ITS and Road Safety - Where to from here?

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Transport Accident Commission
Outline

- road safety context
- role of ITS in a “safe system”
- what are the current/emerging technologies?
- how do we identify priority systems?
- implementation plans
- where to from here?
"Safe system" approach gaining ground

**Road user**
- belted
- right speed!

In a "★★★★★" car

**Road and roadside**

On a "★★★★★" road

**Vehicle**

"★★★★★" person:
- belted
- right speed!
We design a “safe system” for three very good reasons:

- people make mistakes!
- we can withstand only so much force before we are seriously injured or killed!
- health and safety take precedence over other benefits
So what is ITS?
Role of ITS in a “Safe System”

- Prevent error (blind spot detector, FDW)
- Allow errors to be reversed (lane departure warning)
- Reduce the impact of error (CAPS)
- Reduce exposure to risk (smart licence)
- Reduce risk level (ISA)
Role of ITS in a “Safe System”

**Technology Role**
- prevent access
- provide warning/guidance
- exercise control/provide corrective action
- protect occupants/other road users
- reduce severity of trauma outcome

**Crash Sequence**
- Access to transport system
- Deviate from normal driving
- Critical situation
- Crash
- Post Crash
What are the current/emerging technologies?

- pedestrian protection
- lane departure warning
- ESC
- smart licence
- ISA
- active head restraints
- drowsiness detection
- night vision
- collision warning
- seatbelt reminder
- event data recording
- alcohol interlock
- following distance warning
- blind spot detection
- CAPS
- adaptive cruise control
How do we identify priority systems?

- trauma reduction potential
- technical availability
- regulatory/data requirements
- infrastructure demands
- growth model
- cost
- user acceptance
- business case
How do we identify priority systems?

Implementation Road Map: ESP

- **Technical availability**: given for all vehicles
- **Organisational / regulatory requirements**: none
- **Infrastructure requirements**: none
- **Other barriers**: cost
- **User acceptance**: high
- **Business case**: essential for customers, especially buyers of small cars
- **Verify safety benefits via accident data**
- **Improve customer business case by insurance and tax incentives**
- **Increase customer awareness with EuroNCAP and campaigns**

Electronic Stability Program (ESP) 2005

Melbourne, Nov 2005
How do we identify priority systems?

Electronic Stability Control

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<td>Very Low</td>
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- Red: Business as usual
- Blue: Implementation support

TRAFFIC ACCIDENT COMMISSION
Implementation Plan - ESC

Status: safety impact ●
    technical availability ●
    infrastructure ●
    cost ●
    penetration ●
    user acceptance ●

Next steps
- promotion
- partnerships
- incentives
- regulation (eg. U.S. initiative)
Implementation Plan - ISA

Status:
- safety impact
- technical availability
- infrastructure
- cost
- penetration
- user acceptance

Next steps
- national protocols/database
- retro-fit kits
- demonstration/promotion
- partnerships
## Implementation Plan – Alcohol Interlocks

### Status:
- Safety impact: Green
- Technical availability: Green
- Infrastructure: Green
- Cost: Yellow
- Penetration: Red
- User acceptance: Yellow

### Next steps
- Demonstration/promotion
- Partnerships
- Regulation (e.g., Swedish model)
Where to from here?

- national approach
- capitalise on international work
- most impactful ITS technologies agreed
- define the HMI protocols
- detailed implementation plans developed
- cross-jurisdictional
  - promotions/demonstrations
  - partnerships
  - incentives
  - advocacy for support regulations