

National Telematics Framework and Levels of Assurance and On- Board Mass Applications

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Presentation Structure

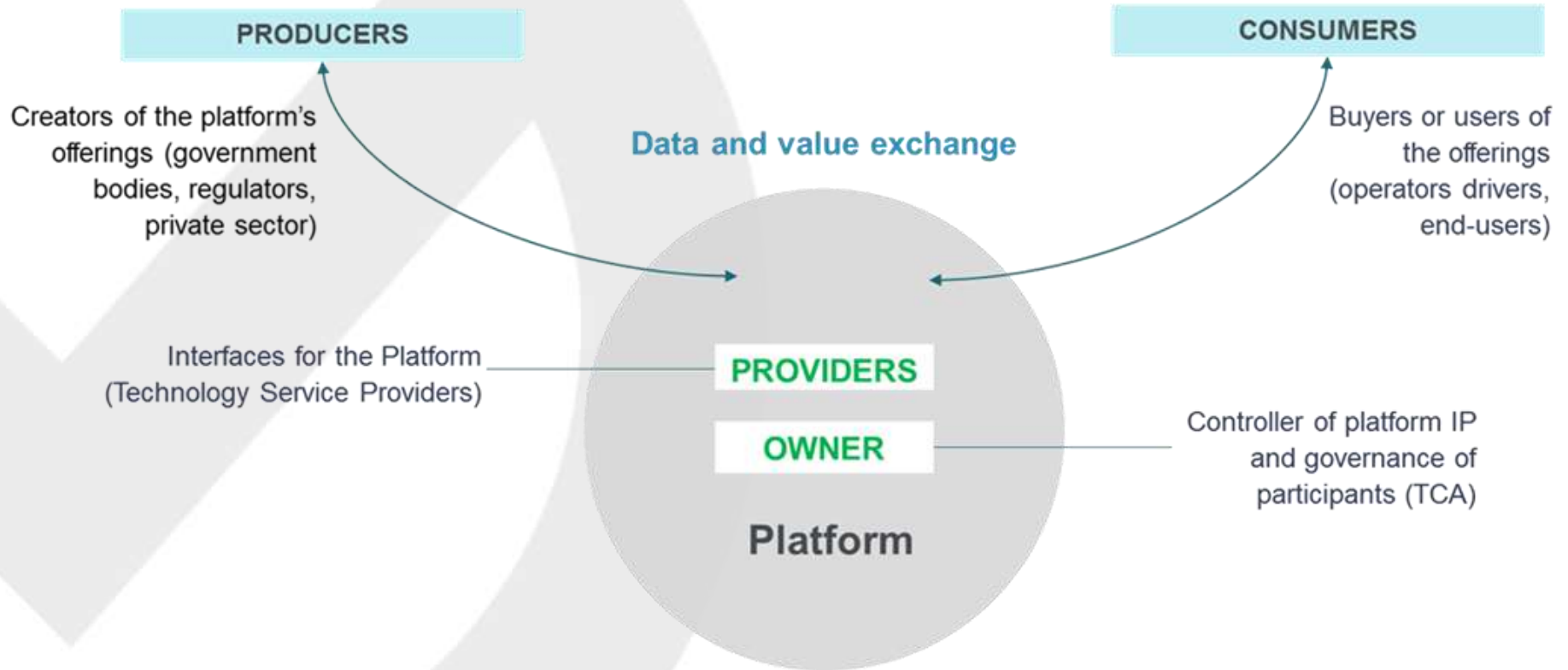
1. National Telematics Framework – *digital business platform*
2. Levels of Assurance – *different levels set by policy owners*
3. Currently available heavy vehicle applications enabled by the National Telematics Framework – *on-board mass monitoring*

National Telematics Framework – *digital business platform*



- The National Telematics Framework is a digital business platform with infrastructure and rules that aims to ensure an open marketplace of technology suppliers/providers of systems and services and enable government policy

National Telematics Framework Ecosystem



Modeled on: Pipelines, Platforms and the New Rules of Strategy (2016)

National Telematics Framework – *digital business platform*



The National Telematics Framework and its associated common infrastructure and rule set delivers:

- An **open technology market**, which can sustainably deliver upon the needs of government, industry and end-user consumers, ensuring choice while delivering the latest developments at increasingly lower costs
- **Consistency and certainty** to providers and end-user consumers, so that government's functional expectations can be relied upon to make both investment and adoption decisions
- the **creating, building and scaling** of applications in a simpler and cheaper environment for all stakeholders

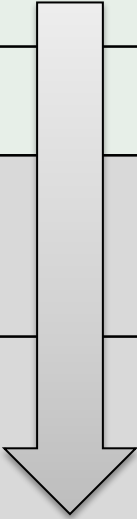
Levels of Assurance – *different levels set by policy owners*



Applications enabled through the National Telematics Framework are established by **producers** (i.e. government and private sector entities) and designed to meet the **level of assurance** sought by these entities including:

- the level of risk being managed
- the management of any incentives or removal of disincentives
- the benefits / outcomes sought

Levels of Assurance – for Heavy Vehicle Mass Management

Increasing Level of Assurance	Technology	Use	Independent of Driver Oversight (other than on-road enforcement)
	Electronic loading and consignment records	Start of journey knowledge of vehicle mass	Nil
	Weighbridge	Periodic monitoring of vehicle mass	Nil, unless weighbridge record can be stored and retrieved later
	On-Board Mass (OBM) System – (oem or aftermarket)	Ongoing monitoring of vehicle mass and operational status (e.g. malfunction)	Nil, unless OBM system stores mass data that can be retrieved later
	On-Board Mass (OBM) Program – (oem or aftermarket)	Ongoing monitoring of vehicle mass and operational status (e.g. malfunction) connected to telematics in-vehicle unit using Intelligent Access Program (IAP) providing vehicle location	Owner / Operator of vehicle through access to vehicle mass and location data (including exception reporting) <i>and (as necessary based on policy outcome)</i> Regulators / Jurisdictions through access to mass/location exception reporting

Note: Shading represents applications of the National Telematics Framework

Heavy vehicles – the Australian context

- A large land mass with relatively small and dispersed population
- Highly differentiated road infrastructure ‘quality’
- Over 75% of non-bulk domestic freight is carried on roads
- Truck traffic is predicted to increase by around 50% by 2030
- Infrastructure and community challenges associated with heavy vehicles

On-Board Mass (OBM) Program

- The OBM Program will provide the highest level of assurance in the collection and use of mass information
- Mechanisms are being incorporated to identify malfunctions, miscalibration or potential tampering
- OBM data will be linked to other data collected through the IAP (including location, time, configuration and vehicle speed) – providing the critical ingredients to advance the next wave of productivity reforms

Example No.1

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:

- Must be approved as a Performance Based Standards (PBS) vehicle
- Must be monitored through the IAP for route and speed compliance (90km/h)
- Must be fitted with TCA type-approved OBM Systems

Example No.1



Example No.2

PBS A-Double combinations

A-Double combinations can operate up to 85 tonne GVM on a 160km route

- Being approved as a Performance Based Standards (PBS)
 - IAP and OBM monitoring for route, mass and speed
- Load factors on bridges were reduced from 2.0 to 1.6 because of the high level of assurance of IAP and OBM

This has **halved** the number of vehicle movements to support export of grain

Conclusion - *Understanding the shift*



Heavy vehicle access is based upon a number of assumptions made by infrastructure managers
Decisions about access often come down to a *conservative* set of assumptions...

...especially when it comes to mass loadings

Loading assessments of bridges are typically based on 'peak loads', which leads to access constraints

Thanks

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