report
AP-T254-13	Effects of Polymer Segregation in Polymer Modified Binders on Field Performance
AP-T255-13	Analytical Study of Performance Models for Unbound Granular Pavements
AP-T256-13	Improving the Performance of Safe System Infrastructure: Stage 1 Interim Report
AP-T257-13	Probabilistic Road Deterioration Model Development
AP-T258-13	Bridge Management Using Performance Models
AP-T259-14	Interim Road Deterioration Cracking Model during Accelerated Deterioration
AP-T260-14	Towards Incorporating Heavy Vehicles into the Austroads Sprayed Seal Design Method
AP-T261-14	Literature Review of the Adhesion Mechanisms in Emulsion Seals
AP-T262-14	Performance Requirements for Bitumen Sprayers
AP-T264-14	Austroads Asphalt Deformation Trial: Dandenong Road
AP-T265-14	Freight Axle Mass Limits Investigation Tool (FAMLIT) User Guide
AP-T266-14	Austroads LTPP / STPPM Study – Summary Report 2012-13
AP-T267-14	Characterisation and Performance Evaluation of Granular Bases Project: Pavement Construction Report

Directors' Report

The directors of Austroads Ltd ("the Company") present this report on the Company for the financial year ended 30 June 2014.

Directors

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

- Andrew Milazzo (Chairperson)
- Peter Duncan AM (Deputy Chairperson)
- Allan Frost (from January 2014)
- Adrian Beresford-Wylie
- Clare Gardiner-Barnes
- Tony Gill PSM
- Shane Gregory
- Andrew Jaggers
- Peter Todd (from October 2013)
- Neil Scales OBE
- Stephen Troughton
- Colin Crampton (until January 2014)
- Gary Liddle (until October 2013)

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.

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 were to:

- conduct strategic research that assist 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 Austroads work
- foster international involvement by engaging with and supporting international road organisations.

The Company's long-term objectives were 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 manage these programs. This provides opportunities for the staff of member organisations to participate in the operation of the Company and the development and delivery of projects. It also encourages a collaborative approach and facilitates learning, development, 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

National Performance Indicators
The collection of performance information enables road agencies to benchmark themselves at both a national and international level as part of the overall Austroads' goal to identify and implement world best practice in the management of roads. Performance data is published for measures of road safety, asset management, program and project assessment, travel speed and productivity, and user satisfaction.

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** | The completion of projects within their scheduled timeframe continues to be a challenge. Of the 40 projects scheduled for completion by 30 June 2014 and only two were completed by that date. New publication approval processes have been introduced which should address some of the delays.
- **Take up of Company outputs** | In 2013-14 more than 88,800 Guides and 55,500 research and technical reports were downloaded. On average, 340 Guides are downloaded by local councils and member organisations every working day.
- **Adoption of Austroads guides by road agencies** | All road agencies across Australasia have adopted the Austroads Guides.
- **Satisfaction of road agencies with the Company's operation in addressing the strategic priorities** | Board Member and Task Force Member surveys indicate a reasonable level of satisfaction in relation to the delivery of strategic priorities. 87% of survey respondents reported that they were satisfied or very satisfied with the Company's strategic performance overall. The Board Members were significantly less satisfied than the Task Force Members and as a result the Company undertook a significant review of its operations.

- **Recognition by national policy bodies as a source of competent, professional advice on road transport** | The Company does not have a procedure in place to measure this outcome but the organisation has a close working relationship with a wide range of government transport policy agencies.
- **Recognition by the road industry as providing authoritative advice** | The 2013 survey of people who had purchased or downloaded the Company's publications reported consistently high levels of satisfaction over the four areas surveyed. Of those who responded, 90% indicated that they were satisfied or very satisfied that the publication they had purchased/downloaded had met their needs, 88% were satisfied or very satisfied with the technical content.
- **Recognition by road agency staff for providing valuable opportunities for professional development, information exchange and networking** | The Company is well regarded by road agency staff with 96% of survey respondents reporting they were satisfied or very satisfied with the Company as a mechanism for collaboration; 100% reporting satisfaction with the quality and practicality of the Company research; and 92% reporting satisfaction with information exchange and networking opportunities provided by the Company.

Information on Directors

Andrew Milazzo (Chairperson)
BE(Hons), ME(Civil), MIEAust, MIHT, MITE, CPEng

Mr Milazzo was appointed Chairperson from November 2012 having previously been Deputy Chairperson. He is a member of the Austroads Executive Committee.

Mr Milazzo is the Deputy Chief Executive, Transport Services and Executive Director, Transport Services Division in the South Australian Department for Planning, Transport and Infrastructure (DPTI). He has held various positions in DPTI including Director Sustainable Transport, General Manager Transport Policy and Planning, Regional Manager Metropolitan and Manager Strategic Investment Planning. In 1990-91 he was Australia's International Road Federation Fellow when he worked and studied at the Texas Transportation Institute and Texas A&M University.

Peter Duncan AM (Deputy Chairperson)
G.Dip. Mgt, A.Dip. Land. Studies, Grad. Cert Traffic Eng, Cert. L&ESD

Mr Duncan was appointed Deputy Chairperson in March 2014, and is a member of the Austroads Executive Committee.

Mr Duncan is Chief Executive of Roads and Maritime Services NSW. Formerly, he was Deputy Director General of the Department of Premier and Cabinet. Previous roles include Director General of the Department of Services, Technology and Administration; Chief Executive Officer of Forests NSW; Director and Chief Executive of the Centennial Park and Moore Park Trust; and Director Estate Management at Olympic Coordination Authority.

Early in his career Mr Duncan worked for a number of years in Road Design and Traffic Engineering with the Department of Main Roads, local government and private consultancies. He has also served on a number of boards and government committees. Current appointments include Roads Australia board member; Director of ARRB Group Ltd and Governor of Centennial Parklands Foundation. He is a member of Australian Institute of Company Directors and Justice of the Peace in NSW.

In 2013 Mr Duncan was made a Member (AM) in the General Division of the Order of Australia for significant service to public administration in New South Wales, and to conservation and the environment.

Adrian Beresford-Wylie
BA (Hons) LLB

Mr Beresford-Wylie is the Chief Executive Officer of the Australian Local Government Association (ALGA). He took up that position in May 2006.

Mr Beresford-Wylie was 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.

Colin Crampton (until January 2014)
BEng (Hons), GradDipAdmin, CPEng, MIPENZ

Mr Crampton was appointed Deputy Chairperson in November 2012 and a member of the Austroads Executive Committee.

Mr Crampton was a Group Manager with the New Zealand Transport Agency responsible for the operation and improvement of the state highway network. Mr Crampton is a civil engineer with more than 20 years experience in the transport sector. He is interested in the practice of general management and the leadership of people and likes to maintain currency around procurement practice.

Allan Frost (from January 2014)
BBS. CA. FCPA.

Mr Frost is the Group Manager, Organisational Support for the New Zealand Transport Agency, and is a member of its Leadership Team and was previously the Chief Financial Officer and subsequently Chief Information Officer for the Ministry of Agriculture and Forestry. Mr Frost also sat on the Ministry's management executive board and has considerable experience in change, information services and financial management.

Clare Gardiner-Barnes
DTeach, GDA, MSWAP

Ms Gardiner-Barnes is Chief Executive of the Department of Transport Northern Territory, leading whole of government transport reforms focussing on unlocking economic growth potential in remote and regional Australia. Ms Gardiner-Barnes has over 20 years' experience in the public sector taking on key leadership roles across transport, education, women's issues, children and families, disability, homelessness, child care, disaster recovery and domestic and family violence. Ms Gardiner-Barnes holds a Diploma of Teaching (Primary), Graduate Diploma Arts (Leadership) and a Masters in Social Welfare Administration and Planning.

Tony Gill PSM
BESc

Mr Gill is a member of the Austroads Executive Committee.

Mr Gill is Director, Roads in the ACT's Department of Territory and Municipal Services. Prior to his current role Mr Gill held various positions with the department, covering traffic management and road maintenance responsibilities. He also worked for private consultant engineers Scott and Furphy from 1985 to 1988 and prior to this as a graduate engineer with Dublin County Council, Ireland for four years.

Shane Gregory
Assoc Dip Eng (Civil), MAICD

Mr Gregory is the General Manager Transport Infrastructure Services for the Department of State Growth, Tasmania. Mr Gregory started his career in 1985 with the former Highways Department of South Australia where he spent 11 years in various design roles. He moved to Western Australia in 1996 to work with Connell Wagner on various public and private infrastructure projects, before relocating to Tasmania in 2000 to work in the civil contracting industry. Prior to his current role Mr Gregory was Manager of Planning & Design for the Department of Infrastructure, Energy and Resources between 2009 and 2012.

Andrew Jaggers
BEc, Grad Dip EnvLaw

Mr Jaggers is a member of the Austroads Executive Committee.

Mr Jaggers is the Executive Director of the Nation Building Infrastructure, Investment Division at the Australian Government Department of Infrastructure and Regional Development. Mr Jaggers' Division is responsible for the delivery of the Nation Building Program including major road, rail and port project funding. He has held a number of senior executive positions in the Australian Public Service, at the Department of the Prime Minister and Cabinet, and the Department of Families, Housing, Community Services and Indigenous Affairs.

Gary Liddle (until October 2013)
BEng(Civil), GradDipMgt

Mr Liddle was Chairperson of Austroads Ltd until November 2012. He was appointed as Chairperson at the inaugural meeting of the Board of Austroads Ltd in October 2009.

Mr Liddle was the Chief Executive of VicRoads until October 2013. He was also the Chairman of the Australian Chapter of the Road Engineering Association of Asia and Australasia (REAAA) and a member of the REAAA Governing Council.

Peter Todd (from October 2013)
BEng (Civil) (Hons), MBA

Mr Todd has been the Chief Operating Officer for VicRoads since May 2013. He is responsible for managing the operation of Victoria's road network, leading the delivery of projects through statewide regional and project offices, internal technical services to the organisation and management of concessions for private road operators in Victoria. He first joined VicRoads in March 2012, as the Regional Director for Metropolitan South East. Prior to joining VicRoads, Peter was the General Manager Roads and Traffic for the Department of Infrastructure, Energy and Resources in Tasmania (DIER). He joined DIER from the then Transport South Australia where he had extensive experience in planning, design and operations of both metropolitan and rural roads. Peter has more than 30 years experience in road transport engineering, planning, project management and delivery.

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

Mr Scales is Director-General of the Department of Transport and Main Roads Queensland. He was previously CEO of TransLink, the public transport operator across Queensland. Prior to joining TransLink, Mr Scales 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.

Stephen Troughton
BEng (Hons), MBA CEng, MICE, CPEng, MIEAust, RPEQ
Mr Troughton was appointed Managing Director of Main Roads Western Australia in February 2013. Prior to joining Main Roads he gained extensive experience in managing business areas in Australia, the United Kingdom and the Middle East and has considerable experience in overall project management and delivery of major infrastructure and property projects for government and the private sector. He moved to Australia in 2007 working in various areas within private industry based in Queensland.

In addition to sitting on the Board of Austroads Ltd he is also a Board member on the Planning and Transport Research Centre, the Western Australian Pavement Research Centre and the ROADS Foundation and is a member of the Australian Institute of Company Directors.

Company Secretary

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

Murray Kidnie PSM
BEc, MURP
Mr Kidnie has worked for Austroads since 2001 performing the role of Executive Director with Austroads Inc. and now Chief Executive with Austroads Ltd. Mr Kidnie was appointed company secretary on 22 October 2009. He 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
Andy Milazzo	4	4
Colin Crampton	2	2
Adrian Beresford-Wylie	4	2
Peter Duncan	4	2
Clare Gardiner-Barnes	4	3
Tony Gill	4	2
Shane Gregory	4	3
Andrew Jaggers	4	2
Gary Liddle	1	1
Neil Scales	4	1
Stephen Troughton	4	3
Peter Todd	3	2
Allan Frost	2	2

Alternate directors attended meetings as follows:

Alternate director	Alternate for	Meetings attended
Michael Sutton	Andrew Jaggers	2
Chris Harrison	Peter Duncan	1
Iain Cameron	Stephen Troughton	1
Ken Kanofski	Peter Duncan	1
Dennis Walsh	Neil Scales	1
Kym Foster	Adrian Beresford-Wylie	1

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 2014, the total amount that members of the Company are liable to contribute if the Company is wound up is $110 (2013: $110).

Auditor's Independence Declaration

The lead auditor's independence declaration for the year ended 30 June 2014 has been received and can be found on page 57 of the financial report.

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

Peter Duncan
Chairperson, Austroads Ltd
Dated this 8th day of October 2014

Auditor's Independence Declaration

MOORE STEPHENS

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Sydney NSW 2000

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AUDITOR'S INDEPENDENCE DECLARATION
UNDER SECTION 307C OF THE CORPORATIONS ACT 2001
TO THE DIRECTORS OF AUSTROADS LTD

As lead auditor for the audit of Austroads Ltd for the year ended 30 June 2014, I declare that, to the best of my knowledge and belief, there have been:

a) no contraventions of the auditor independence requirements of the *Corporations Act 2001* in relation to the audit; and

b) no contraventions of any applicable code of professional conduct in relation to the audit.

Moore Stephens Sydney

MOORE STEPHENS SYDNEY
Chartered Accountants

S TZANNES
Partner

Dated in Sydney this 8th day of October 2014

Financial Report

Statement of Comprehensive Income

For the year ended 30 June 2014

	Notes	2014 $	2013 $
Revenue	2	15,766,428	14,254,752
Expenses			
Corporate Expenses	3(a)	1,521,543	1,578,643
Work Program	3(b)	11,111,114	11,047,234
Specific Projects	3(c)	1,401,369	833,478
Publications	3(d)	121,240	108,206
Total expenses		14,155,266	13,567,561
Profit from continuing operations before income tax expense		1,611,162	687,191
Income tax expense	1(c)	-	-
Profit for the year		**1,611,162**	**687,191**
Other comprehensive income		-	-
Total comprehensive income for the year		**1,611,162**	**687,191**
Total comprehensive income attributable to members of the entity		**1,611,162**	**687,191**

The accompanying notes form part of these financial statements.

Statement of Financial Position

As at 30 June 2014

	Notes	2014 $	2013 $
ASSETS			
Current assets			
Cash and Cash Equivalents	4	11,020,046	8,873,262
Trade and Other Receivables	5	842,780	1,265,423
Other Assets	6	44,733	37,905
Total current assets		11,907,559	10,176,590
Non-current assets			
Plant and Equipment	7	94,290	43,345
Other Assets	6	51,865	49,873
Total non-current assets		146,155	93,218
Total assets		**12,053,714**	**10,269,808**
LIABILITIES			
Current liabilities			
Trade and Other Payables	8	3,056,536	2,098,346
Income Received in Advance	9	49,900	542,210
Unacquitted Funds (NEVDIS)	10	2,556,676	2,865,863
Provision for Employee Benefits	11	162,312	154,604
Total current liabilities		5,825,424	5,661,023
Non-current liabilities			
Provision for Employee Benefits	11	16,834	8,491
		16,834	8,491
Total liabilities		**5,842,258**	**5,669,514**
Net assets		**6,211,456**	**4,600,294**
Equity			
Accumulated Surplus		6,211,456	4,600,294
Total Equity		**6,211,456**	**4,600,294**

The accompanying notes form part of these financial statements.

Statement of Changes in Equity
For the year ended 30 June 2014

	Accumulated Surplus $	Total Equity $
Balance at 1 July 2012	3,913,103	3,913,103
Comprehensive income		
Profit for the year	687,191	687,191
Other comprehensive income	-	-
	687,191	687,191
Balance at 30 June 2013	4,600,294	4,600,294
Comprehensive income		
Profit for the year	1,611,162	1,611,162
Other comprehensive income	-	-
	1,611,162	1,611,162
Balance at 30 June 2014	**6,211,456**	**6,211,456**

Statement of Cash Flows
For the year ended 30 June 2014

	Notes	2014 $	2013 $
Cash Flows from Operating Activities			
Member Contributions		14,658,412	15,157,076
Publication Sales		493,795	544,599
Interest Received		212,618	183,389
External Project Funding		2,011,308	563,271
Cash generated from operating activities		17,376,133	16,448,335
Salaries and Related Costs		(777,107)	(551,890)
National Office including Corporate Projects		(887,211)	(364,910)
Publications		(133,364)	(176,672)
Programs		(13,062,901)	(13,866,576)
Net movement on NEVDIS accounts		110,803	(683,011)
Net GST (Payment)/Refund		(410,171)	99,105
Cash used in operating activities		(15,159,951)	(15,543,954)
Net Cash Inflow from Operating Activities	13	**2,216,182**	**904,381**
Cash Flow from Investing Activities			
Proceeds from sale of Plant and Equipment		1,053	-
Purchases of Plant and Equipment		(70,451)	(6,849)
Cash used in Investing Activities		**(69,398)**	**(6,849)**
Net increase in cash held		2,146,784	897,532
Cash at the beginning of the financial year		8,873,262	7,975,730
Cash at the end of the financial year	4	**11,020,046**	**8,873,262**

The accompanying notes form part of these financial statements.

Notes to the Financial Statements
For the year ended 30 June 2014

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. The Company is a not-for-profit entity for financial reporting purposes under Australian Accounting Standards.

The financial statements have been prepared in accordance with the mandatory Australian Accounting Standards applicable to entities reporting under the Corporations Act 2001 and the significant accounting policies disclosed below, which the directors have determined are appropriate to meet the needs of members. Such accounting policies are consistent with those of previous periods unless stated otherwise.

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 accounting policies that have been adopted in the preparation of the statements are as follows:

The financial statements were authorised for issue on 8 October 2014 by the directors of the Company.

Accounting Policies
(a) Revenue

Membership revenue is recognised over the period of time to which it relates.

Grant revenue is recognised in the statement of comprehensive income when the Company obtains control of the grant and it is probable that the economic benefits gained from the grant will flow to the Company and the amount of the grant can be measured reliably.

If conditions are attached to the grant which must be satisfied before it is eligible to receive the contribution, the recognition of the grant as revenue will be deferred until those conditions are satisfied.

Interest revenue is recognised on a proportional basis taking into account the interest rate and period applicable.

Revenue from the rendering of a service is recognised upon the delivery of the service to the customers.

Publication Sales revenue is recognised monthly when advised by the distributor.

All revenue is stated net of the amount of goods and services tax (GST).

(b) Foreign currency translation

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) Leases

Payments made under operating leases where substantially all the risks and benefits remain with the lessor are charged to the income statement on a straight-line basis over the lease term.

(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.

Notes to the Financial Statements
For the year ended 30 June 2014

Note 1 — Summary of Significant Accounting Policies (continued)

(e) Plant and Equipment (cont)

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

Class of Fixed Asset	Depreciation Rate
Furniture and office equipment	20 - 33.33%
Motor vehicle	20%

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, cash equivalents and investments

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 general provision for doubtful debts, as there has been no need for it.

(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.

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) Income in advance

This represents the invoices raised or monies received but goods and services not yet provided to members and customers at the end of the financial year.

(l) NEVDIS

The Company on behalf of Australian jurisdictional driver licensing and vehicle registration authorities contracted with Fujitsu Australia Limited to operate and maintain the National Exchange Vehicle Driver Information System (NEVDIS) to 25 September 2015. The annual fee is $1,753,687 (ex GST) payable monthly in arrears.

(n) Comparative figures

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

Notes to the Financial Statements
For the year ended 30 June 2014

Note 1 — Summary of Significant Accounting Policies (continued)

(o) Critical accounting estimates

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.

Key Judgments – Doubtful Debts Provision

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

(p) New accounting standards for application in future periods

Certain Australian Accounting Standards have recently been issued or amended but do not have mandatory application for the 30 June 2014 reporting period. The directors' assessment of the impact of new standards and interpretations will not affect any of the amounts recognised in the financial statements.

	2014 $	2013 $
Note 2 — Revenue		
(a) Member Contributions		
Membership Contributions	1,007,500	988,161
Work Program Contributions	12,280,500	12,043,780
	13,288,000	13,031,941
(b) Special Programs and Projects		
Review of the National Guidelines for Transport System Management (NGTSM)	845,002	-
Indigenous Driver Toolkit	413,400	-
User Satisfaction Index 2013	189,500	-
DIRD – Australian Bicycle Council Secretariat	158,360	154,875
National Road Safety Strategy Review	142,200	-
RMS NSW Funding for Project SS1710	50,000	100,000
TfNSW Funding for Project RS17310	30,000	-
Contributions to National Cycling Participation Survey 2013	-	234,670
National Skills Marketing Plan	-	60,000
CPEE Refund of Unused Funds	-	13,726
	1,828,462	563,271
Publications		
Gross Sales Revenue	430,146	427,260
Royalties	2,210	48,873
	432,356	476,133
Interest Received		
Short Term Investments	215,511	181,173
Rental Bond Deposit	1,995	2,216
	217,506	183,389
Other Income		
Net profit on sale of non-current assets	104	18
Total revenue	**15,766,428**	**14,254,752**

Notes to the Financial Statements
For the year ended 30 June 2014

Note 3 — Expenses

		2014 $	2013 $
(a)	**Corporate**		
	Salaries and Related Charges	779,584	563,958
	Program Management	400,000	642,503
	Corporate Services	51,777	47,329
	Depreciation	18,557	17,012
	Other National Office Expenses	271,625	307,841
		1,521,543	**1,578,643**
(b)	**Work Program**		
	Technology	5,182,483	4,852,004
	Safety	1,946,440	1,924,092
	Assets	2,020,999	1,973,250
	Network	1,135,885	1,205,353
	Freight	678,852	599,540
	Registration and Licensing	146,455	474,813
	Capability	-	18,182
		11,111,114	**11,047,234**
(c)	**Specific Projects**		
	Indigenous Learner Driver Tool Kit	386,672	-
	Cooperative ITS Project Director	258,759	246,010
	User Satisfaction Index 2013	189,500	-
	DIRD - Australian Bicycle Council Secretariat	158,358	154,872
	National Skills Marketing Plan	93,500	-
	International Participation	59,662	36,490
	Austroads ARRB Fellowship	59,545	54,545
	Redevelop Austroads Databases and Publications Website	52,349	-
	National Safety Barrier Assessment Panel - Independent Consultant	40,500	-
	Review of the NGTSM	35,672	-
	CPEE Distance Learning Units	15,000	15,000
	Support to ALGA Reps	5,655	9,136
	Cooperative ITS Non ARRB Contracts	15,000	35,000
	Austroads Forum Server	11,047	10,688
	Assessment of 2014/15 Project Proposals	10,000	-
	ABC National Cycling Participation Survey	5,200	225,702
	Test Methods and Pavement Technology Work Tips	4,950	-
	Bicycle Parking Guide	-	10,000
	AFTD - Printing and Distribution	-	8,565
	National Performance Indicators for Public Transport	-	8,540
	DPTI SA Road Safety Knowledge Transfer	-	8,000
	Australian Standards Development related activity	-	5,600
	DIRD - ABC Web Based Resource Centre	-	5,330
		1,401,369	**833,478**
(d)	**Publications**		
	Cost of Sales	79,240	63,572
	Production and Distribution Management	42,000	42,460
	Other Costs	-	2,174
		121,240	**108,206**
Total Expenditure		**14,155,266**	**13,567,561**

Notes to the Financial Statements
For the year ended 30 June 2014

	2014 $	2013 $
Note 4 — Cash and Cash Equivalents		
CURRENT		
Cash at bank and on hand	3,109,510	1,524,845
Cash at Bank (NEVDIS)	2,910,536	2,799,731
Short-term deposits and deposits at call	5,000,000	4,548,686
	11,020,046	**8,873,262**
Cash at the end of the financial year is reconciled to the statement of cash flow as follows:		
Cash and cash equivalents	**11,020,046**	**8,873,262**
Note 5 — Trade and Other Receivables		
CURRENT		
Trade debtors	208,752	587,402
NEVDIS Receivables	170,164	418,639
Net Receivable to ATO	402,698	186,536
Accrued Income	61,166	72,846
	842,780	**1,265,423**
Note 6 — Other Assets		
CURRENT		
Prepayments	**44,733**	**37,905**
NON-CURRENT		
Rental Deposit Bond	**51,865**	**49,873**
Note 7 — Plant and Equipment		
NON-CURRENT		
Office Furniture and Equipment		
At Cost	160,792	120,160
Accumulated depreciation	(84,401)	(100,774)
	76,391	19,386
Motor Vehicle		
At Cost	30,302	30,302
Accumulated depreciation	(12,403)	(6,343)
	17,899	23,959
Total Plant and Equipment	**94,290**	**43,345**
Note 8 — Trade and Other Payables		
CURRENT		
Trade Payables	1,549,821	1,672,056
NEVDIS Payables	474,123	304,211
Accrued Expenses	1,032,592	122,079
	3,056,536	**2,098,346**

Notes to the Financial Statements
For the year ended 30 June 2014

	2014 $	2013 $
Note 9 — Income Received in Advance		
CURRENT		
Contributions Received in Advance	-	493,913
Subscriptions Received in Advance (NEVDIS)	49,900	48,297
	49,900	**542,210**
Note 10 — Unacquitted Funds (NEVDIS)		
Revenue		
Members' contributions	1,962,898	3,276,335
PPSR Enhancements Recovery	1,162,442	1,150,753
VIRS Commercial Phase	340,861	184,154
Safety Recalls	193,022	225,050
AEC Extract Charges	182,573	178,843
Interest Income	15,094	28,408
Data Extracts	10,584	11,030
DVS Private Sector	3,260	-
Total Revenue	**3,870,734**	**5,054,573**
Expenditure		
Fujitsu Subscription and Operating Costs	2,094,240	2,059,759
RMS NEVDIS Administration Unit and Salaries	1,775,731	1,504,725
NEVDIS Projects	233,232	342,315
Other	76,718	181,765
Total Expenditure	**4,179,921**	**4,088,564**
Net (Deficit)/Surplus for the Year	**(309,187)**	**966,009**
Amount Unexpended in Previous Years	2,865,863	1,899,854
Amount Unexpended transferred to Liabilities	**2,556,676**	**2,865,863**
Note 11 — Provision For Employee Benefits		
CURRENT		
Provisions for Annual Leave	75,151	73,826
Provisions for Long Service Leave	87,161	80,778
	162,312	**154,604**
NON-CURRENT		
Provisions for Long Service Leave	**16,834**	**8,491**

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.

Notes to the Financial Statements
For the year ended 30 June 2014

	2014 $	2013 $
Note 13 — Cash Flow Information		
Reconciliation of profit from ordinary activities to net cash generated from operating activities		
Profit for the year	1,611,162	687,191
Adjustment for non-cash-flow items:		
- Depreciation and amortisation	18,557	17,012
- Gain on disposal of plant and equipment	(104)	-
Change in operating assets and liabilities:		
- (Increase)/decrease in trade and other receivables	422,643	(943,684)
- (Increase)/decrease in other assets	(8,820)	(9,740)
- Increase/(decrease) in trade and other payables	958,190	(20,685)
- Increase/(decrease) in income received in advance	(492,310)	196,210
- Increase/(decrease) in unacquitted funds (NEVDIS)	(309,187)	966,009
- Increase/(decrease) in provision for employee benefits	16,051	12,068
Net Cash Generated from Operating Activities	**2,216,182**	**904,381**

Note 14 — Remuneration of Directors
There is no Income received, or due and receivable by the directors.

Note 15 — Remuneration of Auditors
During the year Moore Stephens Sydney, the auditor of the company earned the following remuneration:

Audit of the financial statements	16,000	16,500
Other services	4,400	-
	20,400	16,500

Note 16 — Lease Commitments
Operating Lease Commitments – being for the rent of office

Payable – minimum lease payments		
- Not later than 12 months	132,269	78,418
- Between 12 months and 5 years	437,825	570,094
	570,094	648,512

The property lease was renewed for another 5 years, with rent payable monthly.

Note 17 — Contingent Liabilities or Assets
At 30 June 2014, the Company has no contingent liabilities or assets (2013: Nil).

Note 18 — Matters Subsequent to the End of the Financial Year
There were no subsequent events that occurred prior to the end of the financial year.

Note 19 — Company Details
The registered office and principal place of business of the Company is:
Level 9, 287 Elizabeth Street
SYDNEY NSW 2000

Directors' Declaration

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 58 to 67, are in accordance with the Corporations Act 2001, and:

1. The financial statements set out on pages 58 to 60, 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 2014 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.

Peter Duncan
Chairperson
Dated this 8th day of October 2014

MOORE STEPHENS

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INDEPENDENT AUDITOR'S REPORT

TO THE MEMBERS OF AUSTROADS LTD

Report on the Financial Report

We have audited the accompanying financial report, being a special purpose financial report, of Austroads Ltd ("the company"), which comprises the statement of financial position as at 30 June 2014, and the statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, a summary of significant accounting policies, other explanatory notes and the directors' declaration.

Directors' Responsibility for the Financial Report

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

Auditor's Responsibility

Our responsibility is to express an opinion on the financial report based on our audit. We have conducted our audit in accordance with Australian Auditing Standards. Those standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance about whether the financial report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial report. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial report, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of the financial report 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. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the directors of the Responsible Entity, as well as evaluating the overall presentation of the financial report.

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

Independence

In conducting our audit, we have complied with the independence requirements of Australian professional ethical pronouncements.

MOORE STEPHENS

Opinion

In our opinion the financial report of Austroads Ltd 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 2014 and of its performance for the year ended on that date in accordance with the accounting policies described in Note 1; and

b) complying with Australian Accounting Standards to the extent described in Note1 and complying with the *Corporations Regulations 2001*.

Basis of Accounting

Without modifying our opinion, 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.

Moore Stephens Sydney
Chartered Accountants

Spiro Tzannes
Partner

Dated in Sydney this 8th day of October 2014

Abbreviations

AAPA	Australian Asphalt Pavement Association
ACMA	Australian Communications Media Authority
AS	Australian Standard
ABC	Australian Bicycle Council
ACT	Australian Capital Territory
ALGA	Australian Local Government Association
ANZPAA	Australia New Zealand Policing Advisory Agency
ARRB	ARRB Group
ATOG	Australasian Tunnel Operators Group
ATS	Australasian Tunnelling Society
Auststab	Pavement Recycling and Stabilisation Association
BITRE	Bureau of Infrastructure, Transport and Regional Economics
C-ITS	Cooperative Intelligent Transport Systems
DSG Tas	Department of State Growth Tasmania
DI NT	Department of Infrastructure Northern Territory
DIRD	Department of Infrastructure and Regional Development
DJCS ACT	Directorate of Justice and Community Safety Australian Capital Territory
DLP NT	Department of Lands and Planning Northern Territory
DoI NT	Department of Infrastructure Northern Territory
DoT NT	Department of Transport Northern Territory
DoT WA	Department of Transport Western Australia
DTMR Qld	Department of Transport and Main Roads Queensland
DPTI SA	Department of Planning, Transport and Infrastructure South Australia
DVS	Document Verification Service
IPWEA	Institute of Public Works Engineering Australia
ITS	Intelligent Transport Systems
LMA	Linking Melbourne Authority
LTPP	Long Term Pavement Performance
MoT NZ	Ministry of Transport New Zealand
MR WA	Main Roads Western Australia
NAU	NEVDIS Administration Unit
NBN	National Broadband Network
NEVDIS	National Exchange of Vehicle and Driver Information System
NHVR	National Heavy Vehicle Regulator
NMVTRC	National Motor Vehicle Theft Reduction Council
NPI	National Performance Indicators
NRSEG	National Road Safety Executive Group
NRSS	National Road Safety Strategy 2011-2020
NSW	New South Wales
NTC	National Transport Commission
NZ	New Zealand
NZTA	New Zealand Transport Agency
PBS	Performance Based Standards
PMB	Polymer Modified Binders
PDF	Portable Document Format
WRA	World Road Association
PPSR	Personal Property Security Register
REAAA	Road Engineering Association of Asia and Australasia
RMS NSW	Roads and Maritime Services New South Wales
RUE	Road User Effects

SA	Standards Australia
SMA	Stone Mastic Asphalt
TAMS ACT	Department of Territory and Municipal Services Australian Capital Territory
TfNSW	Transport for NSW
TISOC	Transport and Infrastructure Senior Officials' Committee
VIC	Victoria
VicRoads	Roads Corporation Victoria
VIN	Vehicle Identification Number
VIRS	Vehicle Information Request System
WA	Western Australia

Austroads is the association of Australasian
road transport agencies.

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