Road Safety - Constraint & Collision Barriers

Geoff Boull - Australia
AUSTRALIAN BRIDGES
Road Safety – Bridge Barriers

**Bridge Barriers and Bridge Approach Barriers**
- Risk assessment
  - Accident statistics
  - Barrier performance levels
  - Identified risks
  - Costs

**Barrier Systems**
- Tested systems
- In-service performance
- Multiple functions – safely contain and redirect light and heavy vehicles
- Computer simulation
- Cost of full scale testing
- Rigid, semi-rigid and flexible systems
- Multi-level systems
MEDIUM PERFORMANCE LEVEL BRIDGE APPROACH BARRIER
Protection of Bridge Piers and other Structures
- Road vehicles
- Rail vehicles

Protection from Over-height Vehicles
- Robust bridges
- Secondary protection systems
- Advance over-height vehicle detection systems
  - Warning to road authority bridge engineers
  - VMS warning to drivers
  - Links to intelligent vehicle systems
PIER PROTECTION – ROAD & RAIL TRAFFIC
AUSTRALIAN BRIDGES
Impacts by Heavy Vehicles

Impact and Explosion

Direct Impact

Overheight vehicles

Ship Impact