

Category 1: Work Health and Safety

Reverse Smart Technology – Portable Application

Andrew Schutt, Project Manager
Downer EDI Works



2022 AustStab Awards of Excellence

Proudly sponsored by **CATERPILLAR[®]**



Reverse Smart Technology – Portable Application

- Reversing Plant and Equipment is a critical risk for Downer with a high potential for injury and asset damage from unexpected collisions. Operators of rollers need to be focused on their work activities, on verges, rolling patterns and from rollover. Although this is critical it does mean operators have limited ability to review their reverse path for hazards.



Proudly sponsored by **CATERPILLAR®**

Initiative to Design

- Whilst there have been engineering controls developed to prevent reversing accidents, these devices have not yet been widely adopted by manufacturers, nor have they been introduced as a standard accessory or aftermarket option by plant suppliers or hire companies.
- To mitigate this risk Downer Road Services Team took on the initiative and created the concept of a portable standalone reverse smart system that can move between pieces of plant quickly and easily.



Proudly sponsored by **CATERPILLAR®**

Design Idea to Implementation

- The portable unit would have a sensor and set off an audible alarm to alert the plant operator if there is a worker or object within the vicinity.
- The Road Services Team at Downer chose reversing safety company Reverse Smart to develop the concept further. Downer and Reverse Smart worked together on the development of a portable rear sensing radar system with an audible warning that gives the operator time to stop the vehicle, preventing an incident or injury. Together the team came up with Reverse Smart – A1RS Portable Alerter System.



Proudly sponsored by **CATERPILLAR**[®]

Implementation to Practical Application

- Development occurred over a period of months, the solution had to be easily used, packaged, transported, carried, installed, tuned, operated, and powered on-site in a wide range of plant and equipment. It took numerous trials to achieve this simplicity and operability.



Proudly sponsored by **CATERPILLAR**[®]

Ongoing use and Industry Encouragement

- Downer have been utilizing this system for six months now on a wide variety of vehicle types with great operational success.



Proudly sponsored by **CATERPILLAR®**

Measure of Success

- Equipment with the Reverse Smart – A1RS Portable Alerter System installed have had no reverse plant collisions.
- This has led to a material reduction in reversing incidents in the Division and the success has meant Downer will invest further in this product.



Proudly sponsored by **CATERPILLAR®**