

# ROADMARKER

The Official Publication of the Roadmarking Industry Association of Australia

SPRING EDITION

## FEATURE: LATEST TECHNOLOGY



# 2016



Roadmarking Industry  
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**2016 AUSTRALASIAN ROADMARKING  
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This photo was spotted via an international newspaper. They really must have 'seemingly' strong winds over there and some very difficult materials, "HIGHWAYS England has apologised to drivers after their workers were forced to leave road markings unfinished, which resulted in seemingly wonky lines."

"Unfortunately, road marking was unable to be completed as difficulties were experienced with the lining material on the new anti-skid surface, which was exacerbated by bad weather." Courtesy of Rebecca Cain, Hereford Times.

**Submit your funny photos to:**  
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# Between the Lines

Welcome to our spring edition of the Roadmarker. I hope you are reading this as you attend our 2016 Workshop, Exhibition and Conference hosted by the Gold Coast Turf Club, on the amazing Gold Coast Queensland. Our conference is the largest conference in Australasia dedicated to the road delineation industry and is the only place you will get to catch up with all of the major suppliers, manufacturers and distributors from Australia and from around the world.

Our first stand-alone magazine was a great success, and I hope you enjoy the spring edition as much. Our spring magazine will

have a feature on the latest technology, which will coincide with, our Workshop & Conference where you will be able to see the latest equipment and materials as well as hear from experts in their fields as they present over the two full days.

We are very excited to have five international guest speakers presenting this year and along with the 12 expert Australian speakers, our program is the most informative and practical program we have ever had. Our Thursday morning will have a machine maintenance workshop followed by live demonstrations of various pavement marking methods as well as some other demonstrations related to our industry.

I would like to take this opportunity to thank our Principal Conference Sponsor, Ennis, Evonik Industries and Hofmann Roadmarking Systems for their support. Our other sponsors include: Proceedings sponsor, Fastrack™ (DOW), our TrafFix Devices, horror themed dinner will be a night to remember, located in a spectacular bushland / beach setting, with great food and good company. A1 Roadlines have once again sponsored our popular Cocktail function, which will be held on Tuesday night at the Watermark Hotel, shortly after this year's AGM. The conference satchels are sponsored by

Graco and our inaugural breakfast with a special guest speaker that will leave everyone inspired, is proudly sponsored by Access Linemarking Equipment. Our Lunch, morning and afternoon tea sponsors, Borum, Chep, RoadData, Avant Linemarking and Hofmann will make sure we are well catered for during the day, and Reflective Road Safety Products, Roadmarking Supplier Alliance, and Roadline Removal have supported our conference by taking on the Water - Pad & Pen, Wi-Fi and Lanyard Sponsorships respectively.

Of course our exhibitors make our conference complete and a huge thanks goes to all of them who have taken time to make the effort and come along and support not only our conference, but your association. A full list of exhibitors can be found on the back page of the magazine and I would encourage you to support every one of them.

The conference sessions are being video recorded and will be available shortly after the conference free of charge to attending delegates. We hope you take advantage of this and use these recorded sessions as a future reference.

And of course thanks to the delegates, I hope you all get as much out of the program as possible. We have put the program together to cover technical and practical themes with the view to be beneficial to your business and help you and your staff work safely and smarter, not harder.

As usual, thank you all, for your ongoing support and please do not hesitate to contact the office if we can be of assistance in any way. I look forward to catching up with you all on the Gold Coast.

Dean Crutchfield  
RIAA CEO



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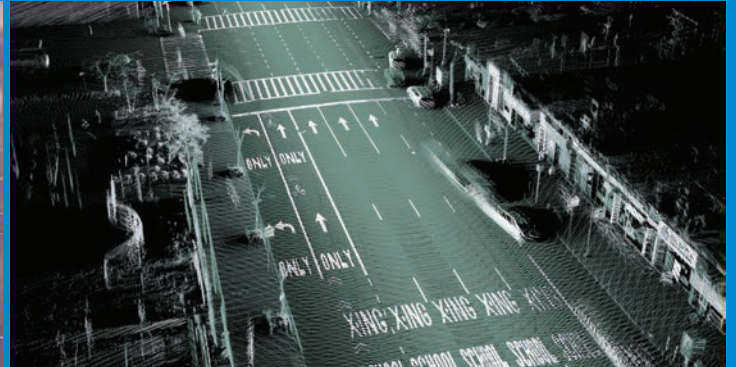
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# Will autonomous cars really improve traffic?



***Australia's already congested cities are continuing to grow, and the speedy introduction of self-driving vehicles is being hailed as the key to tackling urban planning headaches such as car parking and traffic congestion issues.***

Research has shown<sup>1</sup> the road safety benefits of autonomous vehicles could realise a 90 per cent reduction in road crashes, most of which are caused by human error, resulting in a potential saving of \$24.3 billion from the national cost of road trauma.

For a nation that suffers an annual \$20 billion economic hit from congestion and spends twice as much on transport as the OECD average, driverless vehicles are also expected to provide some much needed relief for commuters and governments.

While stress-free, safe and productive commutes in autonomous vehicles will one day become a reality, the transition is unlikely to be smooth sailing without effective global collaboration by all stakeholders within the industry.

Recently, HERE driverless vehicle experts teamed up with leading driverless researchers from SBD to produce a white paper<sup>2</sup> examining the potential issues our cities might face on the road to autonomous vehicles.

They quickly dispelled the misconception that self-driving vehicles will make the traffic we endure today immediately obsolete.

Unfortunately, it will take some time before autonomous vehicles fully integrate to transform the way we travel, particularly with the sheer number of mixed fleet vehicles – autonomous, semi-autonomous and traditional – sharing the road.

## **It's a matter of time**

The introduction of autonomous driving is a truly iterative process that relies on sharing and connecting all aspects of the research, regulatory and technical development process between organisations, industries and countries. Such collaboration has occurred in other autonomous driving projects already live in Australia, such as autonomous straddle<sup>3</sup> (container) loading trucks and Rio Tinto's trucks<sup>4</sup> and trains in the Pilbara. These projects began almost a decade ago, and while driving in a controlled environment on mine or port roads is vastly different to driving on open urban roads, embracing collaboration in the form of data sharing and standardisation is still vitally important.

In the medium term (within 5-6 years), the speed of advancement in deploying autonomous vehicles will depend on the level of cooperation between carmakers, governments, suppliers and service operators. If our industry is to engender trust among consumers, collaboration is key.

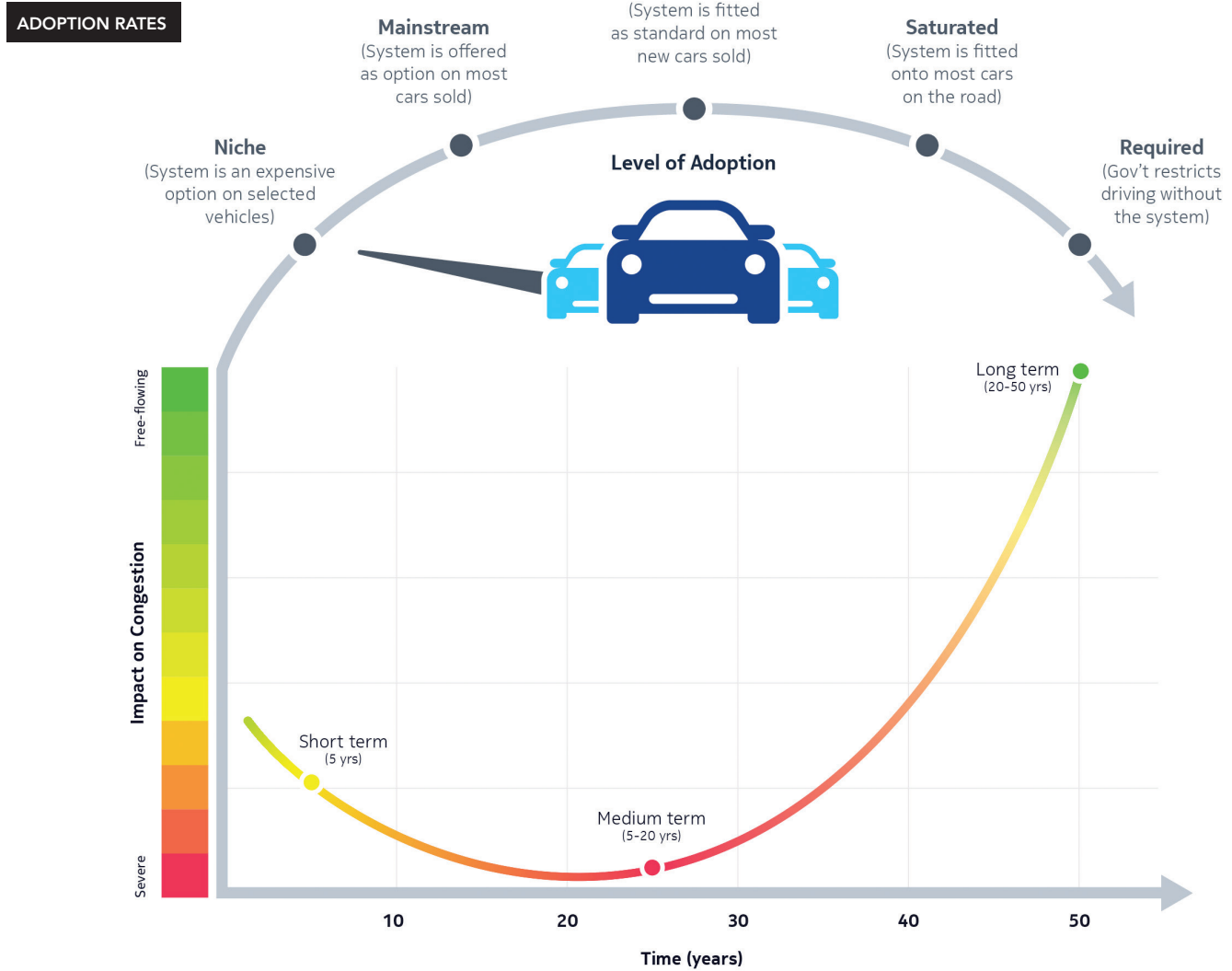
Today, the industry tends to focus on reaching the individual driver,

which is causing vehicle and traffic information to sit in silos. However, sharing data between all vehicles on the road benefits the greater driving community. For example, traffic signal data should 'talk' to cars, not just talk to the traffic management centre, and buses at the train station should know that the train is running three minutes late. The data needs to be shared openly to achieve network optimisation.

In the long term, this mindset is key to realising the ideal outcome of optimising transport mode choices to benefit the user and the transport system as a whole with regard to cost, speed and accessibility. Subsequently, as autonomous travel becomes ubiquitous, road collisions and deaths will decrease and journey times will become more consistent and predictable.

## **The societal shift – mobility and infotainment co-existing**

The transport industry needs to keep pace with people's desire to integrate technology into more aspects of their lives than ever before. The recent emergence and success of disruptive businesses in the ride sharing and taxi industry highlight an appetite for innovation. There is also a significant level of allure for self-driving vehicles, which does not stop at safety benefits and traffic reduction. In fact, we expect demand will



come because of changes in human behaviour, as well as the desire for increased productivity.

Self-driving vehicles will likely appeal to people who are very young, elderly or ill – thus unable to drive traditional cars. Even those who prefer public transport might be tempted to switch to autonomous vehicles as extensions of their offices. Upwards of 70%<sup>5</sup> of all CBD workers in Sydney and Melbourne already commute by public transport, so imagine if all those people abandoned train or bus routes for a road based platoon of autonomous/assisted control vehicles.

Consumer perception is another factor in adoption. SBD has conducted extensive consumer research which shows that the uptake of autonomous vehicles will be based on a combination of emotions and perceptions felt by drivers. They found autonomous features resonate

most strongly with drivers who spend most of their journeys feeling intimidated, unsafe and nervous, indicating a need for safety-driven features.

SBD also found those who feel frustrated, impatient or bored while driving are likely to appreciate autonomous vehicles. You only have to glance out the window at a set of traffic lights to see just how many commuters are texting, despite the increasingly costly fines and loss of demerit points. Conversely, those who already feel confident, safe and calm on the road will have little motivation to transition to autonomous vehicles.

### Progress underway

While the future of autonomous vehicles depends on a more collaborative effort, we should not forget the significant progress already underway to make this vision a reality. There would not even be a possibility

of autonomous vehicles without the technology that drives them and HERE is amongst others working with many industry colleagues to help advance the field.

We recently helped bring forty automotive and mapping companies together from across Europe, the U.S. and Asia to finalise the design of a global standard for vehicle-to-cloud data sharing. The SENSORIS data standard<sup>6</sup> will enable driverless connected vehicles to prepare for changing conditions and hazards well before the vehicle, be it a truck or car, can see them.

In anticipation of higher levels of vehicle automation, HERE has already mapped 100% of Australia's populated road network and almost 90% at the High-Definition 3D machine-readable maps needed to steer self-driving vehicles.

– Brent Stafford, HERE APAC Director

#### REFERENCES

<sup>1</sup> [https://bitre.gov.au/publications/2014/files/report\\_140.pdf](https://bitre.gov.au/publications/2014/files/report_140.pdf)  
<sup>2</sup> <http://bit.ly/here-traffic-congestion-autonomous-vehicles-360>  
<sup>3</sup> <http://www.smh.com.au/nsw/sydneys-patrick-terminal-goes-automated-with-fewer-staff-but-dancing-robots-20150617-ghqc24.html>  
<sup>4</sup> <http://www.mining.com/video-rio-tintos-robot-army-83874/>  
<sup>5</sup> <https://blogs.crikey.com.au/theurbanist/2015/01/21/why-do-commuters-drive-to-work-instead-of-taking-transit/>  
<sup>6</sup> <http://360.here.com/2016/06/28/here-standard-for-shared-car-data-wins-pan-european-backing/>

# Sensor technology in line marking



*Being one of the world's leading manufacturers of line marking machines and equipment it is our expectation that with the use of sensor technologies and wireless communication there will be a breakthrough in terms of improving the entire road marking process, from planning to operational activities.*

Combining GPS-inclusive technology, as used in fleet management, with the monitoring from the sensors on the machine and equipment, offers a lot of benefits. Overall it will result in an improved economy due to better planning as well as the documentation and reporting facilities.

## Remote monitoring and service reminders

Wouldn't it be nice to avoid breakdowns on the road by knowing beforehand when you need to service different parts on your machine? By installing the necessary sensors on the machines, the system will provide information for the monitoring of vital wearing parts, such as when they were last replaced and when they need to be replaced next time, and send service reminders, so that spare parts can be ordered in good time. This way sending a service engineer out to remote locations to ascertain the cause of a breakdown can also be avoided!

## Documentation and reporting

One of the additional benefits of GPS-inclusive technology used in fleet management is documentation and reporting. Documentation requirements vary greatly around the world, but using GPS technology combined with the sensor monitoring and wireless communication, means much more detailed information will be available.

The system could be set up to provide precise data on the date, time, location, air humidity, air temperature, paint temperature, type of paint used, the consumption of materials, verification of uniformity of the layer thickness, reporting machine usage with the total number of kilometres operated, and even on-site progress could be monitored.

This means that the actual amount of material used could be precisely controlled and documented, so that material costs can be optimized while still maintaining the required level of standards for the lines.

Data received from the monitoring system would be managed via an online display, also with access to information about where the fleet is, and whether operations are progressing as planned.

## GPS Tracking system

If you opt for adding the GPS module on your Borum machine, this can provide you with a visual overview of your road marking jobs through Google Earth. It is possible to track and record the line marking positions for each individual road marking job. Afterwards, your activity will be automatically converted into a separate GPS logfile, which you can now view using Google Earth in order to see a visual timeline of your road marking job.

Should the machine be stolen, the GPS data is still available on-line, and the location of the machine would still be known so the machine can be tracked to its current location.

This feature also makes machine leasing much more reliable, because the machine can be programmed to operate in a specific area. If the machine leaves the defined area, it can be pre-programmed to shut down.

All in all, introducing GPS and sensor technologies in line marking is the next step in innovating the industry. Although the technologies are not new in the automotive world, it has not yet been fully exploited within line marking. The unique benefits that these technological solutions bring are long needed by the line marking industry.

– Ib Simonsen, President of Borum A/S

“...introducing GPS and sensor technologies in line marking is the next step in innovating the industry.”



# ULTIMATE MEDIUM LINE MARKER

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1. 300L approx. paint tank capacity.
2. 300 kg. approx. bead tank capacity.
3. Graco 222-900 Severe Duty Airless Paint Pump
4. Graco 206-513 fixed guns - standard
5. Borum bead guns with flat adjustable spoons and atomizing air
6. Stainless steel paint tank - one full side removable for cleaning.
7. 185 x 14" light truck tyres all round.
8. Automotive style variable power steering - excellent "steering feel"
9. Steering lock of 40 degrees both sides of centre - great turning circle.
10. Excellent stability when product low - front mounted engine
11. Yanmar 4TNV88 / 2.2L / 47HP, 4 cyl. diesel engine.
12. Excellent accessibility for daily checks, servicing & maintenance.
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# Personnel Changes at DPI



*"Creating a Safe Environment for All Road Users"*

DPI is going through a minor structural change and is pleased to announce that Jay Hsu will be looking after the day to day running of DPI.

Jay who has been with DPI since June 2016 has come from Underwriters Laboratories Inc. Jay's engineering qualifications and good technical aptitude, has given him a great understanding of the QA requirements, DPI's manufacturing processes and current industry standards.

There has been no change to our chief chemist or any other QA staff.

DPI are also proud to announce that Phil Thiel has started with DPI as our National Sales Manager.

Phil has a wealth of experience and knowledge in

all linemarking products and applications, and a lot of you will already know Phil from his time spent contracting in Canberra, Sydney and most recently in Melbourne. Phil is your primary contact for sales and product(s), and will be able to answer all your questions on our range of premium pavement marking products.

Phil's hard work ethic and his industry knowledge will be a very valuable asset to our team and no doubt, you can expect to hear from Phil very soon, but please feel free to contact him anytime on: 0431 431 843 or via email: [phil@dpiaustralia.com.au](mailto:phil@dpiaustralia.com.au).

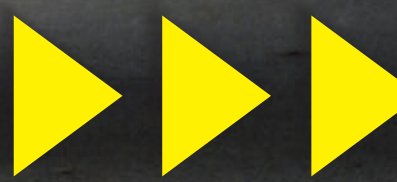
Yours sincerely,

Monica Renaud  
Office Manager, Dura Products Industries Pty Ltd





# PUTTING THE BRAKES ON REVERSING ACCIDENTS



**E**very year, incidents involving reversing vehicles and mobile plant result in fatalities and numerous serious injuries at worksites across Australia. The combination of large equipment (often with limited visibility from the operator cabin), busy worksites and constant reversing manoeuvres can quickly turn into an OH&S disaster – even for those wearing the required high visibility PPE. Indeed, the danger posed by reversing vehicles and mobile plant is widely considered one of the highest OH&S risk factors for workers in the road construction and maintenance sectors.

With that in mind, road authorities, councils and contractors are looking to AEB (Automatic Emergency Braking) technology to help eliminate or significantly reduce the risk of reversing incidents and accidents. While there have been a number of reverse ‘warning systems’ available on the market for some years now, AEB reversing system technology is a relative newcomer – especially in the heavy equipment and mobile plant market; but it is already having a significant positive impact in terms of reducing the number of incidents.



## Reverse Smart: State-of-the-art radar technology

Reverse Smart has been at the forefront of AEB reversing system technology for a number of years throughout Europe and the UK, with many hundreds of successful installations on heavy vehicles, large plant and other mobile equipment.

Building on this success, Reverse Smart now looks set to change the face of worksite safety throughout Australia. Speaking about the Reverse Smart system, Davin Hamnett, Business Development Manager with Reverse Smart explained:

“One of the main benefits of the Reverse Smart system, is that it provides an engineering control to avoid an impact, rather than relying on driver / operator response times.”

“On most worksites, there is usually a myriad of equipment operating, most of which has flashing lights, beacons, cameras and reversing buzzers or other audible warnings. In short, there is usually a lot going on and there’s too much external stimulus to pay attention to all of it – especially when you’re trying to concentrate on the job at hand,” he said.

“While from the outside looking in, it may seem almost impossible to miss a large piece of equipment moving towards you, in reality, impact accidents occur with alarming regularity – and this often results in serious injuries or even fatalities.”

“By providing an additional level of protection, including an engineering control that can stop the vehicle, the Reverse Smart AEB system can significantly reduce the risk of impacts and injuries,” Davin Hamnett added.

The Reverse Smart AEB system has been specifically designed to reduce the incidence of large vehicles or mobile plant impacting workers or objects while reversing. The Reverse Smart AEB detects objects or people behind the vehicle, warns the driver / operator and, unless the driver confirms the nature of the object and specifically triggers the ‘sleep’ mode (which is used when intentionally reversing up to a solid object), applies the vehicles brakes.

## WHAT THE OPERATORS SAID ABOUT REVERSE SMART

As is the case with any new technology being added to a vehicle or piece of plant, the operators’ opinion of Reverse Smart was a critical factor in its success. Drivers and operators do not want or need an extra level of complexity added to their equipment.

Operator feedback about the Reverse Smart system has been universally positive, with drivers praising the unit for both its performance and practicality, and the fact that it doesn’t require additional maintenance or calibration and doesn’t interfere with their normal operation of the vehicle.

“Have felt safe while reversing when I know there is foot traffic about”

“I am more cautious when reversing”

“It works like an extra pair of eyes”

The VicRoads trial also required the operators to complete a Likert Scale Effectiveness and Usability questionnaire about the Reverse Smart AEB system. The operators provided positive feedback to the eleven questions, with all agreeing that ‘...automatic braking technology should be considered for further use across our industry’ and that ‘...in understanding that Reverse Smart could apply the brake, they were more aware when reversing’.

Reference: VicRoads Worksite Safety Update No 133 (April-May 2015)



**Pictured: (Opposite)** The purpose-designed Reverse Smart radar system is not affected by vibration or frequency clashes which can result in 'ghosting' and false proximity alarms.

**(Above)** The in-cabin indicator features a 'sleep' mode button, which 'sleeps' the braking function when intentionally reversing up to a solid object

The key to the success of the Reverse Smart system lies within its purpose-designed radar, which not only allows for an accurately focussed detection area, but also overcomes many of the limitations that can be experienced by traditional ultrasonic detection. Davin Hamnett explained:

"Unlike ultrasonic reversing detection - which is a common feature on many passenger vehicles - the Reverse Smart radar system is not affected by vibration or frequency clashes which can result in 'ghosting' and false proximity alarms."

"In addition, the fact that the radar unit is a purpose-built, heavy duty, fully-sealed unit, means that it is unaffected by dust and dirt and is suitable for use in even the harshest operating environments," he said.

"It's extremely robust, and maintenance free," he added. "The driver or operator doesn't have to change the way they operate the equipment and there are no additional steps required to operate or calibrate the Reverse Smart system once it has been installed."

"The only driver interaction with the system is when they are intentionally reversing up close to a solid object, in which instance they can press a button to 'sleep' the braking function while still maintaining the proximity detection alert," Davin Hamnett added.

## Proven Performance in the Field

Available exclusively throughout Australia from safety, traffic control and line marking equipment specialists A1 Roadlines, the Reverse Smart AEB system is already proving popular with Australian equipment owners and operators alike, with outstanding performance both in the field and during a recent VicRoads safety system assessment trial.

The trial, which commenced in mid-February this year, involved a full in-service evaluation of two Reverse Smart AEB units. The first unit was installed on a SprayLine Cover Truck located at a regional depot, while the second was installed on a Road Services Patrol Truck at a Melbourne metropolitan depot.

The trial has been extremely successful in terms of both the units' performance and operator acceptance of the system. Indeed, drivers have been very supportive of the technology and agree that it benefits their daily work activities and has even helped to increase their awareness and care while reversing.

Not surprisingly, positive feedback from both the VicRoads trial and a series of live demonstrations has resulted in a flood of inquiries and strong demand for the Reverse Smart system from across the road maintenance and construction industry.

**For further information, or to arrange a demonstration, please visit: [www.a1reversingsystems.com.au](http://www.a1reversingsystems.com.au) or contact:**

Davin Hamnett Ph:0419 177 199

or A1 Reversing Systems Pty Ltd Ph:03 9765 9444

## WHY THE NEED FOR AEB DEVICES?

The Victorian Transport Accident Commission (TAC) ran a campaign in regards to the benefits of AEB (Automatic Emergency Braking) devices, which highlighted the need for engineering controls to assist in the reduction of vehicle-based accidents. This is primarily due to the fact that traditional reversing aid devices such as ultrasonic rear sensors and reversing cameras are reliant on the driver's reaction to an external stimulus to avoid an impact event.

Needless to say, these concerns are multiplied with heavy vehicles and large mobile equipment, especially in operating conditions such as those experienced in the road construction / maintenance industries where workers are often in close proximity to heavy mobile equipment.

The Reverse Smart AEB system has been specifically designed to address these issues, significantly reducing the risk of an impact injury.





# HI-VIS SAFETY BOOST

A1 ROADLINES HIGH PERFORMANCE FLASHING  
ARROW BOARDS AWARDED RMS TYPE APPROVAL

Seen as another major 'feather in the cap' for leading traffic control and linemarking equipment specialists A1 Roadlines, the company's full range of LED Flashing Arrow Signs has just been awarded full Type Approval from NSW Transport Roads & Maritime Services (NSW RMS). The Type Approvals, which follow on from an extensive testing and performance assessment program, stand as testament to A1 Roadlines' commitment to developing quality products that help to maximise worksite safety.

When it comes to improving worker Occupational Health and Safety, few would argue that road construction and maintenance worksites present one of the most difficult and challenging OH&S environments around. Indeed, the issues surrounding both worker safety and driver behaviour within worksites have been a major concern for road authorities, contractors and law enforcement agencies for many years.

Needless to say, one of the key factors in improving worksite safety and worker OH&S is to ensure that road users can see the

worksite and/or plant and equipment clearly – in all ambient light and weather conditions. This is particularly important on busy roads which generally have an abundance of signs, lights and other distractions.

With that in mind, the A1 Roadlines team set out to develop a range of flashing arrow signs that would not only be robust and reliable enough to stand up to even the toughest operating environments, but most importantly, would help to maximise worksite visibility for approaching vehicles.

Janine Goodsell, Manager, A1 Roadlines, explained:

"Despite their relative simplicity, flashing arrow signs play a critical role in worksite safety and as such, their performance in the field is paramount."

"Whether it's a vehicle mounted unit or a stand-alone trailer mounted unit, at many worksites, the flashing arrow sign is often the primary traffic control / warning device. They provide drivers with an advance warning of an impending hazard and, importantly, directional information to assist in diverting and controlling traffic around construction or maintenance activities."

"And that's why high visibility is so important," Janine added. "Put simply, the more visible the sign, the earlier it can be seen and the more warning the driver has. This, in turn, allows for earlier lane changes and smoother transitions past the worksite."

Available is a choice of five models, including single-sided, double-sided and as a fully self-contained trailer mounted unit, A1 Roadlines Flashing Arrow Signs are fully-compliant and certified to NSW RMS Specification FAS/5 for *Illuminated Flashing Arrow Signs (Ed 1/Rev0)* and Australian Standard AS4192:2006.

For further information on the full range of A1 Roadlines Flashing Arrow Signs, please contact: A1 Roadlines Pty Ltd, Ph: (03) 9765 9400 or visit the website: [www.a1roadlines.com.au](http://www.a1roadlines.com.au)

## Flashing Arrow Signs - Type A and Type B

The **Type A** or **Type B** LED Flashing Arrow Signs are designed to be vehicle mounted

and give advance warning of a short-term road closure. They are available in single or double sided and operate from 12V to 24V systems without voltage converters.

The arrow controller is lightweight and available for single or double-sided arrow signs.

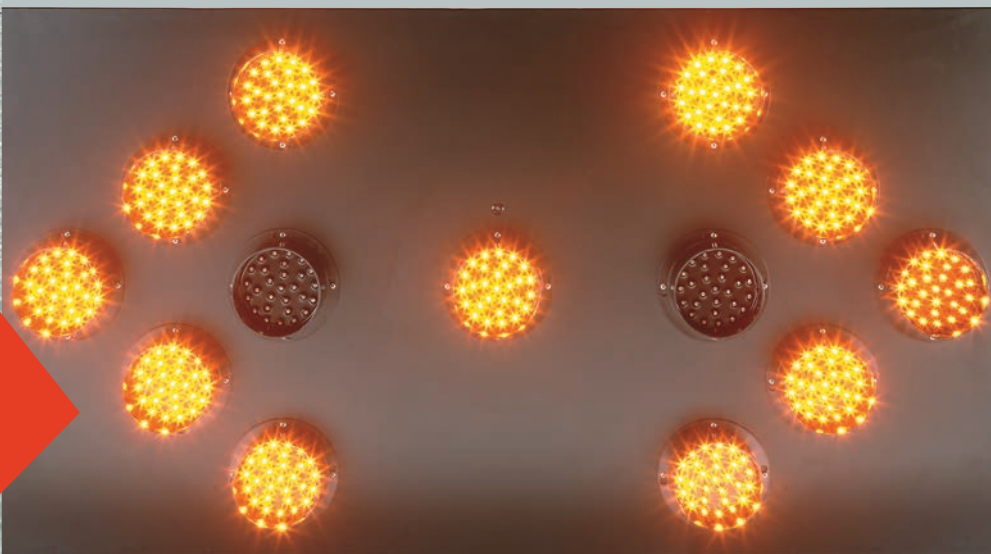
### Features

- Easy to use one touch controller, with real time display
- Arrow can be changed at the push of a button
- In built LED diagnostics
- Automatic dimming
- Heavy duty military specification wiring connectors
- Optional power lift control

### Modes of Operation

- Arrow Right
- Arrow Left
- Double-Headed Arrow
- Non-Directional Warning

The Type C LED Flashing Arrow Sign is also available for Truck or Trailer Mounted Attenuators



## Flashing Arrow Signs - Type C

The **Type C LED Flashing Arrow Sign** meets AS4192-2006 *Illuminated Flashing Arrow Signs and Roads & Maritime Services Flashing Arrow Sign Specification FAS/5*.

**Type C LED Flashing Arrow Sign Trailer** is a self-contained item of plant supplied on its own trailer with back-up battery supply powered by two (2) 80W solar panels positioned flat on top of the arrow sign to attain the optimum solar energy regardless of trailer direction. Used in conjunction with other signs and devices it provides advanced warning and directional information to assist in diverting and controlling traffic around construction or maintenance activities.

A lockable steel enclosure protects the controller and batteries from the elements and vandalism.

### Modes Of Operation

- Arrow Right
- Arrow Left
- Double-Headed Arrow
- Non-Directional Warning

For a quality result, you need quality products and equipment.

# Hi-Brite



## PRODUCTS

**Hi-Brite**  
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**Hi-Brite**  
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PREFORM THERMO

**Hi-Brite**  
COLD APPLIED PLASTIC

### Application Equipment:

THERMOPLASTIC / ADHESIVES



**APCO - Paint**

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**Reflective Road Safety Products**



# Insurance Introduction



Arthur J. Gallagher  
BUSINESS WITHOUT BARRIERS™

## OAMPS, now Arthur J. Gallagher establishes relationship with Roadmarking Industry Association of Australia.

Arthur J. Gallagher has owned OAMPS Insurance Brokers for two years and as the world's fourth largest Insurance Broker they have added an extra dimension to OAMPS' previous strengths in offering Industry specific products and solutions for individual companies.

We see so many similarities with the Roadmarking Industry and other industry relationships we have developed over the past forty years and through our association with the Civil Contractors Federation, we became aware of the importance and size of the Roadmarking Industry. After meeting with the RIAA CEO Dean Crutchfield, we now understand the massive opportunity we have to work on ideas and concepts that will reduce and enhance your businesses risk profile and provide asset and liability protection.

When analysing an Industry's needs there are always unique aspects of their activities which highlight the need for innovative solutions. It is clear to us that the biggest area of potential uninsured risk, is the financial loss for whatever reason that occurs, when a job fails.

Do we concentrate on providing an Insurance solution which could protect financial failure? Or do we help with compliance procedures that would make a failure almost impossible?

Our initial intentions are to provide a contract that will encapsulate Public and Products Liability but also offer financial loss protection for contract failure through errors and omissions. This concept would provide favourable policy conditions and costing to the businesses which have the highest level of compliance in place.

One of the problems identified and well documented in the winter edition of the Roadmarker, is the practice of some contractors that obviously win business on price, and then produce substandard

work. We have learnt over many years the level playing field can only operate when all participants create acceptable standards of compliance and integrity.

Whilst we continue to work with your directors on the most appropriate ways to support your industry and association, we invite all RIAA members to contact:

**DAVID AITCHESON**

**Ph:** 03 9412 1320

**Email:** david.aitcheson@ajg.com.au

or

**GRANT STILLMAN**

**Ph:** 03 9412 1610

**Email:** grant.stillman@ajg.com.au

Where we will be more than happy to provide FREE advice on any insurance related matter for RIAA Members.

"Insurance with Arthur J. Gallagher is a business partnership, not a grudge buy."



**European Road Infrastructure Congress**

18th - 20th October 2016 | Leeds 



# 'An Industry at the Cross Roads'

## 2016 AUSTRALASIAN ROADMARKING CONFERENCE, WORKSHOP & EXHIBITION



### TUESDAY 6TH SEPTEMBER 2016

<b>1.00pm – 3.30pm</b>	<b>Registration</b> – Foyer Watermark Hotel Gold Coast Conference Sponsor: ENNIS FLINT
<b>4.00pm</b>	<b>RIAA ANNUAL GENERAL MEETING</b> - Full Financial RIAA members
<b>6.30pm</b>	<b>A1 Cocktail Reception</b> – Watermark Hotel Sponsored by: A1 ROADLINES



### WEDNESDAY 7TH SEPTEMBER

Proceedings Sponsor: Fastrack



<b>7.00am</b>	Free Shuttle bus from Watermark – Gold Coast Turf Club begins
<b>7.15am</b>	Registration desk opens – Gold Coast Turf Club
<b>7.30am</b>	Coach Transfers from Watermark – Gold Coast Turf Club begin. <i>Every 20 minutes until 8:30am</i>
<b>7.30am</b>	Trade Exhibition opens
<b>9.00am</b>	Conference Official Opening Comments / Ceremony Dean Crutchfield – Karl Hohendorf
<b>9.45am</b>	Keynote Speaker Peter Frazer – President, Safer Australian Roads and Highways Inc.
<b>10.30am</b>	<b>Chep Morning Tea in Exhibition Area</b> Sponsored by: Chep








# 'An Industry at the Cross Roads'

## 2016 AUSTRALASIAN ROADMARKING CONFERENCE, WORKSHOP & EXHIBITION




### WEDNESDAY 1ST PLENARY SESSION

### SPEAKER

11.00am	Retroreflectivity in Yellow markings	Swarco
11.20am	Cold Applied Plastic, The Good, The Bad and The Ugly	Evonik
11.40am	Retroreflectivity for Signs and Lines	Roaddata
12.00pm	Cold Applied Plastic - The latest News from Europe	Borum
12.20pm	Questions to Speakers	
12.30pm	<b>Borum Industries Lunch in Exhibition Area</b> Sponsored by: Borum Industries	

### WEDNESDAY 2ND PLENARY SESSION

### SPEAKER

1.30pm	Mobile Works – Standards Update	Roads Australia
1.50pm	Material Technology and Testing The Importance of Having Standards	Roads Australia
2.10pm	Retroreflectivity – Harmonisation and Standardisation	Roads Australia
2.30pm	Questions	
2.40pm	<b>Roaddata Afternoon Tea in Exhibition Area</b> Sponsored by: Roaddata	

### WEDNESDAY 3RD PLENARY SESSION

### SPEAKER

3.10pm	Talking Cars – They are Just Around the Corner	Ross Caldwell
3.30pm	Increasing Retroreflectivity – Saving Lives	Peter Zehntner
3.50pm	PCCP / APAS – Critical Letters for our Industry	CSIRO
4.20pm	Questions	
4.30pm	Close Day 1	



# 'An Industry at the Cross Roads' 2016 AUSTRALASIAN ROADMARKING CONFERENCE, WORKSHOP & EXHIBITION



## PROGRAM OF EVENTS (CONTINUED)

WEDNESDAY 7TH SEPTEMBER 2016



# Traffix HORROR GALA DINNER

6.00pm – 12.00am

Join us and our Horror Themed Gala Dinner Sponsors TRAFFIX for a great night of ..., well you'll just have to wait and see. Our offsite dinner in a spectacular setting, will be sure to have every one of our guests talking non-stop about the night for a long time.

Come and spend a full night of amazing food with first class entertainment, drinks and great company all for \$195 pp.



## THURSDAY 8TH SEPTEMBER 2016

**7.00am** Free Shuttle bus from Watermark – Gold Coast Turf Club begins

**7.45am** **Access Linemarking Breakfast**

*– be seated for an 8.00am Start*

Access Linemarking invite all registered delegates and exhibitors to come and join us (bookings required) for a free breakfast. A very special guest speaker will leave you inspired and believing that no challenge is too great...



**9.00am** **Thursday Workshop / Demonstration Session**

**Graco Demonstration – Machine Maintenance**

A comprehensive demonstration of how to maintain, and clean your linemarking unit. Best practice from proper cleaning procedures to filter and tip sizes, straight from the manufacturer – invite your crews along.

\*Program, Times and Presentations are subject to change



# 'An Industry at the Cross Roads'

## 2016 AUSTRALASIAN ROADMARKING CONFERENCE, WORKSHOP & EXHIBITION



**10.00am** **Avanté Morning Tea in Exhibition Area**  
Sponsored by: Avanté Linemarking



**10.30am** **Outside Workshop / Demonstration**

Live application demonstrations of the latest equipment and techniques including Paint Machines, Thermo Plastic Machines, Pre Form Thermo Plastic, Coloured Surfacing Application and Cold Applied Plastic – three different application methods.

**12.00pm** **Lunch in Exhibition Area**

Conference Proceedings Sponsor: Fastrack



### THURSDAY 6TH PLENARY SESSION

### SPEAKER

**1.00pm** The 7 Essential Strategies to Take Your Business from Surviving to Thriving

Tony Rule

**1.20pm** Attenuator Crashes, What Has History Taught Us

Stephen Collins

**1.40pm** Retire in Style – How to Get \$1m+ in Your Super

Brenda Hutchinson

**2.00pm** Questions

**2.15pm** **Hofmann Afternoon Tea in Exhibition Area**  
Sponsored by: Hofmann Roadmarking Systems



### THURSDAY 7TH PLENARY SESSION

### SPEAKER

**2.45pm** Stimulants – In and Passing our Worksites

Glen Dittmann

**3.05pm** Near Misses and the Critical Role Reporting them Plays in Workplace Safety

Jim Appleby

**3.25pm** Worksite Safety – it Should be More than Lip Service

Alan Hay

**3.45pm** Engaged Workers – Makes Sense and Money

Dr. John Whiteoak



# 'An Industry at the Cross Roads' 2016 AUSTRALASIAN ROADMARKING CONFERENCE, WORKSHOP & EXHIBITION

## PROGRAM OF EVENTS (CONTINUED)

4.05pm Questions

4.15pm Conference Closing Ceremony

On Behalf of the Board of Directors, the RIAA would like to thank our 2016 conference presenters for taking the time to prepare and present such a great range of topics, and sharing their knowledge expertise and experience with our industry. We would also like to thank the conference sponsors who have again, supported and contributed so much to ensure the success of our conference.

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CONFERENCE



Roadmarking Industry  
Association of Australia



# WE'VE GOT WHAT YOU NEED

**Whatever your line marking or traffic management requirements, A1 Roadlines can provide the solution.**

From line marking application, testing and removal equipment, high quality paints and stencils, through to variable message signs, portable traffic signals, arrow boards, speed detection/display signs and truck-mounted attenuators, A1 Roadlines has the equipment and expertise to meet your needs.



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[www.a1roadlines.com.au](http://www.a1roadlines.com.au)



# Achieving Increased Productivity and Consistency for Road & Runway Markings

## Introduction

Road and runway markings are essential to road and airport safety. A system of clear, effective and consistently applied markings provide proper regulations, warning and guidance for pilots, drivers, cyclists, pedestrians and other employees and road users.

## Road markings

Research shows that road markings which are 'kept to standard' have the potential to greatly reduce the amount of crashes, with the Australian Automobile Association estimating a reduction of up to 40 percent<sup>1</sup>.

For the contractors and consultants engaged in the application and maintenance of the markings, the primary challenge to applying road markings which satisfy state regulations as well as the desired level of consistency are the time constraints, which are a nature of the business.

## Regulations & time challenges

Each state has guidelines for the application and maintenance of quality road marking systems. These guidelines dictate the requirements for the correct and consistent application of road markings.

Generally, these works must be completed at times that cause minimum disruption to the day-to-day traffic and road usage, and as such, the times allotted and deadlines to work within are short and strict.

One of the biggest hurdles for meeting these deadlines are the variables in colours, sizes and shapes that are an inevitable part of most road and parking lot contracts.

## Multiple colours

While the majority of road markings are white as standard, the use of other colours is a necessity for applications such as yellow for bus or tram lanes, blue for disability access and green for bike lanes, to name just a few.

The need for black paint is also prevalent, either to cover existing markings, or to heighten contrast where a light coloured pavement does not allow adequate line definition to be obtained<sup>2</sup>.

Using multiple colours on a project requires multiple passes as well as the need to change paints, increasing pressure on already strict deadlines.

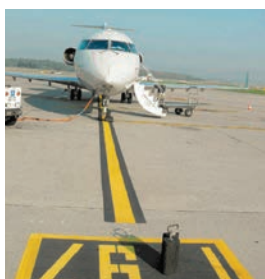
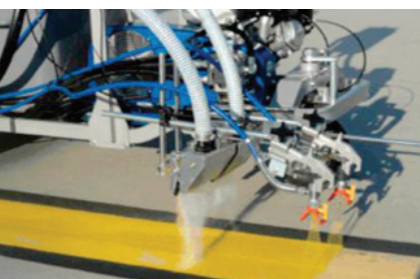
## Wide lines

Traditionally, wide lines markings such as pedestrian crossings or runway markings, which can be 600 to 900mm wide<sup>3</sup> require multiple passes to reach the desired width. These lines can take up to five times as long as regular linear markings.

## Repairing existing lines

Repairing existing lines requires the removal of existing lines before adding new colours.

This can require multiple operations for the removal of the old line (which requires multiple machines) and then the lay down of the new line.



"...the primary challenge to applying road markings which satisfy state regulations as well as the desired level of consistency are the time constraints..."





## Airport markings

Airport markings are crucial to navigation and safety around an airport during landing, taxiing, and take-off. Runway incursions (when an unauthorised aircraft, vehicle or person is on a runway) are one of the most significant risks to aircraft operators<sup>4</sup>, and the consistency and visibility of markings, especially during night and reduced visibility conditions, are imperative to safety.

Australian Civil Aviation Safety Regulations dictate markings must be clearly visible against the background upon which they are placed, and on a surface of light colour, a contrasting black surround must be provided: on a black surface, a contrasting white surround must be provided<sup>5</sup>.

## Graco

Graco offers a complete range of professional line striping equipment. The Graco LineLazer IV 250DC, Dual Color Striper, has specifically been developed to address the unique challenges of the more complicated road marking contracts involving wide lines and multiple colours, commonly found at Airports for example.

The key feature of the Graco LineLazer 250DC are the dual hopper and dual pump system, which allow for the simultaneous application of dual colours. Multiple guns greatly increase performance and efficiency of the spraying application, allowing contractors to complete jobs with quality, consistency and within deadlines.

## Multiple spray guns allow road marking contractors to:

- Spray two colours simultaneously (add contrasting borders)
- Lay black or white to cover existing line and then lay the new colour over the top at the same time.
- Create wide lines in one pass

**The use of multiple guns & multiple colours can make road marking application up to five times faster than traditional single gun machines.**

Graco have developed a range of road and airport line marking solutions to address these common issues faced by road marking contractors for adhering to state regulations for while executing within time constraints.



*Since 1926, Graco has been a leading provider of premium pumps and spray equipment for fluid handling in the construction, manufacturing, processing and maintenance industries. With a focus on highly-engineered, quality products, industry-leading innovation and the solid partnerships formed with customers and suppliers around the world, Graco provide unparalleled service and performance in its field.*



## REFERENCES

- <sup>1</sup> <http://acrs.org.au/wp-content/uploads/Thurston.pdf>
- <sup>2</sup> <http://www.tmr.qld.gov.au/~/-/media/busind/techstdpubs/Guidepavementmark/GuidePavementMarkingsJune2013PartB.pdf>
- <sup>3</sup> <http://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Guide-to-pavement-markings.aspx>
- <sup>4</sup> [http://www.airservicesaustralia.com/wp-content/uploads/Pilots\\_Guide\\_to\\_Runway\\_Safety.pdf](http://www.airservicesaustralia.com/wp-content/uploads/Pilots_Guide_to_Runway_Safety.pdf)
- <sup>5</sup> [https://www.comlaw.gov.au/Details/F2013C00998/Html/Volume\\_1#\\_Toc37157762](https://www.comlaw.gov.au/Details/F2013C00998/Html/Volume_1#_Toc37157762)



# Less 'Bang' for our Buck!



*The main purpose of the Boylan Group is to save lives, It's what owner and managing director Peter Boylan and the Boylan Team strive for, and it lends to a creative environment where we not only assess the needs of our industry from the front line, the operational dynamics of our industry, but we use them as a base to develop practical and affordable technologies that can assist in a layered approach to road and workzone safety.*

As Peter says "if we are not embracing every opportunity to save lives, we are costing lives"

Our view is that we need to be realistic in our expectations of all new technologies, their attributes, their practicality and their affordability.

And that leads me on to the topics of Autonomous Vehicles (AVs) and Cooperative Intelligent Transport Systems (CITS'). Until we can develop a computer that is sentient, in a no

win situation, one that can choose between killing an errant child or the occupants of the vehicle, until we improve pavement condition data collection and until an AV can negotiate its way, safely through a roadworks site, then AVs deployment potential is limited to the most controlled of environments.

For CITS', fleet attrition is around 4%, which means that it would take at least two and a half decades to transition the current fleet in use on our roads to CITS' enabled vehicles. This is of course also ignoring my 300,000 motor enthusiasts and my 66 GT Mustang (we will not give up our vehicles lightly), the \$11bn dollar Australian automotive aftermarket sector and the 30,000 jobs we support. So we will have drivers in cars for potentially a long time to come

Yes, let's reach for the stars with CITS' and AVs but keep our feet on the ground. With the equivalent of three airliners crashing and killing all on board in Australia every year we need solutions now not in 25 -30 years, and we need to target the disparity between Regional and Rural.

If 90% of accidents involve human error and it appears that it will take three decades, if ever to negate that factor, then we need to innovate solutions that will effect positive behavioral change in a cost effective manner.

Technologies that target additional senses other than just static signage, which is reaching saturation points.

Technologies such as Radio Overbroadcast, that reaches into the vehicle speaking directly to the driver. Scientists such

"...Radio Overbroadcast, that reaches into the vehicle speaking directly to the driver...six times the positive behavioural impact of signage..."



as Wogalter have calculated that this has six times the positive behavioural impact of signage alone. Temporary rumble strips and line-marking to provide a tactile signal that there is a change of condition approaching, colour coding of permanent safe zones such as level-crossings and schoolzones.

Photoluminescent linemarking stores the energy of the sun, then glows at night. This can increase the event horizon beyond that of headlights, a particularly useful property for regional roads with no street lighting.

Interactive variable speed signage that tugs at the conscience. Testing showed that

78% of vehicles were speeding through a schoolzone during operational hours, including one at 106kmh. With speedcheck signage in place, those numbers were drastically reduced.

A layered approach to workzone safety that provides sufficient warning to personnel of approaching danger such as, UHF ear protectors for all workers on site, workzone radar, laser perimeter protection, workzone Wili, drones, license cameras, name and shame; these are all currently available technologies.

Development of these technologies is time consuming and expensive with returns uncertain owing to a lack of

implementation pathways and opportunities. How about a tender based solution to encourage safety innovation, one where a sum of money is sequestered based on the anticipated value of the project and where each tenderer outlines what safety initiatives they will employ to that value.

In these budget constrained times it really is about preventing as many accidents as possible with the least financial outlay, or, if you like 'Less bang for our Buck'.

I am a proponent of CITS' and AVs, and we can learn much from the research, but, they are not going to prove statistically influential in the next few years.



### Boylan Group Head Office

198 Power Street, Glendenning, NSW 2761

E [info@boylan.net.au](mailto:info@boylan.net.au)



Call us on 1300 500 055

# A minute with our members



## A minute with "Central Linemarking P/L"

**NAME:**

Rob Burns

**POSITION HELD:**

Managing Director at Central Linemarking Pty Ltd

**NICK NAME:**

Bomber

**BRIEF WORK HISTORY & HOW YOU GOT INVOLVED IN THE ROADMARKING INDUSTRY:**

I started my career in the road construction industry about 18 years ago when I was employed in the area of Traffic Management and Civil Construction both in Bendigo and in

Melbourne. Whilst still working for a traffic management company in Bendigo I was offered the chance to manage a new line marking business by the same operators. I'm always eager to learn something new so jumped at the opportunity. A couple of years into managing Central Linemarking the owners invited me to become a part owner and subsequently I took up their offer.

**FAVOURITE FOOD:**

BBQ Shapes (Original Version!!)

**PETS:**

16 year old ginger cat and two 6 year old cavoodles.

**FAVOURITE TV SHOW:**

Married With Children.

**FAVOURITE MOVIE:**

Shawshank Redemption.

**FAVOURITE BOOK:**

I don't really enjoy reading books but like to read cycling and motorbike magazines.

**WHAT TYPE OF CAR DO YOU DRIVE?**

Mazda BT50 Ute.

**IDEAL HOLIDAY:**

Sunshine Coast and Rainbow Beach, Q.L.D.

**FAVOURITE SPORT:**

Cycling.

**DREAM JOB:**

Surfer.



## A minute with "Killarney Linemarking Services P/L"

**NAME:**

Peter Turner

**POSITION HELD:**

Owner

**NICK NAME:**

None

**BRIEF WORK HISTORY & HOW YOU GOT INVOLVED IN THE ROADMARKING INDUSTRY:**

Automotive Engineer trade, Took a job with Frank Cooney of Linemarking Services in 1980 moved to the Central

Coast 1983 started Killarney Linemarking Service.

**FAVOURITE FOOD:**

Anything the boss cooks.

**PETS:**

Dog.

**FAVOURITE TV SHOW:**

Moto GP.

**FAVOURITE MOVIE:**

None.

**FAVOURITE BOOK:**

None.

**WHAT TYPE OF CAR DO YOU DRIVE?**

Holden Caprice.

**IDEAL HOLIDAY:**

Fishing Swain Reefs or anywhere with the boss.

**FAVOURITE SPORT:**

Rugby league.

**DREAM JOB:**

Linemarker.

# ARS

A1 Reversing Systems

## PUTTING THE BRAKES

ON REVERSING ACCIDENTS

The state-of-the-art Reverse Smart AEB system has been specifically designed to reduce the incidents of large vehicles or mobile plant impacting workers or objects while reversing.

By providing an additional level of protection, including an engineering control that can stop the vehicle by automatically applying the brakes, the Reverse Smart system can significantly reduce the risk of impacts, injuries and workplace fatalities.



**Step 1:** Object detected while reversing. **Step 2:** Vehicle continues to reverse towards object. **Step 3:** Reverse Smart AEB system automatically applies the brakes and stops the vehicle.

For further information, or to arrange a demonstration, please visit:

[www.a1reversingsystems.com.au](http://www.a1reversingsystems.com.au)

or contact Davin Hamnett Ph: 0419 177 199

or A1 Reversing Systems Pty Ltd Ph: 03 9765 9444

## REVERSE "SMART"

See the video of the Reverse Smart AEB in action:  
[www.reversesmart.com.au/how-does-it-work](http://www.reversesmart.com.au/how-does-it-work)





RetroGrip MMAX - Transverse / TyreGrip MMAX – High Friction / Retro MM



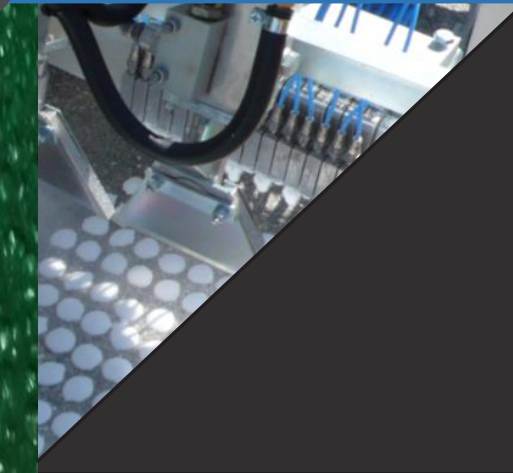
# DISCOVER NEW POSSIBILITIES



The future of durable long life road markings has arrived. By combining state-of-the-art methyl methacrylate resins (MMA), best in class equipment and detailed system specifications Ennis-Flint are taking Cold Applied Plastic road markings to a whole new level. Call your Ennis-Flint representative to find out how you can discover new possibilities.



Max - Flat Line / CycleGrip MMAx / Profile MMAx – SpotFlex / Grip MMAx / Profile MMAx – ATLM



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08/2016



ROAD MARKING SYSTEMS

# HOFMANN Roadmarking Technology



## HOFMANN. Benchmark in ...

### Quality

We always strive to give you the very best! And that is what we do: for over 60 years, HOFMANN marking technology has delivered top quality „Made in Germany“.

### Innovation

Research and development are the lifeblood of our company and have a significant impact on road markings around the world. We offer state-of-the-art technology and the comprehensive expertise that you need for your project.

### Product Variety

Extensive and future-proof – these are the attributes of our product range. Combined with our flexibility, we offer you the perfect solution to suit your needs.

### Services

No matter where you are: we are there for you and your project! Our geographical presence in over 150 countries plus the lasting availability of spare parts and machine expertise are guaranteed – now and in the future.

### Consulting

Since 1952, we have not only been manufacturers with a high level of technological competence and experience, but also your global consultant for road markings! Make the most of our potential and contact us with your questions!

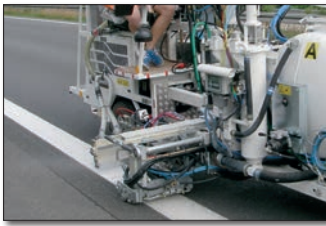


## HOFMANN Road Marking Systems: Makes it easy to get the best marking!

### 2-component cold plastic agglomerate markings 98:2

#### Scattering drum system    Spotflex® system

Stochastic agglomerate markings with 2-component cold plastic, mixing ratio 98:2 applied with ...



... bellow pump system (path-dependent)



- Application of whole container filling **without intermediate flushing** of the corresponding systems (bellow pump, extruder and pressurised container) thus longer stops can be avoided

- **Exact** compliance of **mixing ratio**, therefore mixing as a matter of trial and error is eliminated

- Marking speeds up to **10 km/h\*** can be achieved

- Suitable for the application of highly abrasive mediums and solid matters with a size of **up to Ø 2,5 mm** (bellow pump and pressurised co

- Due to the optimum drainage the **peaks of the stochastic marking** remains reachable for headlights and will reflect even during heavy rainfall

- This system is also suitable for applying roadmarkings combined with a **noise effect** (depending on the height of dots) when crossing the road-marking

- At the customer's request **large and small dots** as well as **different raster** (distance between the rows) with open or closed edge can be applied

- Marking system for agglomerate markings, which efficiently applies **structure markings** respectively **defined profile markings** (Spotflex®) on the road in order to increase night visibility during rain and wet conditions

- These **structure** respectively **profiled** markings can be renewed (re-marked) or can be applied on already existing roadmarkings in case a plain effect is requested during daylight and reduced inspection distance

- Acoustic **warning signal** in case of lack of hardener

- Due to **high application speeds** and **short flushing periods** obstruction to traffic can be reduced

- Using the bellow pump system **double lines** and **line combinations** in one single marking operation are possible. Using the pressurised container system double lines are also possible, however line combinations only restricted [refer to Hofmann Info N° 396]

- Fulfillment of regulations is ensured with regard to **automatic compliance** of adjusted **line thickness/material quantity**

- Using the **AMAKOS®** method of operation is possible

\* (dependent on material and equipment, continuous line, line width 12 cm)

- Application of whole container filling **without intermediate flushing** of the system thus longer stops can be avoided

- **Exact** compliance of **mixing ratio**, therefore mixing as a matter of trial and error is eliminated

- Marking speeds up to **6 km/h\*** can be achieved

- Suitable for the application of highly abrasive mediums and solid matters with a size of **up to Ø 2,5 mm**

- Due to the optimum drainage the individual **dots having a height of 3 – 5 mm** remain accessible for headlights and will reflect even during heavy rainfall

- This system is also suitable for applying roadmarkings combined with a **noise effect** (depending on the height of dots) when crossing the road-marking

- At the customer's request **large and small dots** as well as **different raster** (distance between the rows) with open or closed edge can be applied

Defined agglomerate markings with 2-component cold plastic, mixing ratio 98:2 applied with ...

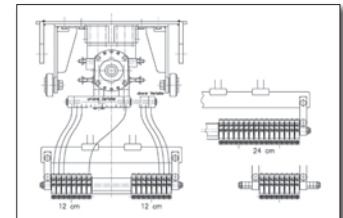
... bellow pump system (path-dependent)



Air pulsed method - Spotflex®



Functional principle



- Modular build of spray bar
- Nozzles and nozzle holder can be attached variably, therefore line width and line distance can be determined by yourself
- Very efficient system by reason of the quick exchange of nozzles



- 90° cross profiled markings up to 16 mm height (depending on material) with and without chamfered edges

The following applications are possible:

- Profiles on base line, possible as continuous line and line-gap combinations
- Profiles without base line



The **only** convention of its type in Australia

**CROWN PERTH, 8-10 NOVEMBER 2016**



## PARKING AUSTRALIA CONVENTION & EXHIBITION 2016

### What's ON @ PACE 2016?

- 20+ speakers
- 50+ exhibitors
- 2 full days of conferencing
- Gala Awards Dinner
- ADVI parking forum
- Perth Airport site visit
- Networking drinks
- 150+ expected delegates

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**RACHEL SMITH**

Hailed as one of Australia's brightest thinkers on the perpetual challenge of urban planning by News Limited and the author of *'Decongestion - 7 steps for mayors and other city leaders to cut traffic congestion without the expense of new roads or annoyed residents'*.



**KIERAN FITSALL**

At London's Westminster City Council Kieran has transformed the council's approach to parking, including the introduction of Smart Parking sensor-based street parking management, the development of the ParkRight parking app and the transformation of Civil Enforcement Officers into 'Marshals'.



**VANESSA SOLESBEE**

Vanessa serves on parking expert advisory panels across the US and led a complete transformation of the municipal parking system in Cedar Rapids, Iowa, including installation of new parking meter technology, system-wide rebranding and financial reform.

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# Fresh ideas for your creative communication

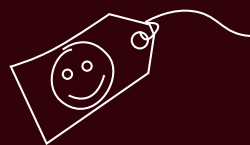
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# Mobile Data Surveys for Rooding Network Asset Management

\* Asset management is a systematic process of deploying, operating, maintaining, upgrading or renewing and disposing of assets cost-effectively.

The term is most commonly used in the financial world to describe people and companies that manage investments on behalf of others. (Wikipedia)

## Protecting our Human Assets

One of our greatest assets is the staff we utilise to achieve our outcomes.

To this end, the use of Mobile Data collection is a great opportunity to protect our personnel from the ever present hazards of traffic while undertaking assessments.

While eliminating risks to staff, Mobile Data collection at normal road speeds, has the advantage of completing tasks in a timely and economic manner, which adds efficiency to Asset management.

## Condition Rating NOC (visual assessment) vs Mobile Data Survey

Some people might say there is a fundamental difference in approach to condition rating between visual human assessment (NOC) and automated mobile data collection.

In fact, there is no difference at all. All that a mobile data collection survey does, is to interpret an assessment into a language (numbers) that can be understood by humans, be they the manufacturer, ASNZD standards committee board, auditor, assets manager or installer.

Instead of having subjective condition rating system heavily dependent on human judgment, experience and expertise we can create a robust condition rating collection system which will help us understand each other better.

Roaddata Pty Ltd is actively engaged in the provision of a cohesive and integrated data collection services that provides the asset manager with the right tools and information to operate efficiently and effectively while also making cost savings.

## A robust database gives rise to the following benefits

- Accurate, short and long term forecasting.
- Deterioration modelling
- Realistic levels of service
- Simulation models for strategic planning

*Right time - Right place - Right treatment*

## A robust database also means cost effective asset management

- Assets ID
- Location
- Age
- Material Specification.
- Condition/s.

## Signs and Line Marking assets

Since signs and line marking (and other delineation assets) have short life cycle compare to other assets, their annual maintenance and renewal budgets are very close or sometimes even higher then more strategically important assets (pavement, structures, drainage).

By collecting real condition values, understanding trends and

implementing effective data collection processes, conscious decisions towards more proactive and cost effective management of the asset is possible.

*Roaddata continues to develop its resources in Mobile Asset data collection and has the current capabilities.*

## Retroreflectivity measuring

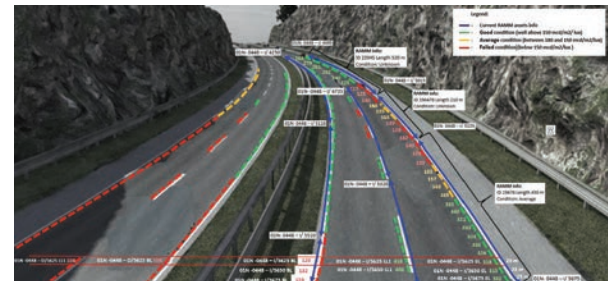
- Line marking retroreflectivity to EN 1436
- Signs retro reflectivity to ASTM E 1709
- Signs inventory including sign size, location
- Signs Measured as seen from drivers perspective
- 360 degree panoramic photography
- LiDAR data collection

## Asset Condition Rating

- Road roughness
- Road profiling
- 3D Laser camera for profiling and crack detection 4m width

## Amalgamated Data Display

- Multiple data sources can be collected, analysed and displayed on one Web based platform.



MOBILE DATA COLLECTION VS VISUAL CONDITION RATING

## One asset manager's perspective:

"We believe that by collecting real condition value and understanding trends and implementing process which were mentioned today, we can start making conscious decisions towards more proactive and cost effective management of the assets."

Olexiy Kurlov –AMA traffic assets manger. (Auckland Motorway Alliance)



CRACK ASSESSMENT TOOL

Roaddata thanks Mr Olexiy Kulov of the AMA for the use of material that is reproduced here.

# Are you heading in the right direction?



**Roaddata are specialists in collecting the data that you need to manage your roading network efficiently and effectively.**

Today's roading asset managers are tasked with managing and delivering cost effective solutions that can only be devised from the evaluation of a Database containing both historic and current data, along with asset management and Analysis Modeling & Integration.



Question .....	Yes ...	No
Do your network roadmarkings meet required standards? .....	<input type="radio"/>	<input type="radio"/>
Does your data base allow deterioration modeling? .....	<input type="radio"/>	<input type="radio"/>
Is your data GIS integrated, with pictorial and numeric data? .....	<input type="radio"/>	<input type="radio"/>
Is your current roadmarking data base reliable? .....	<input type="radio"/>	<input type="radio"/>
Is your road signage asset base accurate and GIS integrated? .....	<input type="radio"/>	<input type="radio"/>
Do all your road signs meet required performance standards? .....	<input type="radio"/>	<input type="radio"/>
Do you know the precise location of all of your road signage? .....	<input type="radio"/>	<input type="radio"/>
Do you have pictorial and numeric data for your road signage? .....	<input type="radio"/>	<input type="radio"/>
Do you have actual readings as opposed to visual ratings? .....	<input type="radio"/>	<input type="radio"/>
Does your current signs data indicate what "the Driver" sees? .....	<input type="radio"/>	<input type="radio"/>
Is your road furniture comprehensively listed and GIS Integrated? .....	<input type="radio"/>	<input type="radio"/>
Do you have 360 degree photographic information on your assets? .....	<input type="radio"/>	<input type="radio"/>
Do you have 3D LiDAR point clouds for future data extraction? .....	<input type="radio"/>	<input type="radio"/>
Do you have an integrated Pavement Assessment System? .....	<input type="radio"/>	<input type="radio"/>
Do you have all your data stored in one place? .....	<input type="radio"/>	<input type="radio"/>
Do you have one data platform you can share? .....	<input type="radio"/>	<input type="radio"/>

**If you have ticked any of the boxes above, you need to talk to Roaddata today.**

Roaddata Pty Ltd is an Australian based company with International Accreditation in Inspection Services. The IANZ (International Accreditation New Zealand) accreditation is recognized by NATA (National Association of Testing Services) Australia.

**Contact Roaddata today by calling Free phone 1800 81 61 83  
or E-mail - [urban@roaddata.co.nz](mailto:urban@roaddata.co.nz)**

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