The Zero Driving Fatalities Project

Improving the safety of a large government organisation’s fleet.

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Centre for Road Safety,
Transport for NSW
WHS Working Parties

• Working near or around utilities

• Working near mobile plant

• School crossing Supervisor drive-throughs

• Zero Driving Fatality

• Violence/harassment by members of the public

• Working near traffic

• Driver tester risks
Aims

• Define & benchmark the major driving related risks for RMS staff

• Recommend higher order controls for identified risks
Higher order of controls

The Hierarchy of Controls

- Elimination
- Substitution
- Isolation
- Engineer
- Administration
- PPE

Above the line

Controls
The Safe System Approach

SAFER TRAVEL

ADMITTANCE TO THE SYSTEM

SAFER SPEEDS
(Lower speeds more forgiving of human errors)

HUMAN TOLERANCE TO PHYSICAL FORCE

SAFER ROADS/ROADSIDES
(More forgiving of human error)

SAFER VEHICLES
(Alerting, reducing the severity of crashes)

EDUCATION AND INFORMATION
Supporting road users

LEGISLATION AND ENFORCEMENT OF ROAD RULES

SAFER TRAVEL

RESCUE AND EMERGENCY MEDICAL TREATMENT

ALERT AND COMPLIANT ROAD USERS

ALERT AND COMPLIANT ROAD USERS

NSW GOVERNMENT

Transport for NSW
“Safe” Impact Speeds (human tolerance to violence)

- Car/pedestrian: 20-30 km/h
- Car/motorcyclist: 20-30 km/h
- Car/tree or pole: 30-40 km/h
- Car/car (side-impact): 50 km/h
- Car/car (head-on): 70 km/h
Method

- Insurance claims – 1020 crashes in 3.5 years
- Crashlink – 97/1020 crashes in 3.5 years
- Ensafe – 994 incidents in 3.5 years - 175 crashes analysed
- Root Cause Analysis – 4 crashes from 2011
- Staff survey – 2,452 respondents
- Staff crash survey (2008 – 2011) – 47 staff
- Benchmark study
Facts & Figures

• 320 crashes per year
• $1.5 million in claim costs per year
• $4.6 million true costs per year
• 1 in 5 RMS drivers have had a crash at work
• Almost 1 in 3 crashes resulted in an injury
• 4 in 10 crashes were rear end collisions
• Driver fatigue followed by speeding were the major identified contributing factors
Facts & Figures

• 60% of crashes involved another vehicle
• 55% of crashes RMS was deemed at fault
• 43% of crashes involved a utility
• 21% of crashes involved a vehicle with a carrying capacity greater that 2 tonnes
• 58% occurred in a 50 or 60 km/h speed zone
• 17% occurred in a 100 or 110 km/h speed zone
Facts & Figures

- RMS drivers travel over 50 million km per year
- 1 in 3 surveyed drive an RMS vehicle daily
- 73% respondents drive to carry out inspections/visits
- 60% respondents drive to meetings
- 11% of drivers use a handset only whilst driving
- 34% of drivers are never monitored for accumulated fatigue by their supervisor
- 83% of drivers that crashed said RMS could not have done anything to prevent them crashing
Ensafe reporting

- Only 132 insurance claim incidents recorded in Ensafe
- 45% recorded as RMS driver not looking
- 62% of Ensafe reported incidents not investigated
- 96% recommended Administration Control
- 81% of Admin Controls = Toolbox talk
- Appears to be a lack of any investigation training
What did we learn from this almost fatal crash?

**Investigation Details**

- **Due Date**: 15/05/2011
- **Sequence of Events**: The investigation has commenced to determine how this accident occurred.
- **Immediate Cause**: MOP / External Factors
- **Description of Immediate Cause**: Lost control of vehicle after swerving to avoid colliding with a kangaroo that crossed the road in front of vehicle.

**List of Contributing Factors**

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<thead>
<tr>
<th>Action</th>
<th>Contributing Factor</th>
<th>Desc of Contributing Factor</th>
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<tbody>
<tr>
<td></td>
<td>MOP / External Factors</td>
<td>Uncontrolled wildlife crossing roadway.</td>
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**Just and Fair Consequence Management**

- **Behaviour**: [Edit]
- **Recommended Action**: [Edit]

**Specific actions to be completed**

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<thead>
<tr>
<th>Action</th>
<th>Additional Notes</th>
<th>Assigned To</th>
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<td></td>
<td>Discuss safe driving practices with</td>
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Major Recommendations

• Higher order controls where possible

• Safe Systems Approach
  – Safer vehicles & speeds
  – Safer people

• Improving management systems
  – Implementation team
  – Investigations
  – Data collection & analysis
Safer vehicles & speeds

• Vehicle selection
  – Reduce number of light commercials & replace with 5* ANCAP, 1,000 safety point passenger vehicles
  – Move to 4* ANCAP, 950 safety point commercial vehicles
  – All vehicles purchased should be fitted with reversing sensors
  – Purchase vehicles with forward collision warning from 2014 onwards
Safer vehicles & speeds

• Vehicle technology
  – Fit or make available sat phones, two way radios or satellite emergency beacons to vehicles travelling in poor mobile phone coverage areas.
  – Trial Intelligent Speed Adaptation
  – Trial aftermarket collision warning system in RMS vehicles identified as having a higher risk of crashing
Safer vehicles & speeds

• Vehicle technology
  – Trial the installation of driver fatigue detection technology and logging systems in high risk RMS vehicles.
  – Trial the installation of Automatic Crash Notification in high risk vehicles
  – Trial the use of ‘black box’ crash recorders in high risk vehicles to assist in investigations
  – Mandate the application of retro-reflective banding on all RMS commercial vehicles
Safer people

• Reduce the number of journeys and driving hours by:
  – increasing the usage of video conferencing and teleconferencing.
  – introducing the use of personal computer (PC) based web meetings & video conferencing for both internal & external meetings.
Safer people

• Conduct journey risk assessments for staff driving related travel, including an assessment of potential routes and their crash history and considering environmental and mobile phone coverage issues
Improving Governance & Management

- Establish an implementation team lead by RMS Network Management
- Establish an identified, appropriately skilled and resourced vehicle crash and incident investigation team
- Develop and maintain a central crash analysis system with the responsibility for recording, monitoring and disseminating information on crashes & near crashes
- Introduce an RMS state-wide electronic vehicle booking system (EVBS) for shared fleet vehicles
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Current Status

- The Working Party has presented their report to the RMS;
- The RMS has not yet accepted the recommendations. The RMS is considering the report recommendations, against cost, risk, benefit etc.;
- Recommendations were put to the RMS for acceptance or other (e.g. partial acceptance, rejection);
- Accepted recommendations will be managed as a series of risk based programs;
- RMS is actively sourcing a Program Manager to manage the program;
- The accepted recommendations, will be rolled up into the RMS WHS Plan (being drafted) to ensure that the accepted recommendations are systematically implemented.
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