Self-regulation through quality-assured telematics in Australia

Gavin Hill
General Manager
Transport Certification Australia

6 June 2018
About us

A national government body responsible for providing assurance in the use of telematics and related intelligent technologies
How do we provide assurance?

• Quality assure **providers of technology**

• Focus on **performance outcomes** and **innovative approaches**

• **Certify** and **type-approve** in-vehicle technologies

• A **common interoperable platform for reporting** – for government and industry
Productivity
Interoperability
Choice
Competition
Removes barriers to innovation
Reduces duplication effort and cost
Avoids potential market failures
Avoids potential regulatory failures
Getting it wrong has consequences

The promise of a ‘technology utopia’...

...could lead us to a technology ‘dystopia’
Getting it wrong has consequences
The regulatory environment

<table>
<thead>
<tr>
<th>National reform</th>
<th>Introduced</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Heavy Vehicle Accreditation Scheme (NHVAS)</td>
<td>1999</td>
<td>Quality systems with modules for heavy vehicle mass/loading, maintenance and fatigue</td>
</tr>
<tr>
<td>Chain of Responsibility (CoR)</td>
<td>2005</td>
<td>All parties in the supply chain need to manage compliance</td>
</tr>
<tr>
<td>Performance Based Standards (PBS)</td>
<td>2005</td>
<td>Allows innovative vehicle designs – on the right roads</td>
</tr>
<tr>
<td>Intelligent Access Program (IAP)</td>
<td>2008</td>
<td>Ensures the right truck is on the right road</td>
</tr>
<tr>
<td>National Telematics Framework/TARV (ISO15638)</td>
<td>2012</td>
<td>Allows innovative approaches to telematics to support different applications, with multiple levels of quality assurance</td>
</tr>
</tbody>
</table>
An international standard

In 2012 the National Telematics Framework was recognised internationally as an international standard

ISO15638: Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV)

One box, many uses (a platform approach!)
Getting the foundations right

• A focus **performance outcomes for technology, devices and services:**
  - Robustness
  - Accuracy
  - Reliability
  - Tamper evidence
  - Data storage
  - Security
Getting the foundations right

- A focus on the **business standing and quality systems** of technology providers:
  - Probity and financial assessments
  - Periodic and triggered audits
  - Management of conflicts of interest
A market of quality providers

- There is now a market of certified services and type-approved hardware...
  
  ...the transport industry has competition and choice

- Competition ‘improves the breed’, and reduces costs to end-users
The platform makes reporting easy.
**Platform reporting**

**Corrective actions**

<table>
<thead>
<tr>
<th>Route</th>
<th>Chart Type: Speed NCR Summary</th>
<th>NCR Type</th>
<th>Speed NCR Summary</th>
<th>Start Date</th>
<th>End Date</th>
<th>Speed Threshold</th>
<th>Speed Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC0000024996240</td>
<td>1GM610</td>
<td>XXXXXXXX</td>
<td>W00000000922</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>94.50</td>
</tr>
<tr>
<td>TC000002499693</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>93.90</td>
</tr>
<tr>
<td>TC000002499560</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>93.20</td>
</tr>
<tr>
<td>TC000002499561</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>93.20</td>
</tr>
<tr>
<td>TC000002499562</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>95.20</td>
</tr>
<tr>
<td>TC000002499563</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>94.80</td>
</tr>
<tr>
<td>TC000002499564</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>95.70</td>
</tr>
<tr>
<td>TC000002499565</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>95.10</td>
</tr>
<tr>
<td>TC000002499566</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>94.40</td>
</tr>
<tr>
<td>TC000002499567</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>93.00</td>
</tr>
<tr>
<td>TC000002499568</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>93.10</td>
</tr>
<tr>
<td>TC000002499569</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>93.00</td>
</tr>
<tr>
<td>TC000002499570</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>93.00</td>
</tr>
<tr>
<td>TC000002499571</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>93.00</td>
</tr>
<tr>
<td>TC000002499572</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>94.60</td>
</tr>
<tr>
<td>TC000002499573</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>96.60</td>
</tr>
<tr>
<td>TC000002499574</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>96.60</td>
</tr>
<tr>
<td>TC000002499575</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>96.60</td>
</tr>
<tr>
<td>TC000002499576</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>96.60</td>
</tr>
<tr>
<td>TC000002499577</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>94.40</td>
</tr>
<tr>
<td>TC000002499578</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>95.40</td>
</tr>
<tr>
<td>TC000002499579</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>94.40</td>
</tr>
<tr>
<td>TC000002499580</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>94.70</td>
</tr>
<tr>
<td>TC000002499581</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>94.70</td>
</tr>
<tr>
<td>TC000002499582</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>94.70</td>
</tr>
<tr>
<td>TC000002499583</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>94.70</td>
</tr>
<tr>
<td>TC000002499584</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>94.70</td>
</tr>
<tr>
<td>TC000002499585</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>94.70</td>
</tr>
<tr>
<td>TC000002499586</td>
<td>1EPH71</td>
<td>XXXXXXXX</td>
<td>W00000000712</td>
<td>21-06-2018</td>
<td>27-06-2018</td>
<td>93.00</td>
<td>94.70</td>
</tr>
</tbody>
</table>
Platform reporting
Mapping

NCR Map

Telematics Analytics Platform

tca
Transport Certification Australia

www.tca.gov.au
Moving forward…

Let’s learn from each other’s experiences

Let’s build a collaborative approach to best practice approaches to self-regulation in South Africa and Australia
Gavin Hill
P: +61 3 8601 4620
E: GavinH@tca.gov.au
Delivering reforms through quality assured telematics

Road managers and regulators have introduced productivity and safety reforms which enable:

• Road network access
• New vehicle types
• Increased mass

…while managing infrastructure and safety risks
Higher Productivity Freight Vehicles (HPFVs) – Victoria (73t Quad-Tri and 77.5t Quad-Quad B-Doubles)

• HPFVs were introduced in 2013, under the ‘Moving More With Less’ policy

• HPFVs are longer B-Double combinations (up to 30 metres) that:
  
  o Must be approved as a Performance Based Standards (PBS) vehicle
  
  o Must be monitored through the IAP for route and speed compliance (90km/h)
  
  o Must be fitted with TCA type-approved OBM Systems

Example #1
Example #1
Safety, Productivity and Environment and Construction Transport Scheme (SPECTS) – NSW

- SPECTS was introduced in 2016
- ‘General’ (unrestricted) access is available for vehicles operating at Higher Mass Limits (HML), subject to:
  - Being approved as a Performance Based Standards (PBS)
  - IAP monitoring for route and mass
- 140+ bridge restrictions have been removed (only 1 bridge restriction remains)
Example #3

Super Quad Road Trains – WA

- 60m in length
- Payload of 140 tonnes (198 tonne GCM)
- Operating access monitored by the IAP:
  - Defined routes
  - Maximum speed of 90km/h
  - Minimum headway of 200m
  - No overtaking
Example #3
Gavin Hill
P: +61 3 8601 4620
E: GavinH@tca.gov.au