

# Telematics Industry Group (TIG) meeting

Welcome!

# Opening remarks/ Overview of current and emerging developments

Chris Koniditsiotis  
Chief Executive Officer  
TCA

# About TCA



- A national government organisation
- Upholds national policy positions on ITS
- TCA's 'Members' are the road and transport agencies from across Australia (including the Commonwealth)





Department of  
**Transport**



# The National Telematics Framework



TCA administers the *National Telematics Framework* to:

- Provides a **central point of reference** for the deployment of telematics and related intelligent technologies in Australia
- Enables the **market** to develop and *deliver* optimal **technical, commercial and operational outcomes**
- Ensures **public purpose outcomes** are delivered through the use of telematics and related intelligent technologies by aligning policy and end-user intent

# The National Telematics Framework



- A **multi-application, multi-provider** service model
- **Performance and outcome based** specifications
- An independent, **national certifier** and auditor to ensure 'it works', and continues to work, as intended
- Underpinned by a strong, **deliberate separation between technology and policy use**
- **Defined roles and responsibilities** between users, regulators and technology providers (to minimise real or perceived conflicts of interest)

# The National Telematics Framework



- Australian transport ministers have endorsed the National Telematics Framework on a number of occasions
- The Framework became an international standard in 2012:

*ISO 15638: Framework for Collaborative Telematics Applications for Regulated Commercial Vehicles*

- This standard is application agnostic, and applies to connected and autonomous vehicles



# Current and emerging developments



- Intelligent Access Program (IAP)
- On-Board Mass (OBM) systems
- Type-approval of Telematics In-Vehicle Unit (IVU) and OBM systems
- Electronic Work Diary
- Taxi and hire car reforms
- Alcohol interlock reforms
- C-ITS – security and international harmonisation
- Traveller Information Service

# Importance of the TIG



- The TIG provides a consultative forum between TCA and the broader telematics industry on current and emerging issues of interest
- Interaction with TIG members is critical to ensure that the telematics sector is kept abreast of policy and operational developments being led by government...and to obtain feedback from the telematics sector to inform implementation activities
- *We encourage your input throughout today's meeting*

# Questions and comments



Chris Koniditsiotis  
Chief Executive Officer  
P: 03 8601 4683  
E: [chrisk@tca.gov.au](mailto:chrisk@tca.gov.au)

# Obtaining assurance through Telematics In-Vehicle Units (IVUs)

Paul Corkill  
General Manager Operations  
TCA

# Governments are using telematics to deliver outcomes



- **Heavy vehicle and freight management**

Intelligent Access Program (IAP)

Intelligent Speed Compliance (ISC)

On-Board Mass (OBM) systems



- **Safety**

NSW Mandatory Alcohol Interlock Program (MAIP)

WA Alcohol Interlock Program (AIP)

Intelligent Speed Management (ISM)



# Governments are using telematics to deliver outcomes

- **Buses**

School Bus Management - Tasmania

- **Taxis/Hire Cars/Ride Sharing**

Fare Device reform - Victoria

Taxi Safety Cameras - Queensland



# Functional and technical requirements



- Across all applications, there is a focus on core functional and technical requirements:
  - Physical Characteristics
  - Environmental Characteristics
  - Data Collection
  - Record Generation
  - Data Storage
  - Data Security
  - Data Transfer
  - Documentation

# Functional and technical requirements



- While these requirements are core requirements governments are looking for to support regulatory applications of telematics...

...they are also the features purchasers end-users of are looking for to obtain assurance in the use of telematics



# Functional and technical requirements



- The market is already leading the way
- Over **25,000** Telematics IVUs are already fitted to vehicles which are able meet TCA's core functional and technical requirements (as advised by IAP Service Providers)

# Better informed end-users



- End-users are demanding to meet their business needs, and to obtain commercial benefits
- There is an awareness of a trend by governments toward further adoption of regulatory telematics applications

# Type-approval of Telematics IVUs provides an entry point

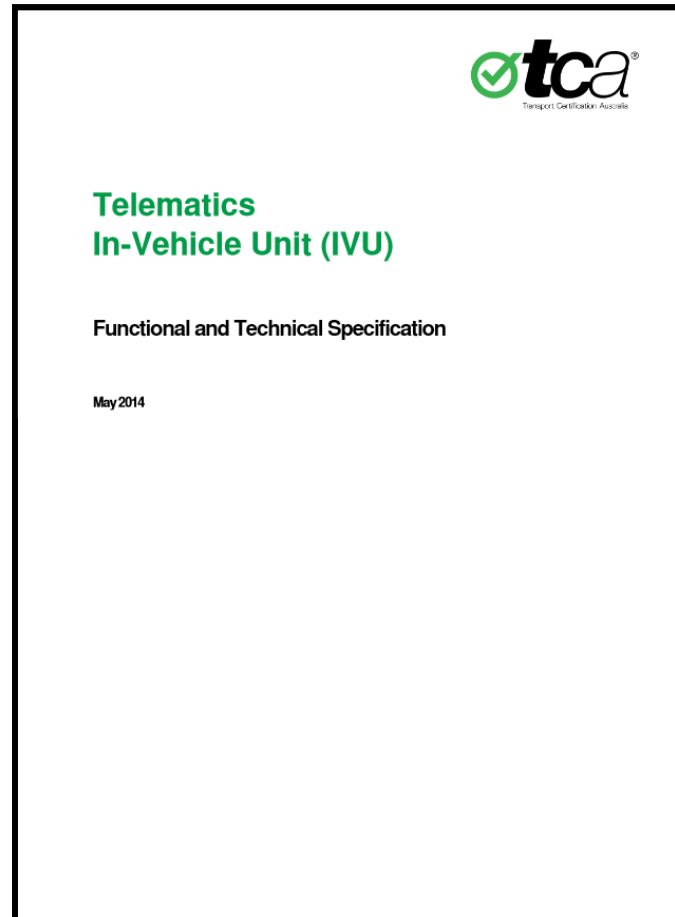


- Type-approval is offered by TCA for Telematics IVUs
- The functional and technical requirements of Telematics IVUs are common across all regulatory telematics applications
- Suppliers of type-approved Telematics IVUs receive a Certificate of Conformance from TCA – for every type-approved IVU supplied to end-users

## Further information

- The Specification is available on the TCA website, and from us here today:

<http://www.tca.gov.au/type-approvals/ivu-specification>



# Questions and comments



Paul Corkill

General Manager Operations

P: 03 8601 4675

E: [paulc@tca.gov.au](mailto:paulc@tca.gov.au)

# Electronic Work Diary (EWD)

Amber Fiske  
Senior Project Manager – EWD  
TCA

# A brief overview



- History
- EWD Phases
- Roles and Responsibilities
- Overview of the EWD operating environment
- What we know now
  - Certification
  - Specification
  - Back Office
- Presentation on the EWD from the NHVR

### 2008

- Fatigue legislation is enacted

### 2011:

- EWD Pilot commenced

### 2013:

- Ministers consider and endorse Pilot findings
- Roles of NHVR as regulatory framework owner and TCA as System Manager are approved
- High Level Project Management Plan Approved
- Draft EWD Specification released

### 2014:

- High Level Project Management Plan refreshed

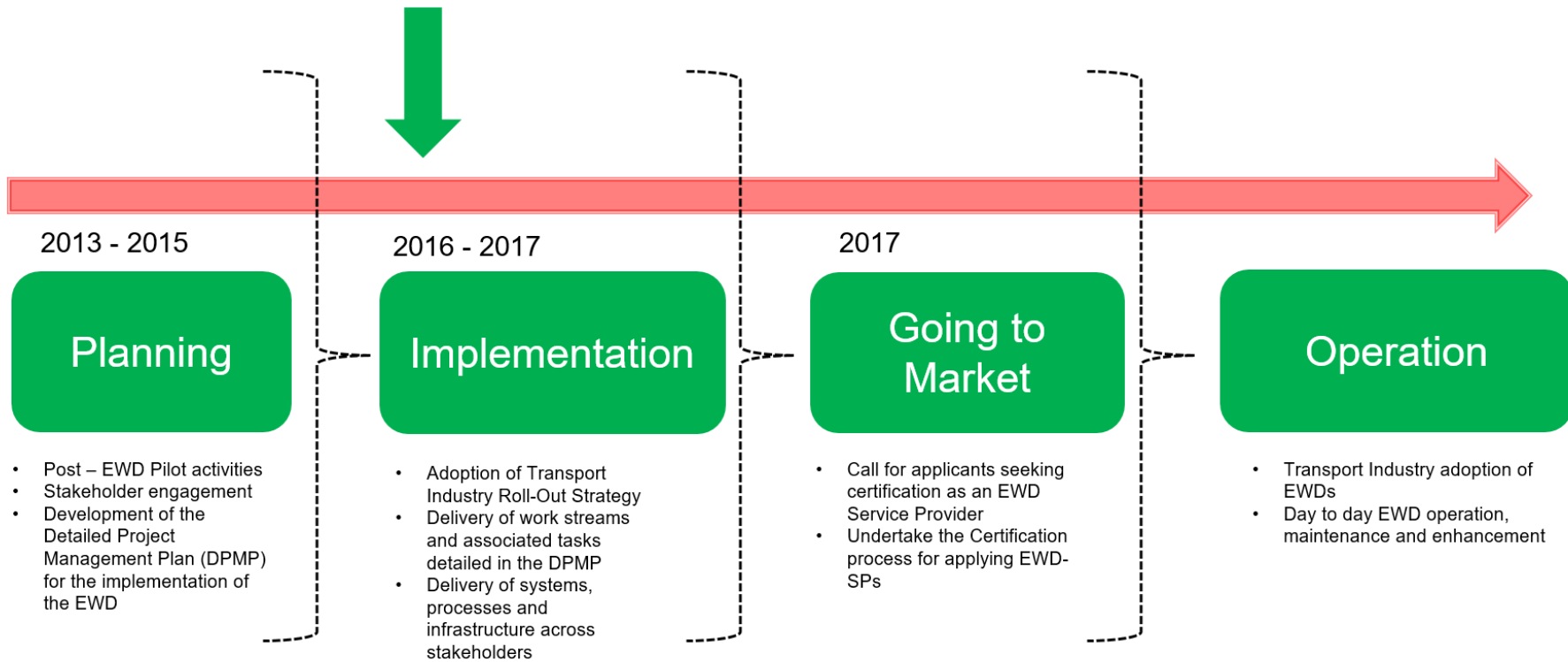
### 2015:

- Detailed Project Management Plan drafted
- Detailed Project Management Plan approved

1 MARCH 2016:  
IMPLEMENTATION  
COMMENCES



# EWD Phases



# Roles and responsibilities



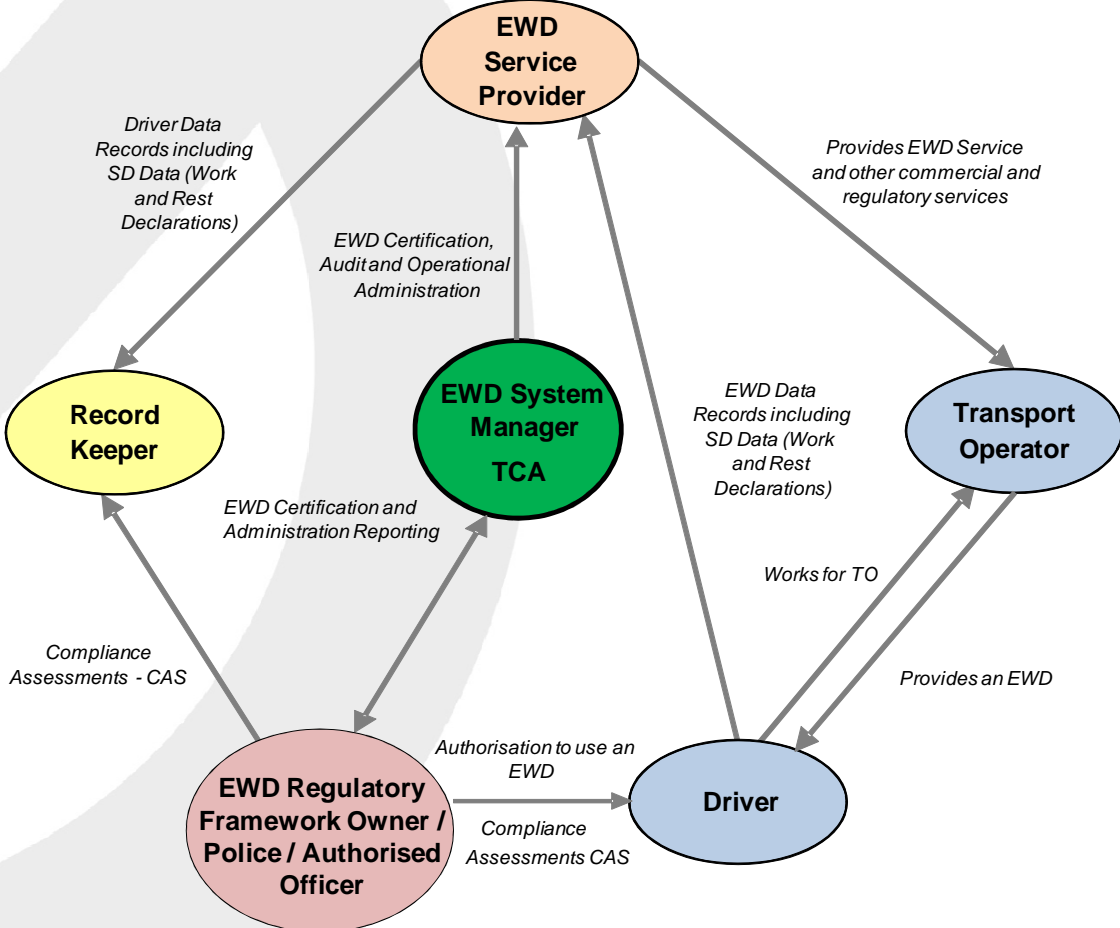
- The NHVR and TCA have specific roles and responsibilities for the EWD
- The NHVR is the EWD Regulatory Framework Owner under the Heavy Vehicle National Law (HVNL), and responsible for:
  - Operational policy settings, and the ongoing roll-out strategy for the transport industry
  - Operational policy consistency
  - Operational activities relating to Transport Operators and Drivers
  - Compliance and enforcement operational policy, and ongoing monitoring

# Roles and responsibilities

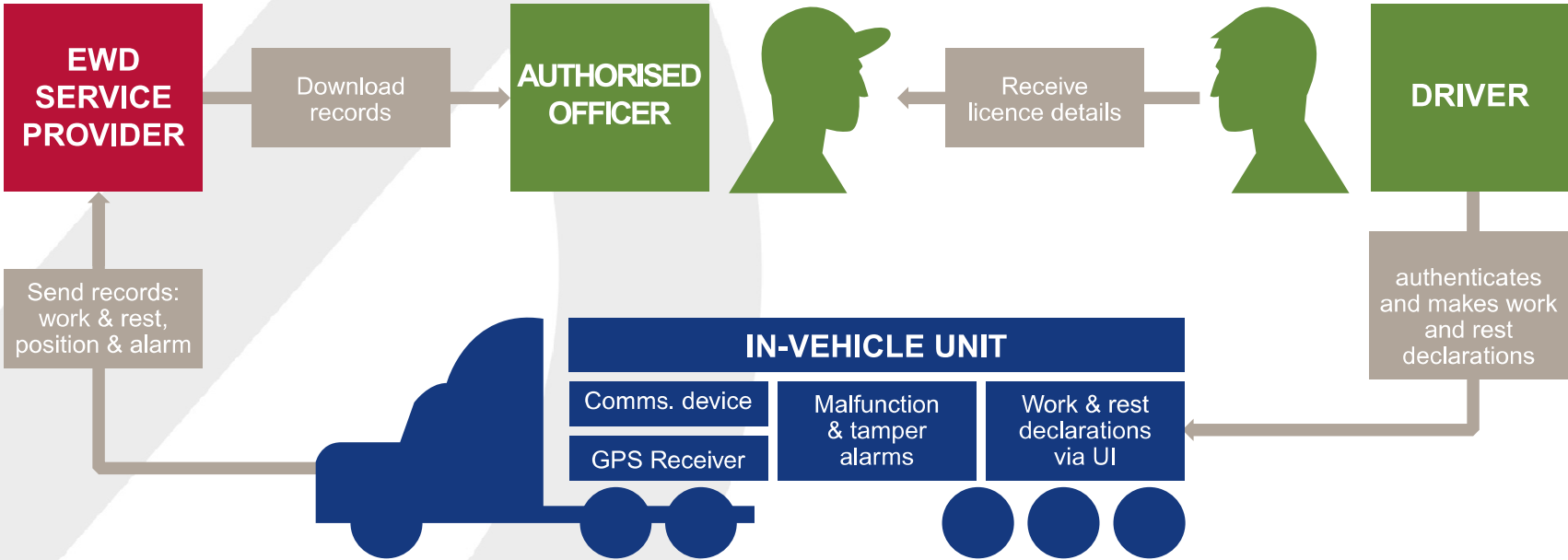


- TCA is the EWD System Manager, and is responsible for all aspects of the EWD which relate to the telematics sector, including:
  - The type-approval, certification and auditing of EWD Service Providers
  - Administering the technical and operational environment that interfaces with EWD Service Providers

# Roles and responsibilities



# Overview of the EWD



# EWD Functional and Technical Specification



- Draft EWD Functional and Technical Specification  
*Available on TCA Website*
- Updates are being made to the Specification to reflect the operational environment  
*In the next few weeks we'll be sending issues to TIG members for feedback*  
*Another TIG meeting will be held to work through these issues*
- The final EWD Functional and Technical Specification to reflect feedback from review  
*Early 2017*

# What we know now: Specification



- The functional and technical requirements for an EWD IVU are consistent with the Telematics IVU and IAP IVU
- The EWD Functional and Technical Specification will provide minimum requirements for the user interface, given it will also provide an interface for on road enforcement

# What we know now: Specification



- We are now focussing on the areas of the Specification that are informed by the operational environment and feedback on the Draft EWD Functional and Technical Specification, including such things as:
  - Updated data formats
  - Inputs from the planning stage (with input from both government and industry)
  - Feedback received from stakeholders on the draft EWD Functional and Technical Specification



# What we know now: Certification



- There will be a Certification process
- There will be Certification fees
- There will be operational fees
- There will be a contract – an agreement between you, TCA and your customer
- There will be a driver acknowledgement document covering obligations, rights and responsibilities

# What we know now:

## Back Office



- EWD-SP System (Back Office) requirements will be defined in the EWD Functional and Technical Specification
- The operating requirements for a Back Office are far greater than many other applications – at least or greater than your existing commercial applications, and existing certified applications
- EWD data **MUST** reside in Australia

# Questions and comments



Amber Fiske

Senior Project Manager – EWD

P: 03 8601 4699

E: [amberf@tca.gov.au](mailto:amberf@tca.gov.au)

# Telematics Industry Group

April 2016

Geoff Casey, Executive Director Productivity & Safety



## EWD: For Productivity and Safety

- The NHVR is committed to delivering EWDs as a voluntary alternative to the written work diary in 2017
  - To support the heavy vehicle industry meet its obligations under the Heavy Vehicle National Law (HVNL)
  - To address some of the inefficiencies of the current paper-based system
  - To improve industry productivity and safety outcomes



## EWD: Project Establishment

- Detailed Project Management Plan (DPMP) was finalised in 2015
- Options for enforcement capability were presented to jurisdictions and police, resulting in a preferred model for the use of smart devices for on-road compliance assessment
- In November 2015, Ministers were presented with the options and costs
- Ministers gave unanimous support for the preferred model to be adopted and approved the NHVR budget for implementation
- The NHVR has now commenced implementation activities



## EWD: Approval of EWDs

- Amendments to the HVNL were proclaimed on 6 February 2016
- These amendments set up the HVNL to allow the NHVR to approve EWDs. They do not approve telematics already in operation
- The amendments address industry concerns about greater accuracy in driver records
- The HVNL Fatigue Chapter does not refer to certification of EWDs. The NHVR will implement this through TCA



# EWD: Implementation Phase Activities

- The NHVR is responsible for:
  - the policy framework for approval and use of EWDs
  - the consistent interpretation and application of the HVNL Fatigue Chapter, fatigue rules and fatigue management schemes
  - the operational policies and procedures for enforcement
  - exchange of information through stakeholder engagement, change management and communications activities to ensure greatest project visibility and success





## EWD: Key NHVR Decisions

The NHVR has responsibility for decisions and implementation of:

- Driver Authorisation to use EWDs
- The rollout strategy for industry
  - Ensuring a successful uptake and attracting early adopters
  - Market-driven incentives
  - Assessment of uptake and possible incentives following a period of operations
- The rollout strategy for enforcement capability
  - Ensuring authorised officers have access to accurate driver work and rest records and evidentiary standard data
- The business model for operational costs

## EWD: Issues and Related Activities

- The NHVR is going forward with a Safety Strategy which has been approved by the NHVR Board
- There are topical issues in the current regulatory environment

## EWD: Contacts

NHVR Project Manager: Amanda Capper

**Email:** [amanda.capper@nhvr.gov.au](mailto:amanda.capper@nhvr.gov.au)

Call NHVR: 1300 MYNHVR (1300 696 487)

**Email NHVR:** [fatiguemanagement@nhvr.gov.au](mailto:fatiguemanagement@nhvr.gov.au)





# Privacy Code of Practice for non-regulatory use of telematics

## An ATAA initiative

Ro Mueller  
Senior Advisor, Road Safety and Productivity  
Australian Trucking Association

A safe, professional and viable  
trucking industry

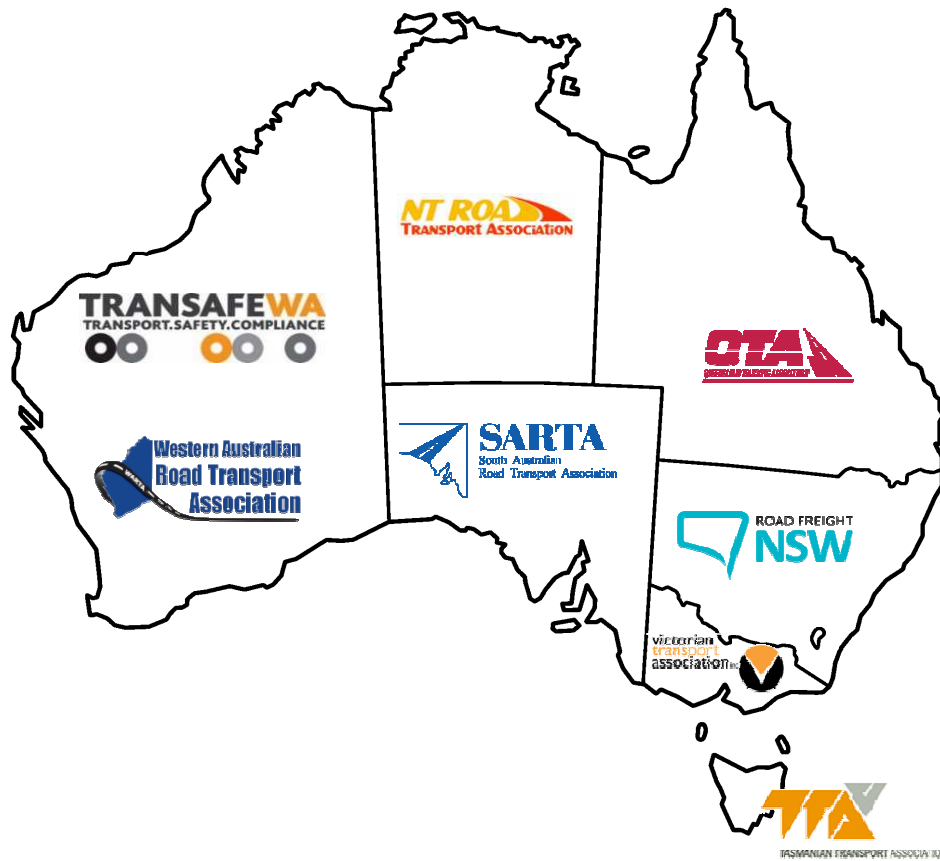
# About us – the ATA industry family



## State Association Members



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## Member Companies





# Privacy Code of Practice initiative



- Driver monitoring systems
  - What data is captured and how it is used
  - Inward-facing cameras are of greatest concern
- Rationale for a voluntary COP for non-regulatory telematics:
  - Operator liability
  - Driver resistance to technology
  - Lack of current guidance
  - Insurance industry concerns
  - Voluntary industry approach versus mandatory regulatory approach
  - May help increase telematics uptake in the road transport industry
- COP Development Oversight Committee
  - TCA
  - Industry operator
  - Transport union
  - HV insurer
  - Office of the Australian Information Commissioner



Thank You.  
Any questions?

A safe, professional and viable trucking industry.



# Traveller Information Service

Peter Girgis  
General Manager Implementation  
TCA

# Introduction



- TCA worked with Main Roads WA during 2014 to perform a regional traveller information ‘proof-of-concept’
- The proof-of-concept set out to demonstrate how information provided by MRWA could be ‘pushed’ to drivers – through telematics systems – travelling in regional areas of Western Australia
- The safety-of-life of road users in remote locations was a key driver for the proof-of-concept

# Introduction



- TCA is now working to expand the Traveller Information Service, to incorporate real-time information from:
  - Main Roads WA
  - Port of Fremantle
- The use of both ‘on-road’ and ‘off-road’ data sources has been driven by the feedback received from heavy vehicle drivers involved in the proof-of-concept
- Notably, drivers sought information about congestion or queues at key locations (such as ports) – *before* they reached the location

# Traveller Information Service



- The Traveller Information Service will enable the aggregation and harmonisation of multiple sources of data, from multiple origins
- This merged data will then be made accessible to providers of telematics services
- TCA is working with to leverage the use of ‘on-road’ and ‘off-road’ data from other regions

# Traveller Information Service



- The expanded Traveller Information Service will evaluate the ability to:
  - Reliably and consistently securing the use of real-time data and information from Main Roads and the Port of Fremantle
  - Providing end-users with confidence that data published through the Service can be relied upon to make decisions 'up-stream'
- TCA will be seeking expressions of interest from the telematics sector and from the transport sector in mid-2016

# Questions and comments



Peter Girgis

General Manager Implementation

P: 03 8601 4674

E: [peterg@tca.gov.au](mailto:peterg@tca.gov.au)

# On-Board Mass (OBM) Systems Linked to the IAP: Operational Learnings and Next Steps

Peter Taylor  
Implementation Manager, On-Board Mass  
TCA

# Introduction

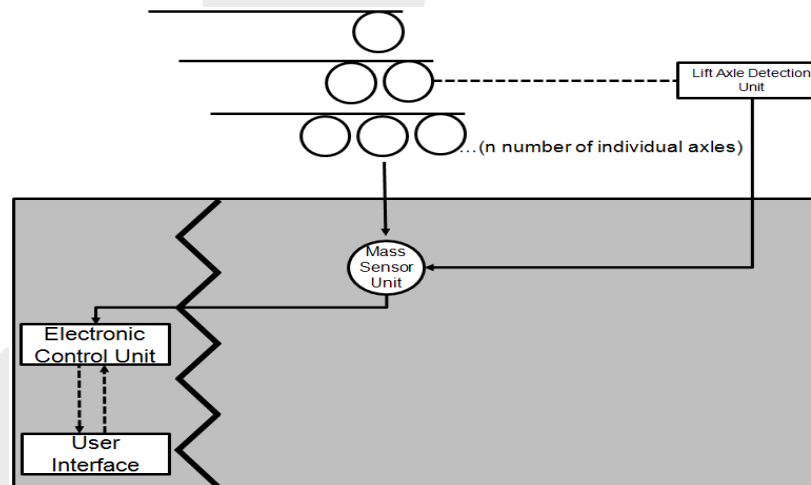


- The Interim On-Board Mass Solution commenced in Qld in September 2013, and is now also operating in NSW
- Enrolment in IAP is a prerequisite for transport operators to participate in the Interim On-Board Mass (OBM) Solution
- The Interim OBM Solution requires fitment of an OBM system which is used to determine axle group mass and total combination mass, transmitting this data to an In-Vehicle Unit which is type approved for the IAP
- There are currently in excess of 150 vehicles participating in the Interim OBM Solution



# Introduction

- An OBM system comprises as a minimum:
  - An Electronic Control Unit (ECU)
  - A User Interface (UI)
  - One or more Mass Sensor Unit/s (MSU)



# Operational learnings



## (1) Roles and responsibilities

- Need greater definition and clarity of the roles and responsibilities of IAP Service Providers and OBM system suppliers
  - Further defining these roles and responsibilities will improve operational performance, efficiency and administration
  - Enhancing the commercial and contractual arrangements of IAP Service Providers and OBM system suppliers will ensure roles and responsibilities are clearly managed in accordance with expectations

# Operational learnings



## (2) Security of data

- The management of access to data is critical to maintain the integrity of the IAP, and the privacy protections which are an integral aspect of the program
- As Road Managers expand their use of OBM systems, a higher degree of integrity in the management of mass monitoring and reporting will ensure emerging applications are managed appropriately

# Operational learnings



## (3) Monitoring of data integrity, and reporting of tampering and malfunctions

- The ability to monitor the integrity of the Interim OBM Solution, together with the identification of tampering and malfunctions, while suitable for a limited number of vehicles, will need enhancement with the projected growth in participating vehicles
- This includes the need for automated reporting of possible malfunctions and tampering of OBM systems

# Operational learnings



## (4) Calibration

- Analysis of Interim OBM Solution data has shown that the current six month calibration frequency is insufficient to ensure that the accuracy of the mass data generated by MSU's is within a tolerance that is acceptable to Road Managers
  - Analysis also indicates that there are other factors influencing the accuracy of an OBM system that may be unrelated to its calibration, such as malfunctions and tampering
  - As a result of this analysis, a three month calibration frequency will be introduced until there is sufficient data for further analysis

# Next steps – implementing type-approved OBM systems



- These key learnings and feedback from governments and the transport industry showed that current OBM systems fall short of meeting their requirements in these areas
- While OBM systems can be used for any number of purposes, TCA type approved systems will need to meet core requirements to ensure reliability, integrity and security
- These requirements are especially critical if the information collected from OBM systems is to be used and relied upon by third parties, such as in a contractual relationship or a regulatory setting

# Next steps – implementing type-approved OBM systems



- TCA type-approved OBM systems will provide assurance to commercial operators
- Type-approval of OBM systems will also be a significant step toward meeting the strong demand from Road Managers for OBM systems that can support regulatory policy requirements
- VicRoads recently announced access conditions for longer B–Doubles operating at weights between 68.6 tonnes and 77.5 tonnes (High Productivity Freight Vehicles) in Victoria
- These access conditions include enrolment in the IAP, and OBM in particular

# Next steps – implementing type-approved OBM systems



- A new OBM system Functional and Technical Specification is being developed which:
  - Incorporates key learnings from the Interim OBM solution
  - Provides appropriate levels of data security
  - Defines electronic control unit and mass sensor unit functionality and capability
  - Addresses requirements for detection of turntable position where applicable
- The philosophy guiding the creation of this Specification has been to focus on required outcomes, that is, performance based without being overly solution oriented



# Next steps – implementing type-approved OBM systems



- Applicants are encouraged to consider innovative ways of meeting requirements
  - This will enable the type-approved OBM systems to draw upon the best available technology, and encourage re-development, rather than restricting the OBM System to the technology that was available at a particular time
- The Specification can be used by end-users to:
  - Investigate and compare different telematics IVUs against this Specification – to become an informed end-user
  - Acquire/purchase OBM systems already type-approved by TCA

# Next steps – implementing type-approved OBM systems



- While type-approval of OBM systems will not include a requirement for interoperability with the In-Vehicle Unit (IVU), future regulatory applications will require this capability
- As such, a separate OBM Interoperability Functional and Technical Specification is being developed
- OBM system suppliers seeking type-approval should consider the need for interoperability as a capability requirement for future regulatory applications

# Next steps – implementing type-approved OBM systems



- Also being developed are type-approval requirements and processes, including:
  - Documentation requirements for OBM system approval, including all components, cabling and interfaces
  - Evidence from an appropriate certification body of compliance with specified standards
  - Development of agreements

# Next steps – implementing type-approved OBM systems



- Engage with OBM suppliers and service providers
  - Must have stakeholder review and support for OBM Functional and Technical Specification
  - Consult with individual stakeholders – OBM system suppliers, IAP Service Providers, government
  - Prepare operational learnings report based findings from implementation of type-approved OBM systems
  - Need to continue to develop OBM systems to meet future requirements

# Next steps – implementing type-approved OBM systems



- Timeframes
  - Initial consultation with key stakeholders – Now to end April 2016
  - Release final draft Technical and Functional Specification to key stakeholders for comment – mid-May to mid-June 2016
  - Finalise Technical and Functional Specification – mid-June to end July 2016
  - ‘Go live’ with supporting requirements including type approval processes, installation and training requirements, supplier contracts, test protocols and communications material – end September 2016, subject government and IAP Service Provider readiness

# Questions and comments



Peter Taylor

Implementation Manager – On-Board Mass

P: 03 8601 4627

E: [peter@tca.gov.au](mailto:peter@tca.gov.au)

# Questions and comments



Peter Taylor

Implementation Manager – On-Board Mass

P: 03 8601 4627

E: [petert@tca.gov.au](mailto:petert@tca.gov.au)

# Final questions and comments...

