

# *Category 1: Work Health and Safety*

## Reverse Smart Technology – Portable Application

Andrew Schutt  
Downer EDI



## *2024 AustStab Awards of Excellence*

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# Vehicle & Mobile Plant

## *Our Community of Practice Journey*



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# Carriageway to Innovation



- Reversing Plant and Equipment is a critical risk having high potential for collision, asset damage and/or personnel injury. Operators must focus on work activities, rolling patterns and pathway of travel. In confined or challenging areas operators on occasion have limited visibility and ability to continuously monitor their travel-paths, specifically if reversing on Verges, around corners or confined areas.
- Whilst there are engineering controls in development phases, these devices have not yet been widely adopted by manufacturers. As an interim measure Downer have created a portable reverse smart system. The unit has a sensor which sets off an audible alarm to alert the plant operator if there is an object or more importantly a worker in the pathway of the operating plant.

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# Images of Installation & Operation



- Dower has adapted the technology to multiple plant with success measured in the reduced rate of incidents



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# Vehicle & Mobile Plant

*Our achievements, we have reviewed, consolidated and improved*

**249**

## Control Activities

105 Controls (60 Critical)  
93 Enablers (43 Critical)  
51 Verification (24 Critical)



## CoP

### Cross Collaboration

- Working at Height
- EWP
- Fitness for Work/Fatigue
- Electrical



## TDS Document Review

- Reviewed/consolidated multiple documents
- Collaborated with Plant & Equipment Team
- Agreement on ownership of information between Zero Harm and Plant & Equipment across multiple documents

### Reviewed pending release for implementation:

- 2 x Standards
- 3 x Work Instructions
- 3 x Guidelines
- 1 x Register
- 5 x Forms/Templates



## Critical Risk Verification Activity

### Data Sheets

- 17 key risk areas
- > 60 control activities
- > 450 questions



### CR/CC forms drafted/under review

- Operating Vehicle & Mobile Plant\*
- Traffic Management\*
- Loading/Unloading/Load Restraint\*
- \* all inc. Plant and People Interaction
- HVNL/CoR

## SWMS Review & Plan



172 current SWMS Documents

- 39 Risk Based\*
- 119 Activity Based\*
- 14 Archived

\* Assigned to CoP  
Developed a VMP SWMS Review Plan

## Training Tools

- Critical Risk Video Animation: Vehicle & Mobile Plant
- Driver Safety eLearning: Collaboration and support



## eLearn Modules

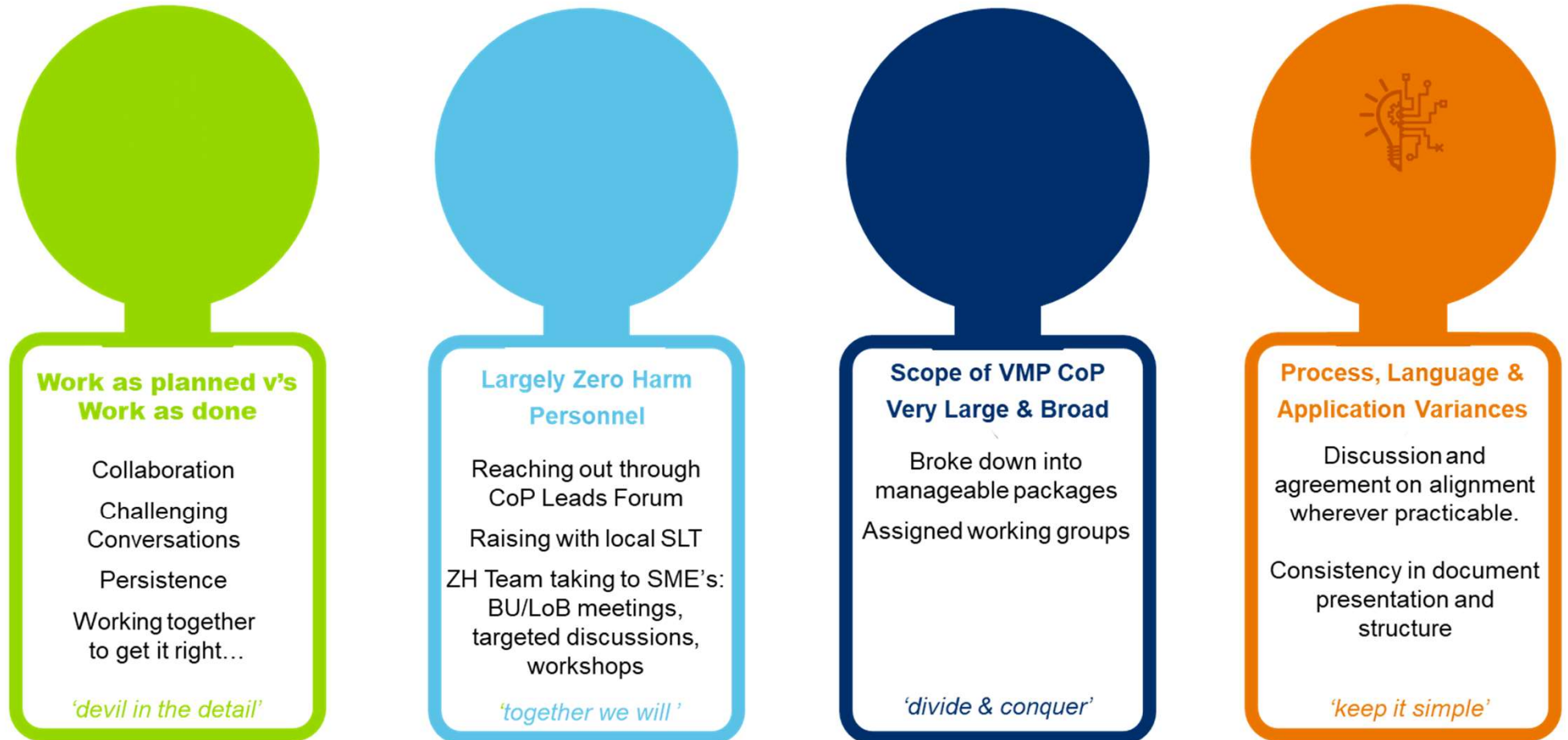
- HVNL/CoR: Multi module bases on Role within the CoR
- Operating vehicle and Mobile Plant
- Plant and People Interaction
- Spotter Training – Level 1



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# Vehicle & Mobile Plant

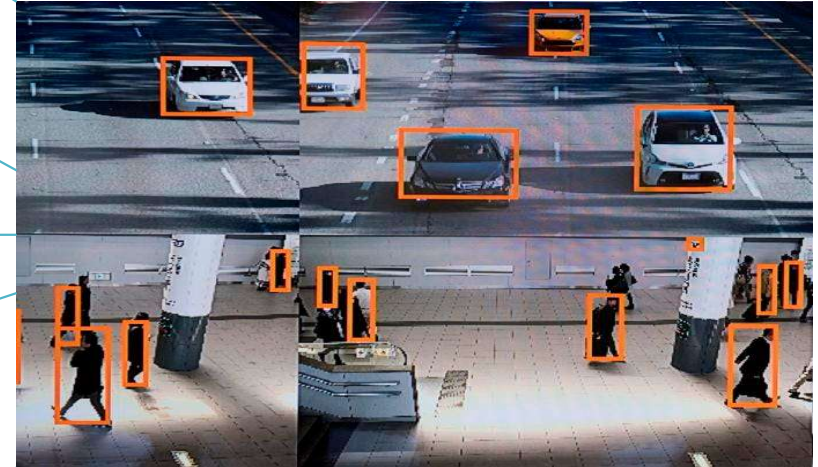
## CoP Process: Challenges & Solutions



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# Stretch Targets

- The reverse camera is currently under development as a potential engineering control with the adaption or inclusion of AI to perform an identification of persons or structure or obstacle and a controlled 'slow down' operation should an object be identified within the traversing pathway of the moving plant.
- Note: (this is beyond the scope of this specific presentation).



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# Vehicle & Mobile Plant

*The Year Ahead: What's in store for FY24*

## TDS Review Continues

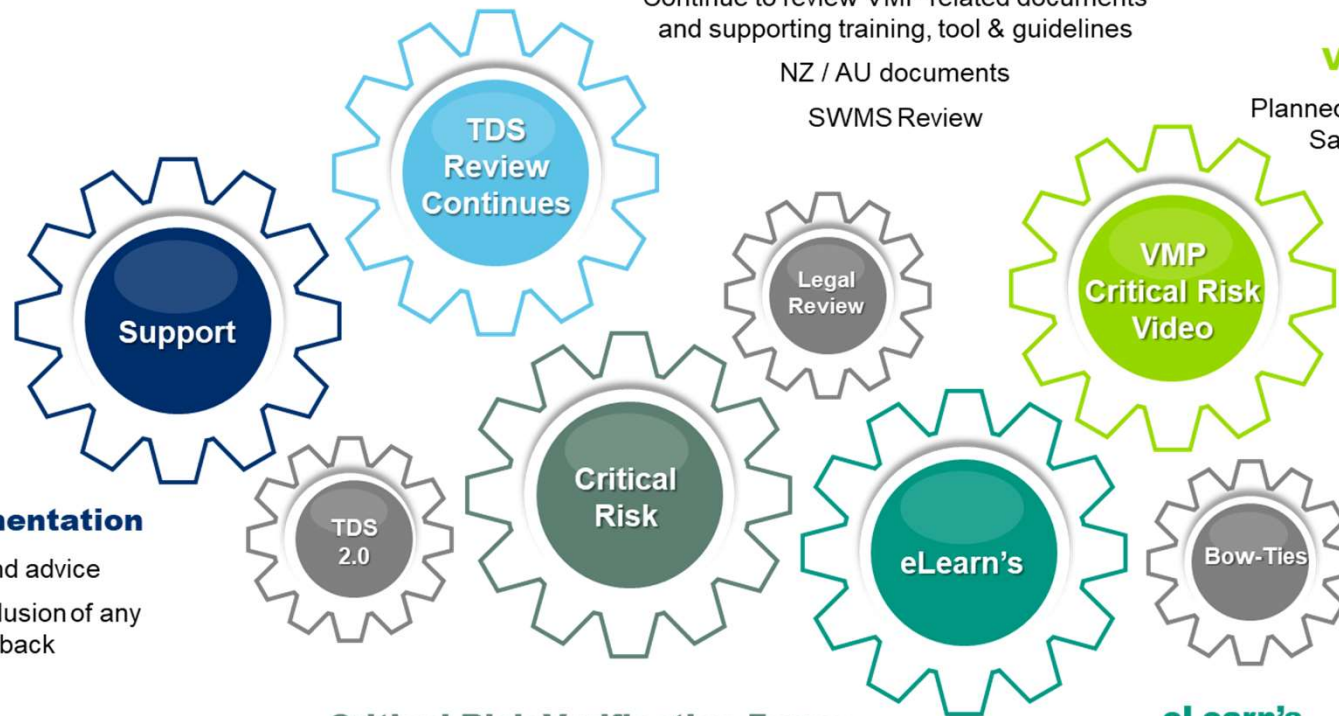
Continue to review VMP related documents and supporting training, tool & guidelines

NZ / AU documents

SWMS Review

## Video Release

Planned for October to align with Safe Work Month (AU)



## Support Implementation

Provide support and advice  
Consideration and inclusion of any additional feedback

## Critical Risk Verification Forms

Working with the end user in mind,  
'Test Drive' options  
Question: how can we improve

## eLearn's

Short and sharp, targeted audience,  
plant operators  
Consideration of further development  
needed for workers / front line personnel

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# Vehicle & Mobile Plant

## *Critical Risk Animation Videos*

Link to current Critical Risk Videos, presented on Vimeo

- Critical Risk – Introduction  
[www.vimeo.com/showcase/10630325/video/868531523](http://www.vimeo.com/showcase/10630325/video/868531523)
- Critical Risk - Vehicles & Mobile Plant  
[www.vimeo.com/showcase/10630325/video/861398577](http://www.vimeo.com/showcase/10630325/video/861398577)
- The Red Zone  
[www.vimeo.com/showcase/10630325/video/369785884](http://www.vimeo.com/showcase/10630325/video/369785884)
- Control the Roll  
[www.vimeo.com/showcase/10630325/video/420076009](http://www.vimeo.com/showcase/10630325/video/420076009)

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