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DEC 2017/JAN 2018

## V49.4



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# Contents

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- 2 Editor's Column
- 4 Industry News
- 14 Cover Feature: ACRS Steel Certification
- 18 TMAA News
- 20 Product Brief: Rocla MassBloc
- 22 ARSC2017 Conference Report
- 24 IAP Case Study
- 30 TCA News
- 32 Equipment Focus
- 34 Case Study: Eastlink
- 37 ITS Special Feature
- 44 Intertraffic 2018 Conference
- 48 Bridges in Focus
- 54 AAPA Feature



18



24



32



48



## About the Cover

Steel is often purchased on the assumption that it must "meet the standard". After all it comes with a test certificate! The facts however are increasingly different. The products you get might not be fit for the purpose for which they are intended and, in extreme cases, using them can be dangerous. How do you know what you are getting? ACRS makes it easy.

► Turn to **Page 14** for the full story.



# Building a Multi-Modal Solution to Australia's Freight Task

Dear Readers,

Few would question the critical role that an efficient transport network plays in building a robust, prosperous and resilient economy. Indeed, many would argue that in a country such as ours - where the tyranny of distance is a major consideration in almost everything we do - that the quality and efficiency of our transport infrastructure network is one of the most important factors in ensuring Australia's economic future.

Unfortunately, a number of factors, including: historically low levels of investment in road infrastructure (both in terms of maintenance and upgrades to existing infrastructure, the development of new infrastructure, and adoption of new ITS technologies); the ever-present skills shortage; and Australia's ever-increasing freight task, have all had a major negative impact on our transport capabilities and efficiency.

Without wishing to appear overly melodramatic, in terms of Australia's transport infrastructure and future capabilities, the situation is rapidly approaching 'critical' - a factor which is clearly evidenced by the many clogged roads and transport bottlenecks that now exist across the network.

Put simply, our road infrastructure network (both rural, regional and metropolitan) is in danger of collapsing under the strain of demand, with much of it

now being expected to cater for loads and capacities for which it was clearly never intended or designed.

Add to that the challenges associated with finding the people to design, build and deliver the required road infrastructure - and the ever-present problems associated deciding how we should fund the development, construction and on-going operation of the network - and the scope of the current freight transport crisis starts to become clear.

Then there is the matter of environmental performance.

With an ever-increasing emphasis now being placed on assessing, and hopefully reducing the environmental impact of all aspects of our day-to-day lives, road freight transport looks set to face what is arguably its biggest challenge yet. Every kilometre that a kilogram of freight has to be moved generates both an economic and environmental cost. And in a country such as ours, where much of the freight travels an inordinate number of kilometres, that cost can be quite staggering.

Over the past two decades Australia's freight task has more than doubled. What's more, it is continuing to grow at a rapid rate. Indeed, by 2030 our national freight task is expected to have grown to a staggering 1 trillion tonne / kilometres per year.

While initiatives such as the Intelligent Access Program (IAP) and HML vehicles programs being overseen by Transport Certification Australia (TCA) undoubtedly play

a significant role in improving the efficiency of road transport, it is also clear, that at current projected growth levels, the road network alone will not be able to cope with the massive increase in freight movements.

With that in mind, I believe that the answer to both our future freight transport and sustainability challenges lies within the rapid development of additional 'multi-modal' transport facilities and networks, including an expanded road/rail interchange network.

The benefits of a multi-modal approach to freight transport extend far beyond simple economies of scale. By moving longhaul freight from the road network to the rail network, multi-modal facilities also deliver significant improvements transport efficiency and road safety - by reducing the number of long-distance heavy vehicle movements.

What's more, moving freight to the rail network also results in a dramatic reduction in the 'environmental footprint' of each freight kilometre - an especially critical factor, given the ever-increasing focus on environmental performance and reducing the carbon footprint of business operations.



**Anthony T Schmidt**  
Managing Editor

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# Road Safety Needs Better Data!

## Road safety experts from around the globe adopt “Marrakech Declaration on Better Safety Data for Better Safety Outcomes”

Improving the quality of road safety data is essential to reducing the number of road deaths and injuries. This is the message of the “Marrakech Declaration” adopted by international road safety experts from more than 40 countries meeting in Marrakech, Morocco for the 6th IRTAD conference during October.

Around 1.3 million people are killed and 20 to 50 million injured in road crashes around the world every year. The United Nations are targeting to halve the number of road deaths in the near future.

The “Marrakech Declaration on Better Safety Data for Better Safety Outcomes”, adopted on the final day of the conference, makes a number of recommendations aimed at policy makers and other leaders with responsibility for road safety. These include:

- Clearly for making decisions in road safety.
- Address under-reporting of road crashes and casualties.
- Use more data on injury crashes - fatality data are insufficient to fully understand road safety problems. A common definition for injuries will allow comparisons.

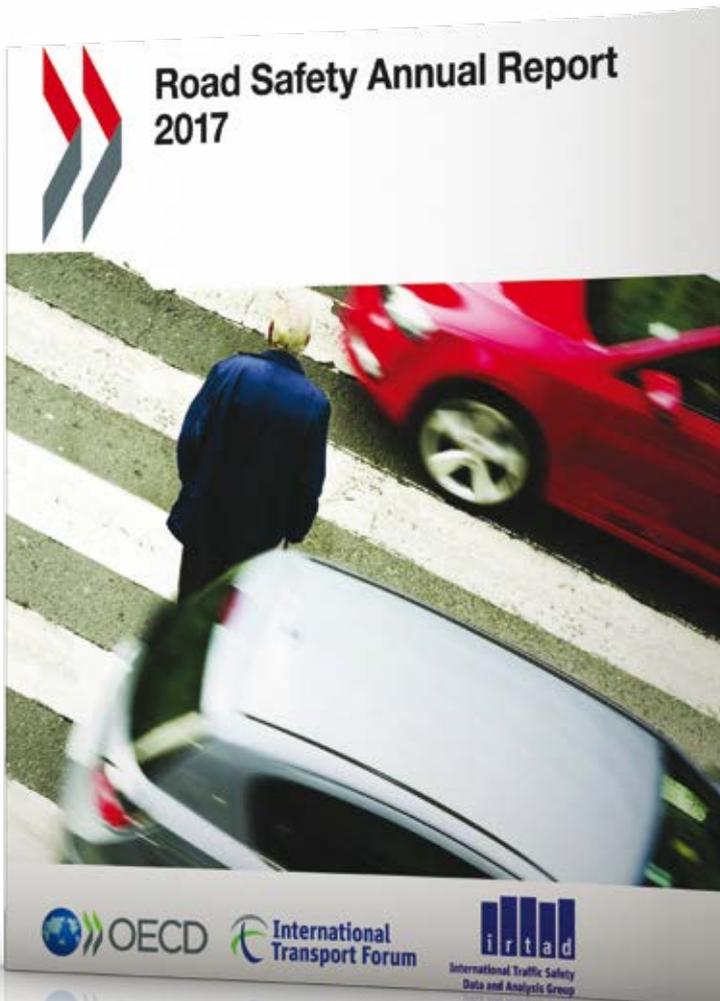
- Better knowledge of road safety also relies on better safety performance indicators, exposure data and context information.
- Let a national agency analyse and publish road safety data collected at state and national levels.
- Monitor the main risk factors. Make results publicly available and use them to adapt road safety strategies.
- Harmonise road safety data based on common definitions. Develop common methodologies to enable meaningful comparisons.
- Share road safety data among countries and co-operate within international initiatives. Benchmarking between countries, regions and cities, has proven effective, for instance through the regional road safety observatory in Latin America. Similar initiatives would be beneficial in other regions, including Africa.

“Good road safety data is fundamental to achieving the road safety objectives set by ambitious countries and contribute to the United Nations Sustainable Development Goals”, said Young Tae Kim, Secretary-General of the International Transport Forum (ITF), who also presented the organisation’s Road Safety Annual Report 2017 with latest road safety data for 40 countries.

“Reliable data are essential to understand, assess and monitor the nature and magnitude of the road safety problem and the related solutions”, added Fred Wegman, chair of the IRTAD Group, the ITF’s permanent working group on road safety. “Improvements made to the quality of road safety data will also improve the quality of data driven policy decisions.”

Text of the Marrakech Declaration is available for download at: <https://www.itf-oecd.org/road-safety-data-marrakech-declaration>

The Road Safety Annual Report 2017 is available for download at: <https://www.itf-oecd.org/road-safety-annual-report-2017>



### ABOUT THE INTERNATIONAL TRANSPORT FORUM

The International Transport Forum is an intergovernmental organisation with 59 member countries. It acts as a think tank for transport policy and organises the Annual Summit of transport ministers. ITF is the only global body that covers all transport modes. The ITF is administratively integrated with the OECD, yet politically autonomous.

ITF works for transport policies that improve peoples' lives. Our mission is to foster a deeper understanding of the role of transport in economic growth, environmental sustainability and social inclusion and to raise the public profile of transport policy.

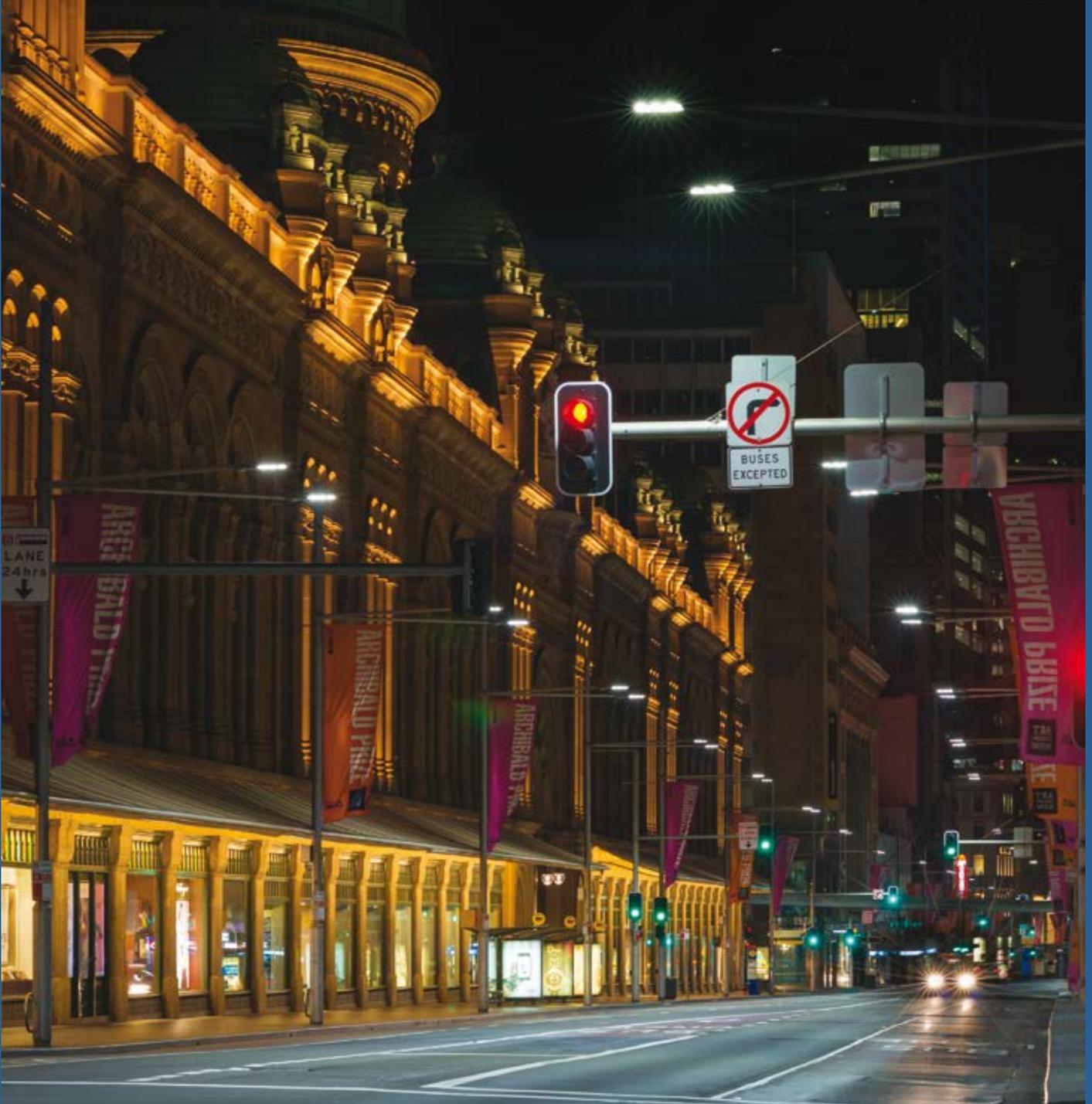
ITF organises global dialogue for better transport. We act as a platform for discussion and pre-negotiation of policy issues across all transport modes. We analyse trends, share knowledge and promote exchange among transport decision-makers and civil society. The ITF’s Annual Summit is the world’s largest gathering of transport ministers and the leading global platform for dialogue on transport policy.

For further information, please visit: [www.itf-oecd.org](http://www.itf-oecd.org)



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## SA Heavy vehicle inspection scheme to be expanded after successful pilot

A new regime of safety inspections to weed out unroadworthy trucks will be expanded in South Australia, with the State Government calling for business proposals to run stage two of the scheme.

The Heavy Vehicle Inspection Scheme is aimed at improving the safety of South Australian roads by reducing the number of crashes caused by unsafe heavy vehicles.

It is expected to create up to 100 full-time jobs.

A pilot scheme was introduced in January requiring vehicles more than 3 years old, and registered in South Australia, to undergo an inspection at change of ownership.

Approximately 900 vehicles were inspected in the first half of 2017 with 58 per cent of vehicles found to be non-compliant. Of those, 29 per cent were faults with lights and reflectors. More concerning, one fifth of faults related to brakes.

"This scheme is the latest in a series of measures the Government has introduced in a bid to prevent the kinds of horrific accidents we've seen at the bottom of the South Eastern Freeway from ever occurring again," SA Transport and Infrastructure Minister Stephen Mullighan said.

"Tragic accidents such as these show just how dangerous unroadworthy trucks can be for anyone on the road. Some heavy vehicles can go through their entire lives without ever being checked for roadworthiness," he said.

In stage two, all heavy vehicles will require an inspection at four, six and eight years after

manufacture, then every year from 10 years of age.

The Government has been working with the SA Road Transport Association, the Livestock and Rural Transporters Association of SA and the Motor Trades Association to develop the inspection regime.

"We're also working with the national regulator to introduce measures to ensure all trucks, not just those registered in South Australia, undergo greater scrutiny," the Minister said.

"Other measures we've been working on include making sure that everyone in the chain of responsibility, from the driver to the chairman of the company, are accountable for keeping these vehicles safe."

"Most drivers and operators do the right thing but when someone flouts the law they don't simply risk their own lives, but the lives of all road users around them," the Minister added.

SA Road Transport Association Executive Officer Steve Shearer welcomed the announcement.

"SARTA welcomes the implementation of the HVIS state-wide and we look forward to it becoming easier and more cost-effective for operators to undergo inspections, particularly in rural areas.

"We support this initiative as part of the improved safety focus in relation to HV roadworthiness," he said.

The comments were echoed by Motor Trade Association of South Australia Chief Executive Officer Paul Unerkov, who added:

"The MTA note that the results of the heavy vehicle inspection trial highlighted the need to introduce a mandatory system of heavy vehicle inspections."

"The figures from the heavy vehicle inspection trial have been very alarming, with initial statistics reporting a 50 per cent failure

rate of heavy vehicles participating in the trial," Mr Unerkov said.

Inspections stations will be located in both metropolitan and regional areas across the State.

The Government is also working with the National Heavy Vehicle Regulator to ensure the South Australian scheme aligns with proposed national reforms.



## Call for subcontractors to be paid promptly

The Australian Small Business and Family Enterprise Ombudsman is examining payment terms and conditions for subcontractors working on government projects.

Ombudsman Kate Carnell says small business "subbies" are vulnerable to delayed payments, which can have an adverse impact on their livelihoods and the broader economy.

"Most government departments pay their invoices within 30 days, but when a prime contractor is appointed to manage a project there are regularly delayed payments further down the chain," Ms Carnell said.

"Government agencies and prime contractors should ensure that payment terms and conditions throughout the supply chain are no worse than those in the head contract.

"It's not good enough to leave responsibility with a head contractor and overlook small businesses who do much of the work."

Ms Carnell said cashflow was vital to small business success.

"Cashflow is king," she said.

"A lack of cashflow is the leading cause of business insolvency and this underscores the importance of prompt payments."

Ms Carnell has written to seven government departments seeking information about their procurement and payment policies.

It follows her inquiry into payment times, which recommended the government pay invoices within 15 days.



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The inquiry recommended:

- The Australian Government require its head contractors to adopt the payment times and practices of the procurement policy through the supply chain;
- The Australian Government extend its payment policies to all agencies and entities;
- The Australian Government publish its payment times and policies, and for all its agencies and entities, with performance against best practice benchmarks;
- The Australian Government procure from businesses which have supply-chain payment times and practices equal to or better than its practices.

The inquiry also recommended that all levels of government adopt the same prompt-payment policies.

## Victorian First Technology to Make Napier Street Safer

The Victorian State Government will install a new high-tech detection system to stop trucks and other tall vehicles hitting Footscray's Napier Street Bridge. Victorian Minister for Roads and Road Safety Luke Donnellan joined Member for Footscray Marsha Thomson recently to announce \$1.2 million to build new warning systems at the notorious bridge.

Automatic detection systems will be installed on the approaches to the bridge to detect over-height vehicles, and traffic signals will be used to stop drivers before they get to the bridge.

"This Victorian first technology will detect vehicles before they reach the bridge and

alert the driver while there's still time to take an alternate route, said Minister for Roads and Road Safety Luke Donnellan.

Electronic variable message signs will direct these vehicles to use an alternate route with closed circuit cameras to capture the details of drivers who disobey the advance warnings. Alarms triggered by over-height vehicles that ignore the warnings will notify authorities immediately.

"Bridge strikes put people at risk and they can be easily avoided. It's the responsibility of all drivers to know the height of their vehicle and choose an appropriate route," the Minister said.

Napier Street is used by more than 20,000 vehicles each day and is a key arterial route for Melbourne's inner west.

The project is part of the State Government's Smarter Journeys program, which funds technology that reduces congestion, improves safety and keeps traffic flowing on the state's road network.

The new warning system follows a \$600,000 realignment of the protection beams on both sides of the bridge to reduce the risk of container loads dislodging if they strike the bridge.

"We're investing in the infrastructure we need to make suburbs safer and take trucks off local roads in the inner west - the West Gate Tunnel, the Port Rail Shuttle project and high-tech solutions to prevent bridge strikes," Minister Donnellan added.

There have been more than 70 reported strikes on the Napier Street Bridge since 2005 and despite more than 20 warning signs on the approach to the bridge, trucks and other vehicles continue to hit it. The Government is working with the local community and industry to reduce low-clearance bridge strikes and take trucks off local roads across the inner west.



## Have your say: making public transport more accessible

- *Terms of Reference revealed for review to assess the effectiveness of the Disability Standards for Accessible Public Transport 2002*
- *All stakeholders encouraged to make submissions*

The Australian Government has released the Terms of Reference for the 2017 review of the Disability Standards for Accessible Public Transport 2002.

Minister for Infrastructure and Transport Darren Chester said the review will assess whether the standards have been effectively applied to remove, as far as possible, discriminatory impediments to people with a disability accessing public transport.

"The Disability Standards for Accessible Public Transport 2002 (Transport Standards) recognise the importance of providing permanently and temporarily disabled people with easy access to public transport so they can fully participate in the community," Mr Chester said.

"This is the third review of the standards and is designed to help make public transport safer and more accessible.

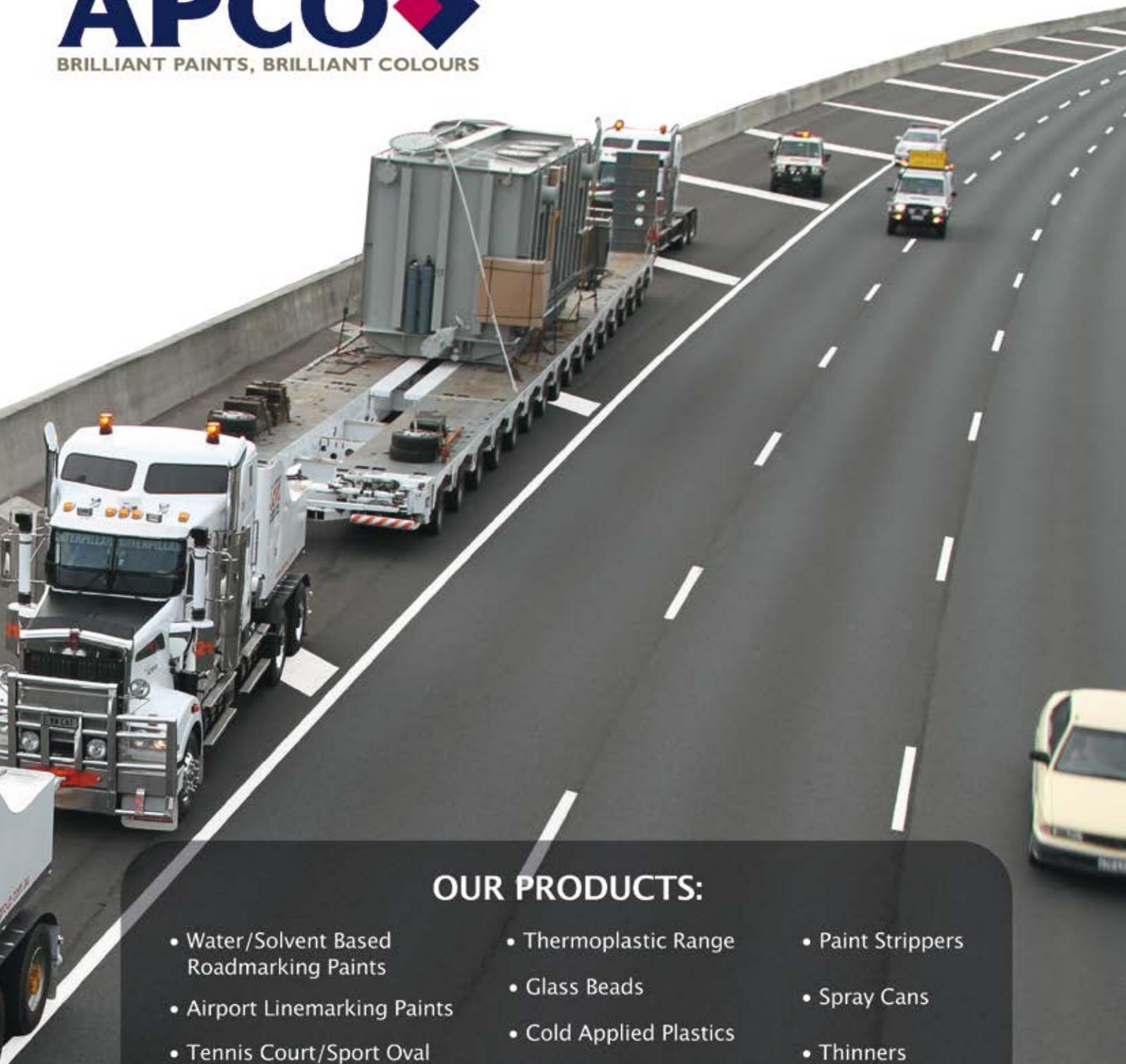
"While especially helpful for people with a disability, accessible public transport benefits all Australians, particularly older citizens and people with infants in prams.

"Stakeholders are invited to provide written submissions in response to either the Terms of Reference or the Issues Paper which is scheduled to be released in early 2018.

"There will be a series of public consultation sessions on the review next year," Mr Chester said.

Further information on the Transport Standards review is available at: [https://infrastructure.gov.au/transport/disabilities/index.aspx#third\\_review](https://infrastructure.gov.au/transport/disabilities/index.aspx#third_review)





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## Think before taking risks on the roads this Christmas

Victorians are being warned to think twice before taking risks on our roads this Christmas in a new Transport Accident Commission road safety campaign.

Victorian Minister for Roads and Road Safety Luke Donnellan unveiled the new campaign during December, which takes aim at three major factors in Victorian road trauma – drink-driving, speed and distractions.

The campaign asks motorists to *‘think of us before you drive’*, referring to the heightened police presence on the state’s roads across the upcoming Christmas and holiday period.

“We’re working towards a future where no one dies or is seriously injured on Victorian roads and our hard-working Victoria Police members play a vital role in achieving that,” Minister Donnellan said.

“There is no excuse for drink-driving, speeding or using your phone while driving – we see too many tragedies caused by this behaviour,” he added.

A television ad features Victoria Police members and aims to deter risky behaviour before it happens – asking people to consider the presence of police on the roads each time they drive.

Victoria Police will increase traffic enforcement operations over the Christmas and holiday period as part of *Operation Roadwise*, targeting dangerous driver behaviour.

Speaking about the campaign, TAC Lead Director Road Safety Samantha Cockfield, commented:

“We have worked with Victoria Police to develop this campaign to address risk-taking behaviour on our roads and to encourage people to think about the police before they take these actions.”

“Around 90 per cent of crashes involve some type of human error and reducing that is a great start to reducing the number of people being killed and seriously injured on our roads,” she added.

Last year, 26 drivers died on Victorian roads with a blood alcohol level over .05, police issued almost 130,000 penalty notices for speeding and detected almost 28,000 mobile phone infringements.

## Improving rail safety in Indonesia and Australia

Computer models to predict how railcars will respond to different track conditions are being developed by Indonesian and Australian researchers, to improve rail safety and efficiency in both countries.

They’ve already created a successful model for passenger carriages, which has been validated against the performance of trains in Indonesia. Now the researchers are working on models for freight trains.

“For railways, it’s standard practice to measure the conditions of the track periodically,” says Dr Nithurshan Nadarajah, a research engineer at the Institute of Railway Technology at Monash University.

“However, the influence of a track’s condition on the vehicle isn’t fully understood. So the thresholds for when to intervene with maintenance aren’t comprehensive, or optimised.

“Lots of relevant data is helping our computer algorithm learn about the relationship between track conditions, running speeds, and the response of a moving train under these conditions. This work will help operators predict the response of different wagons, and identify maintenance requirements based on performance.”

The researchers are also hoping the models could be used to predict optimal running speeds based on the track condition and vehicle characteristics, but that work is yet to be validated.

The project, supported by The Australia-Indonesia Centre, is using data collected by a real-time monitoring railcar – utilising the Instrumented Revenue Vehicle Technology (IRV) developed by the Institute of Railway Technology – which ran for several weeks during 2016 on a track between Surabaya and Lamongan in East Java, Indonesia. Further IRV data from an Australian line managed by the Australian Rail Track Corporation is also used for this research.

When a range of different vehicles use the tracks – for example passenger and freight wagons – the risk increases when using the current passive track condition based maintenance threshold.

“The increased demand on railways – particularly in a growing country like Indonesia – is quickly exposing the crippling limitations of traditional passive assessment, and a number of derailments have resulted from a combination of track defects and rollingstock condition,” Nithurshan says.

The project involves The Australia-Indonesia Centre’s Infrastructure Cluster with the support of the Government of East Java, PT Kereta Api Indonesia (the national rail company), Java Integrated Industrial and Port Estate, the Lamong Bay Terminal container port, the Australian Rail Track Corporation, Public Transport Victoria, Institut Teknologi Sepuluh Nopember, the Institute of Railway Technology, and Monash University.



View from inside the instrumented vehicle. Photo courtesy: PT Kereta Api Indonesia

## Lightweight car research offers more sustainable future

A major new research centre aims to transform Australia's automotive industry by developing new lightweight materials and manufacturing technologies. The research will also make cars more fuel-efficient and reducing carbon dioxide emissions.

The ARC Training Centre in Lightweight Automotive Structures (ATLAS) was launched recently at RMIT University by Senator James Paterson.

ATLAS is led by RMIT University in close partnership with Deakin University and the Australian National University, lead partner the Ford Motor Company, CSIRO and 11 additional local and international partner organisations including those from the USA, Germany and England.

The research will aim to accelerate the transformation of Australia's automotive

industry by commercialising new products and processes.

RMIT Deputy Vice-Chancellor Research and Innovation and Vice-President, Professor Calum Drummond, said new lightweight materials and advanced manufacturing processes would help industry to innovate and create jobs.

"This opens the door to exporting new lightweight automotive product designs, high-value lightweight components, and engineering services to the global automotive market segments.

"It's a perfect fit with RMIT's aim to deliver research with impact that can contribute to a more vibrant and sustainable economy."

ARC Chief Executive Officer, Professor Sue Thomas, said the Training Centre will develop new lightweight technologies, manufacturing processes and energy storage designs that will reduce carbon dioxide emissions in transportation.

"Working with industry partnering organisations, the ARC Industrial Transformation Training Centre in Lightweight Automotive Structures will accelerate the

transformation of Australia's automotive industry through new research capabilities and commercialisation of new processes and products," said Professor Thomas.

"This new research Training Centre brings together world-leading scientists and industrial engineers from 16 organisations from Australia, Germany, United Kingdom, and the United States of America, and will provide an outstanding collaborative network to mentor, train and develop Australia's next generation of researchers in an industry-focused research training environment."

Dave French, Programs Director Asia Pacific for Ford said:

"We are incredibly proud of our relationship with RMIT and together we believe that ATLAS will be the basis for an even more integrated local Australian research activity.

"We look forward to jointly positioning Ford and this Australian ingenuity right at the leading edge of future Automotive R&D."

ATLAS will take on 13 PhD candidates and five postdoctoral research fellows.



## SAFETY. COMPLIANCE. OBSERVATION. PROTECTION. ENGAGEMENT.

### KEYNOTE SPEAKERS INCLUDE



**Michael Caltabiano**  
ARRB  
Chief Executive  
Officer at Australian  
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**Neil Scales**  
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### A message from TMAA President Brendan Woods

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### **DESIGNED FOR SAFETY**

- Low ride down accelerations on vehicle occupants in end-on impact.
- Reduced spare parts inventory: In almost 50% of all resets to date, the only replacement parts needed are two 1/4" shear bolts.
- Increased crew safety: The average reset/repair time (often with just a one person crew) is 56 minutes.
- Reduced call outs increase crew safety: To date there have been no call outs for side angle impacts, a similar pattern to that in the USA.
- Reduced lane closure time: Fewer call outs and faster repairs keep traffic lanes open for longer
- Happier motorists: Fewer lane closures, less blockages and faster repairs.
- SMART DESIGN, SAFER SITES FOR ROAD CREW and SAFER MOTORING

# ROAD SAFETY DESIGN AT ITS BEST

The SMART CUSHION spare parts detailed record to date for the first 54 resets.

sci01	Jul-15	sci02	Jul-15	sci03	Sep-15	sci04	Oct-15	sci05	Oct-15	sci06	Nov-15	sci07	Nov-15
1st	SP												
sci08	Nov-15	sci09	Nov-15	sci10	Dec-15	sci11	Dec-15	sci12	Apr-16	sci13	May-16	sci14	May-16
1st	SP+DP	1st	SP	1st	SP+DP	1st	SP	1st	SP	1st	SP	1st	SP+DP
sci15	Jun-16	sci16	Jul-16	sci17	Jul-16	sci18	Aug-16	sci19	Oct-16	sci20	Nov-16	sci21	Nov-16
1st	SP+DP	1st	SP+DP	1st	SP	1st	SP+DP	1st	SP	1st	SP	1st	SP
sci22	Nov-16	sci23	Nov-16	sci24	Feb-17	sci25	Feb-17	sci26	Feb-17	sci27	Feb-17	sci28	Mar-17
1st	SP	1st	SP	1st	SP	1st	SP	1st	SP+Sd	1st	SP+Sd	1st	SP+DP
sci29	May-17	sci30	May-17	sci01	Sep-15	sci06	Dec-15	sci08	Dec-15	sci10	May-16	sci15	Jul-16
1st	SP	1st	SP	2nd	SP+DP	2nd	SP+DP	2nd	SP	2nd	SP	2nd	SP
sci07	Jul-16	sci02	Feb-15	sci21	Mar-17	sci25	Apr-17	sci26	Apr-17	sci11	May-17	sci01	Nov-15
2nd	SP+DP	2nd	SP	2nd	SP+DP	2nd	SP+DP	2nd	SP+DP	2nd	SP	3rd	SP
sci06	Dec-15	sci10	Dec-16	sci15	May-17	sci01	Dec-15	sci06	Sep-16				
3rd	SP	3rd	SP	3rd	SP	4th	SP	4th	SP+DP				
sci01	Dec-15	sci01	Dec-15	sci01	Jan-16	sci01	May-16	sci01	Jun-16	sci01	Jun-16	sci01	Aug-16
5th	SP+DP	6th	SP	7th	SP	8th	SP+DP	9th	SP+DP	10th	SP	11th	SP

Code for SCI unit / reset date / reset sequence	
sci-XX	unique Smart Cushion Number
MM-YY	Month reset / repaired
1st / etc	Reset sequence per unit

Spare Part details for each reset		Qty	%
SP	Shear pins only required	35 of 54	65%
SP+DP	Delineator panel plus Shear pins	17 of 54	31%
SP+Sd	Sled panel plus Shear pins	2 of 54	4%

## GAME CHANGER

To date 30 Smart Cushions have been impacted, one of these has been impacted 11 times. **The total cost of all Spare Parts used in 54 resets is \$7,438.00 at an average of \$137.74 per reset.**



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# IS YOUR **STEEL** **FIT** *FOR USE?*

Cladding and steel failures, and the senate nonconforming products enquiry have shone new light on materials compliance obligations in Australia.



**A**round 20 years ago, imported steels began arriving, offering new and often financially attractive alternatives.

But increased choice also brings challenges. Not all these steels meet AS/NZS Standards, and supply chains have become much more complex, making verification of product conformity much more difficult for any purchaser, builder or building surveyor.

Steel is often purchased on the assumption that it must “meet the standard”. After all it comes with a test certificate! The facts however are increasingly different.

As Executive Director of the Australasian Certification Authority for Reinforcing and Structural Steels (ACRS), Philip Sanders, points out, construction steels available in Australia today fall into three categories:

- those that meet AS/NZS Standards;
- those that meet other national Standards, but not necessarily AS/NZS Standards; and
- those that meet no standards at all.

The last two categories mean products might not be fit for the purpose for which they are intended and, in extreme cases, using them can be dangerous. How do you know what you are getting?

“If you can’t be sure it’s right for the job, you’d be right to be concerned.” Philip says.

## PRODUCT CONFORMITY AND YOUR RESPONSIBILITIES

Recent well-reported cases of materials failures, including flammable cladding, shattering glass, and failing steel mesh and hollow sections, clearly show there is a need for testing and certifying organisations which give designers, certifiers and builders peace of mind that the materials used meet the standards and regulations. After all, regulations require building materials to be fit for purpose.

## THE ACRS SCHEME

ACRS was formed as an independent, not for profit steel verification body with the assistance of major professional bodies, including Austroads, Engineers Australia, the Australian Institute of Building Surveyors, the Master Builders Association and the Steel Reinforcement Institute of Australia.

In 2005, ACRS certified 3 steel companies, at 23 manufacturing and processing sites, in 3 countries, to just one standard, AS/NZS 4671.

Today, ACRS certifies steels from 66 manufacturing and processing companies, operating 160 facilities in 17 countries, to more than a dozen steel standards, responding to the demands from end-users for independent validation of compliance. ACRS certification currently covers over 65% of construction steels supplied in Australia. Philip explains why.

“The major difference between ACRS and the normally understood type of product certification system is that ACRS is a steel specialist on the EU model widely recognised as world best practice.”

“As such, all ACRS certification personnel are metallurgists and engineers with direct experience in manufacture, processing, or design and construction of the steel materials we certify to AS/NZS standards, as well as qualified auditors. So, we know exactly what to look for.”

## INDEPENDENT VERIFICATION TO INTERNATIONAL BEST PRACTICE

ACRS also operates a strictly verification-based system.

“Where some certification systems accept the suppliers’ own quality management systems certification and test reporting without further checking, ACRS doesn’t”, Philip reports.

“ACRS assessors independently select the samples for testing during the audit to prevent any chance of “cherry picking” by the supplier. We then manage the subsequent verification process through independent qualified laboratories selected by ACRS, not the supplier. Then, we do conformity checking on the suppliers’ raw production data every three-months. This provides a further level of confidence to the purchaser that matches the verification levels demanded in EU and North America.”

“ACRS’s reputation rests on the quality of its auditors and ACRS’s clear independence from both the steel suppliers we audit and end-users who rely on our certification. We are independent, expert, entirely neutral and operated solely for the benefit of end-users and safety of the public,” he said.

## RUBBISH IN, RUBBISH OUT

“Of course, the provision of materials is just one part of the complex process of building construction. But if you don’t have the right materials, every other decision made after that is based on a flawed assumption,” Philip Sander explains.

“This is where ACRS verification-based system comes into its own as a confidence-building measure for the building industry and for the public.”

“As ACRS has found from more than 2,500 audits at steel suppliers around the world, what you don’t actively check, at some point, you just won’t get. And it’s too late when it’s built.”

“It’s simple, really. We do the detailed checking now so you don’t have to worry later,” he added.



**“ACRS assessors independently select the samples for testing during the audit to prevent any chance of “cherry picking” by the supplier.”**





# INDEPENDENT, EXPERT, THIRD-PARTY CERTIFICATION

The only way to be truly sure that the materials being used conform fully with the appropriate Australian and New Zealand Standards and are fit for purpose, is through independent, expert, third party validation and certification.

ACRS (Australasian Certification Authority for Reinforcing and Structural Steels Ltd) provides a fully independent, expert assessment and certification for both Australian and internationally sourced construction steels, including reinforcing steels, structural steels and prestressing steels. All ACRS auditors are fully qualified metallurgists with many years of experience working with steels.

ACRS certification makes checking for compliance with the relevant Australian and New Zealand Standards easy. It demonstrates INDEPENDENTLY and EXPERTLY that the supplier consistently meets the Standards stated on the certificate.

By using ACRS certified construction steels, builders and contractors can be confident that they are getting the AS/NZS compliant materials that they ordered, and engineers and building certifiers can be confident that steel meets the requirements of the Building Code and associated Standards.

Beyond checking the supplier's ACRS certificate, product markings and tags, there's no need for you to make any further checks on ACRS certified materials.

- **No more checking materials properties against technical specifications;**
- **No more checking batch numbers against the test certificates.**

In addition to factory production control audits and independent testing, the ACRS scheme provides regular review and analysis of all products manufactured and supplied by the certified supplier. This makes matching material to conformity documentation simple and effective for the customer and for any verifier.

ACRS' Product Certification Scheme provides certification of reinforcing and prestressing steels, structural steels and associated products against a wide range of applicable Australian and New Zealand Standards and specifications.

## AREN'T TEST CERTIFICATES THE SAME THING?

Test Certificates, ARE NOT the same as ACRS independent certification. Test certificates from the supplier are simply a "snapshot" of the manufacturer's own test results of the material on the certificate, not its regular supply.

ACRS certification demonstrates INDEPENDENTLY and EXPERTLY that the supplier manufactures consistently to the Standards stated on the certificate. Unless you are going to check and validate EVERY single test certificate against EVERY delivery, you should check the ACRS certificates for the manufacturer and supplier instead.

For further information about the validity of certification for any materials being supplied into your project, please visit the ACRS website: [www.steelcertification.com](http://www.steelcertification.com), or contact ACRS, Phone: (02) 9965 7216.

## WHAT IS YOUR DOCUMENTATION REALLY TELLING YOU?

One of the most common issues facing users of non-ACRS certified steels, is that of being able to match the source-identity of the delivered material (e.g. manufacturers' marks) with the documentation supplied so they can validate material's conformity.

In addition to factory production control audits and independent testing, the ACRS scheme provides regular review and analysis of all products manufactured and supplied by the certified manufacturer to the Australian and New Zealand Standards. This makes matching material to conformity documentation simple and effective for the customer and any verifier.

## HOW DO I SPECIFY ACRS CERTIFIED STEELS?

The easiest way to manage and minimise the risk of non-conforming construction steels, is to specify ACRS certified steels.

### SUGGESTED WORDING FOR STEEL VERIFIED BY ACRS AS MEETING LONG TERM QUALITY LEVELS TO AS/NZS 4671, OR AS/NZS 4672:

*Steel reinforcing and steel prestressing materials for concrete shall comply with AS/ NZS 4671 or AS/NZS 4672, respectively. Where applicable, materials shall be cut and bent in accordance with the requirements of the "Material and Structural Requirements for Reinforcing Steel" clauses AS 3600 and AS 5100.5, or the "Reinforcement" Clauses of NZS 3109.*

*Acceptable manufacturers and processors of steel reinforcing and prestressing materials must hold a valid certificate of approval issued by the Australasian Certification Authority for Reinforcing and Structural Steels Ltd (ACRS), or other product certification system as shall be demonstrated to be directly equivalent to ACRS and approved as such in writing by the specifier.*

*Evidence of compliance with this clause must be obtained when contract bids are received.*

### SUGGESTED WORDING FOR STRUCTURAL STEELS VERIFIED BY ACRS AS MEETING MINIMUM REQUIRED TESTING LEVELS TO AS/NZS 1163, AS/NZS 1594, AS/NZS 3678, AS/ NZS 3679.1, OR AS/ NZS 3679.2:

*Structural steels shall comply with AS/NZS 1163, AS/NZS 1594, AS/NZS 3678, AS/NZS 3679.1 or AS/NZS 3679.2, as appropriate.*

*Acceptable manufacturers of structural steel must hold a valid certificate of approval issued by the Australasian Certification Authority for Reinforcing and Structural Steels Ltd (ACRS), or other product certification system as shall be demonstrated to be directly equivalent to ACRS and approved as such in writing by the specifier.*

*Evidence of compliance with this clause must be obtained when contract bids are received.*

## CALL UP ACRS FOR CERTIFICATION TO THESE STANDARDS:

- **AS 1442** - Carbon steels and carbon-manganese steels - Hot-rolled bars and semi-finished products.
- **AS 3597** - Structural and pressure vessel steel - Quenched and tempered plate
- **AS 3600** - Concrete structures
- **AS 4100** - Steel structures
- **AS 5100.5** - Bridge design - Concrete
- **AS/NZS 1163** - Cold-formed structural steel hollow sections
- **AS/NZS 1252** - High strength steel fastener assemblies for structural engineering - Bolts, nuts and washers - Technical requirements
- **AS/NZS 1594** - Hot-rolled steel flat products
- **AS/NZS 3678** - Structural steel - Hot-rolled plates, floor plates and slabs
- **AS/NZS 3679.1** - Structural steel - Hot-rolled bars and sections
- **AS/NZS 3679.2** - Structural steel - Welded I sections
- **AS/NZS 4671** - Steel reinforcing materials
- **AS/NZS 4672** - Steel prestressing materials - General requirements
- **AS/NZS 5100.6** - Bridge design - Steel and composite construction
- **NZS 3109** - Concrete construction
- **NZS 3404** - Steel structures - Materials, fabrication and construction
- Government specifications and/or manufacturers' specifications



# THE ACRS CHAIN OF CERTIFICATION

Construction steels manufactured to AS/NZS Standards can be rendered non-conforming by poor transformation, e.g. through such processes as cutting, bending and welding. Certification systems that only assess the mill of manufacture do not provide for validated performance to Standards of the as-delivered product.

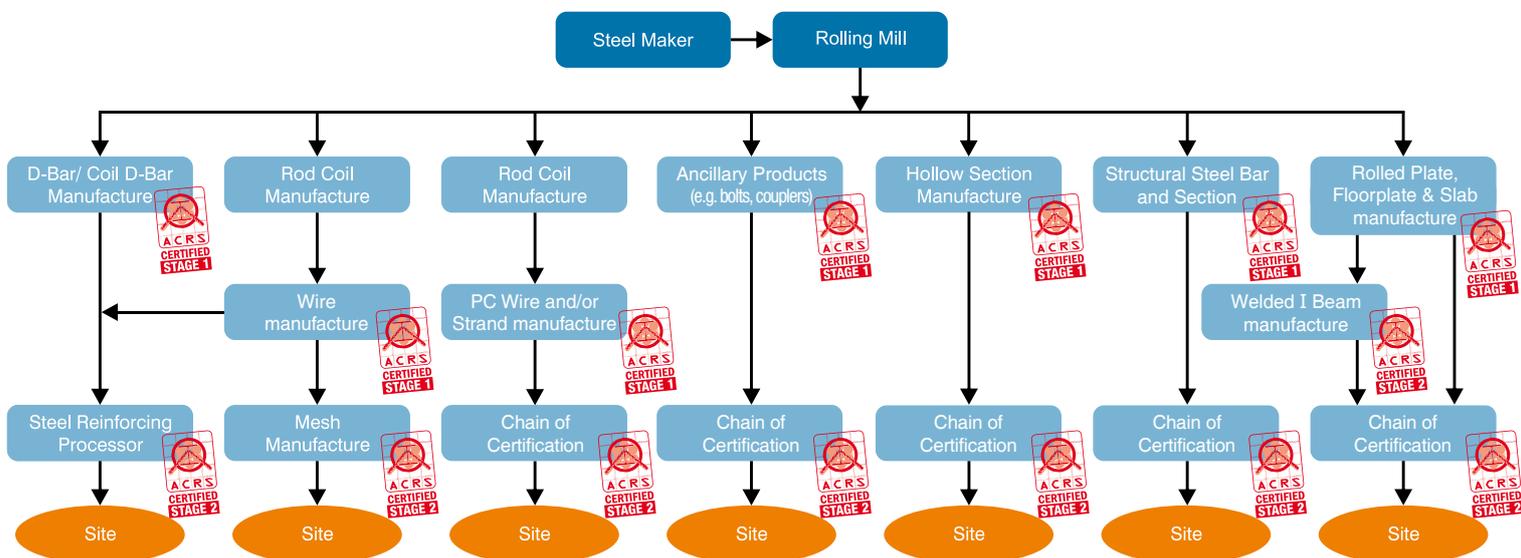
In steel reinforcing materials, the ACRS scheme, through its certification of steel reinforcement ("rebar") processors and the mills of manufacture, provides a rigorous mechanism for "bookending" the manufacture and transformation. This 'chain of certification'

provides a vital link between the steel manufacturer and the construction site.

For any steel to be ACRS certified, it must have been manufactured by an ACRS Certified supplier. Any break in the 'chain of certification' of the mill and the processor means the steel delivered to site is not ACRS certified.

For steel reinforcement, ACRS certifies BOTH the steel mill that manufactures the steel AND the steel reinforcement processor and mesh supplier. Verification of the outputs of both these supply streams is essential for any steel reinforcing materials claiming to conform with the Standards.

With structural steels, ACRS certifies the steel mill of manufacture, who must actively demonstrate traceability of their supply to the steel distributor. ACRS is working with Steelwork Certification Australia to develop "end to end" certification from mill to site that will provide confidence in fabricated structural steels from the purchase of verified steel from ACRS certified mills right through to delivery of the finished fabricated steel to the project site.





# Traffic management matters

“It is clear that awareness is needed to stop the carnage on roadwork sites.” The Traffic Management Association of Australia (TMAA) President Brendan Woods believes the greatest threat to life on a roadwork site is motorists disengaged with signage and roadwork personnel.

“I believe motorists don’t recognise the traffic controllers are people, just like them, working to save the lives of those working on the roadway, construction project, flood, fire, or event that is occurring behind, and all around them,” Mr Woods said.

He also believes that emotive public education campaigns through visual media, social media and radio can have an impact and help promote a positive reaction in driver behaviour.

“The trouble is, obtaining funding for such education projects, is a difficult task,” he said.

Thankfully, the Northern Territory Government believed education was necessary in the territory and, working with the TMAA NT Division, created an emotive storyline for traffic controller safety, that has swept the nation and been aired in other states. Tasmania is currently running a two-year campaign for roadworker safety, using the same advertisement with a more Tasmanian flavour. The ACT has also picked up the advertisement, and will be airing it with an ACT theme during their road safety week in 2018.

Mr Woods believes there will be funding made available in the future to create and air a second and third instalment of the storyline, to quench the thirst of the Australian public,

who, as shown in the long running AAMI advertisement, want to know how the story ends.

Mr Woods said the TMAA would be streaming the adverts continually across 2018 and they would be highlighted during the 2018 TMAA Conference, *SCOPE18*, to be held on the Gold Coast, on 26 & 27 April 2018.

“Our Conference highlights the themes we need the industry, the government and the public to promote - Safety. Compliance. Observation. Protection. Engagement.”

In the meantime, Mr Woods and the TMAA members across Australia are working with federal, state and local government to drive the safety message to obey the signs and slow down at roadwork sites. Recent fatalities have hit raw nerves in the industry and the TMAA is calling for further surveillance and police presence on roadwork sites to thwart speeding, drunk or drugged motorists. Mr Woods noted that not only is speeding a factor, but there is sometimes violence against traffic controllers trying to slow motorists, as well as verbal and physical abuse.

“Traffic Controllers matter,” he said.

“They are regular people doing their job trying to make a living in a high-risk industry. Motorists should be thanking them, not hankering them.”

“We will not rest until there is zero harm and full compliance on roadwork sites,” Mr Woods added.

Mr Woods is working closely with ARRB, Austroads, Standards Australia, AAPA, SARAH Group, the NRSP and government,

to define strategic goals and operational outcomes, to drive home the message of safety on roadwork sites to motorists, pedestrians and the workers themselves.

## ABOUT THE TMAA

The Traffic Management Association of Australia (TMAA) is the peak body for Traffic Management. The TMAA provides the strategic direction for Traffic Management and Traffic Control across Australia. The TMAA represents Traffic Management and Traffic Control companies throughout Australia and its prime goal is to ensure best practice and compliance within the industry nationally.

The TMAA promotes and lobbies for national standards in all deliverables and capabilities within this industry. Key focus areas of the TMAA include: safety, training, industrial relations, policy development, national standardisation, product and equipment review, advisory provider to federal government and other associated bodies and organisations.

The TMAA will provide collective representation to Government, Unions and other industry stakeholders on behalf of its membership. The TMAA strives to develop strong working relationships with all stakeholders and to provide strategic advice and planning for future Traffic Control compliance, harmonisation, policy and procedures.

The TMAA represents a total cross section of industry providers from small regional businesses to national traffic management companies working across all states and all road and infrastructure projects.

For further information, please visit: [www.tmaa.asn.au](http://www.tmaa.asn.au)



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Roadmarking Industry  
Association of Australia

# 2018 Australasian Roadmarking & Signs Conference & Exhibition

## DRIVERS OF CHANGE

29th and 30th August 2018  
Dubbo Convention Centre, Dubbo, NSW

## CALL FOR PAPERS

The Roadmarking Industry Association of Australia invites your input into the development of a highly beneficial and instructive programme for our Australasian Roadmarking & Signs Conference and Exhibition which will be held at the Dubbo Convention Centre, Dubbo, NSW on August the 29th & 30th 2018.

RIAA Conferences & Exhibitions are held bi-annually and have secured a well-established reputation for successfully bringing together delegates from all aspects of the road delineation industry throughout Australasia & indeed the world.

We expect over 300 local & international delegates to attend this event which includes Roadmarking & Signs Industry Contractors and Suppliers of related materials; State and Local Road Authority Personnel; Engineers and Researchers as well as Consultants and Contractors within the Traffic Engineering and Road Safety areas.

Submissions of Papers & Topics relating to how road safety can be enhanced by innovative or best practice use of pavement markings, signs, roadside delineators or barriers would especially be welcome, as would papers related to improvements in processes; materials; research and development; business practices; work safety; specifications; contracts; or indeed any other topics that you feel would be of benefit to our delegates.

If you are interested in presenting a paper you are invited to submit an abstract for consideration by our conference organising committee. Your abstract should detail the following: Title/Theme, Author/Presenter, an overview of the material to be covered along with any key outcomes or conclusions.

Please send your abstract (preferably by email) by no later than March 31 to:

**Roadmarking Industry Association of Australia**

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LEFT: A fast and reliable solution, the Rocla MassBloc® retaining wall system was used to fix a major slip repair on Macquarie Pass in NSW.



“The slip repair was located on Macquarie Pass in NSW so it’s surrounded by a rainforest. We needed a retaining wall that is durable and quick to build, but allows for high levels of water to pass through so that the area remains stable at all times,” Peter said.

The speed and versatility of the Rocla MassBloc® retaining wall system, as well as the permeability of the concrete blocks, means that it can be used across a range of applications and is well suited to government projects.

“Macquarie Pass is one of the links from Wollongong to the Southern Highlands, to the Hume Highway, and it’s considered to be one of the highest volume roads in NSW,” he said.

“We closed both sides of the road for a total of three weeks, with no public access except for the weekends. The project was finished a lot faster because we can off-load the Rocla MassBloc straight onto the job, and not hold up any of the trucks.”

The RMS used a total of six employees to build the retaining wall system on Macquarie Pass. RMS has also used Rocla MassBloc® retaining wall system on number of previous projects.

“The wall on Macquarie Pass is very steep and difficult to access so Rocla MassBloc is an easy, low-labour installation that is safe,” Peter said.

“We know it’s a good product and it’s efficient, so we use it quite regularly. We also have MassBloc® walls on Picton Road and Mount Ousley Road, to name a few,” he added.

To find out more about Rocla MassBloc® retaining wall system, please visit:

[www.rocla.com.au](http://www.rocla.com.au)

# ROCLA MASSBLOC TOP CHOICE FOR EMBANKMENT REPAIR

When NSW Roads & Maritime Services (RMS) had to repair an unstable embankment on a major NSW road they needed a reliable and fast solution, so they invested in the Rocla MassBloc® retaining wall system.

Peter Stapleton, Project Quality Representative at the RMS, says that repairs on major roads need to be completed within a tight timeframe and with high efficiency, so a product that’s fast to install, permeable and increases stabilisation in the area is vital.



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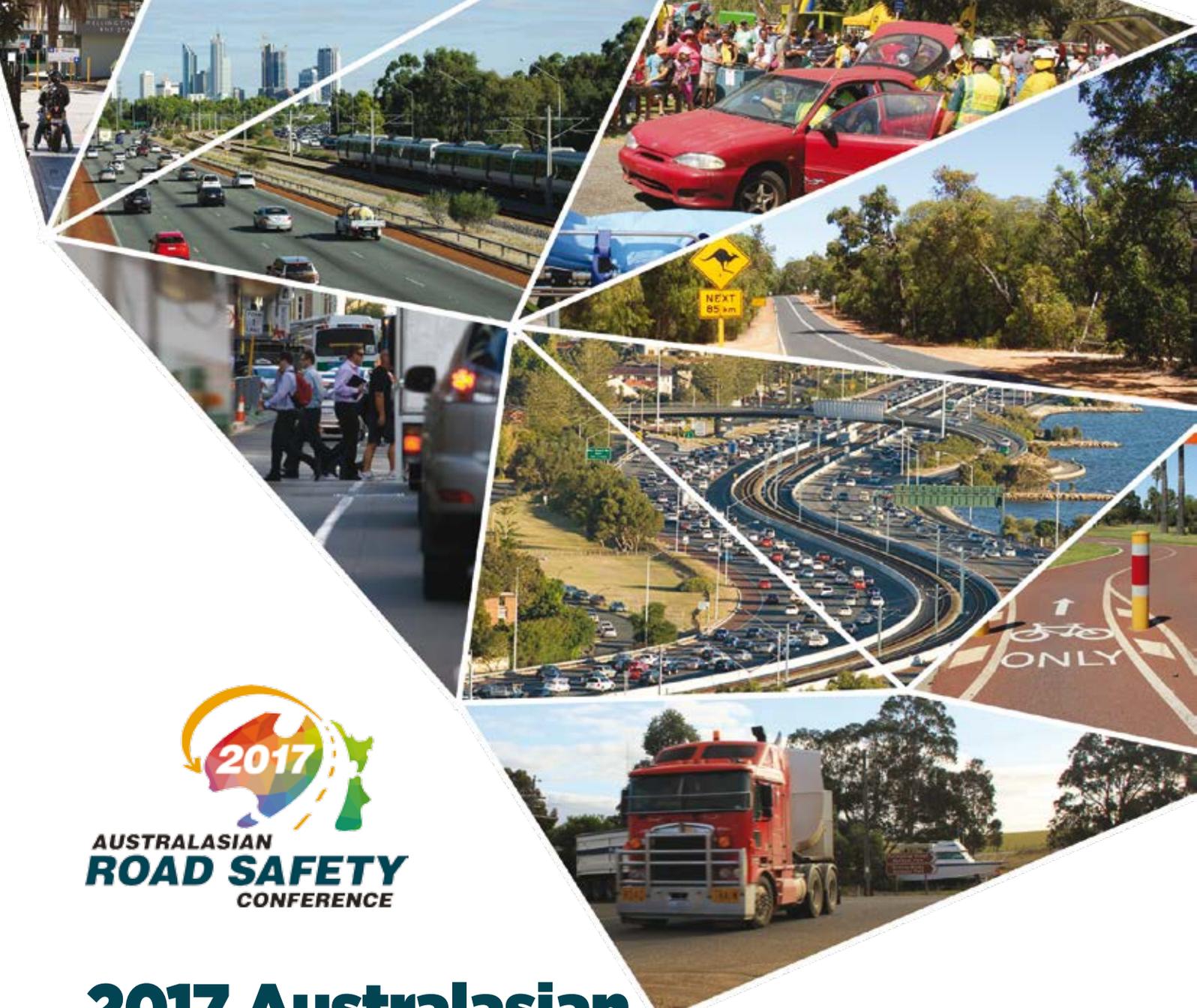
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# 2017 Australasian Road Safety Conference an outstanding success

With the theme *'Expanding our Horizons'*, the 2017 Australasian Road Safety Conference was an outstanding success, attracting over 650 delegates and more than 40 sponsors, exhibitors and supporters. The 150+ papers and posters, workshops & symposia, keynotes, invited speakers & panellists ensured there was something for everyone in their combined efforts to drive down road deaths and injuries.

The key note speaker, former US National Highway Traffic Safety Administrator Dr Mark Rosekind, who now heads safety innovation at autonomous vehicle start-up Zoox Inc, challenged the over 650 delegates to consider if they were to work "Towards

Zero" road deaths, then we all would have to be doing something different to what we are doing now.

Working together, not giving up, expanding our horizons, campaigning together for funding were common themes from plenary speakers.

The collaboration achieved this year from so many different groups, with support from sponsors and exhibitors, with a varying range of road safety subjects, programs, technologies and projects, confirmed that many are indeed on that journey, although there is still more to be done to expand horizons to include other key road safety participants.

The Hon Darren Chester, Minister for Infrastructure and Transport, speaking to delegates during the ARSC2017 Conference Dinner reminded delegates that 189,000 had died on our Australian roads since 1925 and likened that tragic result to that of the results of war, of a battle. A war and battle that is ignored. He encouraged delegates to help him gain the resources needed to reduce road trauma and has established an *Independent Ministerial Review of the National Road Safety Strategy* - not to find what we already know, but to identify what is not being done and recommend management actions for the next strategies.

His task, along with his colleagues the State and Territory Ministers, companies, organisations, researchers, practitioners and the community will be to deliver those actions, hopefully to step up quickly, as Dr Rosekind urged.

"My job as your road safety Minister is to go in to Cabinet and advocate on your behalf, on behalf of road safety experts, to make sure our voice is heard in that important room," Minister Chester said.

"If there's one message to remember from my comments here tonight it is simply this one - never give up. Never give up on the work you are doing in your particular roles," the Minister added. "I simply say one other thing - thank you. Thank you so much for the work you've already done. Thank you for the work you are doing today, thank you for the work you are going to do tomorrow, and more importantly thank you for the work you are going to do years into the future, because this is a battle that's worth fighting, worth winning."

At the Conference, Samantha Cockfield, Manager, Road Safety Technical and Policy, Transport Accident Commission,

was recognised for outstanding work with the prestigious *2017 ACRS Fellowship*. Presented by Hon Darren Chester, Minister for Infrastructure and Transport, the Award is Australasia's highest honour for an outstanding road safety advocate - a well-deserved congratulations to Samantha who joins an elite group of experts awarded the honour of ACRS Fellowship since 1991.

The Conference Dinner was also an opportunity to recognise a team from the Australian Capital Territory who was rewarded for their project showing exemplary innovation and effectiveness to save lives and injuries on roads. The *Kidsafe ACT* project, led by Team Leader Eric Chalmers, is being delivered in the ACT to underpin the zero deaths and injuries target in the Australian Capital Territory for children under 7, and was awarded the Grand Prize of a trip to USA during the ARSC2017 conference dinner. Three Highly Commended projects were also recognised.

This year the conference again ran a Low- and Middle-Income Country Scholarship Program to enable 5 participants from 5 Countries to attend

ARSC2017. This was made possible thanks to the generosity of the Australian Federal Department of Infrastructure and Regional Development.

The organisers were also delighted to be able to offer for the first time 19 Rural and Remote Scholarships across Australasia aimed at addressing the current disparity where 2/3 of deaths are occurring outside urban areas. These scholarships were made possible thanks to the generosity of the WA Road Safety Commission which provided \$50,000 in funding which enabled 9 Western Australians and 10 ex-WA awardees to attend the conference. These recipients would otherwise not have been able to participate.

Importantly, feedback from recipients has been overwhelmingly positive, enabling them to feel refreshed and armed with new knowledge and contacts to support them in their valuable work.

The organisers invite all stakeholders to join them in Sydney in October 2018 for the ARSC2018 event to help maintain this positivity and momentum - working together in a collaborative and supportive environment such as the one clearly evident at ARSC2017.

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# IAP What's In It For Me?

## BLAND SHIRE COUNCIL FACILITATING ACCESS THROUGH THE IAP

*14 roads in the Bland Shire Council have been approved for heavy vehicles operating under the IAP. Permits to operate under the IAP have also been issued to transport operators for approximately 60 other regional and local roads.*



### ABOUT BLAND SHIRE COUNCIL

Bland Shire Council is located on the border of the central western and Riverina areas of New South Wales. Agriculture and mining underpin the economy of Bland Shire Council.

Bland Shire Council is the fourth largest grain producing local council in New South Wales. Local and regional roads within Bland Shire Council also carry large grain volumes from neighbouring councils, especially Lachlan Shire Council. Pace Farm's egg production facility near West Wyalong is the largest in the southern hemisphere.

Evolution Minerals Limited's gold mine at Lake Cowal, approximately 80 kilometres north-east of West Wyalong, is the largest employer within Bland Shire Council. Other mineral resources, principally nickel, are located within Bland Shire.

Bland Shire occupies approximately 8,550 square kilometres and has a population of approximately 6,000 people. The twin towns of West Wyalong and Wyalong have a combined population approaching 3,500. Smaller population centres within the Bland Shire Council include Tallimba, Ungarie, Weethalle, Barmedman and Mirrool.

### HEAVY VEHICLE ACCESS ONTO THE NATIONAL AND STATE ROAD NETWORK

West Wyalong is strategically located at the junction of the Newell Highway which is the main road link between Melbourne (570 kilometres to the south) and Brisbane (1,105 kilometres to the north). West Wyalong is also located on the Mid Western Highway which links Sydney and Adelaide. The preferred route to Sydney, 490 kilometres to the east, is via Burley-Griffin Way and the Hume Highway. The preferred route to Adelaide, 915 kilometres to the west, is via Narrandera.



## ACCESS ON THE STATE ROAD NETWORK

### 26 Metre B-Doubles

Roads and Maritime Services has approved access for 26 metre B-Doubles at Higher Mass Limits (HML) on the full length of the Newell Highway, the Mid-Western Highway, Burley-Griffin Way and the Hume Highway. A condition of access for 26 metre B-Doubles at HML is that vehicles must operate on approved routes and be monitored under the Intelligent Access Program (IAP).

HML access on the State road network is also possible for 26 metre B-Doubles on Goldfields Way, which links Wyalong to Junee.

### AB-Triples, B-Triples and Type 1 A-Double Road Trains

Roads and Maritime Services has also approved access under the IAP for AB-Triples at General Mass Limits (GML) and Concessional Mass Limits (CML), and for AB-Triples at HML west on the Mid-Western Highway from the Newell Highway intersection. Access is also possible for B-Triples at GML and CML as well as for Type 1 A-Double Road Trains at HML from West Wyalong west on the Mid Western Highway from the Newell Highway intersection. This ensures access for these heavy vehicle combinations is possible from West Wyalong onto Kidman Way, the Cobb Highway and other approved routes in western NSW and interstate.

Operation of these vehicle combinations on approved routes is subject to a number of conditions of access, including a

requirement to operate under the IAP. Further details can be obtained from the NSW Schedule of the National Class 2 Heavy Vehicle Road Train Authorisation (Notice) 2015 (No.1) on the National Heavy Vehicle Regulator (NHVR) website: ([www.nhvr.gov.au/files/c2015g00865/national-road-train-authorisation-notice-no1.pdf](http://www.nhvr.gov.au/files/c2015g00865/national-road-train-authorisation-notice-no1.pdf)).

Access under these conditions (by enrolling in the IAP) is also possible on Goldfields Way from the Newell Highway intersection at Wyalong to the intersection at Kitchener Road Temora for AB-Triples and B-Triples at GML and CML. Access for these heavy vehicle combinations from Goldfields Way to Mid-Western Highway is possible via MR 639 (Compton Road and Showground Road at the stockyards (the Heavy Vehicle By-pass)) which link Wyalong and West Wyalong. Type 1 A-Double road trains are approved at GML for the whole route. Type 1 A-Double road trains are also approved at GML/CML on the Newell Highway from Goldfields Way to Back Yamma Road in Daroobalgie.

### Modular B-Triples

Roads and Maritime Services has approved access for Modular B-Triples at GML west from the intersection of the Newell Highway and the Mid-Western Highway at West Wyalong. Roads and Maritime Services has also approved access for Modular B-Triples along the Newell Highway from West Wyalong to Back Yamma Road in Daroobalgie. This provides the opportunity to access other approved Modular B-Triple

routes in western NSW and interstate, however access is not possible for Modular B-Triples onto or east of the Newell Highway at West Wyalong. Operation of Modular B-Triples on approved routes also is subject to a number of conditions of access, including a requirement to operate on routes under the IAP. For Modular B-Triples the conditions are displayed as a black line on Roads and Maritime's interactive map.

## THE LOCAL ROAD NETWORK

Mr Will Marsh, Director of Asset and Engineering Services says that Bland Shire Council is responsible for the construction and maintenance of 3,248 kilometres of road.

'This is one of the largest regional and local road networks for any council in NSW,' Mr Marsh said.

This asset base comprises 879 kilometres of sealed roads and 2,369 kilometres of unsealed roads which are generally gravel but may also be naturally formed.

Bland Shire Council has generally good bridge stock and a significant number of culverts, however not all structures have undergone assessment for bridge strength.

Mr Marsh said that 'there are a wide variety of soil types within Bland Shire Council.'

'This means some road surfaces, especially in the black soil area around Bland Creek near Barmedman, are less suitable for higher mass vehicles.'

'Soil type has a significant impact on how access requests are considered,' Mr Marsh said.



### COUNCIL'S PHILOSOPHY ON GRANTING HEAVY VEHICLE ACCESS

Mr Marsh said that as a matter of principle, Bland Shire Council supports opening up access to various types of Restricted Access Vehicles, including Type 1 A-Double Road Trains, 26 metre B-Doubles and Modular B-Triples.

'Accordingly, access requests under the IAP are considered on their merits.'

'B-Double access at GML has been approved throughout Bland Shire Council except for certain residential streets in West Wyalong, Wyalong and smaller villages.'

'HML vehicles are not permitted on the Newell Highway between Wyalong and West Wyalong however, HML access is permitted on the Heavy Vehicle By-pass.'

'The Heavy Vehicle By-pass ensures continuous access is provided for heavy vehicles operating under the IAP on approved national and State routes,' Mr Marsh said.

### ACCESS ON REGIONAL AND LOCAL ROADS

Mr Marsh said 'Transport operators wishing to access roads under the IAP which are not approved or gazetted by Roads and Maritime Services must apply for a permit from the NHVR, even in situations where access has been granted to any other operator.'

Mr Marsh said that the NHVR has approved access to heavy vehicles operating under the IAP on approximately 60 regional and local roads within Bland Shire Council.

He said that a permit, once granted by the NHVR, applies to that operator only and not to any other transport operator.

Mr Marsh said that while Bland Shire Council is not currently in a position to assess bridges on routes where HML access is sought, it is willing to work with others with a stake in extending the HML road network to develop the means to provide a funded bridge assessment program.

### GRAIN TRANSPORT

A significant proportion of the grain harvest from the West Wyalong district continues to be transported by rail. Within Bland Shire, primary grain receival sites on the rail network are located at Calleen and Hatelys Lane, north-west of West Wyalong. These sites are capable of storing and distributing grain for export markets. Other grain receival sites on the rail network are located at Barmedman, Kikoira, Naradhan, Ungarie and West Wyalong.

Mr Marsh said that after harvest, grain is transported either directly to a receival facility or is stored on farm.

'A significant proportion of locally grown grain is transported short distances generally on local and regional roads.'

'However, there is a growing tendency to store on farm, especially after a bumper harvest.'

'While higher payloads are possible for heavy vehicles enrolled in the IAP, the volume of trucking activity is not reduced at the peak, although that peak occurs over a shorter time frame.'

'A significant proportion of grain grown within the Lachlan Shire Council and grain grown in the Bland Shire going to Temora Shire uses regional and local roads within

Bland Shire Council to get product to a receival facility,' Mr Marsh said.

### SIGNIFICANCE OF THE IAP AS AN ACCESS TOOL

The IAP provides Council with a high level of assurance that the transport operator will comply with conditions to access routes, enabling Council to give favourable consideration to applications.

Mr Marsh said that the development of the IAP provided an opportunity for all levels of government to work together to assess the benefits of allowing access to more productive heavy vehicles.

Bland Shire Council has been willing to assess access requests under the IAP on roads for which it has responsibility.

'This led to the development of an extensive regional and local road network which enabled transport operators with a permit issued through the NHVR to use more productive vehicles operating under the IAP to connect to the State road network,' Mr Marsh said.

### IAP INFORMATION

For further information, visit the TCA website: [www.tca.gov.au](http://www.tca.gov.au)

### DISCLAIMER:

The information contained in this case study is intended to convey the experiences of the transport operator/s concerned. The benefits of IAP mentioned in this case study may not be true for all transport operators. Transport operators should consider the appropriateness of IAP to their business operations, objectives and circumstances before enrolling in IAP. Information in this case study has been provided by Bland Shire Council.

## TCA provides *assurance* in the use of telematics and related intelligent technologies.

### How TCA help the transport industry:

- We connect both industry and government to telematics and related technologies
- We check and approve technology to help transport operators make informed decisions
- We provide information and advice on technological developments.



### What we do:

- Administer programs such as the Intelligent Access Program (IAP)
- Type-approve In-Vehicle Units (IVUs) and On-Board Mass (OBM) systems
- Data analysis and policy advice
- Lead progress in connected / automated vehicles.

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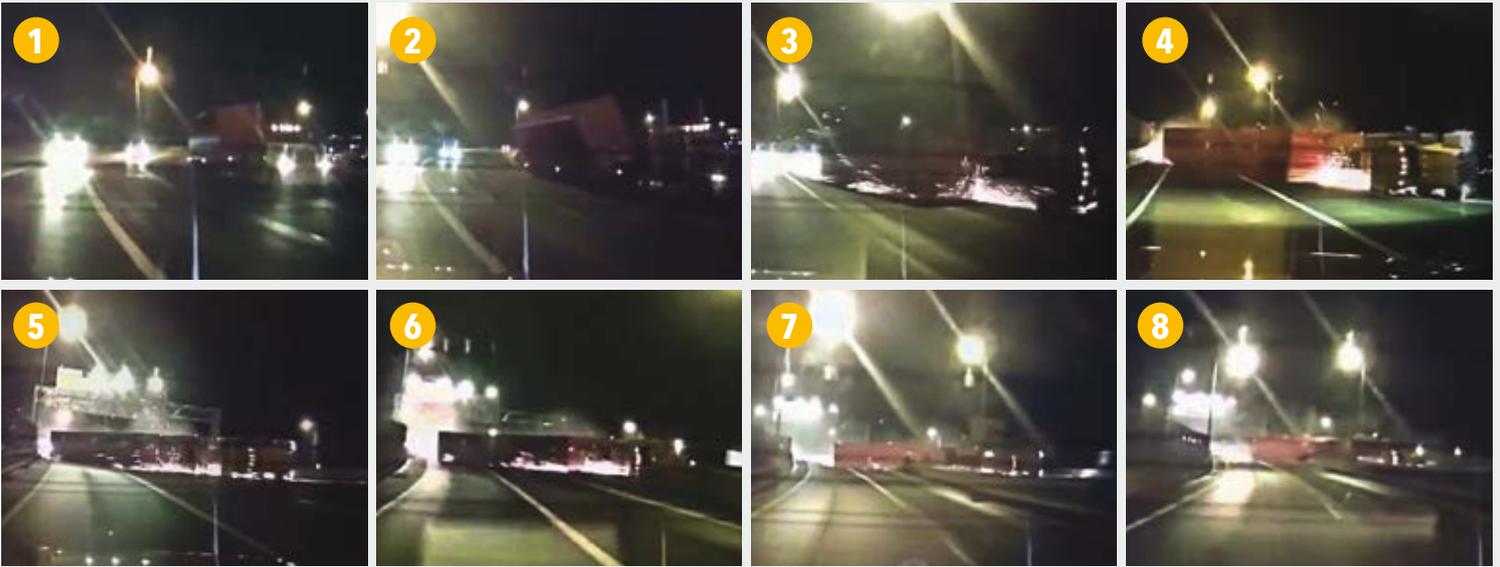


Transport  
Certification  
Australia

# EXTREME IMPACT EXCEPTIONAL PERFORMANCE

On November 27, 2017 a police cruiser travelling along the Marquam Bridge on the I5 in Portland, Oregon in the USA captured amazing footage with its rear-facing onboard video of a semi-trailer loaded with hay as it lost control, flipped onto its side and impacted with a SMART CUSHION.

## THE IMPACT POLICE VISION REAR DASH CAM



## THE AFTERMATH



## SMART CUSHION PERFORMANCE

### SMART CUSHION SC100 FULLY COMPRESSED

- Time to Repair and Reset: 15 minutes
- Replacement Parts Required: 2 Shear Bolts
- Replacement Parts Cost: < \$5
- Injuries to Truck Driver: None (Reported Uninjured)



## SEE IT FOR YOURSELF

View the dramatic footage and aftermath of this major SMART CUSHION impact by visiting the links or using the QR Codes below:

**DC Channel Vision of the Aftermath:** <https://www.youtube.com/watch?v=8znJPF4E760>



**Police Cruiser Vision of Impact:** <https://youtu.be/ufBjFD0ncxU>



**KOIN6 News Story Link:** [https://www.youtube.com/watch?v=hWVPoR\\_xhOg](https://www.youtube.com/watch?v=hWVPoR_xhOg)



# SMART CUSHION

## Speed Dependent Crash Attenuators



# SMART CUSHION AUSTRALIAN 2 YEAR IN-SERVICE PERFORMANCE REPORT

## Smart Cushion Replacement Parts Costs

- 3 main types of components were replaced over the 59 resets
- Shear Pins (2 x \$2 = \$4) required for every reset
- Delineator Panel (\$190) required for 21 resets
- Sled Panel (\$1416) required for 4 resets
- The **total cost** of replacement parts over the **59 resets was \$9,994**
- The **average cost** for each reset was **\$169**

## Durability and Robustness

- 31 different Smart Cushion units required 1 or more resets
- 8 Smart Cushions were reset twice
- 2 Smart Cushions were reset 4 times
- 1 Smart Cushion was reset 5 times
- **1 Smart Cushion was reset 11 times**
- Average Reset Time **55 Minutes** (1 person crew)
- **All Smart Cushions were reset fit for service after an impact**



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## CERTIFIED TELEMATICS APPS DRIVE PRODUCTIVITY REFORMS

Transport Certification Australia (TCA) has highlighted the availability of an updated Australian bridge standard which leads the way for enhanced access to drive productivity.

The Australian Standard for bridge assessment (AS 5100.7:2017) – which was developed in conjunction with Austroads – incorporates reduced traffic load factors for vehicles monitored with TCA certified telematics apps – namely, the Intelligent Access Program (IAP) and On-Board Mass (OBM).

AS 5100.7:2017 is the national standard for assessing bridge infrastructure, and forms part of the national Bridge Design series.

The Acting Chief Executive Officer, Gavin Hill, said, “AS 5100.7:2017 highlights how the availability of reliable and accurate vehicle location, mass and configuration information – provided through certified telematics apps – can enable improved productivity outcomes.”

“The availability of certified telematics apps allows road managers to make access decisions which can increase mass loadings of heavy vehicle combinations,” Mr Hill said.

“Fundamentally, AS 5100.7:2017 provides the ability to ‘re-engineer’ the use of bridges, by relying on trusted sources of telematics information,” Mr Hill said.

“The updated standard also notes that load factors can be further reduced, provided a vehicle speed limit is specified.”

“With this in mind, TCA recently introduced a Low Speed Guidance app – as part of the National Telematics Framework – which measures vehicle speed using GPS at low speeds. The new app allows road managers to obtain reports on heavy vehicle speed when crossing speed-restricted bridges.”

“The ability to optimise the use of bridge infrastructure using certified telematics apps in this way can unlock heavy vehicle access arrangements, which would not otherwise be possible.”

This message was a key presentation by TCA’s Chief Executive Officer, Chris Koniditsiotis at the recent ITS World Congress in Montreal, Canada last month. It was also a subject of discussion at the recent Weigh-In-Motion (WIM) Forum held in Brisbane.

During October TCA announced that it had received five applications for type-approval of On-Board Mass (OBM) Systems. Type-approval represents a major step forward in establishing performance-based outcomes for the accuracy, integrity, scalability and interoperability of OBM systems which can satisfy the needs of both industry and government,” Mr Hill said.

As OBM Systems become type-approved, end-users will benefit from having competition and choice through an open technology market.

## TCA RELEASES 2016-17 ANNUAL REPORT

Transport Certification Australia (TCA) has released its Annual Report for the 2016-17 financial year. The Annual Report highlights how TCA worked across government portfolios and industry sectors to navigate the disruptive influences of new technologies in the use of telematics and related intelligent technologies.



TCA Chief Executive Officer, Chris Koniditsiotis said, “Our Annual Report highlights the increasing pace at which technologically-driven changes are influencing public policy deliberations and government decision making.”

“It also highlights the breadth of activities TCA now performs in relation to telematics and related technologies, and importantly, how we contribute to improved outcomes across policy areas and industry sectors.”

“For example, during 2016-17 two new functional and technical specifications were released – which will benefit by multiple road agencies, regulators and end-users alike.”

Mr Koniditsiotis said, “Central to TCA’s purpose is our management of an open technology market. This platform approach not only provides competition and choice for the end user, it provides a standardised approach to data collection, privacy management and security across policy areas and industry sectors.”

“During 2016-17 we observed a significant growth in the use of technology applications administered by TCA, and the adoption of in-vehicle technologies.”

- Key results include:
- A 27% annual growth in the number of devices used that meet TCA requirements (or can do so with some amendments)
  - Over 60 approved device ‘types’, ranging from smartphones to advanced in-vehicle telematics systems
  - Seven active applications from technology providers seeking type-approval of devices/systems.

The open technology market provides competition and choice to end-users, and continues to drive innovation and cost savings.

TCA’s Annual Report for 2016-17 can be viewed at: <https://tca.gov.au/tca/publications-reports>

## ACQUISITION OF TCA CERTIFIED SERVICE PROVIDER BY TELSTRA

Transport Certification Australia (TCA) has released information about the acquisition of a certified service provider. MTDData and its wholly-owned subsidiary Transport Compliance Services (TCS) - which has been certified by TCA since 2009 - have been acquired by Telstra.

The Acting Chief Executive Officer of TCA, Gavin Hill, said “The acquisition of MTDData and TCS by Telstra recognises the long-standing commitment both organisations have made in Australia to support the use of telematics.”

“TCS has a range of devices installed across the Australian vehicle fleet that are able to satisfy TCA requirements, and which enable the co-location of commercial and regulatory

apps through the National Telematics Framework.”

“TCS has confirmed to TCA that approved devices already installed in vehicles, together with certified apps administered through the National Telematics Framework, will continue to be supported,” Mr Hill said.

“Importantly, for industry and government users that rely on certified apps provided by TCS, established operating arrangements will not be impacted.”

Mr Hill concluded, “TCA looks forward to working with TCS and Telstra to further advance the use of in-vehicle technologies to deliver improved productivity, efficiency and safety outcomes through an open technology market.”

MARK YOUR DIARY WITH THESE KEY DATES:

Abstract Submissions Open: **16 October 2017**

Registration Opens: **16 October 2017**

Abstract Submission Deadline: **16 February 2018**

Early Bird Registration Deadline: **1 June 2018**



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ARSC2018 will showcase the region's outstanding researchers, practitioners, policy-makers and industry spanning the plethora of road safety issues identified in the United Nations Decade of Action for Road Safety: Road Safety Management, Infrastructure, Safe Vehicles, User Behaviour, and Post-Crash Care. ARSC2018 will bring with it a special focus on engaging all levels of government and community, from the city to the bush, to move "Towards Zero - Making it Happen!" The comprehensive 3-day scientific program will showcase the latest research; education and policing programs; policies and management strategies; and technological developments in the field, together with national and international keynote speakers, oral and poster presentations, workshops and interactive symposia.

**WHO SHOULD ATTEND?**

ARSC2018 is expected to attract 500-700 delegates including researchers, policing and enforcement agencies, practitioners, policymakers, industry representatives, educators, and students working in the fields of behavioural science, education and training, emergency services, engineering and technology, health and rehabilitation, policing, justice and law enforcement, local, state and federal government, traffic management, and vehicle safety.

To register your expression of interest as a delegate, speaker, sponsor or trade exhibitor, or for further information about the Conference, please visit [www.australasianroadsafetyconference.com.au](http://www.australasianroadsafetyconference.com.au).

Additional enquiries should be directed to the Conference Secretariat, Encanta Event Management on +61 3 9863 7608 or [ARSC@encanta.com.au](mailto:ARSC@encanta.com.au).



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[www.australasianroadsafetyconference.com.au](http://www.australasianroadsafetyconference.com.au)



The Wirtgen W 210 XP high-performance milling machine offers high performance, economic efficiency and flexibility.

## THE NEW WIRTGEN W 210 XP LARGE MILLING MACHINE:

### A CHAMPION PERFORMER IN ITS WEIGHT CLASS

With the W 210 XP, the Wirtgen experts have extended their comprehensive product range with a new high-performance machine. Combining tremendous engine power with an application-optimized machine transport weight, this machine has added a trump card to the deck within its class.

The W 210 XP is a champion performer in its weight class. Its powerful 6-cylinder engine delivers an impressive output of 571 kW, allowing the milling pro to handle a wide range of applications, from surface course rehabilitation to complete pavement removal and fine milling jobs.

#### High machine utilisation thanks to FCS light

The W 210 XP comes equipped with a 2-m milling drum unit as a standard feature. Units with milling widths of 1.5 and 2.2 m are also available as options. Wirtgen's Flexible Cutter System Light (FCS Light) not only ensures greater flexibility but also high machine utilization – a key factor for the economic operation of large milling machines. Both the 2-m and the 2.2-m milling drum units are FCS Light-compatible. This allows milling drums of the same width but with different tool spacings to be fitted without difficulty as required for the job at hand.

All the milling drums are fitted with Wirtgen's HT22 quick-change toolholder system. The robust upper part of the system can be easily and quickly changed directly on site. This minimizes machine downtimes and increases the lifespan of the milling drum. HT22 is the all-round key to maximum milling performance and cost-efficient operation.

#### Ease of transport increases machine availability

Thanks to its compact dimensions and optimum machine transport weight, the W 210 XP can be easily transported from one job site to the next. As a result, it can be up and running in no time.

Without the water tank content of approximately 29 tonnes, the transport weight is low, so that the machine can also be transported on a light low-bed truck with a low gross train weight.

Customers are more flexible as a result, and can get their large milling machine to its next job at a fraction of the cost.

The ergonomically designed walk-through W 210 XP operator's platform is a further plus point. The control elements are ideally arranged to provide a clear overview and make operation child's play for the machine operator. Most functions can be controlled by the multi-functional joystick mounted in the armrest. In this way, the operating concept of the new W 210 XP, devised by the Wirtgen designers with great attention to detail, allows high daily production rates.

For more information visit [www.wirtgen.com](http://www.wirtgen.com)

## WHEN ARTIFICIAL INTELLIGENCE MEETS THE CONSTRUCTION INDUSTRY



Created by Volvo CE, Compact Assist uses AI technology to 'assist' the operator.

The potential for artificial intelligence – or AI – is high on the social agenda. Seemingly, everyone from Facebook founder Mark Zuckerberg to Tesla CEO Elon Musk has an opinion on the impact of AI on our everyday lives. But how will the technology of today impact the construction of tomorrow?

Once confined to the pages of science fiction novels, artificial intelligence (AI) has now become a reality that cannot be ignored. In many ways, we are already using AI – from the news feed we read on our smartphones to the software that enables us to shop online securely. We no longer see AI as a far-fetched concept resigned to our imaginations, it is something we are experiencing and benefiting from every day.

The advantages of AI are limitless and permeate not just our everyday lives, but

across all industries. For the automotive industry, the launch of self-driving cars means a faster mode of transportation and a significant reduction in accidents and emissions. A similar statement can be made about the construction industry. Early adopters are already using the technology to increase the efficiency, safety, and quality of construction projects.

So, what exactly is artificial intelligence? It is a collective term used to describe when a machine mimics human cognitive functions, like problem-solving, learning, and pattern recognition. AI includes a process called machine learning, whereby algorithms are used to enable a machine to learn from the data it is exposed to. Therefore, the more data to which a machine is exposed, the better it will become at understanding and provide insights.

In a time when humans are increasing data creation every day, AI provides an endless resource for machines to learn and adapt. But how does that translate to the construction industry? The volume of data generated on an average construction site is growing - from images captured via mobile devices, to drone videos, security sensors, machine telematics, Building Information Modelling (BIM) and more. The main challenge, however, is not capturing all the data, but rather, implementing a system capable of managing the information, allowing customers to make the most out of it.

### Increasing safety and efficiency

AI programs deliver precise data and insights, helping construction contractors maximize the safety, value, and productivity of worksites. For example, Smartvid.io - a photo and video management platform used by construction companies such as Skanska and Arup - uses AI to sift through mass quantities of images and videos taken at a construction site and spot potential hazards. The software uses image recognition algorithms to identify specific search criteria, like hard hats, safety vests, and hi-vis colours so that it can unearth images to highlight those construction workers who are not wearing the proper safety attire or are possibly violating safety guidelines. Within a matter of minutes, the search results are collected, collated and delivered to a site supervisor - a task that would otherwise take several hours to complete.

Manufacturers like Volvo Construction Equipment are exploring how emerging technologies can increase the safety of job site personnel. After launching Compact Assist in 2015, an operator assist program, Volvo CE is now developing AI algorithms, which detect and decipher specific objects using several computer vision methods. The advanced system sends a warning message to the operator to reduce the risk of accidents.

As well as increasing safety, AI has many other benefits, like performing mundane, repetitive and sometimes dangerous labour-intensive tasks.

Dr Fares Beainy, machine intelligence program leader at Volvo CE says: "AI techniques can help inexperienced machine operators to carry out complex tasks, which they otherwise could not. It's advantageous in an industry that's finding it increasingly difficult to source highly skilled and experienced operators."

Research suggests that in the coming years, some jobs could be automated, leaving many people to worry about their future employment. But as it turns out, the rise in AI is not as terrifying as science fiction would have us believe. Autonomous machines are simply part of evolution, according to Dr. Beainy.

"When the first hydraulic machine was introduced, people had similar apprehensions. But, with change came new opportunities. The same phenomenon is happening with the introduction of AI. It will be gradual, but by the time intelligent and autonomous machines are implemented into construction, new jobs will have been created to complement them."



## NEAL INTRODUCES GENERATION IV SEAL COATING PUMPS FOR ASPHALT TRUCKS

Neal Manufacturing, a division of Blastcrete Equipment Company and a leader in asphalt pavement maintenance equipment, has launched its new Generation IV pumps. The pumps offer improved durability as well as enhanced spraybars and require less frequent routine maintenance than their predecessor, resulting in greater uptime and productivity. Road pavement maintenance contractors also save money since they can retrofit their existing asphalt trucks with the new Neal pumps Gen IV rather than purchase a new truck.

"Customers are continually seeking ways to increase productivity, and once again we listened," said Jim Farrell, Blastcrete CEO. "Our Generation IV pumps not only check all the boxes on our customers' wish lists, but they also set the bar on aggregate load. No other pump handles more aggregates and larger aggregates than the Neal Generation IV pump."

Neal Manufacturing designed the Generation IV pumps with heavy-duty features, including robotically welded pump housings and industrial-grade hydraulic cylinders for extreme durability and longevity. These components offer enhanced reliability and last 50 percent longer than parts on the previous model, which means less downtime associated with rebuilds.

"Most pumps in this industry last around 30,000 gallons before a rebuild is needed," Farrell said. "We've had our first customer hit 300,000 gallons on our Generation IV pump and it's still going strong."

The Generation IV pump also comes with Neal's new filtration system, which is 60 percent more compact than the previous system, more efficient and easier to maintain. The system's compact filters weigh 98 percent less than the previous filters when full, eliminating the need for a crane during filter changes. Neal also designed the filtration system to give contractors fast and easy access to the filters, making routine cleanings more manageable.

Neal installs the system with dual spraybars rather than one. Each spraybar is synchronized with one 100-gpm Generation IV pump. The pumps and spraybars work together to provide optimal efficiency and output on road pavement maintenance projects. Gen IV pumps also offer enough volume for larger orifice tips to all but eliminate tip plugging with aggregates.

To ensure its customers know how to properly operate and maintain the machines, Neal offers free training seminars at its Anniston, Alabama, location. All machines are tested under load before being shipped to customers.

# Eastlink tunnels closed for first demonstration of hands-free driving through freeway tunnels



generation of affordable vehicles equipped with an advanced safety technology suite. Honda Sensing comprises a range of driver assistance functions such as lane keep assist, adaptive cruise control with low-speed follow, collision mitigation braking, forward collision warning, lane departure warning, and road departure mitigation.

Doug Spencer-Roy described the demonstration, “The Honda Civic steered itself using lane keep assist mode along EastLink and through the EastLink tunnels at speeds up to 80km/h, while the driver was not holding the steering wheel.”

“The Honda Civic lane keep assist function was not affected by changing light conditions during the demonstration, such as the transitions into and out of each tunnel portal.”

“The demonstration showed that driver assistance functions in cars are rapidly increasing in quality and availability, which is paving the way for motorists to experience hands-free driving on freeways in the coming years (subject to legislative changes),” he concluded.



**Top:** A Honda Civic VTi-LX was selected for the Eastlink trial; **Above:** The car being made ready for another tunnel run.

When Melbourne’s EastLink tunnels were closed for scheduled maintenance overnight Saturday 18 November, EastLink conducted the first demonstration of hands-free driving through freeway tunnels, using the lane keep assist function of a Honda Civic VTi-LX.

Hands-free driving is currently not allowed on Victorian roads. Motorists should always drive with at least one hand on the steering wheel at all times. The demonstration was able to include hands-free driving using lane keep assist as it was conducted through the EastLink tunnels when closed to traffic in preparation for scheduled tunnel maintenance activities, and under controlled conditions.

The demonstration was planned to help Victorian motorists gain a better understanding of lane keep assist and other driver assistance functions.

EastLink corporate affairs and marketing manager Doug Spencer-Roy explained, “The demonstration resulted from the Annual Victorian Self-Driving Vehicle Survey conducted recently by EastLink, in which more than half of the 15,000 respondents rated their awareness of self-driving cars as ‘very little’ or ‘none’.”

“EastLink wants to help motorists gain a better understanding of the latest driver

assistance functions, and how they will evolve to make self-driving cars possible in the future.”

“With driver assistance functions such as lane keep assist expected to improve road safety significantly, we hope that the demonstration encourages motorists to consider the availability of these new vehicle capabilities when choosing their next car,” he added.

In EastLink’s Annual Victorian Self-Driving Vehicle Survey, only 4% of survey respondents said their car has a lane keep assist function. However, lane keep assist and other driver assistance functions are increasingly available in the latest cars, and at much lower prices than previously.

EastLink selected the Honda Civic VTi-LX for the demonstration following its participation in the trials of the latest automated vehicle technologies that have been undertaken this year by EastLink in partnership with VicRoads, the Australian Road Research Board (ARRB), La Trobe University and RACV.

The new Honda Civic VTi-LX, which is available for less than \$40,000, includes the Honda Sensing package as standard. The Honda Civic is representative of a new

## ABOUT EASTLINK

EastLink’s 40 kilometre road network is the largest privately operated freeway network in Victoria. EastLink is the major north-south transport artery in Melbourne’s east, connecting the Eastern, Monash, Frankston and Peninsula Link freeways. EastLink is Melbourne’s fastest road and safest freeway, with traffic averaging 250,000 vehicles per day.

EastLink’s twin tunnels are each 1.6 kilometres in length with three traffic lanes. The tunnels protect the environmentally sensitive Mullum Mullum valley.

For further information visit: [www.eastlink.com.au](http://www.eastlink.com.au)



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Versatility is a key benefit of all Ammann APF plates. An optional Vulcolan mat, which can be installed without a single tool, provides quick adjustment when working with paving stones. A sprinkling system enables work on asphalt. Ammann plates lead the industry in lowest hand-arm vibration (HAV) levels. The levels are so minimal that the machines will remain in compliance with the strictest regulations for many years to come.

### Water sprinkling system

- The tank and sprinkler are combined into a single unit that can be added or removed without any tools, or even adjustment of a single screw.
- The sprinklers provide comprehensive surface coverage and can be activated by simply turning the bar.
- The 10-litre tanks extend intervals between fillings.

### Highly manoeuvrable

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When it comes to road safety, the quality and visibility of linemarking is of paramount importance. Mobile Laser Technology's new mobile retroreflectivity testing service makes monitoring and data collection easy - giving you the data you need to establish an efficient re-marking strategy, while eliminating unnecessary remarking.

Utilising their new state-of-the-art Laserlux 6 fully self-contained retroreflectivity testing vehicles, Mobile Laser Technology Pty Ltd can provide you with extremely accurate results in a fraction of the time it takes to complete the task using traditional hand held testing units.

- **Data Collection at Highway Speeds**
- **Eliminates the Need for Lane Closures**
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# itsaustralia

Intelligent Transport Systems

## ITS SPECIAL FEATURE

Intelligent Transport Systems  
News and Feature Articles

# SOLID LEADERSHIP CONTINUES

## AS VICE PRESIDENT IS ELECTED AS PRESIDENT AT ITS AUSTRALIA

Following six years of leadership by Brian Negus as President, ITS Australia recently announced its new President and Board of Directors.

The Board of Directors is now led by Mr Dean Zabrieszsch as President, ably supported by Mr Dennis Walsh as Vice President, and Directors, all of whom bring with them a wealth of knowledge from a variety of transport industry backgrounds.

ITS Australia congratulated new and re-elected Board members:

- Mr Dale Andrea – VicRoads
- Mr Chen Cai – Data61/CSIRO
- Mr James Hurnall – Federal Chambers of Automotive Industries
- Mr Mark Jackman – Robert Bosch Australia
- Mr Jeff McCarthy – Roads and Maritime Services
- Mr Brian Negus – RACV
- Mr Dean Zabrieszsch – HMI Technologies

They join ongoing members of the Board:

- Mr Bill Advic - Eastlink
- Mr Gino Dompertio – Jacobs Group
- Mr Chris Koniditsiotis - Transport Certification Australia Limited
- Mr Jeremy Nassau - Transurban
- Mr Soren Tellegen - Kapsch (TrafficCom in Australia/New Zealand)
- Mr Dirk Van de Meerssche – Cubic
- Mr Dennis Walsh – Department of Transport and Main Roads
- Mr Michael Watts - Transmax

ITS Australia would also like to thank Mr John Hawkins and Mr Andrew Mehaffey for their contribution as long serving Board Members that concluded in 2017, and to Mr Andrew Sheridan for his contribution over the last year.

The role of the ITS Australia Board is to advocate the application of communication, data processing and electronic technologies for in-vehicle, vehicle-to-vehicle, vehicle-to-infrastructure and mode-to-mode systems to increase transport safety and sustainability, reduce congestion, and improve the performance and competitiveness of Australia's transport networks.

Mr Zabrieszsch said how proud he is to be elected as President of such a dynamic and growing organisation, with a highly engaged Board of Directors.

"It's my belief that ours is the best ITS Association in the world. The enormous work in recent years, led by my predecessor Brian Negus, and with the help of Susan Harris, CEO and her

team, have seen ITS Australia grow from strength to strength.

"The continued work to represent our members both in domestic and international settings means the Australian ITS industry has continued to grow and remains a major employer and economic contributor."

The peak body, now in its 25th year, aims to promote and facilitate collaboration and partnering amongst industry, government and academia in researching, developing and deploying ITS technologies.

Upon the announcement of the newly elected Board of Directors, Ms Harris echoed the noted strength to date of the Board of Directors, and in particular the tremendous contribution from immediate past President, Brian Negus.

"His consistency and engaged leadership has placed us in an enviable position of growth. ITS Australia has never been in a stronger position and we are building upon the momentum of the highly successful 2016 ITS World Congress.

Ms Harris said that the organisation has a lot to celebrate.

"We continue to leverage the opportunities the ITS World Congress created for the benefit of the Australian ITS industry.

"Ongoing activities including the publication of the Smart Transport for Australia report, the bid to host the 2020 Asia Pacific Forum in Brisbane, and the engagement of a Policy Manager.

"These things and more will ensure Brian's legacy is the starting point for continued success for ITS Australia".

### ABOUT ITS AUSTRALIA

Intelligent Transport Systems Australia (ITS Australia) shapes future transport by promoting the development and deployment of advanced technologies to deliver safer, more efficient and sustainable transport across all public and private modes – air, sea, road and rail.

Established in 1992, ITS Australia advocates the application of communication, data processing and electronic technologies for in-vehicle, vehicle-to-vehicle, vehicle-to-infrastructure and mode-to-mode systems to increase transport safety and sustainability, reduce congestion, and improve the performance and competitiveness of Australia's networks.

ITS Australia is an independent not-for-profit incorporated membership organisation representing ITS suppliers, government authorities, academia and transport businesses and users. Affiliated with peak ITS organisations around the world, ITS Australia is a major international contributor to the development of the industry and host of the 2001 and 2016 ITS World Congress.

For further information, please visit: [www.its-australia.com.au](http://www.its-australia.com.au)



Newly appointed President of ITS Australia, Mr Dean Zabrieszsch.

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# AUSTRALIA'S ITS AWARD WINNERS

## MAKING IN-ROADS FOR THE INDUSTRY



**ABOVE:** The 2017 ITS Australia National Awards with (on left) ITS Australia CEO Susan Harris, and (on right) newly elected President of ITS Australia, Dean Zabrieszach.

Intelligent Transport Systems (ITS) Australia recently celebrated the achievements of the nation's most innovative and advanced transport technologies and the organisations and individuals involved.

Held during November at the Art's Centre, Melbourne, and attended by The Hon Ben Carroll MP, Minister for Industry and Employment, the National Awards recognise professional ITS expertise and raise awareness across all levels of government and community about the benefits of ITS technology to cities and communities, the economy, environment, transportation and everyday lives.

Now in their 8th year, and reflecting the growing influence of ITS across transport technology decision making, ITS Australia received a record number of nominations from a wide variety of organisations for this year's awards.

Brian Negus, immediate past ITS President said ITS in Australia is now established as a significant industry sector.

"ITS Australia is internationally recognised as world leading, and brings together Federal, State and Local Governments, multinational corporations, industry sectors, start-ups and research organisations to help shape future transport.

"The rapid rate of technological change and consumer demands for ITS technology not only makes it an exciting time for our industry, but allows it to continue its position as a major employer and economic contributor.

"The industry itself deserves the recognition the Awards bring and congratulations again to the winners."

ITS Australia Chief Executive Susan Harris said the 2017 ITS Australia National Awards capped off another strong year for the industry.

"Congratulations to our winners and all the nominees. It was a very competitive year and we thank the Judging Panel for their comprehensive review of all the submissions. We were delighted to see more than double last year's nominations and in particular, it was pleasing there was more recognition of Young Professionals.

"This increased interest is mirrored in all our ITS Australia events with either record or sold out attendances this year. This is in addition to strong representation internationally at the ITS Asia Pacific Forum held in Hong Kong and the 24th ITS World Congress in Montreal.

"The ITS industry is on an upward curve and we look forward to an exciting and productive 2018".

### WINNERS OF THE 2017 ITS AUSTRALIA NATIONAL AWARDS

#### MAX LAY LIFETIME ACHIEVEMENT AWARD - LAUCLAN MCINTOSH AM

Lauchlan McIntosh was President of ITS Australia 1996 to 2002 and a member of the Board from 1994 to 2002. During this time, he led the 8th ITS World Congress, the first in Australia, hosted in Sydney 2001 which attracted more than 3,000 Australian and international delegates.

Lauchlan McIntosh has held many distinguished positions in the transport technology sector and in 2007 was appointed a Member of the Order of Australia.

He was also: Executive Director of the Australian Automobile Association 1994-2006; Past Chair of ANCAP Australasia Ltd (holding the position for over 20 years); Appointed a Fellow of the Australasian College of Road Safety 2006; President and Fellow of the Australasian College of Road Safety since 2007; Appointed a Member

of the Order of Australia (AM) 2007; Awarded the John Shaw Medal by Roads Australia 2013; Chairman of Global NCAP since September 2017.

**INDUSTRY AWARD WINNER - CUBIC TRANSPORTATION SYSTEMS**

For the Manly Ferry Contactless Payments Trial: The field trial of contactless transport payments on the Manly to Circular Quay ferry route is the first deployment of this technology in both Australia and the Southern Hemisphere. This enables the traveller to use a contactless credit/debit card to tap on instead of their opal card, with the fare calculation and payment processing taking place automatically within the system.

**GOVERNMENT AWARD WINNER - TRANSPORT FOR NEW SOUTH WALES**

For the Public Transport Information and Priority System (PTIPS): The Public Transport Information and Priority System (PTIPS) provides real time data feeds for location for public transport - bus, train, light rail and ferry - used by all transport apps. PTIPS is world leading. Transport for NSW is the first and currently only agency globally, which provides real-time passenger numbers for the public travelling on buses.

**AUTOMATED VEHICLE AWARD WINNER - ROYAL AUTOMOBILE CLUB OF WESTERN AUSTRALIA**

For Learnings from the RAC Automated Vehicle Trial: RAC’s purposeful AV Trial is the longest running trial of a Level 4 vehicle in the Australasian region. Having completed 1,720 thirty-minute rides, or 6,000kms in autonomous mode, learnings are being documented and shared with industry and government. More than 9,500 people have registered.

The trial allows industry to experience a L4 vehicle in a complex traffic environment while the technology remains largely in development.

The Automated Vehicle Award is sponsored by the Australian and New Zealand Driverless Vehicle Initiative (ADVI)

**RESEARCH AWARD WINNER - THE UNIVERSITY OF MELBOURNE**

The Australian Integrated Multimodal Ecosystem: The Australian Integrated Multimodal Ecosystem (AIMES) is the world’s largest live city-based ITS test environment. Containing high and low speed roads, freeways, bus, tram, heavy freight and city logistic, high pedestrian and cycle traffic, the AIMES test

bed brings together 37 industry, government and academic partners, with Cubic’s Transport Management Platform (TMP) as the main integration hub.

**YOUNG PROFESSIONAL AWARD WINNER - TIMOTHY PHILLIPS**

Timothy Phillips, Maintenance Engineer at Legacy Way Tunnel, Brisbane, and employed by Egis, has provided innovative engineering solutions to ensure all incorporated intelligent transport systems, implemented in the Tunnel project, work in harmony.

In addition to the Award, ITS Australia will sponsor Timothy to attend next year’s ITS Asia Pacific Forum in Japan, which is expected to attract over 2,000 transportation technology professionals, to network and participate in advanced transport technology demonstrations.

ITS Australia also recognised runner-up Young ITS Professionals, James Donovan, Graduate Engineer at Metro Trains Melbourne and Tao Wen, Research Scientist with Data61 CSIRO for their demonstrated dedication to the industry, and passion for their chosen fields - aspects that are valued and encouraged by ITS Australia.

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(R-L): Lauchlan McIntosh receiving Max Lay Lifetime award from Brian Negus and Ben Carroll MP.

## LAUCLAN MCINTOSH AM RECOGNISED FOR HIS OUTSTANDING CONTRIBUTION TO THE AUSTRALIAN INTELLIGENT TRANSPORT SYSTEMS INDUSTRY

Lauchlan McIntosh, Member of the Order of Australia (AM), has been recognised for his outstanding contribution to improving the safety and mobility of the community. Mr McIntosh received the *2017 Max Lay Lifetime Achievement Award* at the recent ITS Australia National Awards, in Melbourne.

The Max Lay Lifetime Achievement Award is an industry nominated award, named after Dr Max Lay AM, a globally recognised pioneer and leader in Intelligent Transport Systems (ITS).

Lauchlan McIntosh said it is an honour to be recognised by peers and the ITS community.

"The challenge for ITS today, is perhaps the same as it has been over the past 25 years. Being pragmatic about the potential, excited about the opportunities and realistic about the benefits.

"Today there is rightly great enthusiasm and support for autonomous vehicle projects, connected vehicles and infrastructure. However, when compared with our international peers we are lagging in our introduction of proven semi-autonomous crash reducing technologies and real-time driver monitoring and distraction technology knockout devices, which will save lives and reduce injuries in very large numbers today.

"The challenge to be pragmatic, excited and realistic remains. With road trauma on the rise

for the first time in decades, are we missing that chance?"

Lauchlan McIntosh was President of ITS Australia 1996-2002, and led the 8th ITS World Congress, the first in Australia, hosted in Sydney, 2001 which attracted more than 3,000 Australian and international delegates.

Mr McIntosh enjoyed a long and distinguished career as a geologist, technical and mine manager before becoming Executive Director of the Australian Mining Industry Council (1986-1994). His achievements in the transport technology sector include:

- Executive Director of the Australian Automobile Association 1994-2006
- President ITS Australia 1996-2002
- Past Chair of ANCAP Australasia Ltd (holding the position for over 20 years)
- Appointed a Fellow of the Australasian College of Road Safety 2006
- President and Fellow of the Australasian College of Road Safety since 2007
- Appointed a Member of the Order of Australia (AM) 2007
- Awarded the John Shaw Medal by Roads Australia 2013
- Chairman of Global NCAP since September 2017

ITS Australia Immediate Past President Brian

Negus congratulated Mr McIntosh.

"Lauchlan McIntosh has made an outstanding contribution to the Australian and global ITS industry. He has made a significant difference to way we move about and do business, raising the profile of the industry and transport safety.

"The first ITS World Congress to be held in Australia in 2001 was a watershed moment for the local ITS industry, connecting Australian industry internationally, and Lauchlan can take great credit for its success.

"Lauchlan is a great ambassador, representing the values of the industry – leadership, integrity, high standards, ingenuity – as well as being a great role model and mentor".

In addition to the Max Lay Lifetime Achievement Award, presentations were made to winners of the Industry, Government, Automated Vehicle (sponsored by ADVI), Research and Young Professional categories.

ITS Australia National Awards Committee Chair, Gino Dompietro said the record number of nominations received for this year's Awards reflects the strength of the industry.

"With more than double last year's nominations and shortlisted winners from nearly every State, the Australian ITS industry is making an even stronger and highly valuable contribution to transport safety, efficiency and sustainability."

# ITS AUSTRALIA ADDS NEW STRENGTH TO ALL-FEMALE TEAM

ITS Australia has expanded its numbers and has welcomed two new staff to the team. Joining the Intelligent Transport Systems industry association to the newly created role of Policy Manager is Stacey Ryan. Kathryn Belton joins as Communications Manager.

These welcome additions to the unusually all-female staffed technology organisation are in response to the incredibly positive success of the ITS World Congress 2016, hosted by ITS Australia in Melbourne. The success of the event has placed Australia on the global map as a leader in ITS technology, particularly in the fields of our regulatory frameworks and successful deployments of technology.

To continue this positive industry progress, Stacey Ryan joins ITS Australia from roles in professional services and government and will work across industry, government and academia to facilitate an environment that supports development and deployment of the best smart transport solutions for all Australians.

Ms Ryan's strong experience in Government legislative and policy development provides ITS Australia with additional leadership and stakeholder engagement experience.

"I look forward to working towards raising the profile of ITS initiatives within government organisations to benefit the overall ITS community in Australia," Ms Ryan said.

"We are ideally placed to benefit from emerging transport technology, and I'm excited to work with our stakeholders to map out a clear path moving forward for deployment."

Kathryn Belton joins the team to continue the great work achieved to date by ITS Australia. Ms Belton aims to further the promotion and awareness of ITS activities to a wider audience.

Successes achieved so far in her career provide insight into the complex, growing industry

"My experience in the ITS industry has traversed automotive manufacturers and telematics organisations alike," she said.

"ITS technologies impact everyone, every day - anyone using any kind of transport. I will continue enhancing the profile of ITS Australia, and the ITS industry in general within the media to deliver clear and exciting progress updates we can all benefit from."

Ms Ryan and Ms Belton will also be encouraging the continued dialogue amongst industry professionals to discuss and debate future ITS initiatives.

Susan Harris, CEO ITS Australia said "We are delighted to have secured the best candidates for these roles here at ITS Australia. Whilst it was not intentional to hire only women into these roles, rather unusually for an automotive technology based organisation it has resulted in an all-female staff.

"As transport professionals we are best placed to serve the diversity of the travelling community if our overall workforce reflects this diversity, so in a way we are leading by example, and I hope we can continue to inspire other women and organisations through our results. I look forward to working with our expanded team to support the objectives of the ITS Industry," Susan Harris added.

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# 20.21.22.23 MAR 2018 Intertraffic AMSTERDAM

*Intertraffic Amsterdam* is reinforcing its position as the leading global B2B event on smart mobility, infrastructure, traffic management, safety and parking, with a further expansion of its show floor. The 2018 edition will feature 13 exhibit halls combined with an in-depth knowledge and best practice programme. Intertraffic Amsterdam will be staged from 20 to 23 March 2018 in RAI Amsterdam, The Netherlands.

Intertraffic Amsterdam 2018 will be host to well over 800 exhibitors and an audience of 30,000 global traffic professionals addressing today's and tomorrow's mobility challenges. More than 50 brand new exhibitors have joined and the show floor has been extended with an extra hall, now covering a total surface of almost 70,000m<sup>2</sup>.

Participants range from technology suppliers, solution vendors and system integrators to authorities, trade associations and research institutes. All major stakeholders involved in creating and maintaining a liveable, sustainable mobile world will be represented.

## Knowledge Programme

The Intertraffic knowledge and best practice programme has also been significantly expanded and is spread over three theatres and a large indoor and outdoor demo area. Moreover, visitors can experience the latest mobility innovations in real time traffic situations in the city of Amsterdam.

Themes covered will be Big Data and Mobility, Connected Cooperative and Automated Driving, MaaS (Mobility as a Service), Smart Infrastructure, Smart Parking,

to name but a few. In addition, several parties will organise sessions, workshops and round tables to discuss the future of mobility. The full programme with nearly 70 interactive presentations will be published on the Intertraffic website in the course of January and is free to attend for all visitors.

Joyce de Winter, Exhibition Manager of Intertraffic Amsterdam is eagerly looking forward to it.

"It's fascinating to see how fast the industry is transforming; the event will be bursting with innovative new initiatives which were inconceivable two years ago. New business models are developing and new approaches to mobility sketch a whole new future. The disruptive movements in the industry have an impact on the traditional stakeholder roles so keeping up with the transition is essential for all involved."

## Connectivity & Cooperation

Digitalisation, automation, electrification and new business models have revolutionized the traffic technology and automotive industry. These significant transformations demand cooperation and connectivity.

Cooperation for standardization and policy support is essential to unlock innovations in a national setting but also cross border.

Smart Mobility will have a dedicated hall with many leading names presenting their products and solutions. Many of these new mobility services and opportunities with big data will feature in the knowledge and best practice programme at Intertraffic. Live indoor and outdoor demonstrations will

offer a unique chance to experience these solutions hands on.

## Intertraffic Amsterdam Innovation Award

The ninth Intertraffic Innovation Award for the most innovative exhibit will be presented during the opening ceremony of Intertraffic Amsterdam 2018. An international jury will select a shortlist of nominees due to be announced in January 2018.

## Innovative New Technologies

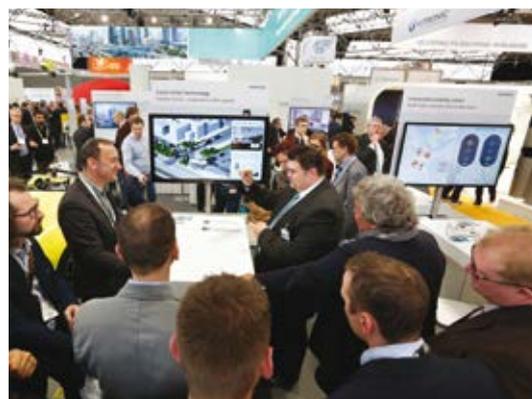
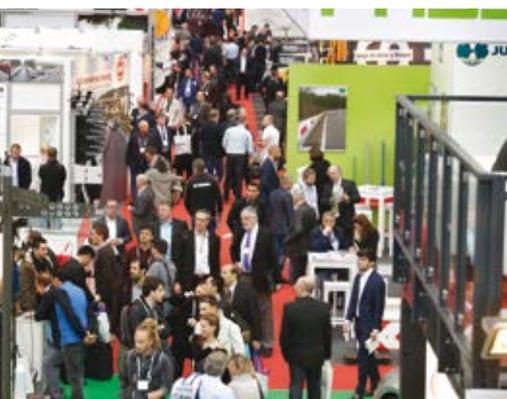
The innovative character of the mobility industry is co-created by the numerous startups in the sector. These new kids on the block will have their own exposure platform during Intertraffic Amsterdam 2018.

Activities such as pitches, live demos, a dragon's den, and a hackathon will provide them with a unique opportunity to engage with a large quality audience of potential partners and investors. Labelled ITSUP, the startup event will be staged in a separate hall, right next to the new Smart Mobility hall.

## Visitor Registration Now Open

Registration has opened for visitors, who can claim their free entrance badge online via the Intertraffic website. As per end of January seats can be booked for the free to attend content programme, allocation is at a first come first served basis. Pre-registered visitors will be notified once the programme is available, so early registration is recommended.

Further information is available at: [www.intertraffic.com](http://www.intertraffic.com)



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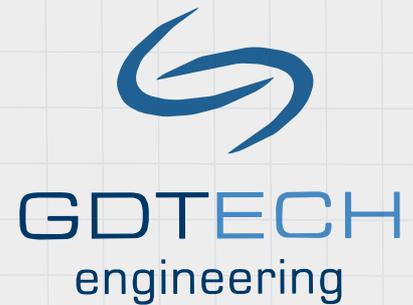
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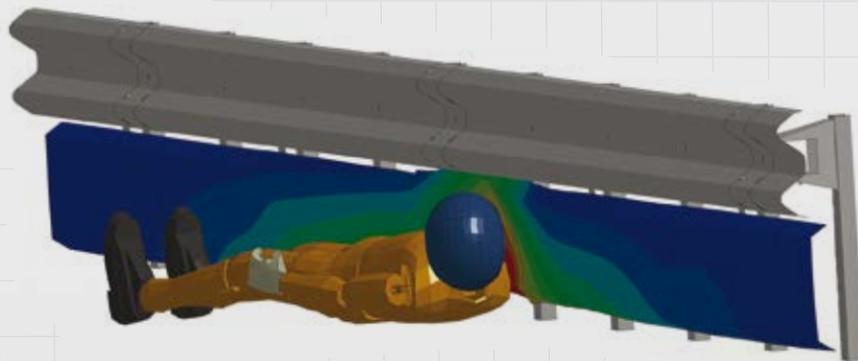


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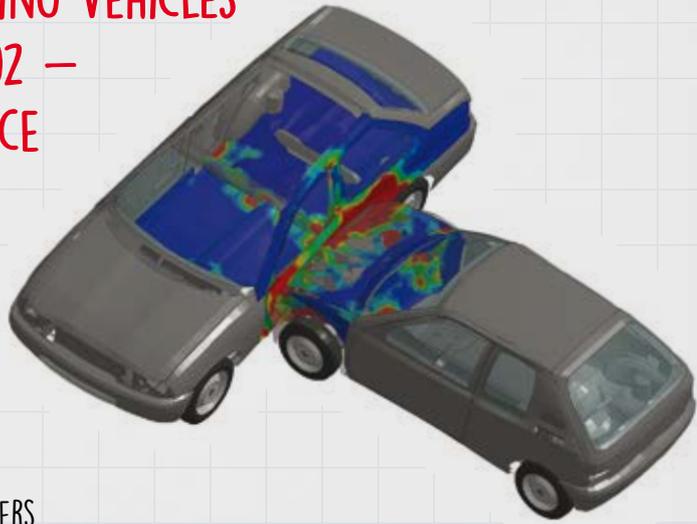


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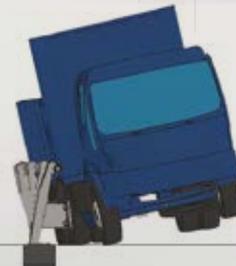
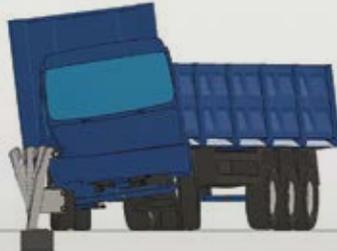
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# FIRST MAJOR DARLINGTON UPGRADE PROJECT BRIDGE INSTALLED

In what can only be described as a mammoth effort by all members of the project team, the first bridge for Adelaide's Darlington Upgrade Project has been successfully installed. The installation went extremely well, with Main South Road and the Southern Expressway reopened to traffic more than 21 hours ahead of schedule.

The 3,000 tonne, 180 metre long bridge was manoeuvred into place over the last weekend of November, and is the first of eight bridges to be installed for the project, including two on Main South Road over the Southern Expressway to carry northbound traffic from Main South Road to the new lowered motorway and surface road.

In an Australian-first for a civil construction project of its scale, the two major bridges are being constructed off-site and moved into position.

Project consortium, Gateway South, built the 180 metre-long, 3,000 tonne bridges on land between the Southern Expressway and Main South Road, near Marion Road. The bridges are transported using self-propelled modular transporters and manoeuvred into place.

Construction of the bridge segments is also providing work for South Australian business, Bowhill Engineering, which is fabricating 10 bridge segments at its River Murray workshop. The largest segment weighs 90 tonnes and measures approximately 40 metres long.

The innovative construction method is substantially reducing traffic impacts for the

project. Building the bridges off-site and moving them into position has eliminated the need for multiple, long-term closures of parts of the Southern Expressway and Main South Road. When finished, the bridges will carry northbound traffic over the Southern Expressway.

One bridge will link to the 3.3 kilometre non-stop motorway while the other will deliver traffic to the local surface roads.

Five sets of traffic lights will be bypassed through the Darlington Upgrade Project, which is being funded on an 80:20 basis with the Australian Government. South Australia's Transport and Infrastructure Minister, Stephen Mullighan, said the project would make the journey quicker and safer for almost 100,000 vehicles using the Main South Road and Sturt Road intersection every day.

"Building the bridges in this way means keeping disruptions to a minimum during construction for the many tens-of-thousands of vehicles which travel through this part of Main South Road every day.

"While this type of bridge installation is common in Europe and America, it has never been used on this scale before in Australia.

"These new bridges will improve traffic flow at some of Adelaide's top 10 busiest intersections and will reduce travel times for drivers travelling both north-south and east-west."

The project is scheduled for completion in 2019.





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# MATAGARUP BRIDGE WORKS PROGRESSING WELL

A workforce of about 200 are now working on the Matagarup Bridge - the pedestrian bridge connecting East Perth with Optus Stadium - following the decision to build the structure in Western Australia.

Speaking about the project, Western Australian Premier Mark McGowan said that the decision to bring the project back to WA has been a great result for local jobs.

"More than 200 jobs will eventually be generated by bringing the steel works to WA, and we have secured more control of the project's management," the Premier said.

"The bridge arches are now starting to take shape which is an impressive step forward, made possible by having the work done locally."

WA Transport Minister Rita Saffioti echoed these sentiments.

"I have been impressed with the determination and tenacity of local industry and workers to expedite this project as we approach the target completion date of March 2018."

Civmec is using local expertise to undertake the steel fabrication that will form the bridge arches, while other local suppliers such as Fremantle Steel are building the deck. Other workers included in the Swan River Pedestrian Bridge Alliance - led by York Rizzani Joint Venture - are based at the East Perth site.

Some 60,000 workshop drawings have been produced by contractors in recent months, which had to be scrutinised and checked ahead of the steel fabrication work starting.

As Civmec produce the modules for the arches, they will be progressively transported to the laydown area in East Perth where the

three arches will be assembled. All modules - 50 for the arches and 24 for the deck - are anticipated to be delivered to the laydown area by the end of the year.

In total, there are 2,172 tonnes of steel being used to build the bridge. The local manufacturing costs for the steel are estimated at \$25 million, which has been incorporated into the revised overall bridge budget.

As a permanent tribute to traditional owners, during November the bridge was officially named the Matagarup Bridge. The name recognises the cultural significance of the immediate Swan River area to the Whadjuk community.

Matagarup is the name given by traditional land owners to the area around Heirisson Island, meaning a place where the river is only leg deep, allowing it to be crossed. The naming of Matagarup Bridge was decided following consultation with the Whadjuk Working Party (WWP), through the South West Aboriginal Land and Sea Council. When nominating names for consideration, the WWP was asked to consider the significance of the river and surrounding area to the Whadjuk community.

Matagarup was one of three names nominated by the WWP for consideration by the Government, based on its meaning for the local area.

Visually stunning, the 370m long, nine metre-wide bridge will have a steel cable-stay span of 160m at its centre. This central structural arch and expressive apex rises 65 metres above the river to provide a focal point from distant vantage points, the city and Optus Stadium.

The design achieves a sensitive footprint, treading lightly upon the river and both

foreshores with only two piers situated in the water, thereby respecting the heritage of the area and minimising the impact on the riverbed.

The structural forces are expressed clearly and uniquely in the black and white articulation of the arch ribbons reflecting both structural interdependency and the symbolic coming together of diverse cultures. Some will see swans in the design, while others will see a Wagyl taking shape or a dolphin, which is perfect for this river environment.

The bridge will be made of structural steel and approximately 1,500 tonnes of steel, 1.6km of piles and 1.5km of steel cables and strip lighting will be used in the construction. Shared paths on the eastern and western foreshores will be retained and will pass under the new bridge. The vessel navigational area will be at least 40 metres wide with clearance of eight metres between the water and bridge deck.

Around 14,000 people are expected to cross the bridge on event days. The journey across the bridge to the Stadium will feature landscaped seating areas and decorative lighting designed to enhance the 'fans first' experience during daylight and night time events.

Other works include the construction of two approaches at both ends of the bridge, special event bus stands on the East Perth shoreline and full landscaping to both shorelines.

Working in and around the Swan River requires careful management of the surrounding environment including marine life, water quality and riverbed disturbances and heritage and cultural consideration.



## CHERWELL CREEK BRIDGE UPGRADE

Traffic flows and vehicular access in Queensland's Bowen Basin are set to improve significantly thanks to the soon to be completed \$6 million upgrade to the Cherwell Creek Bridge.

The upgraded two-lane concrete bridge will be seven metres higher than the current bridge and have a one-in-100-year flood immunity.

The old bridge flooded regularly in major rain events and was closed for an extended period following the floods caused by Tropical Cyclone Debbie earlier in the year.

Together with its improved flood immunity, a further benefit this project will deliver for motorists is improved traffic flow. This is due to the widening of the bridge to 10 meters and increased speed limit of 100km up from 60km.

The Cherwell Creek Bridge Replacement project is being jointly funded, with the Australian Government providing \$2.75 million under the Bridges Renewal Program on a 50:50 funding share arrangement with Isaac Regional Council.

The council is contributing a further \$500,000 as part of its 2016-17 *Connecting Our Communities* program.

## NEW SANDY GULLY BRIDGE OPENS THREE MONTHS EARLY

The new \$57 million Sandy Gully Bridge north of Bowen will open three months early, boosting driver safety on the Bruce Highway in the lead-up to Christmas.

Federal Minister for Infrastructure and Transport Darren Chester said the project was one of standout upgrades happening along the length of the highway, and was an important part of the Australian Government's action plan to reduce accidents.

"This project is part of the Australian Government's \$6.7 billion 10-year commitment to upgrade the Bruce Highway, which aims to improve safety, flood resilience and capacity along this important national corridor," Mr Chester said.

"During Cyclone Debbie, the Bruce Highway was cut off at the old Sandy Gully Bridge, causing additional disruption to affected communities. We are now far better prepared for future wet weather events, with the upgrade improving flood immunity from Euri Creek all the way to the Merinda rail overpass," he added.



The new Sandy Gully Bridge north of Bowen will open three months early, boosting driver safety on the Bruce Highway in the lead-up to Christmas.

*Photo courtesy: Vassallo Constructions*



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# NEW BRIDGES AT BIG HORSE AND LITTLE HORSE CREEKS IN NT

Works to strengthen the Victoria Highway between Western Australian and the Northern Territory will soon be underway, with two key bridge contracts awarded.

The contracts relate to the delivery of the \$35.5 million bridge replacement projects at Big Horse and Little Horse Creeks. The work has been awarded to Northern Territory business, Allan King & Sons Construction Pty Ltd.

The project will replace the existing bridges of Big Horse and Little Horse Creeks to 1-in-20-year flood immunity standards, consistent with other crossings along the Victoria Highway.

It will create approximately 60 jobs and will be sited about 300 kilometres west of



Katherine, improving links between Perth and Darwin.

The Victoria Highway is the only sealed link between the Northern Territory and Western Australia and the upgrade project is critical to keeping the Perth to Darwin freight corridor open.

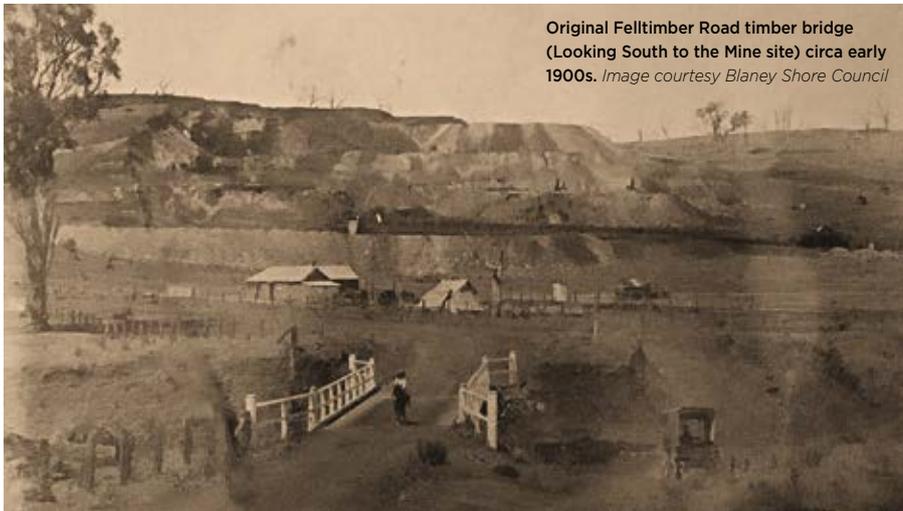
Northern Territory Minister for Infrastructure, Planning and Logistics, Nicole Manison, said the new bridges would replace the existing crossings with higher structures, along with raised road approaches and culverts at low points to minimise the impact of flooding.

“The project design will also improve safety and connectivity around the new bridges by upgrading the intersections linking access roads to the Big Horse Creek boat ramp and the Bradshaw Field Training Area,” Ms Manison said.

“This tender award is a major step forward for the project, which has an expected completion due in late 2018.”

The Australian Government has committed \$20 million to the project under the National Highway Upgrade Program in partnership with the Northern Territory Government, which is contributing \$15.49 million.

# HISTORIC CROSSING GETS A 21ST CENTURY UPGRADE



Original Felltimber Road timber bridge (Looking South to the Mine site) circa early 1900s. Image courtesy Blaney Shore Council

The new concrete Felltimber Road Bridge over Coombing Creek near Blaney, west of Bathurst, NSW, is open to traffic, replacing the old one-lane wooden structure and allowing the previous five-tonne load limit to be lifted.

Federal Minister for Infrastructure and Transport Darren Chester said the Australian Government was investing a record \$75 billion in infrastructure projects nationwide

to deliver a safer and more efficient national transport network.

“The new Felltimber Road Bridge is just one of many projects delivered under the *Bridges Renewal Programme*, which has been developed and implemented to help upgrade and repair bridges so communities are better connected and regional businesses can get their product to market more efficiently,” Mr Chester said.

“This project is a fantastic example of how the programme is funding superior transport infrastructure for communities right around the nation.”

Federal Member for Calare Andrew Gee said the upgrade had brought the crossing into the 21st century.

“Emergency vehicles and other heavy vehicles will now be able to use the bridge because the previous five-tonne load limit has been lifted,” Mr Gee said.

“The Australian Government is investing more than \$325 million in infrastructure across the Calare electorate, and this is just one of many projects that will ensure the region has the transport links it needs to thrive.”

Blaney Shire Mayor Scott Ferguson said the project had greatly improved freight efficiency by reducing travel times for primary producers connecting to regional sales facilities.

“This bridge is ‘future-proofed’, reducing the cost burden on Council in the form of ongoing maintenance costs,” Cr Ferguson said.

“The improved connections will have immediate benefits for local industry and will also be of great assistance to the entire community in the event of bushfires or other emergencies.”

The project is jointly funded by the Australian Government and Blaney Shire Council, with each committing \$165,000.



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## **Australian Asphalt Pavement Association (AAPA) International Knowledge Transfer (IKT) 2018 Outreach to Asia**

Expressions of Interest are now open to organisations wishing to submit nominees to attend the 2018 Australian Asphalt Pavement Association (AAPA) International Knowledge Transfer (IKT) Outreach to Asia.

AAPA has been conducting a dedicated program of international outreach for more than 30 years. The program provides the Australian roads industry with access to, and details of, new products, processes and design tools from around the world. This is an opportunity to discover tools that deliver value for money, efficiency gains and innovative solutions that can be implemented within Australia.

AAPA, together with our supporting partners Australian Roads Research Board (ARRB) and AUSTRROADS, will host participants throughout Japan, China and South Korea and will include the 2018 GEO China Conference and will focus on topics including:

- The latest sustainable flexible pavement initiatives
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- Perpetual pavement design in practice
- Safety at roadworks
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**The AAPA IKT 2018 Outreach to Asia is planned to take place from 14 July to 29 July 2018. If you are interested in nominating your company and your employees to attend, please contact Erik Denneman: [erik.denneman@aapa.asn.au](mailto:erik.denneman@aapa.asn.au)**

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# NSW COUNCIL SAVES MILLIONS BY EXTENDING THE LIFE OF ROADS

**A**APA's *Roads of the Future* conference in Melbourne earlier in the year opened with a provocative presentation by Bernard Salt that posed a dilemma for the road construction industry.

The prominent social commentator said that because of Australia's relatively low population and tax base, the industry needs to find more economical ways of maintaining the nation's roads or the extensive network may fall into disrepair.

Salt isn't the first to express such concern. VicRoads adopted its *A Stitch in Time* pavement maintenance strategy in 1994 based on the philosophy that simple but timely maintenance can prevent accelerated rates of deterioration requiring expensive rehabilitation.

In recent years many road agencies have been exploring ways to better manage competing demands on their road networks. Campbelltown City Council, south-west of Sydney, is a great example of an agency leading the way by efficiently targeting road network maintenance costs to improve the overall quality of its roads.

Mahbub Hossain, Campbelltown City Council's Asset Services Coordinator, says: "When we started this project 17 years ago, our road renewal backlog was \$33 million. Currently it is less than \$8 million, and at the same time, our pavement condition index

has improved from 5.9 to 7.9. The results are a direct reflection of the council's innovative approach."

Hossain argues that major savings are made possible by extending the useful life of a road network.

"By delaying the need for expensive rehabilitative works, we can afford to spend more on cost-effective preventive treatments that extend the life of roads."

Norbert Michel, AAPA's State Executive for Victoria and Tasmania, says: "The biggest contributor to accelerated pavement damage is water. If you keep roads waterproofed and sealed, you stop water getting in and this preserves the integrity of the base and sub-base.

"Campbelltown's strategy to keep roads sealed and waterproofed is the most effective way to extend their lifespan."

The Campbelltown program seeks to balance expenditure between preventive treatments such as reseals (around \$8 per square metre) and reconstruction treatments (around \$90 per square metre) in its predominantly urban 718-kilometre road network.

"Before 2000, we could afford to do only 10 to 20 major projects a year. But now we are completing 400 to 500 minor projects, preventing roads from needing expensive reconstruction works and further freeing funds for more cost-effective maintenance.

**PICTURED ABOVE:** Mahbub Hossain (centre) with council program officer Rupesh Pradhan (left) and council asset inspector Paul Tonkiss at O'Sullivan Road, Leumeah (near Leumeah railway station). The collector road, which carries about 4000 vehicles a day, was affected by environmental and other distress. The asphalt fatigue area was heavily patched and then the section was treated with hot mix asphalt with interlayer seal. The rehabilitation and resurfacing works were funded by the Federal Government's Roads to Recovery Program.

The longer we keep our network watertight and in good condition, the more preventive works can be undertaken," Hossain says.

Campbelltown's success is predicated on good quality and current data to drive informed decision making. Road condition data collection is outsourced and 20 per cent of the council's network is surveyed each year. The council audits a small sample each year to calibrate the results. Data is then used to generate a pavement condition index that is used to allocate its roads into one of three treatment phases: preservation (Phase 1), standard resurfacing (Phase 2) or rehabilitation (Phase 3).

Before 1997, the council would carry out full road reconstruction as its major renewal treatment option. Its approach was 'worst first' and minimal preservation and resurfacing treatments were applied. Over time, the funding strategy has shifted to a more preventive model: 20% in phase 1, 65%

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