Unlocking the Potential of Telematics Analytics Platform for Local Governments

23 July 2025

Austroads

tca Transport Certification Australia

Today's moderators

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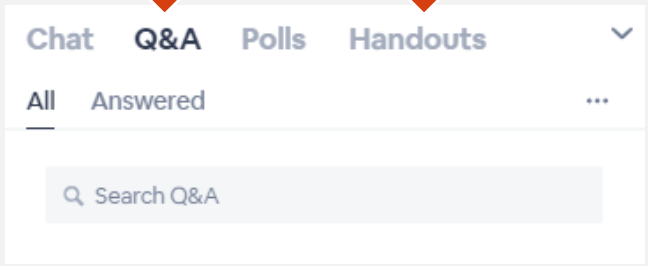
Austroads acknowledges the Australian Aboriginal and Torres Strait Islander peoples as the first inhabitants of the nation and the traditional custodians of the lands where we live, learn and work. We pay our respects to Elders past, present and emerging for they hold the memories, traditions, culture and hopes of Aboriginal and Torres Strait Islander peoples of Australia.

Austroads acknowledges and respects the Treaty of Waitangi and Maori as the original people of New Zealand.

Housekeeping

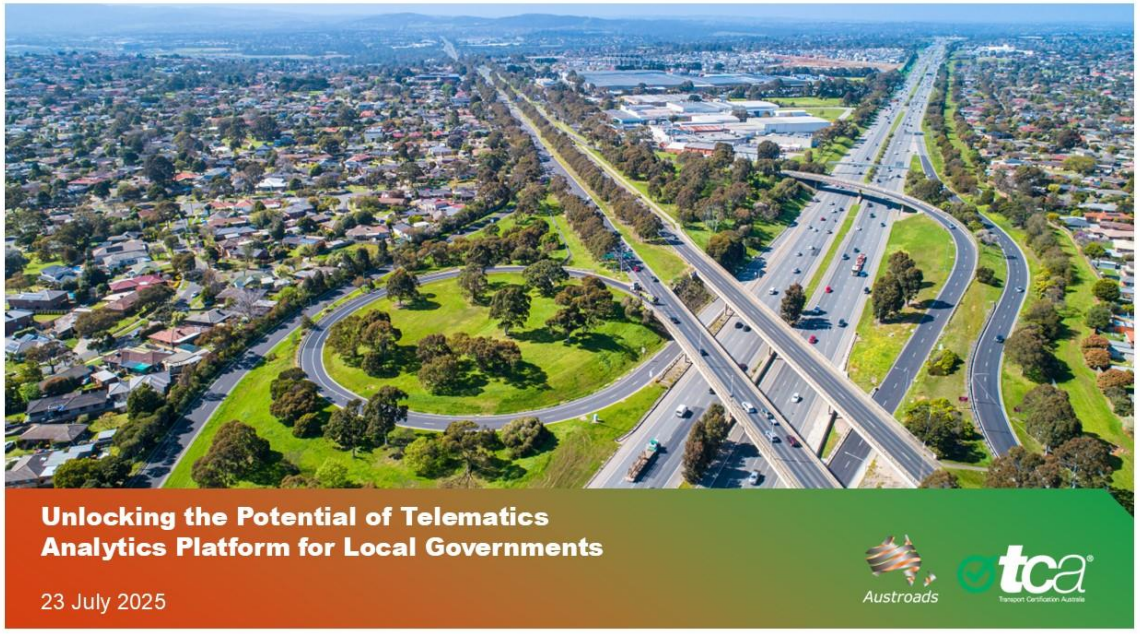
Type questions here
and let us know the slide number your question relates to

Slides and handouts are located here



Presentation = 40 mins

Question time = 15 mins



Today's presenters and agenda

Topic	Presenter
Overview of the telematics data, the NTF and TAP	David Randall
Services and dashboards available in TAP	
DTPV, local government and telematics	David Moore
Q+A	John Gordon (moderating)

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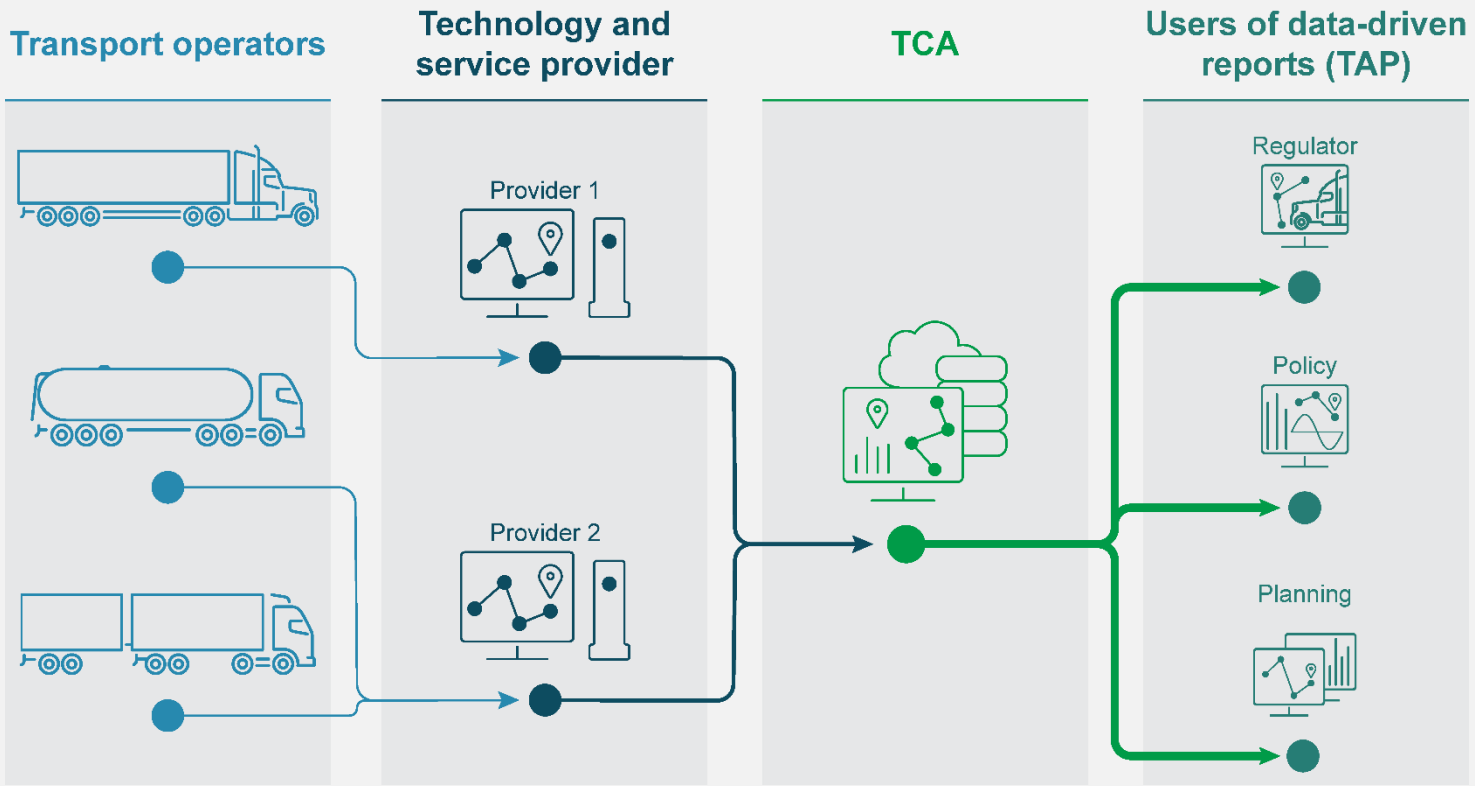
Overview of the telematics data, the NTF and TAP

David Randall

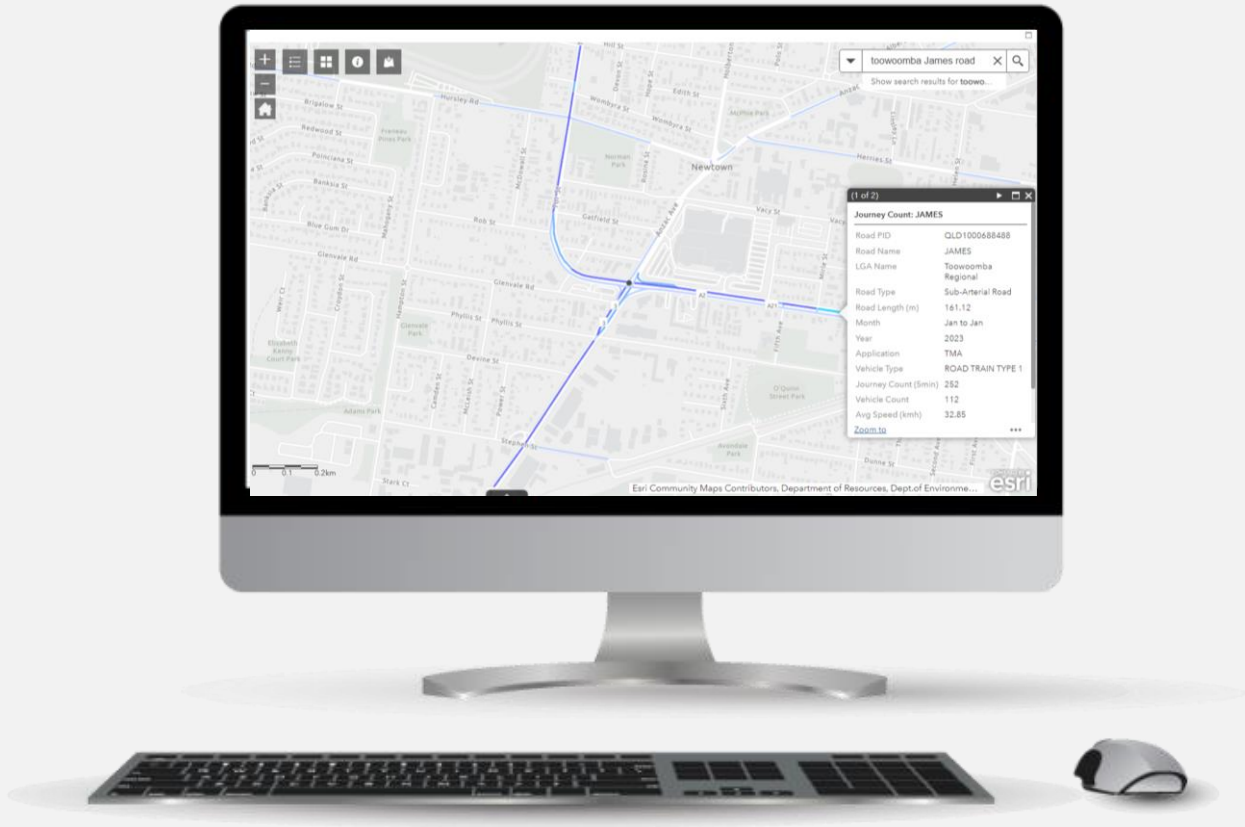
What is telematics data?

- The National Telematics Framework provides a standardised and harmonised way to collect movement and mass data from approved telematics devices installed on vehicles.
- Over 19,000 heavy vehicles are currently enrolled in Intelligent Access Program (IAP), the Telematics Monitoring Application (TMA) and the Road Infrastructure Management (RIM) schemes.
- Austroads/TCA provides data reporting and visualisations via the Telematics Analytics Platform (TAP).



What is TAP?

- A secure, online portal providing Australian and New Zealand transport agencies with access to data, reports and analytics using telematics data.
- The platform provides a range of analytics based on the Geoscape Roads dataset, publicly available in Geoscience Australia's Digital Atlas of Australia.
- Road managers are using TAP to gain insights into how vehicles use their networks.



Which vehicles are monitored?

The vehicles enrolled in the Framework are predominantly restricted access vehicles operating under a Permit or Notice of access. These vehicles include, but are not limited to:

- Vehicles operating at higher mass limits (HML vehicles)
- Performance Based Standards (PBS)-approved vehicles
- Over-size Over-mass (OSOM) vehicles
- Special Purpose Vehicles (SPVs), mostly heavy mobile cranes.

Why use TAP?

To manage assets, road managers need good data.

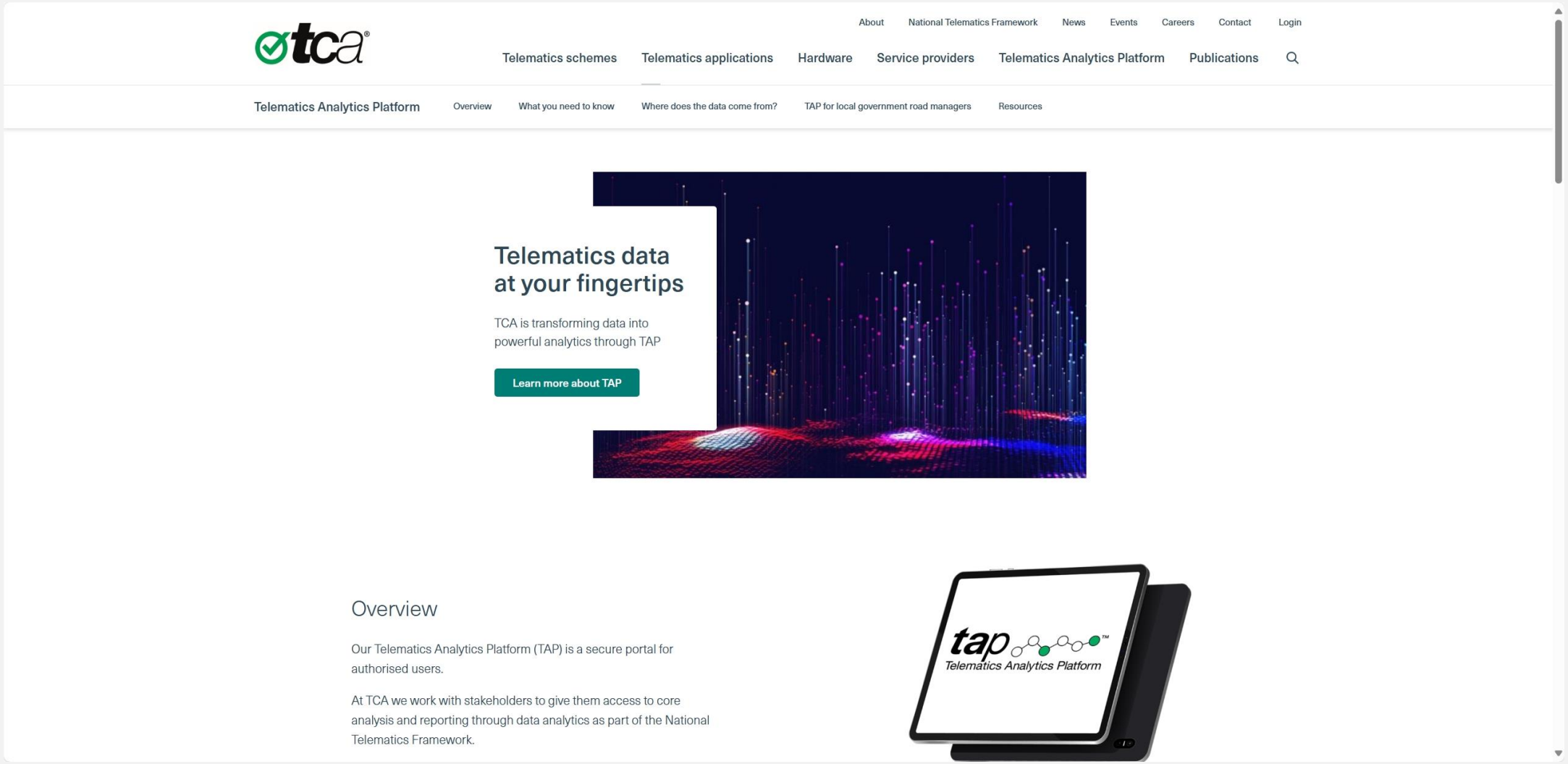
But reliable data is not always readily available.

The Telematics Analytics Platform (TAP) offers insights based on telematics data collected from vehicles.

Services and dashboards available in TAP

David Randall

Accessing TAP



Accessing TAP

TAP Application Form

The Telematics Analytics Platform (TAP) is a secure portal for authorised users. To request access, please use the form below.

Note: We may need to confirm access with your manager.

Your details

I work for a *
—Please choose an option—

First name (required)*

Last name (required)*

Phone number (required)*

Email (required)*

Official email only. Generic or shared emails are not accepted.

Job title (required)*

Authorising officer's details

We need the details of a suitable officer from your organisation, with authority to accept the terms and conditions of use on behalf of your organisation

Authorising officer's name (required)*

Authorising officer's email (required)*

I have read and accepted the terms and conditions

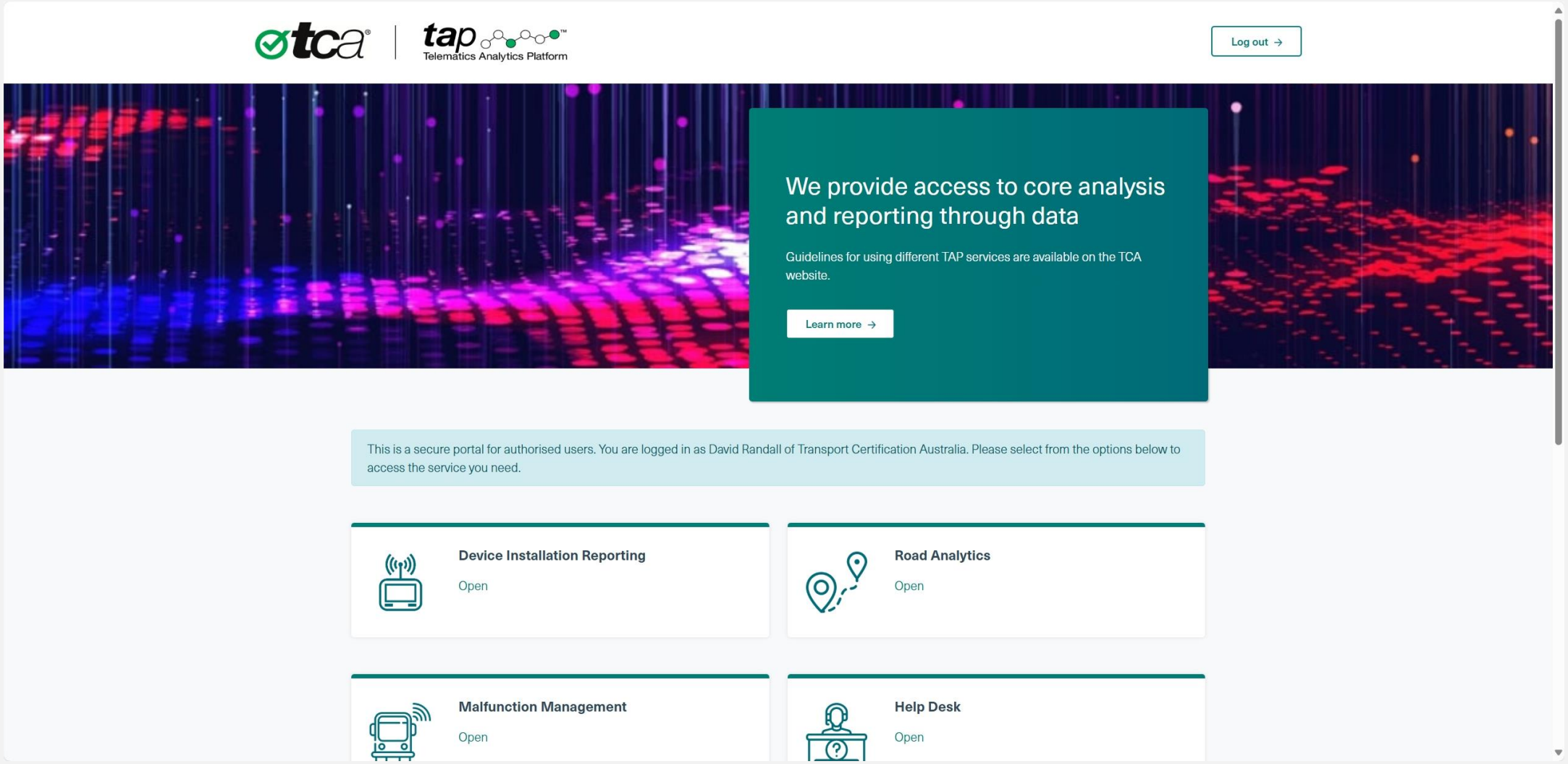
Submit

Accessing TAP

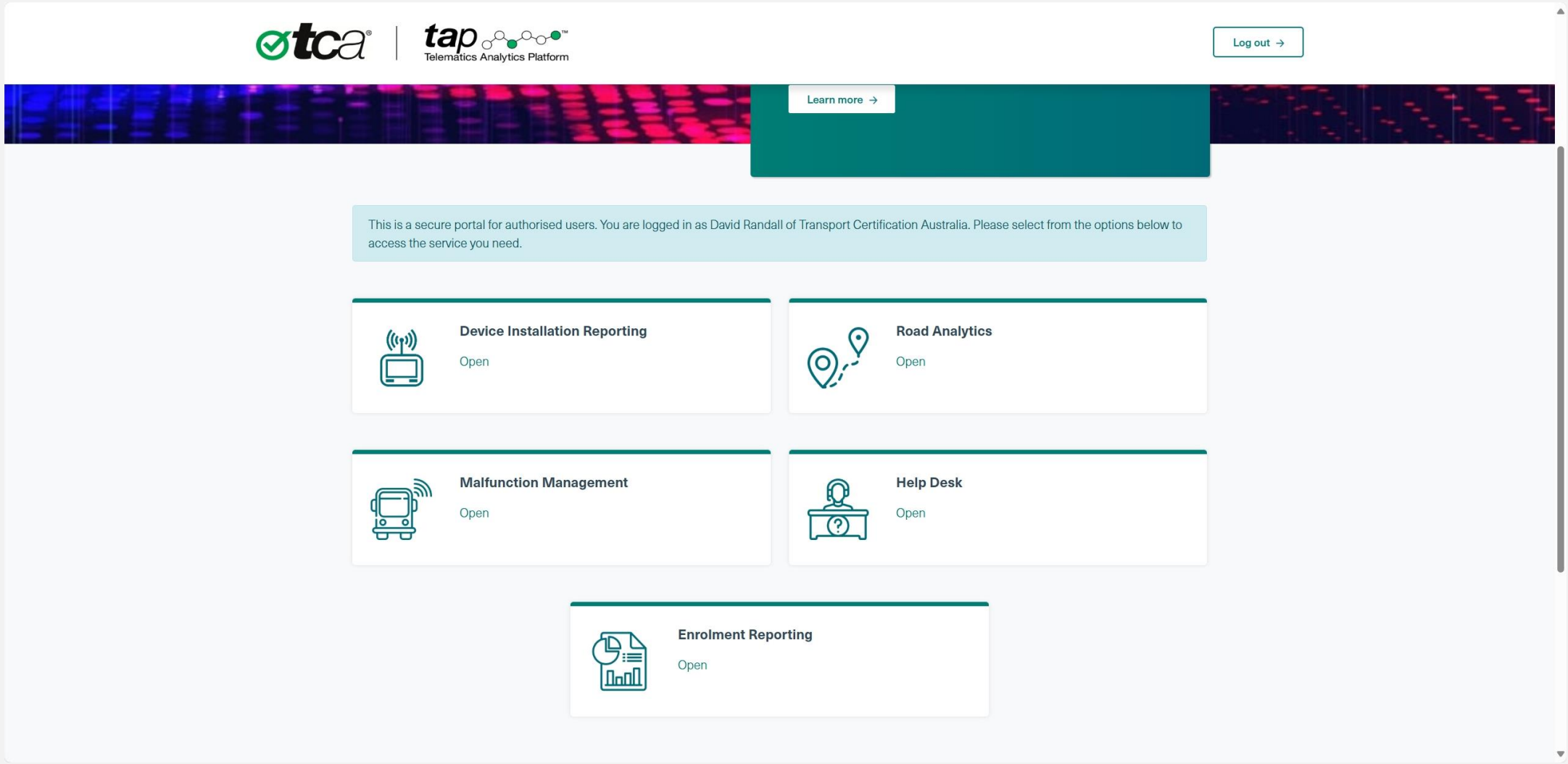
Telematics Analytics Platform

Click here to log in

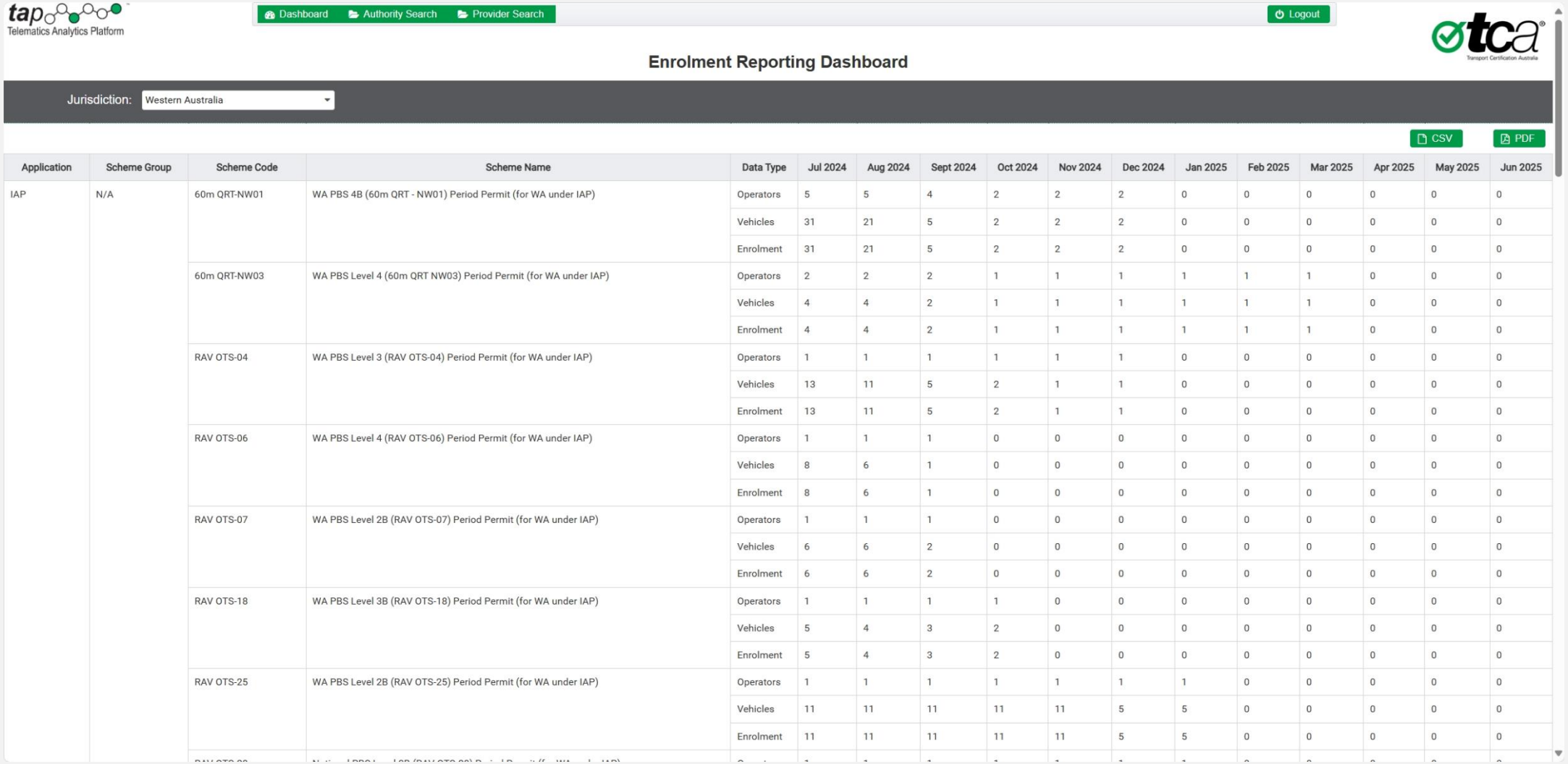
Accessing TAP



Accessing TAP

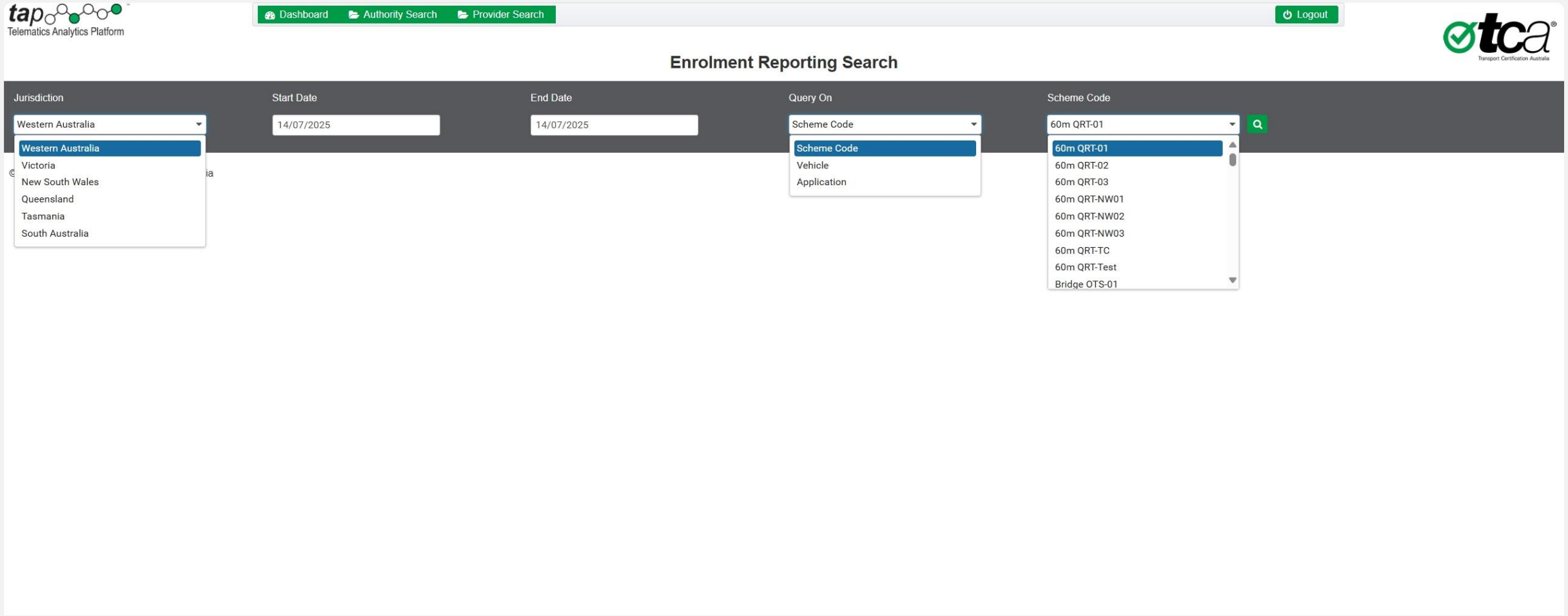


Enrolment Reporting Service

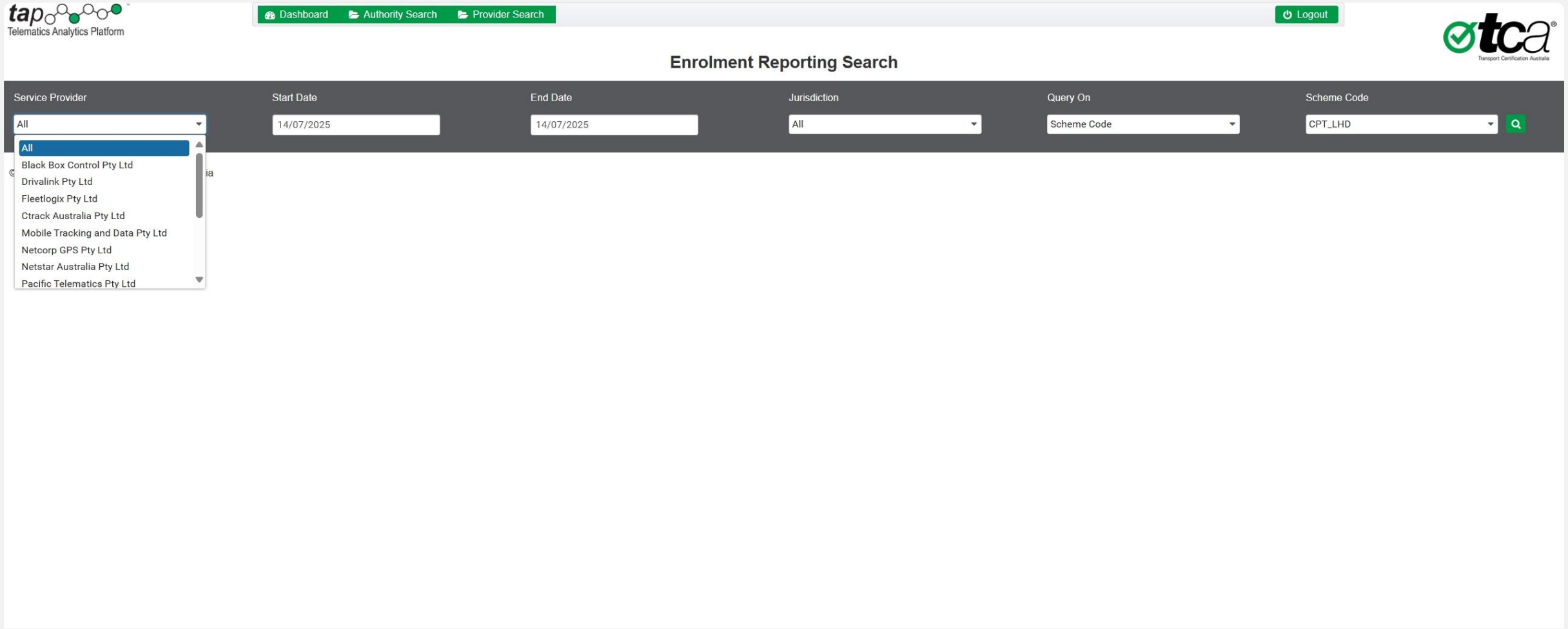


Application	Scheme Group	Scheme Code	Scheme Name	Data Type	Jul 2024	Aug 2024	Sept 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025
IAP	N/A	60m QRT-NW01	WA PBS 4B (60m QRT - NW01) Period Permit (for WA under IAP)	Operators	5	5	4	2	2	2	0	0	0	0	0	0
				Vehicles	31	21	5	2	2	2	0	0	0	0	0	0
				Enrolment	31	21	5	2	2	2	0	0	0	0	0	0
		60m QRT-NW03	WA PBS Level 4 (60m QRT NW03) Period Permit (for WA under IAP)	Operators	2	2	2	1	1	1	1	1	1	0	0	0
				Vehicles	4	4	2	1	1	1	1	1	1	0	0	0
				Enrolment	4	4	2	1	1	1	1	1	1	0	0	0
		RAV OTS-04	WA PBS Level 3 (RAV OTS-04) Period Permit (for WA under IAP)	Operators	1	1	1	1	1	1	0	0	0	0	0	0
				Vehicles	13	11	5	2	1	1	0	0	0	0	0	0
				Enrolment	13	11	5	2	1	1	0	0	0	0	0	0
		RAV OTS-06	WA PBS Level 4 (RAV OTS-06) Period Permit (for WA under IAP)	Operators	1	1	1	0	0	0	0	0	0	0	0	0
				Vehicles	8	6	1	0	0	0	0	0	0	0	0	0
				Enrolment	8	6	1	0	0	0	0	0	0	0	0	0
		RAV OTS-07	WA PBS Level 2B (RAV OTS-07) Period Permit (for WA under IAP)	Operators	1	1	1	0	0	0	0	0	0	0	0	0
				Vehicles	6	6	2	0	0	0	0	0	0	0	0	0
				Enrolment	6	6	2	0	0	0	0	0	0	0	0	0
		RAV OTS-18	WA PBS Level 3B (RAV OTS-18) Period Permit (for WA under IAP)	Operators	1	1	1	1	0	0	0	0	0	0	0	0
				Vehicles	5	4	3	2	0	0	0	0	0	0	0	0
				Enrolment	5	4	3	2	0	0	0	0	0	0	0	0
		RAV OTS-25	WA PBS Level 2B (RAV OTS-25) Period Permit (for WA under IAP)	Operators	1	1	1	1	1	1	1	0	0	0	0	0
				Vehicles	11	11	11	11	11	5	5	0	0	0	0	0
				Enrolment	11	11	11	11	11	5	5	0	0	0	0	0

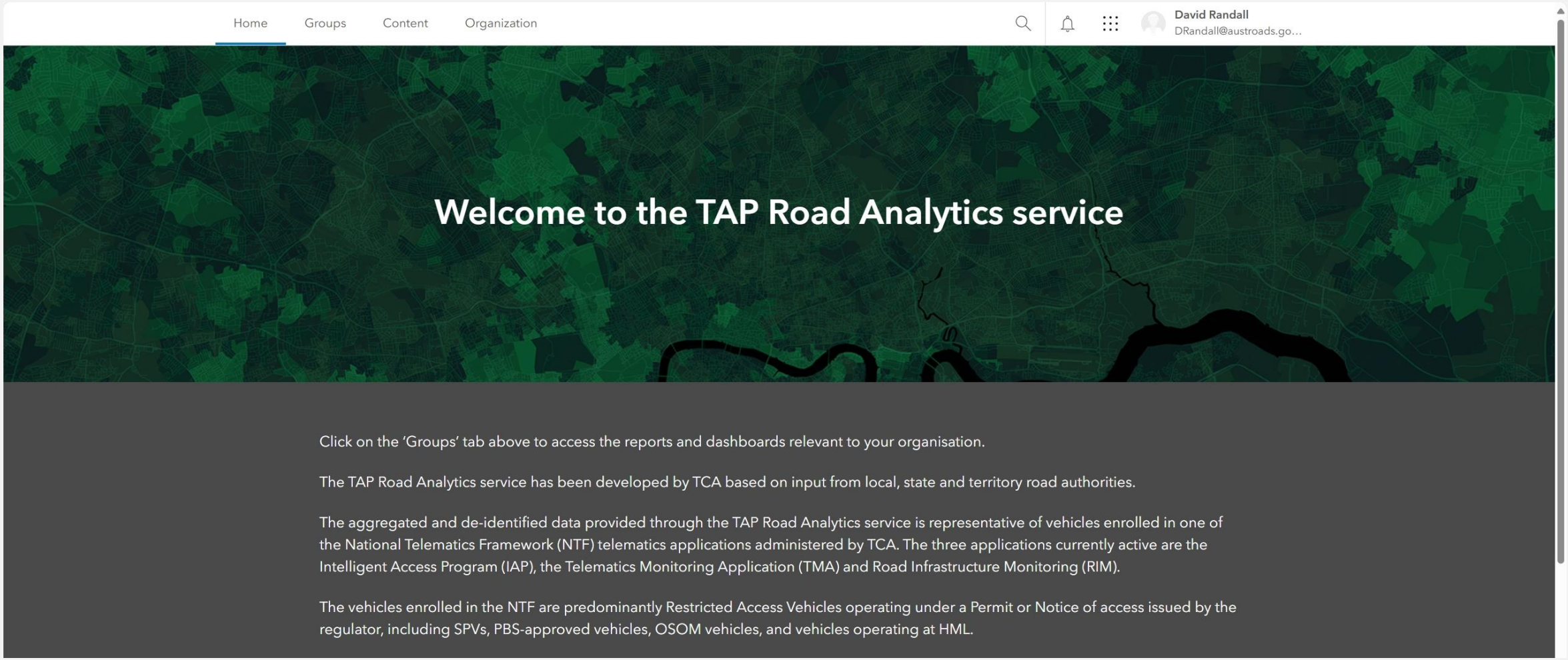
Enrolment Reporting Service



Enrolment Reporting Service



Road Analytics service



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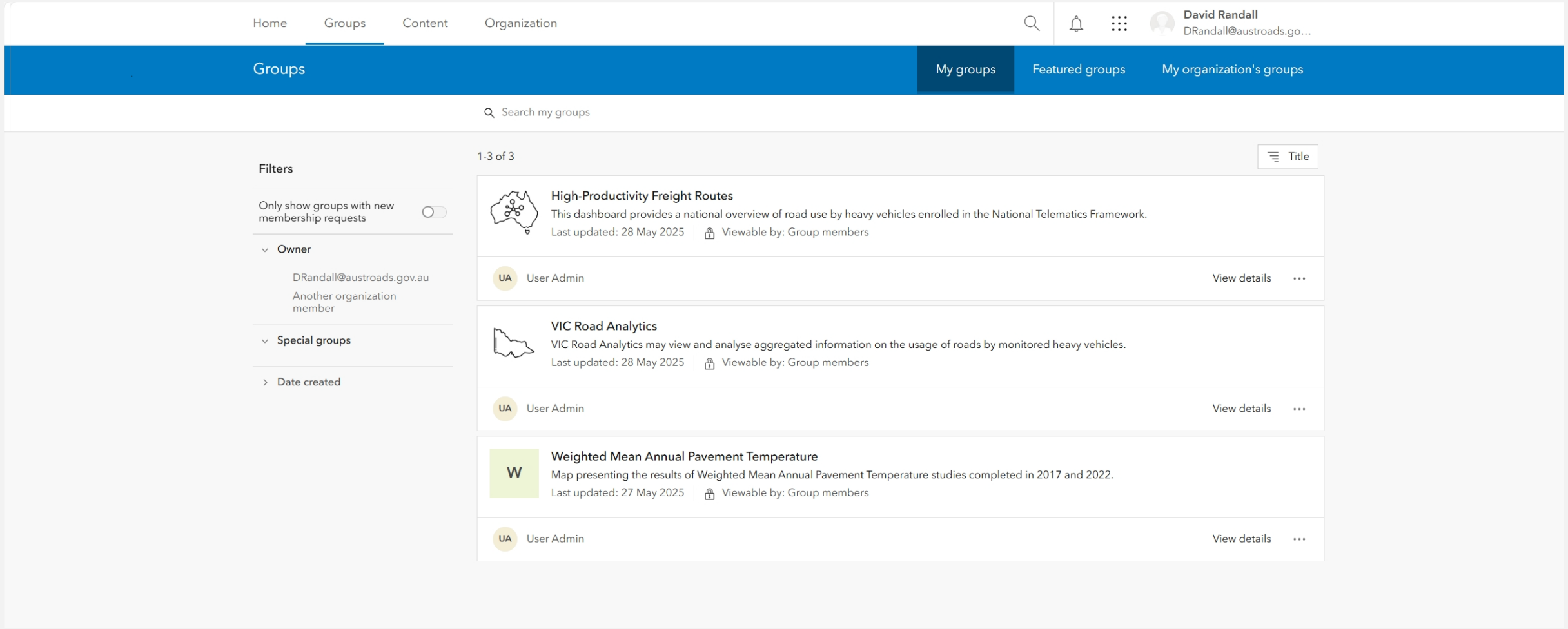

Road Analytics service

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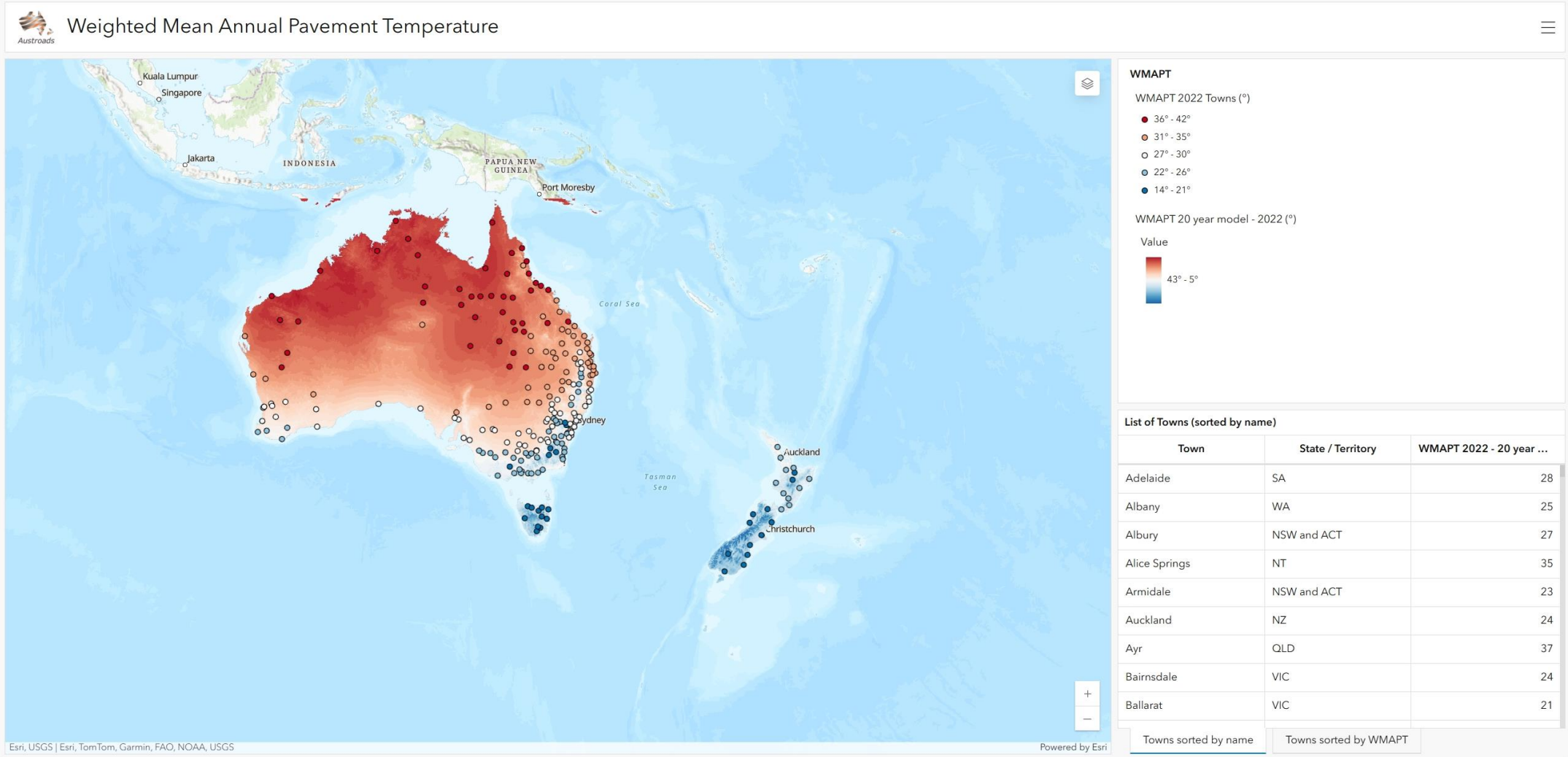

Town	State / Territory	WMAPT 2022 - 20 year ...
Adelaide	SA	28
Albany	WA	25
Albury	NSW and ACT	27
Alice Springs	NT	35
Armidale	NSW and ACT	23
Auckland	NZ	24
Ayr	QLD	37
Bairnsdale	VIC	24
Ballarat	VIC	21

Road Analytics service

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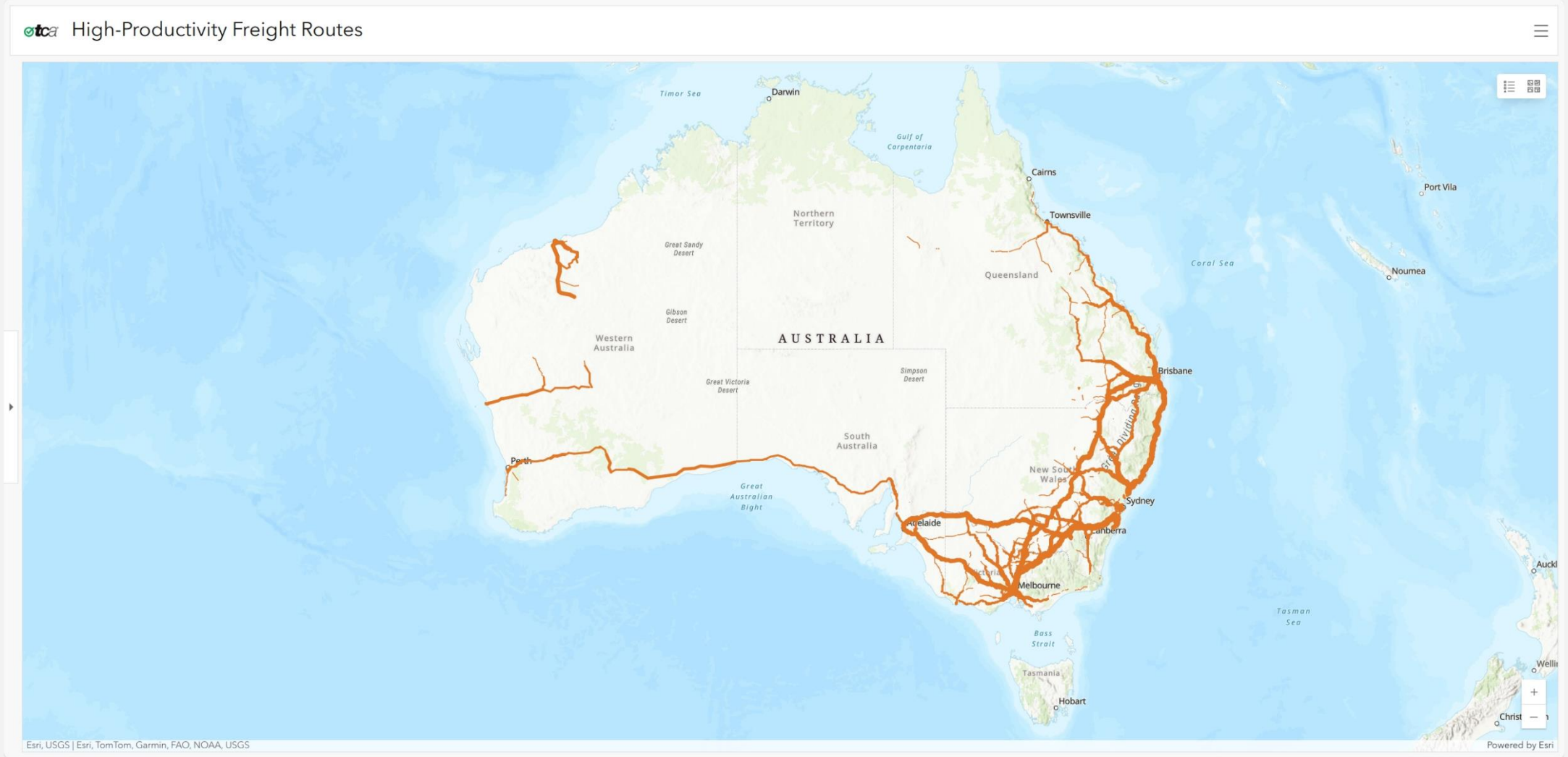

Road Analytics service

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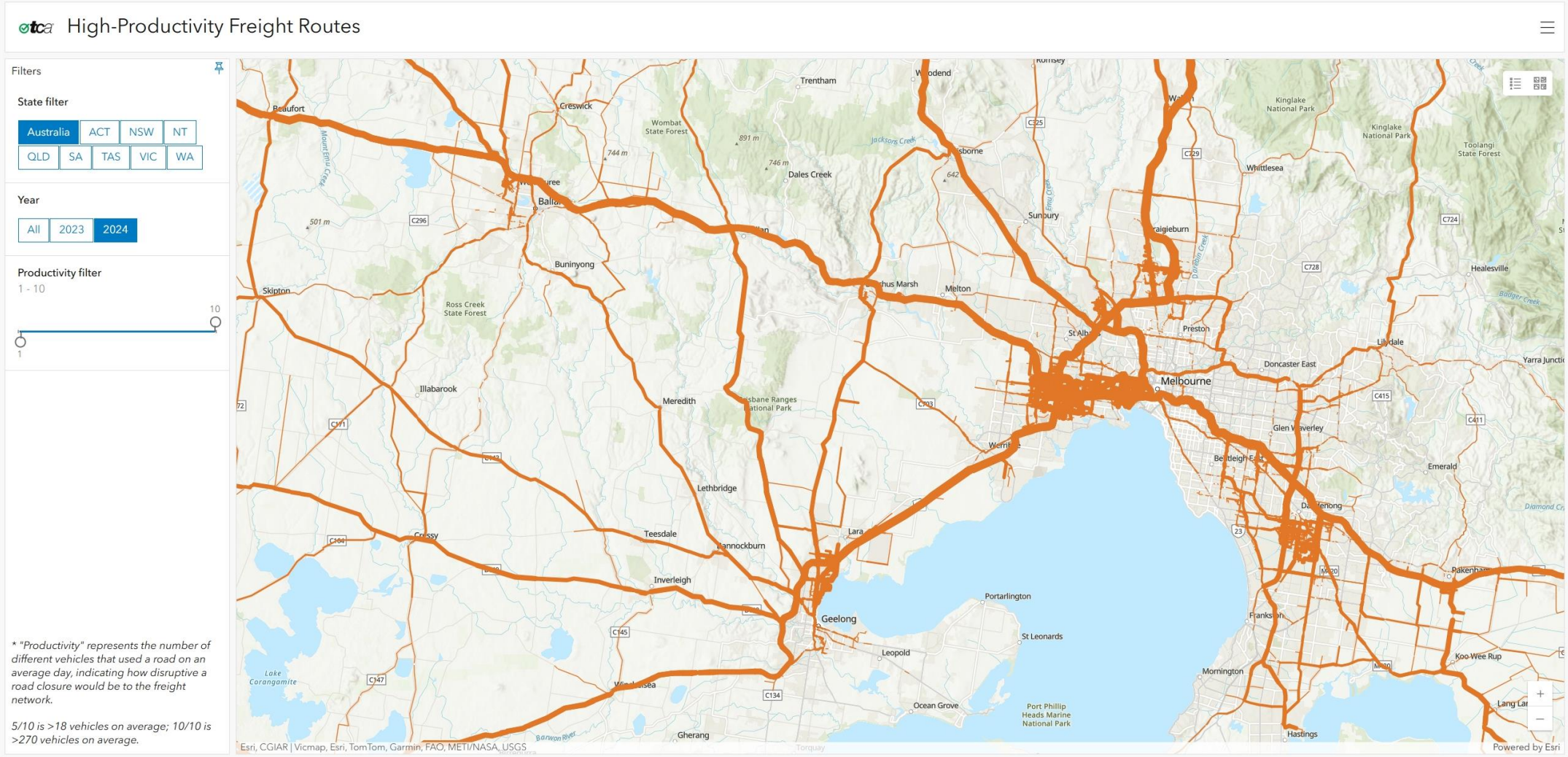

Road Analytics service

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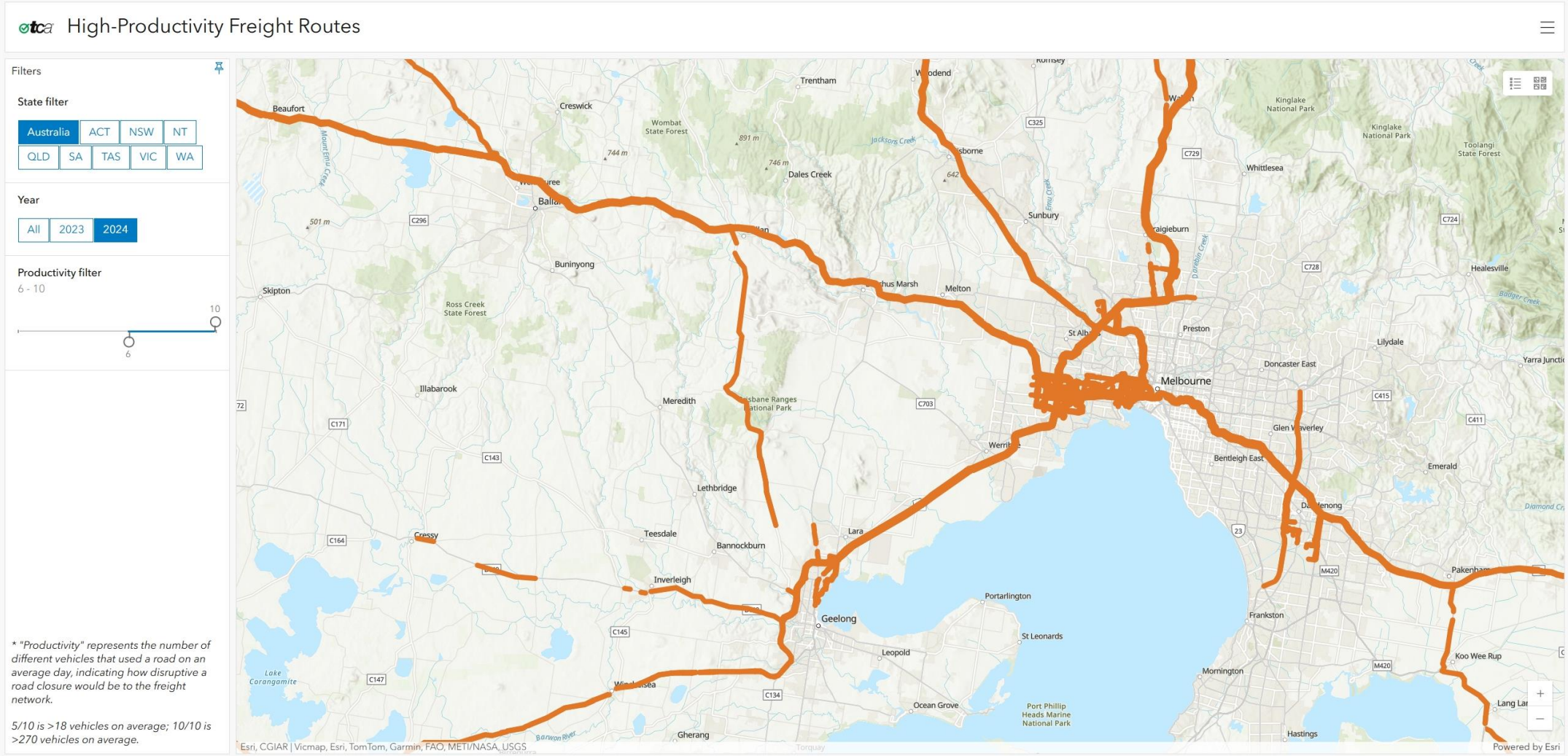

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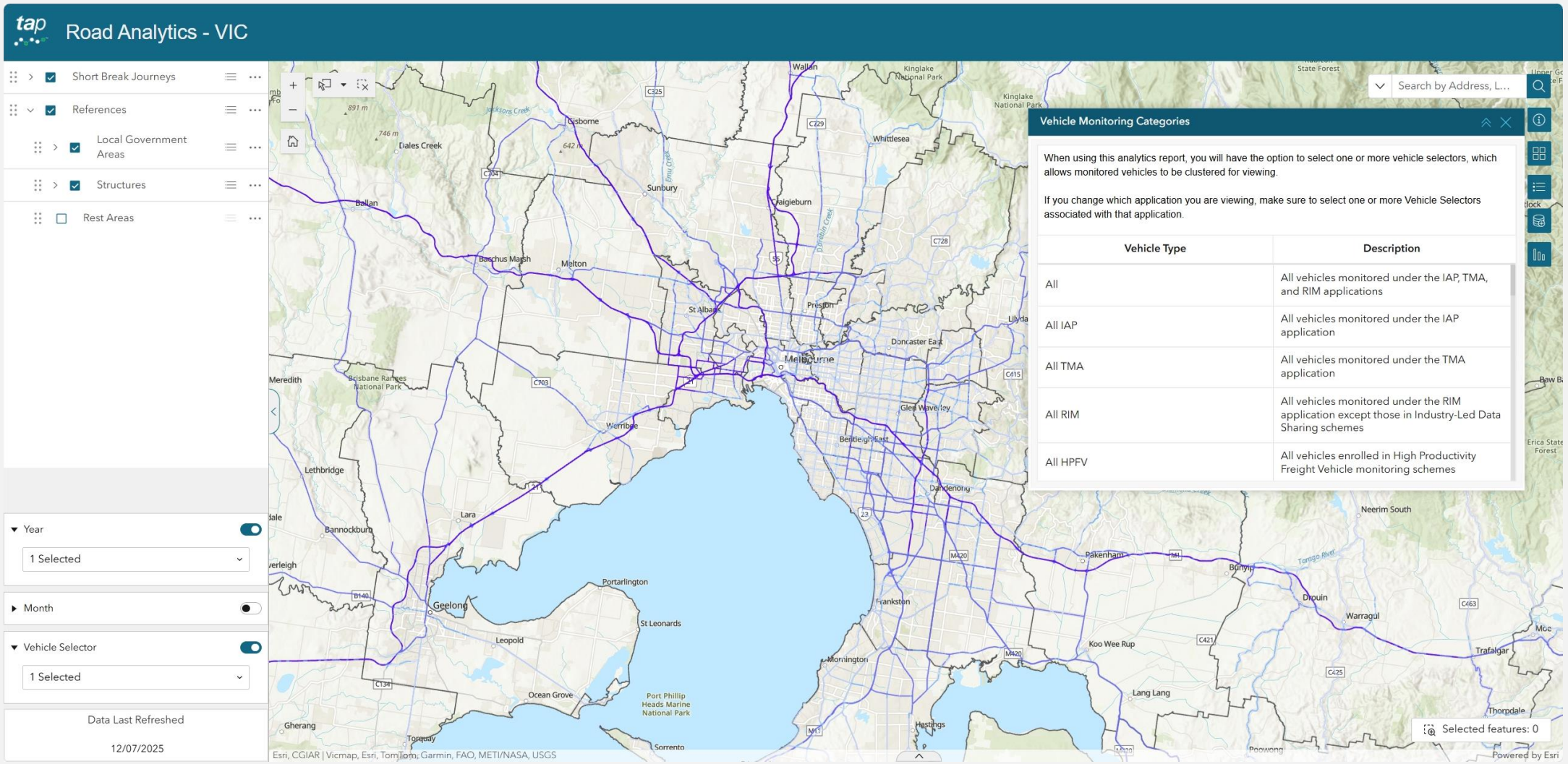

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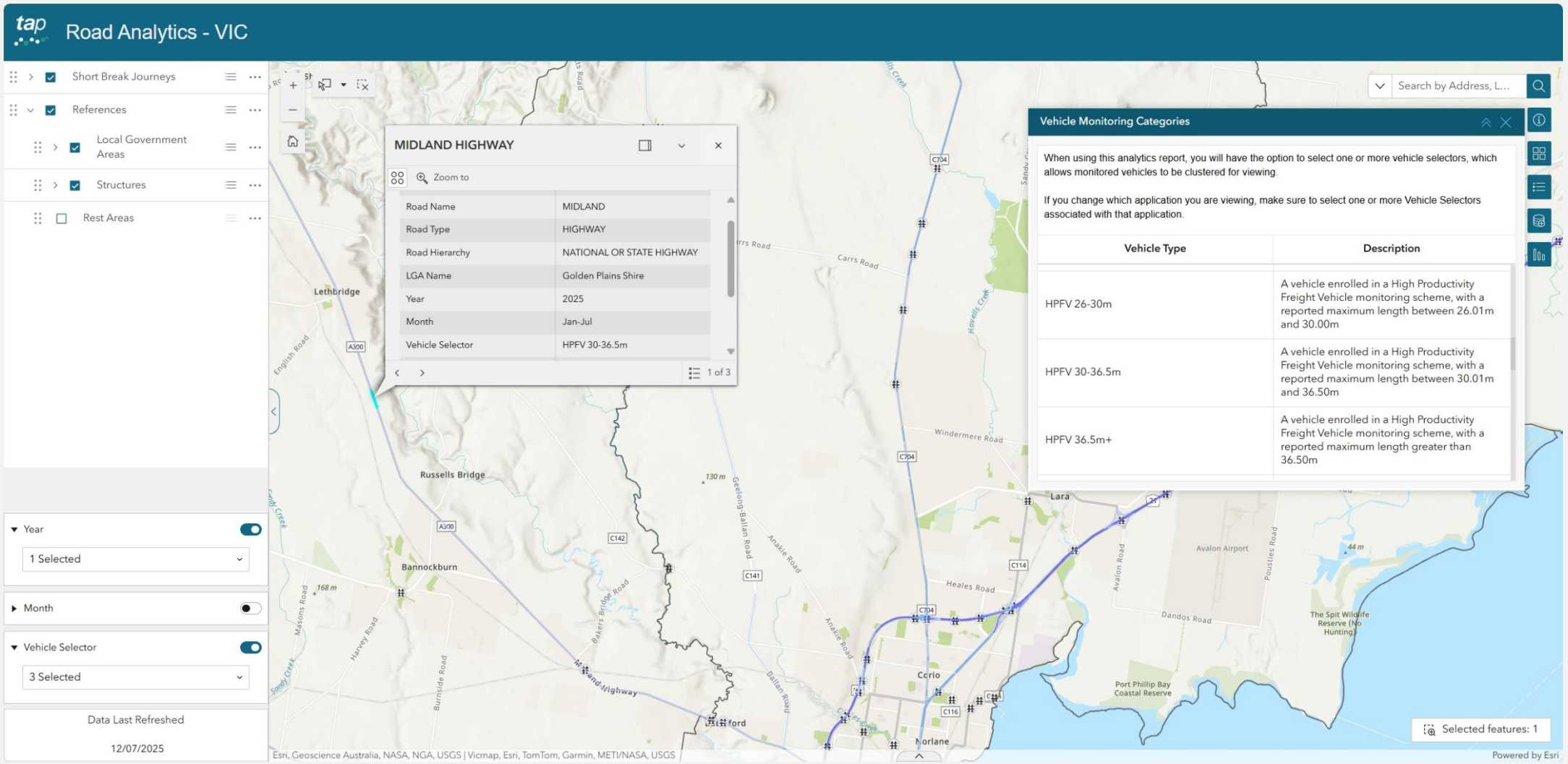

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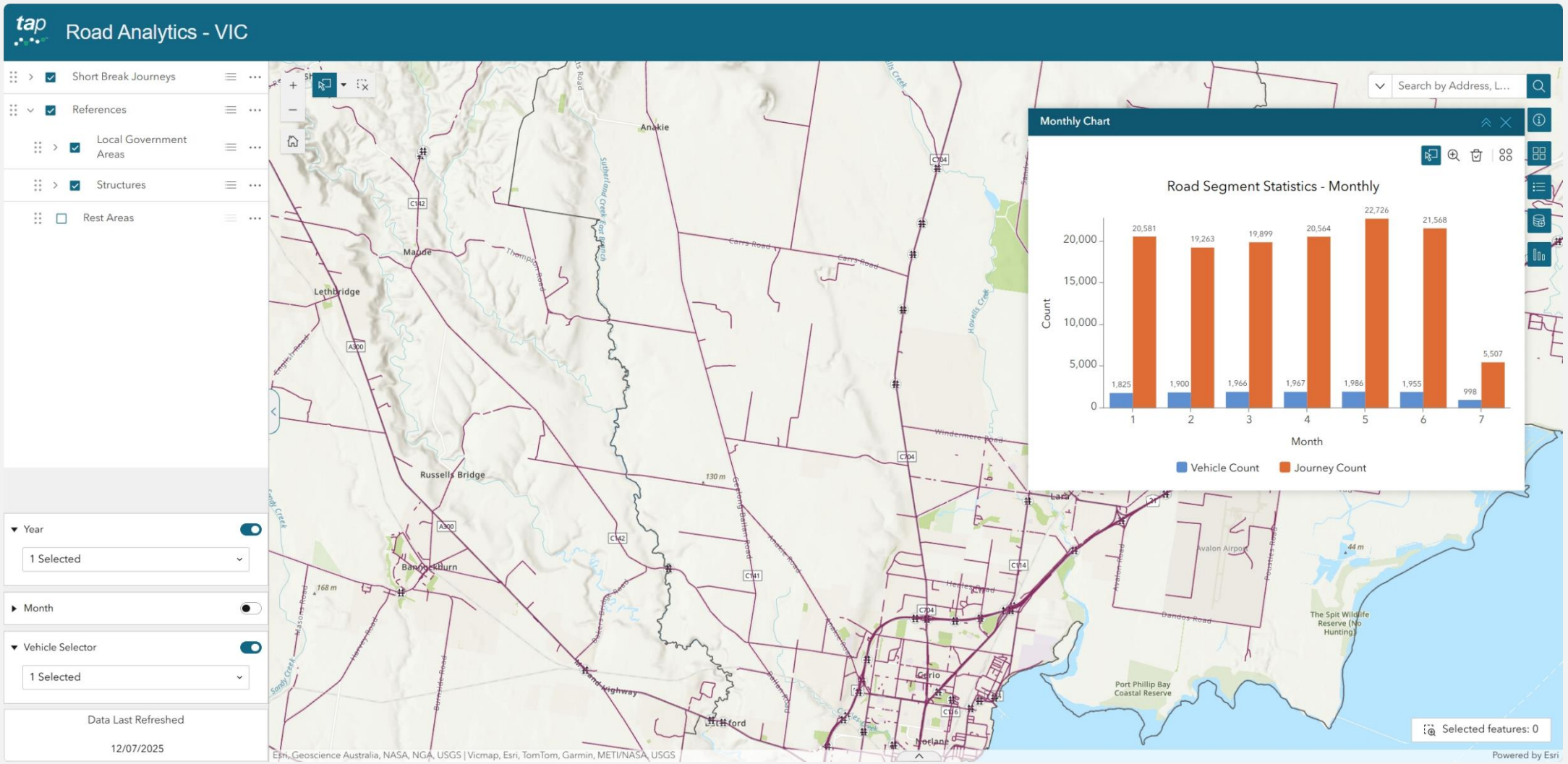

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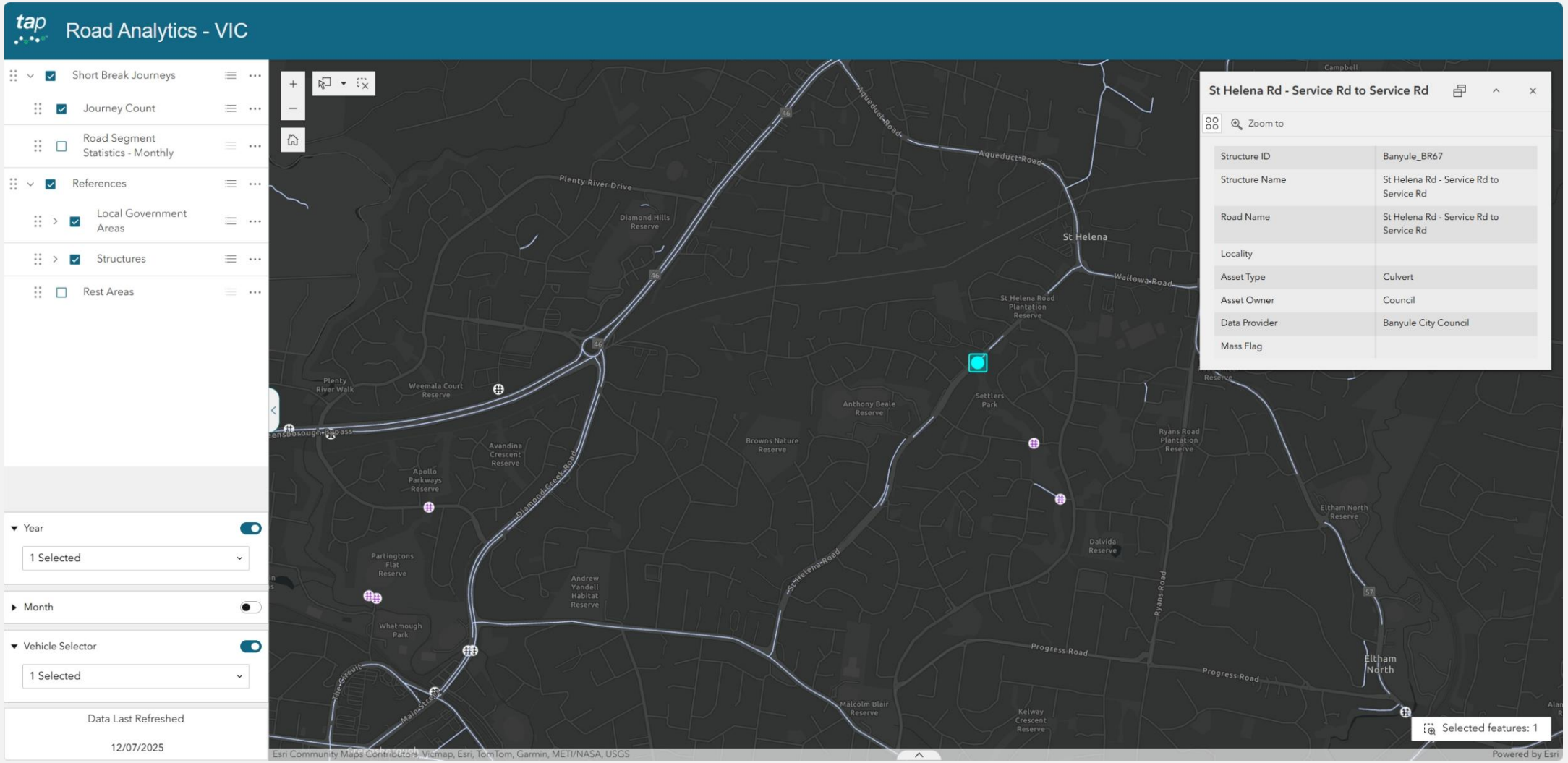
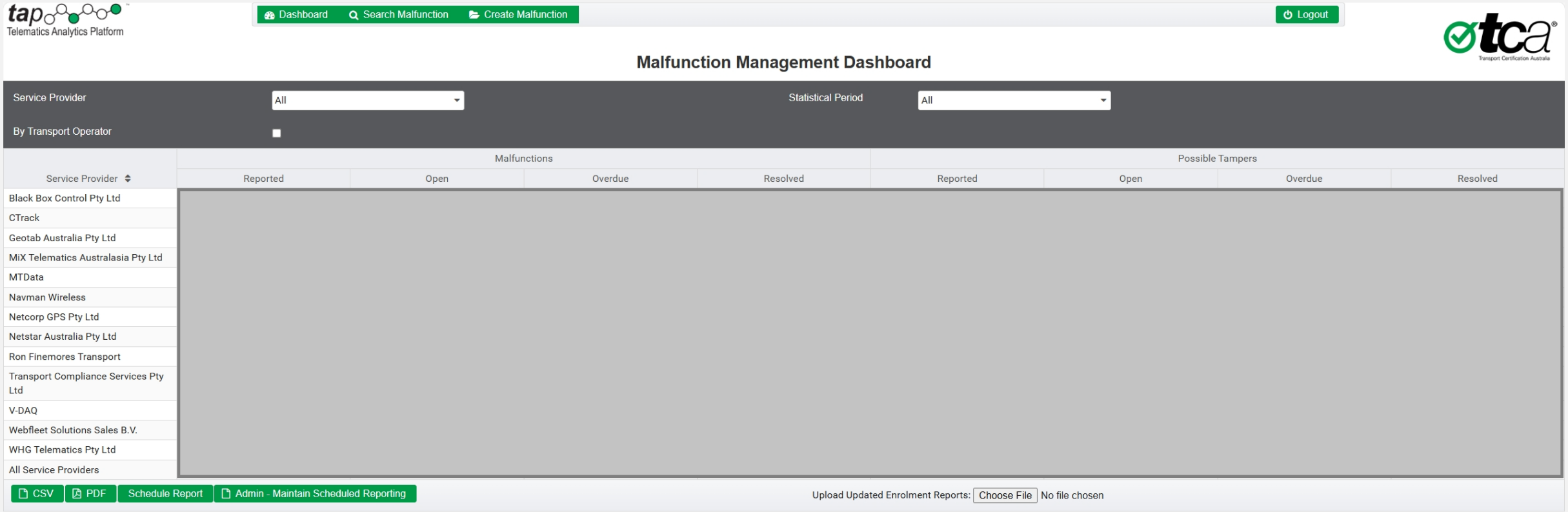


Malfunction Management service



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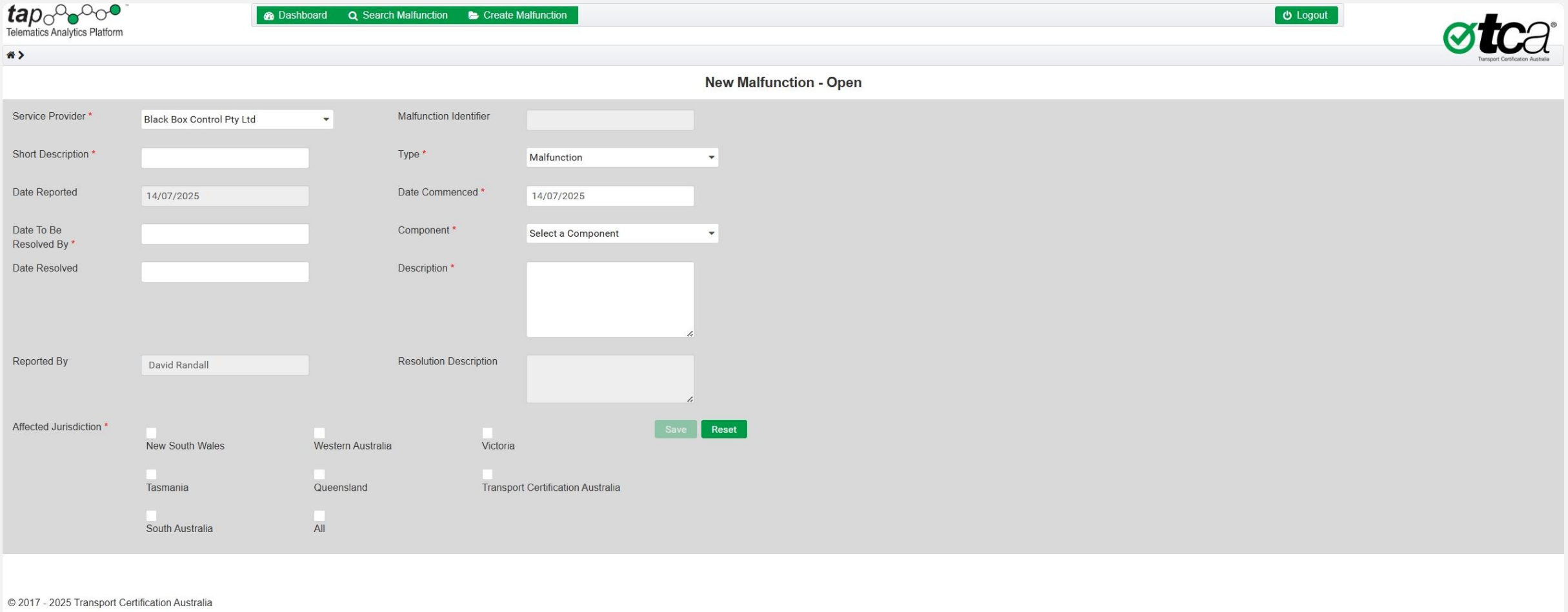
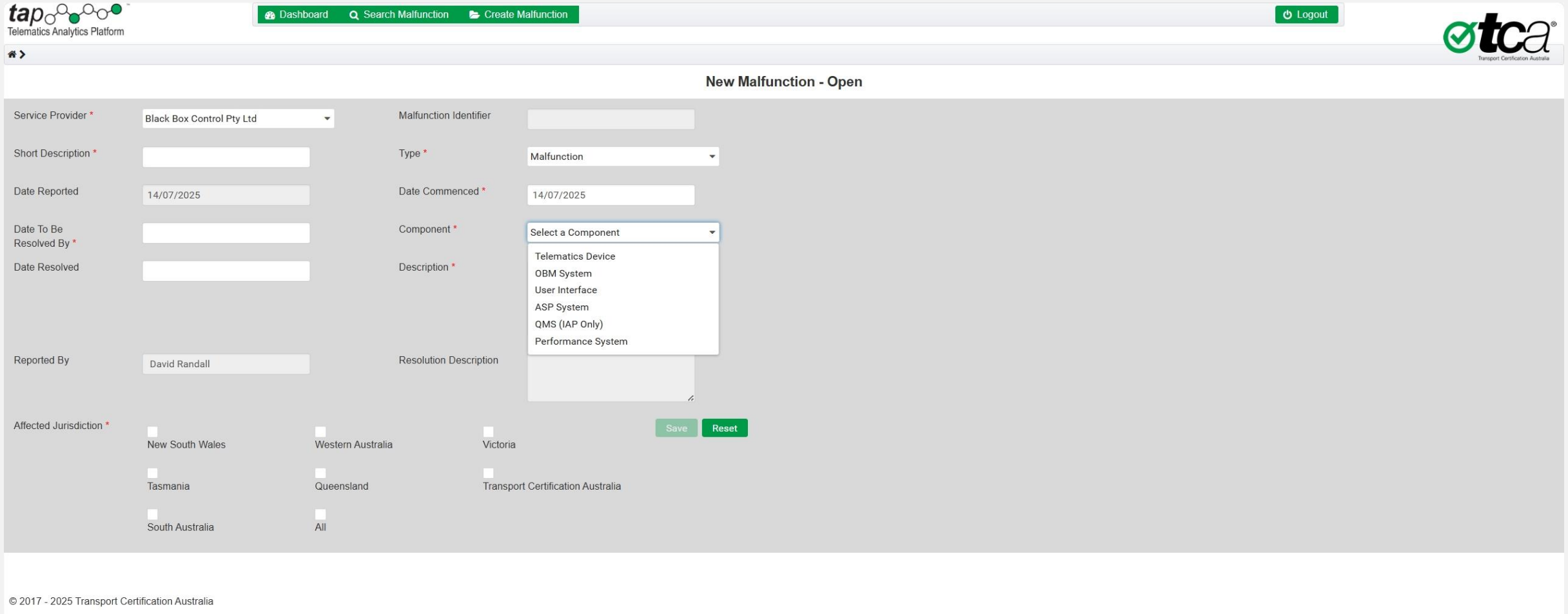
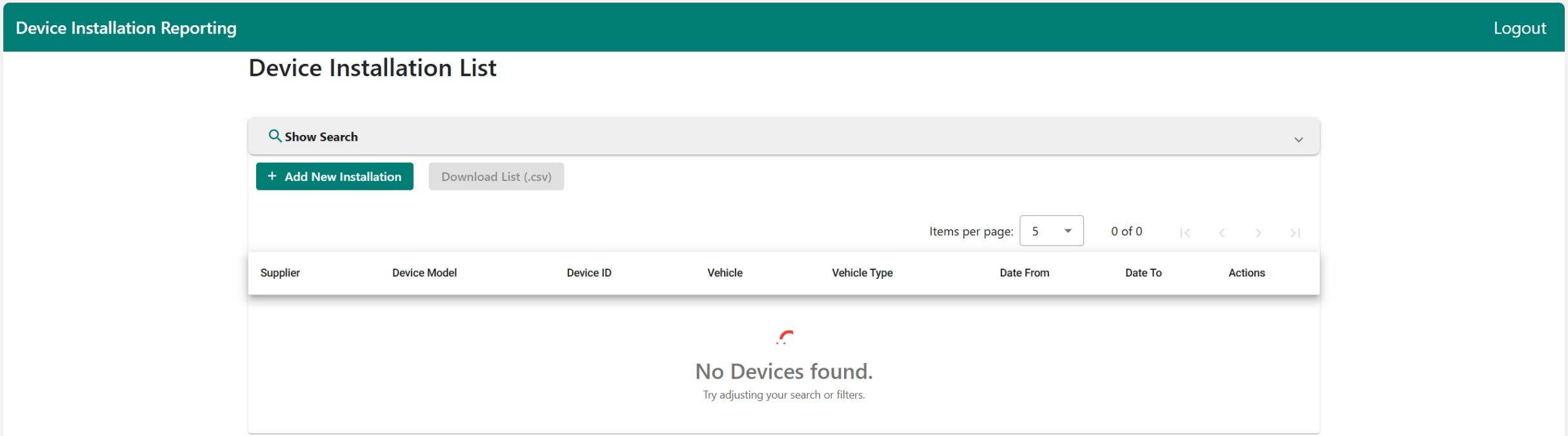
Malfunction Management service



Malfunction Management service



Device Installation Reporting service



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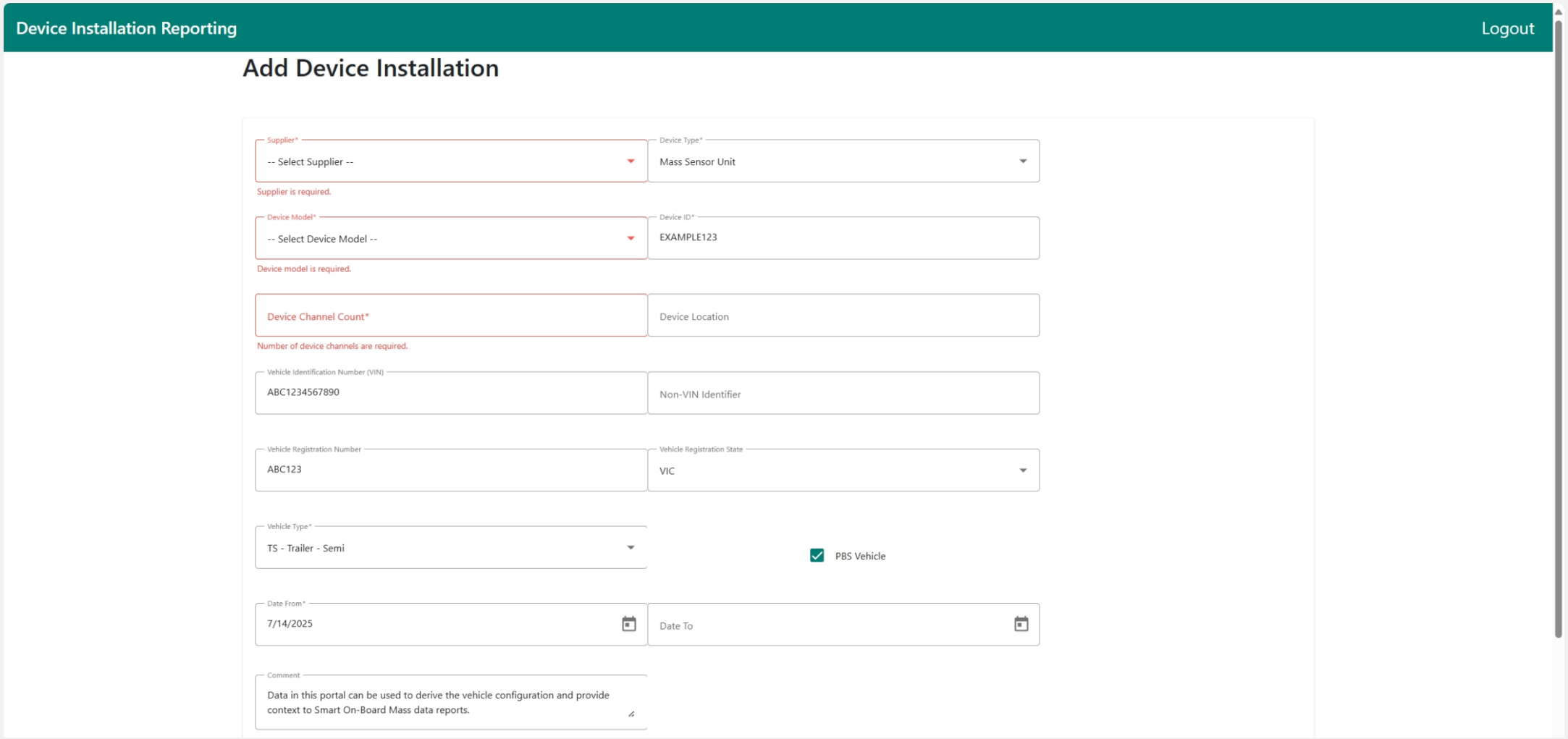

How to get in touch

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tca | tap Telematics Analytics Platform

Telematics Analytics Platform

Click here to log in

DTPV, local government and telematics

David Moore

TAPping into Victoria's road network

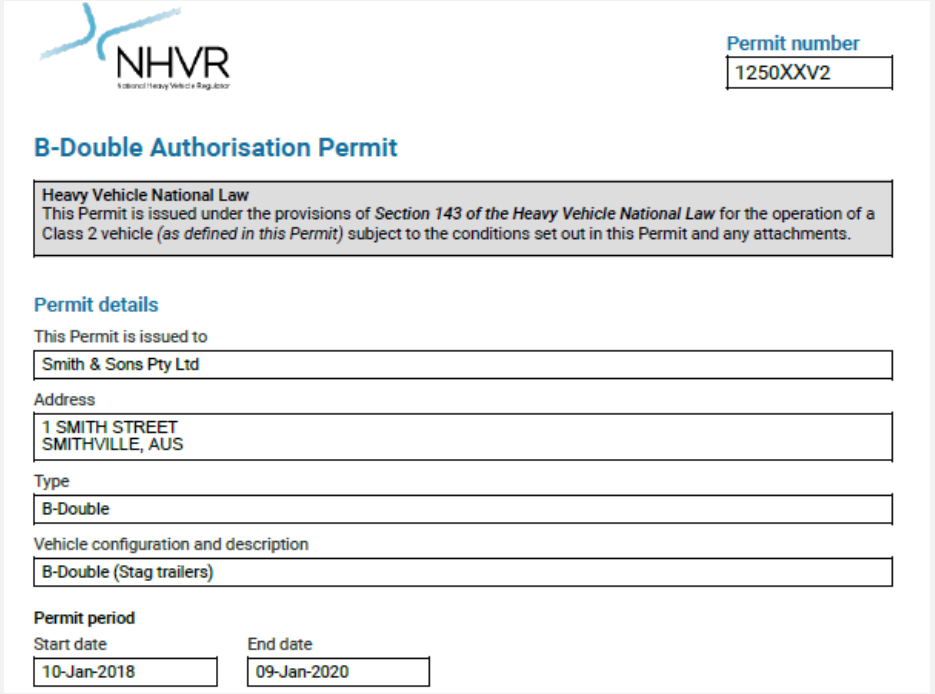
All the way with LGAs

- Two decades on the road, preaching the same familiar refrain – Gazette, gazette, gazette!
- Network expansion has long been a process of chip, chipping away at the biggest barrier to the progress of our mapping goals.
- It's an issue that continues to make life difficult for all participants in the heavy vehicle sphere – not just industry groups and heavy vehicle operators, but also, we road managers, state and local, and the NHVR.

TAPping into Victoria's road network

All the way with LGAs

- The biggest barrier to network mapping: unnecessary permit approvals still being requested by LGAs.
- Heavy operators still need to seek permits to operate on local roads, despite many of those roads being appropriate for the vehicle in question.
- LGAs continue to issue permits year-on-year, effectively rubber-stamping approvals, when they could, should, instead, be mapping their roads on network maps.
- Reasons are varied as to why many local roads remain unmapped. The bottom line though is, once armed with the knowledge and correct information about vehicles, maps and options available, LGAs generally commit to mapping and reducing permits.



NHVR

Permit number
1250XXV2

B-Double Authorisation Permit

Heavy Vehicle National Law
This Permit is issued under the provisions of *Section 143 of the Heavy Vehicle National Law* for the operation of a Class 2 vehicle *(as defined in this Permit)* subject to the conditions set out in this Permit and any attachments.

Permit details

This Permit is issued to
Smith & Sons Pty Ltd

Address
1 SMITH STREET
SMITHVILLE, AUS

Type
B-Double

Vehicle configuration and description
B-Double (Stag trailers)

Permit period

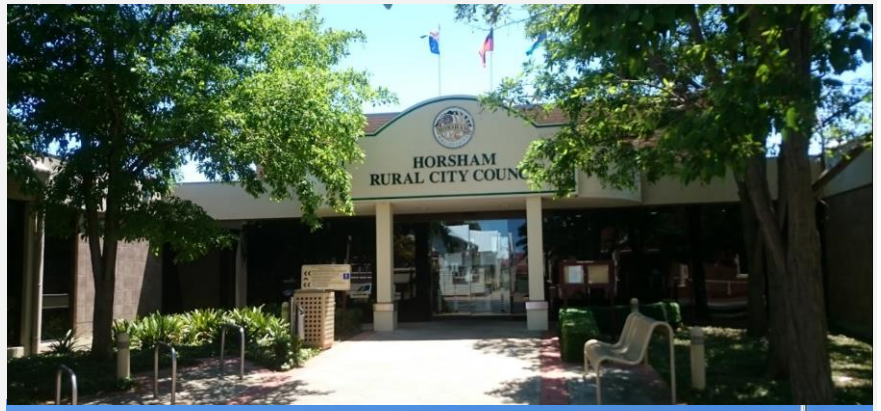
Start date
10-Jan-2018

End date
09-Jan-2020

TAPping into Victoria's road network

All the way with LGAs

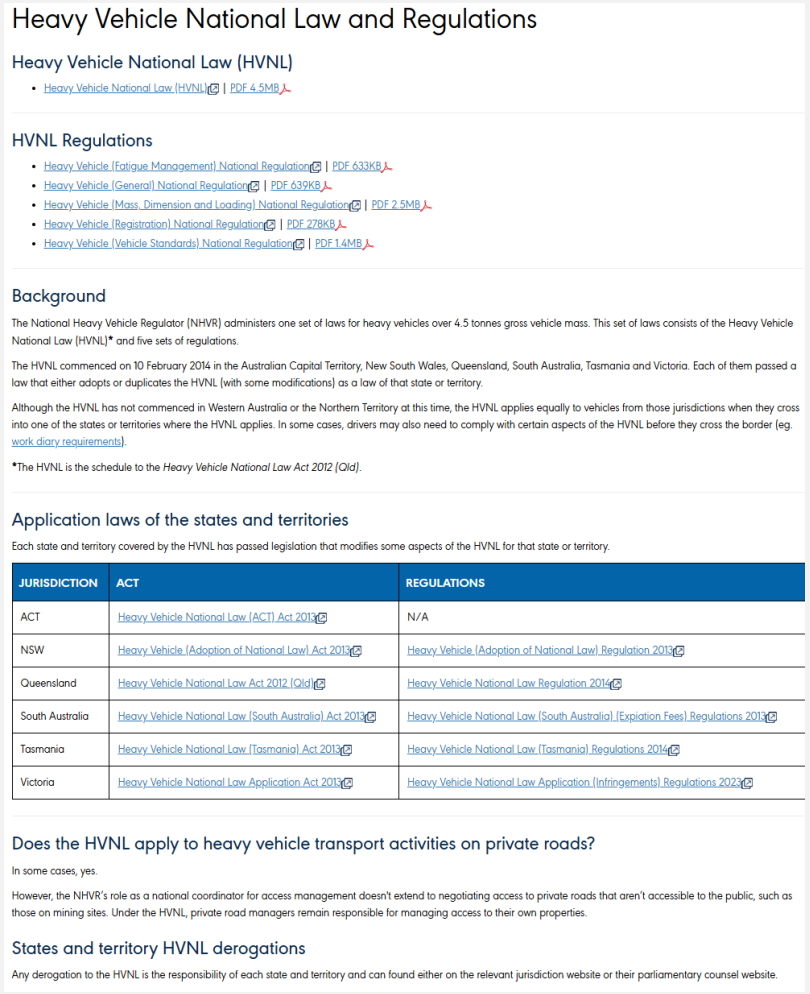
- Personal visits, to councils and other road managers on their home turf, have proven to be the first of two silver bullets for network mapping.
- The second is Austroads' TCA Telematics Analytics Platform (TAP) Tool.
- TAP has provided Freight Victoria with the ability to not only showcase the visible proof of where some of the longer and heavier segments of the fleet are, actually, travelling on LGA roads.
- Just as important, TAP, since it was launched and rolled out early in 2023, has given DTP better access to council officers, a foot in the door, so to speak.



TAPping into Victoria's road network

Relationship between DTP, LGAs & the NHVR

- The NHVR, under the Heavy Vehicle National Law, guides road authorities such as DTP, and LGAs and other roads managers, along a path of harmonisation.
- The NHVR's aims to, broadly:
  - drive sustainable improvements to safety, productivity and efficiency;
  - minimise regulatory burdens while ensuring the objects of the HVNL are achieved and duty holders meet their obligations; and
  - reduce duplication of, and inconsistencies in, heavy vehicle regulation.



Heavy Vehicle National Law and Regulations

Heavy Vehicle National Law (HVNL)

- Heavy Vehicle National Law (HVNL) | PDF 4.5MB

HVNL Regulations

- Heavy Vehicle (Fatigue Management) National Regulation | PDF 633KB
- Heavy Vehicle (General) National Regulation | PDF 639KB
- Heavy Vehicle (Mass, Dimension and Loading) National Regulation | PDF 2.5MB
- Heavy Vehicle (Registration) National Regulation | PDF 278KB
- Heavy Vehicle (Vehicle Standards) National Regulation | PDF 1.4MB

Background

The National Heavy Vehicle Regulator (NHVR) administers one set of laws for heavy vehicles over 4.5 tonnes gross vehicle mass. This set of laws consists of the Heavy Vehicle National Law (HVNL)* and five sets of regulations.

The HVNL commenced on 10 February 2014 in the Australian Capital Territory, New South Wales, Queensland, South Australia, Tasmania and Victoria. Each of them passed a law that either adopts or duplicates the HVNL (with some modifications) as a law of that state or territory.

Although the HVNL has not commenced in Western Australia or the Northern Territory at this time, the HVNL applies equally to vehicles from those jurisdictions when they cross into one of the states or territories where the HVNL applies. In some cases, drivers may also need to comply with certain aspects of the HVNL before they cross the border (eg. work diary requirements).

*The HVNL is the schedule to the *Heavy Vehicle National Law Act 2012 (Qld)*.

Application laws of the states and territories

Each state and territory covered by the HVNL has passed legislation that modifies some aspects of the HVNL for that state or territory.

JURISDICTION	ACT	REGULATIONS
ACT	Heavy Vehicle National Law (ACT) Act 2013	N/A
NSW	Heavy Vehicle (Adoption of National Law) Act 2013	Heavy Vehicle (Adoption of National Law) Regulation 2013
Queensland	Heavy Vehicle National Law Act 2012 (Qld)	Heavy Vehicle National Law Regulation 2014
South Australia	Heavy Vehicle National Law (South Australia) Act 2013	Heavy Vehicle National Law (South Australia) (Expiation Fees) Regulations 2013
Tasmania	Heavy Vehicle National Law (Tasmania) Act 2013	Heavy Vehicle National Law (Tasmania) Regulations 2014
Victoria	Heavy Vehicle National Law Application Act 2013	Heavy Vehicle National Law Application (Infringements) Regulations 2023

Does the HVNL apply to heavy vehicle transport activities on private roads?

In some cases, yes.

However, the NHVR's role as a national coordinator for access management doesn't extend to negotiating access to private roads that aren't accessible to the public, such as those on mining sites. Under the HVNL, private road managers remain responsible for managing access to their own properties.

States and territory HVNL derogations

Any derogation to the HVNL is the responsibility of each state and territory and can found either on the relevant jurisdiction website or their parliamentary counsel website.

TAPping into Victoria's road network

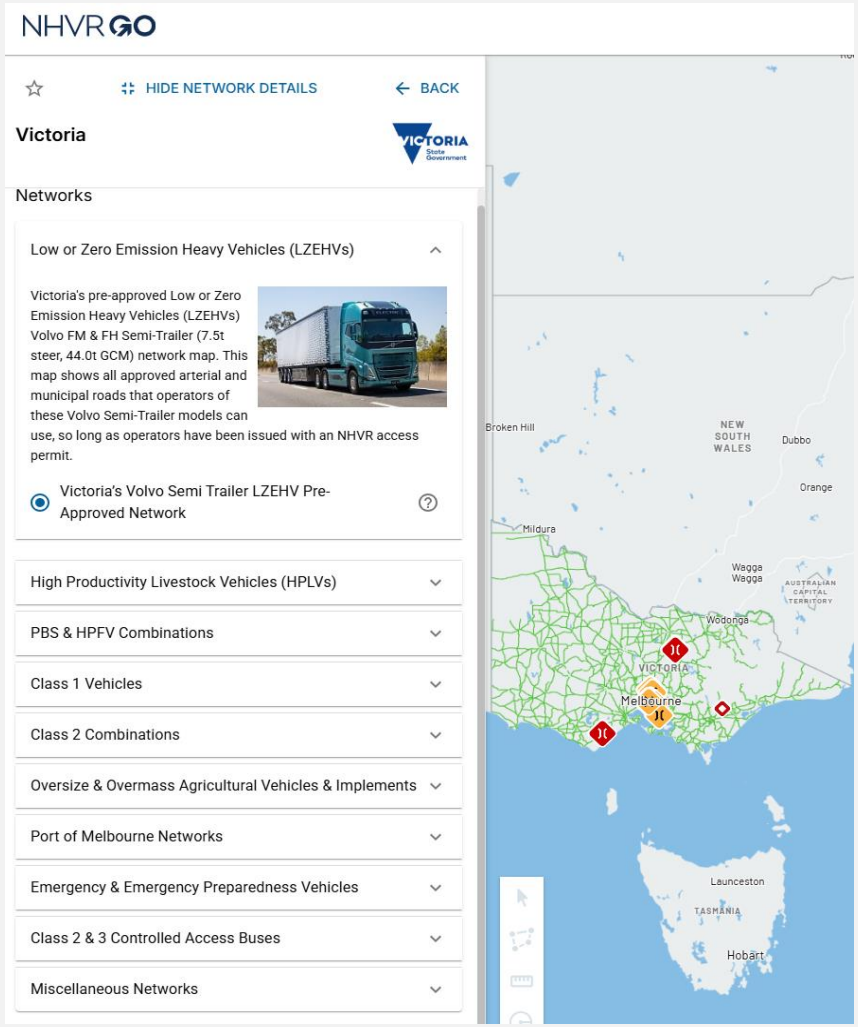
Relationship between DTP, LGAs & the NHVR

- The first of Victoria's Heavy Vehicle Map Networks were published in February 2014.
- Three published maps – one for B-doubles, another for Higher Mass Limits access, and a third for 4 & 5 Axle Cranes.
- Before these maps Victoria's LGAs had approved appropriate roads to be listed in Victorian Gazette Notices and an associated biennial B-double/HML Bulletin.
- At that time operators requiring access for all other heavy vehicles had to rely solely upon permit approvals, subject to access reviews and a payment.

TAPping into Victoria's road network

Relationship between DTP, LGAs & the NHVR

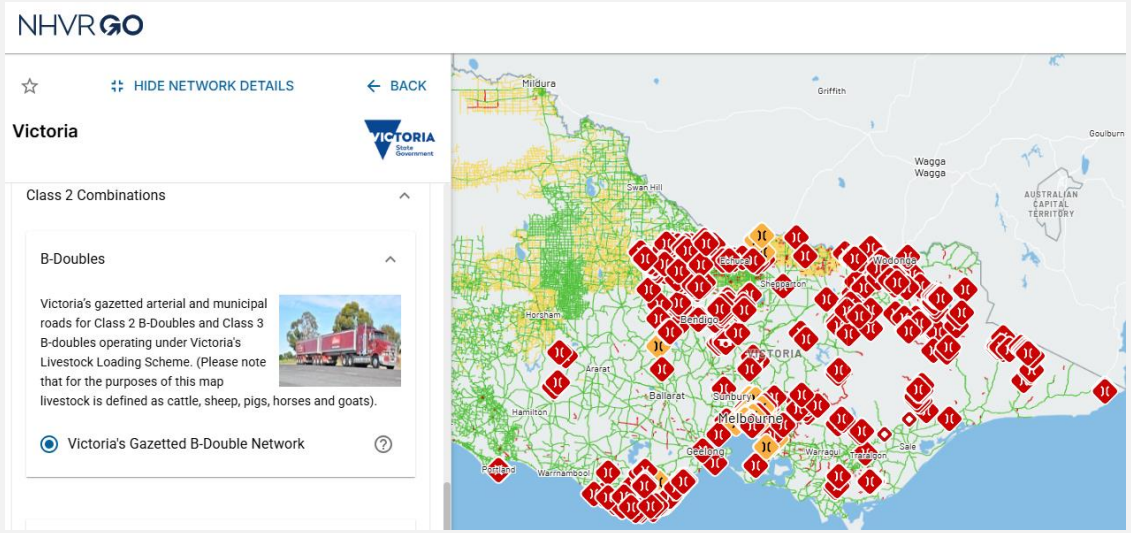
- Mapped networks were created, updated and maintained by our little team until they were transitioned to the NHVR in late December of 2023, all 108 of them.
- The NHVR houses and manages all of Victoria's mapped networks – now numbering 119 - The list is shown here of the vehicle groupings now mapped.
- DTP remains responsible for the creation of new networks, as well as the maintenance and updating of any new and all existing maps.
- DTP is responsible for the state's arterial roads and assets but maintains a very close and nurturing relationship with its local road managers.
- While LGAs remain rightly responsible for approving mapped access on their roads and assets, DTP continues to assist all local road managers with the mapping of appropriate roads on all 119 Victorian networks



TAPping into Victoria's road network

Relationship between DTP, LGAs & the NHVR

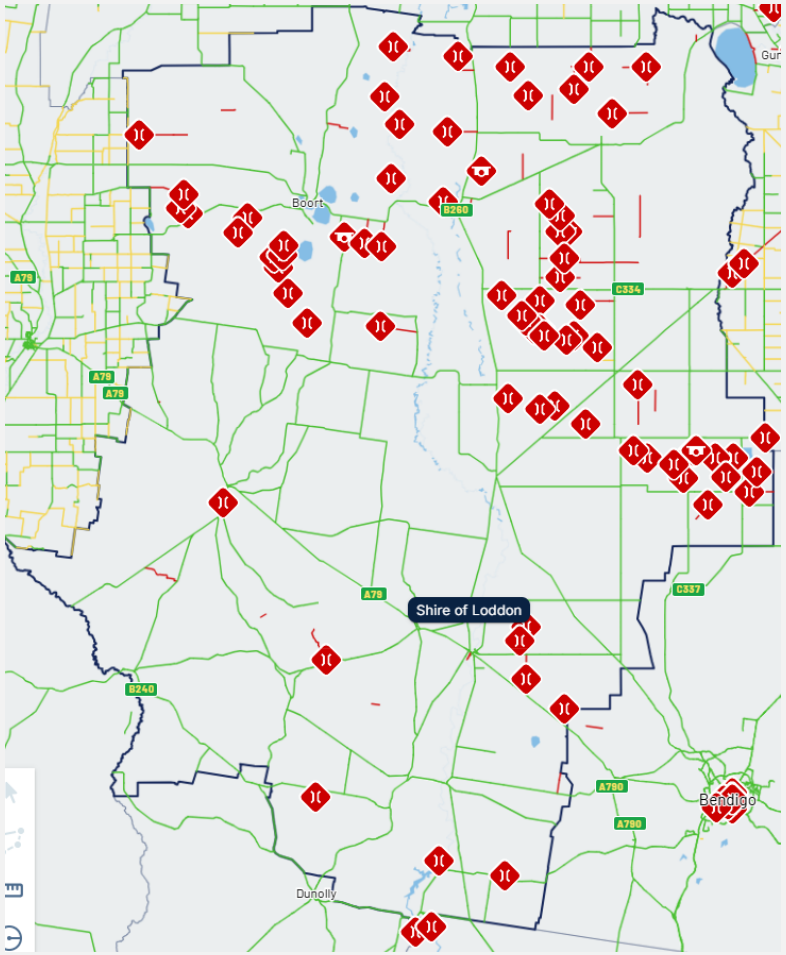
- DTP is an intermediary between the NHVR and local government, assisting road managers on the finer points of all manner of heavy vehicle access advice and guidance. Dotting the i's and crossing the t's, so to speak
- Since the map transition from DTP to NHVR 20 months ago, many councils have been trained to self map their networks.
- A handful of LGAs have taken on that task, but for a varitey of reasons, most still rely on DTP to facilitate the mapping process.
- DTP has recently embedded an NHVR-paid mapping officer within our Freight Victoria team. Jess Lopez has been with us for five months now and has both the authority and capability to map roads on behalf of the LGAs.



TAPping into Victoria's road network

Challenges for LGAs v DTP and the NHVR

- LGAs often lack the knowledge, resources, time and sometimes, sadly, the inclination to deal proactively with the demands of heavy vehicle access.
- It's the reason why permit access has persisted so long in some councils.
- Way too many councils still rely too heavily on the permit process.
- Many LGAs are dotted with ancient structures and many unsealed roads, and don't have the adequate staff to deal with the constant heavy vehicle access requirements coming at them.



TAPping into Victoria's road network

Challenges for LGAs v DTP and the NHVR

- One reason why some LGAs persist with permits, and another challenge for LGAs, is asset protection and a lack of knowledge of the capacity of some of their structures.
- DTP has the bridge engineers to deal with the 6000-odd structures and they know the capabilities of these structure.
- Many LGAs, however, don't know the capacity of many of their bridges, and most don't have the bridge engineers or knowledge on tap to deal with access requests over those bridges.
- Routes remain closed to mapped heavy vehicle traffic because of the fear of the unknown.
- High turnover of staff turnover in LGAs is also a major stumbling block. Particularly evident to those dealing daily with councils.

TAPping into Victoria's road network

Challenges for LGAs v DTP and the NHVR

- The main challenge for DTP is to maintain relationships with state local road managers.
- DTP needs these relationships and open channels of communication because it acts as a broker between industry and road managers to build the mapped networks.
- Another challenge, since LGAs have been trained by the NHVR to self map, is being left out of the loop - not knowing what changes councils have made to their networks.
- Part of the agreement DTP signed up to before the mapped networks transitioned to the NHVR was transparency and retaining our involvement in map changes.

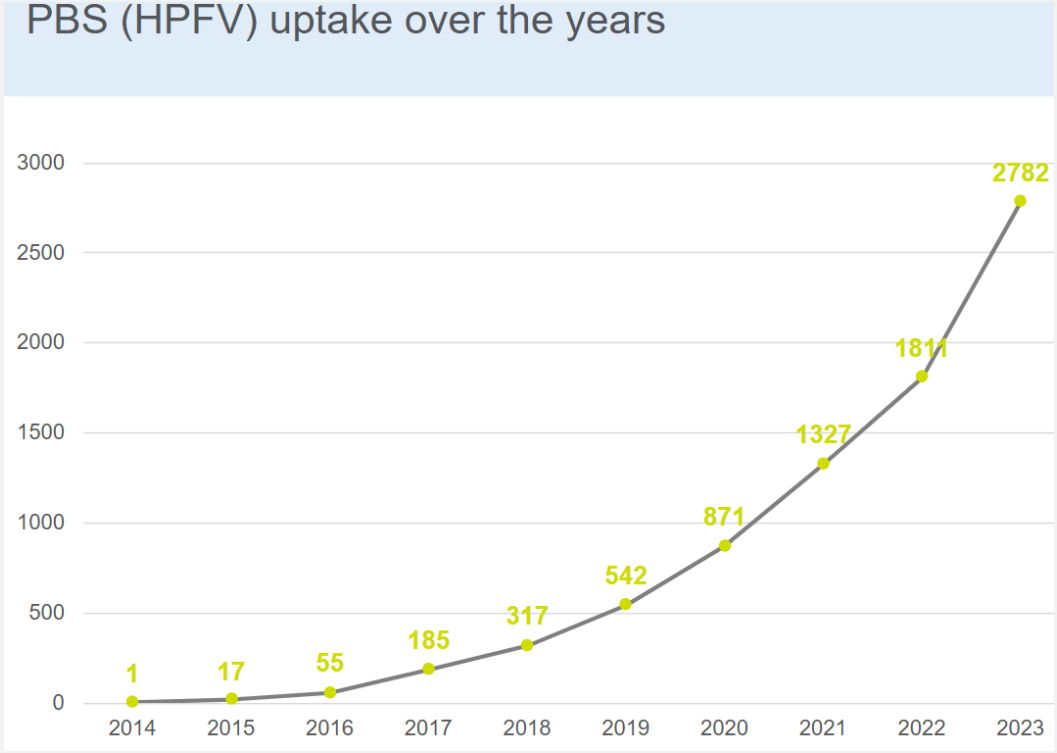
TAPping into Victoria's road network

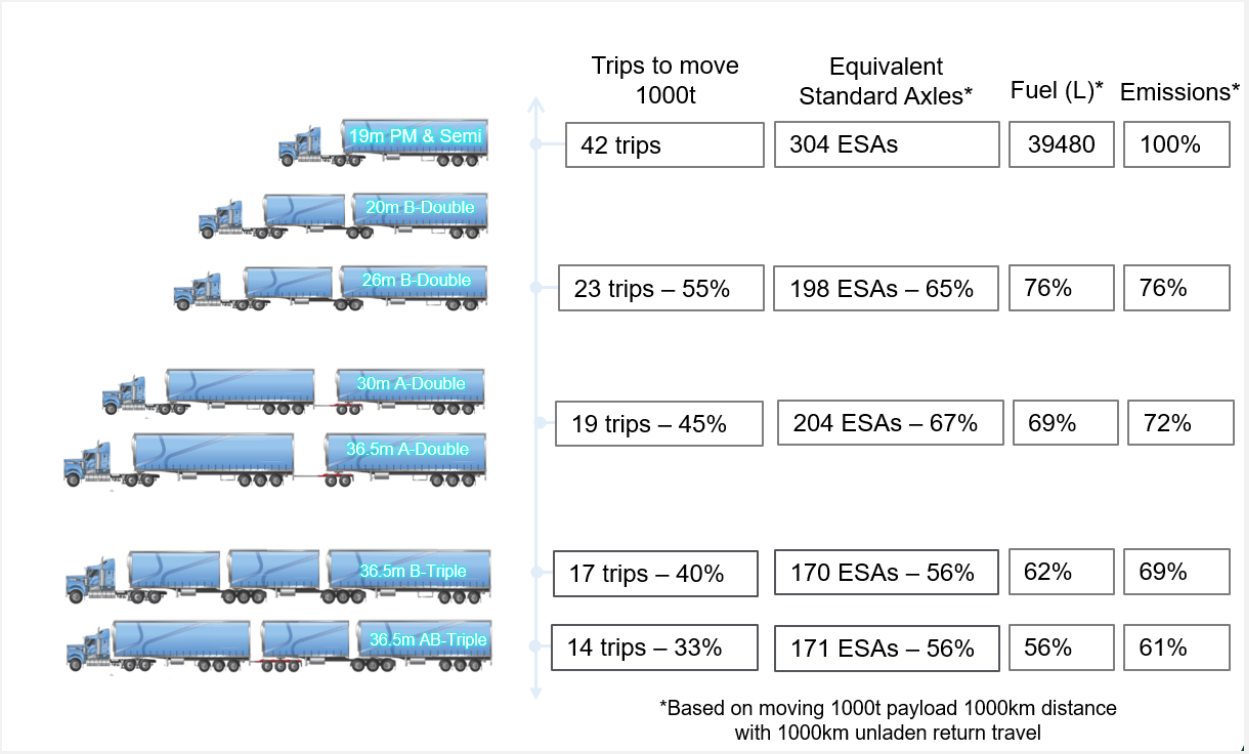
Challenges for LGAs v DTP and the NHVR

- There are a few challenges facing the NHVR, as I see it, but the main ones DTP is hopeful that the Regulator will focus on are to continue to:
  - Iron out issues and bugs within the NNM and the Portal. Still a work in progress, particularly with layers relating to asset symbols for level crossing etc., and areas of operation.
  - Educate and re-train existing LGA staff and identify and train new LGA officers as they replace those who regularly move on – not just about the virtues of mapping over permits, but also about heavy vehicles in general.

TAPping into Victoria's road network

Challenges for LGAs v DTP and the NHVR



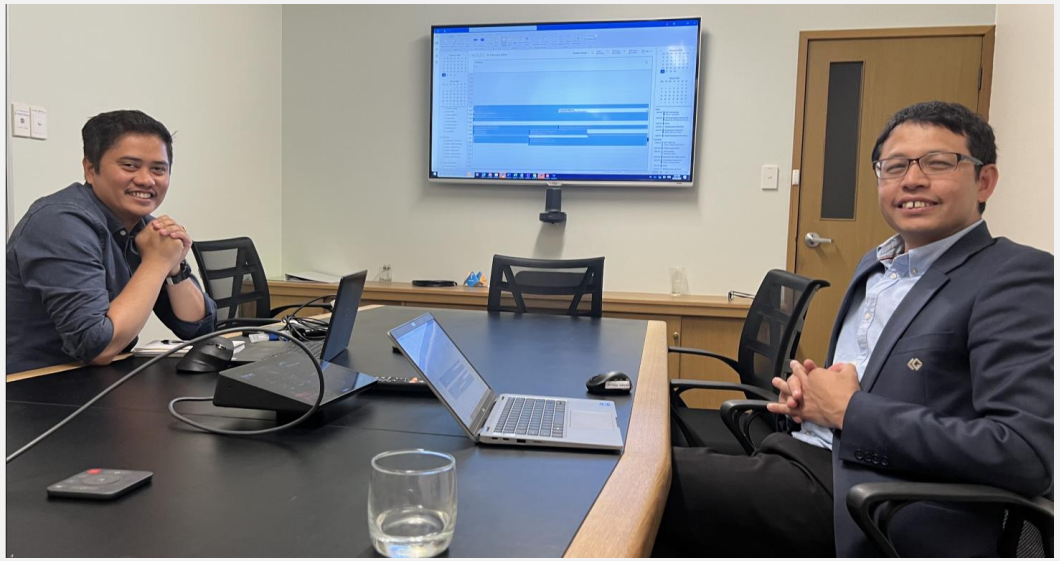


Scheme Group	Scheme Code	Scheme Name	Data Type	Jul 2024	Aug 2024	Sept 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025
Total TMAHPFVVIC	--	--	Operators	536	559	574	594	600	614	650	662	683	694	707	705
			Vehicles	3890	4107	4228	4323	4399	4465	4581	4632	4758	4811	4867	4774
			Enrolment	3949	4161	4287	4377	4453	4525	4638	4684	4809	4868	4924	4833

TAPping into Victoria's road network

How DTP has supported LGAs to use telematics and provide data to enhance the NHVR's NNM

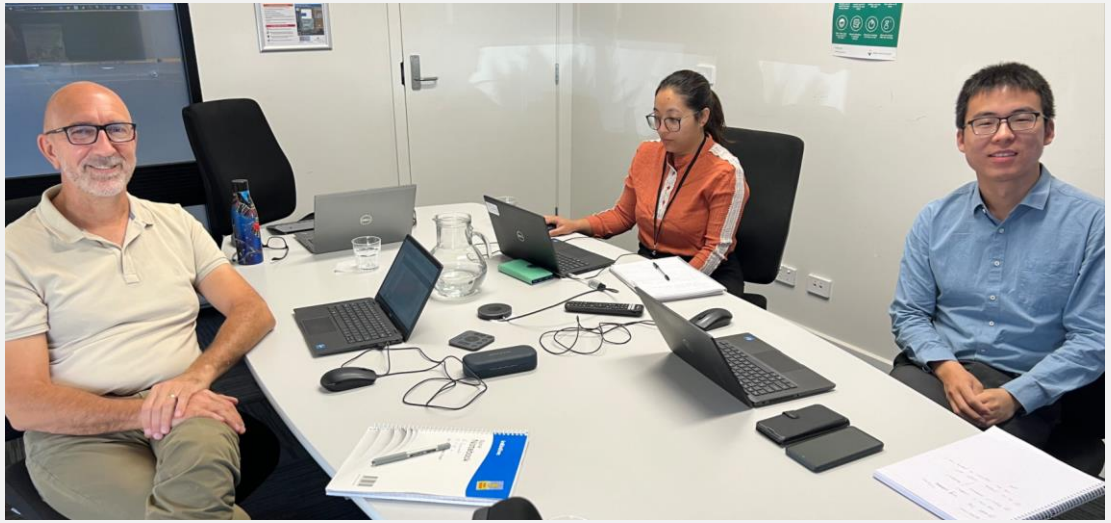
- DTP's earlier iterations long encouraged Heavy Vehicle Policy officers such as myself to go forth and meet with local road managers to expand the B-double/HML network.
- As the focus moved from bulletins to network maps with the emergence of the NHVR, visit were made to almost all 31 metropolitan LGAs.
- In the ensuing years we've met with every one of Victoria's 79 councils, most physically, others via Microsoft Teams.
- Met with 62 councils on their premises, as well as all ports and toll road operators, a couple of airports, a handful of alpine resorts and DEECA



TAPping into Victoria's road network

How DTP has supported LGAs to use telematics and provide data to enhance the NHVR's NNM

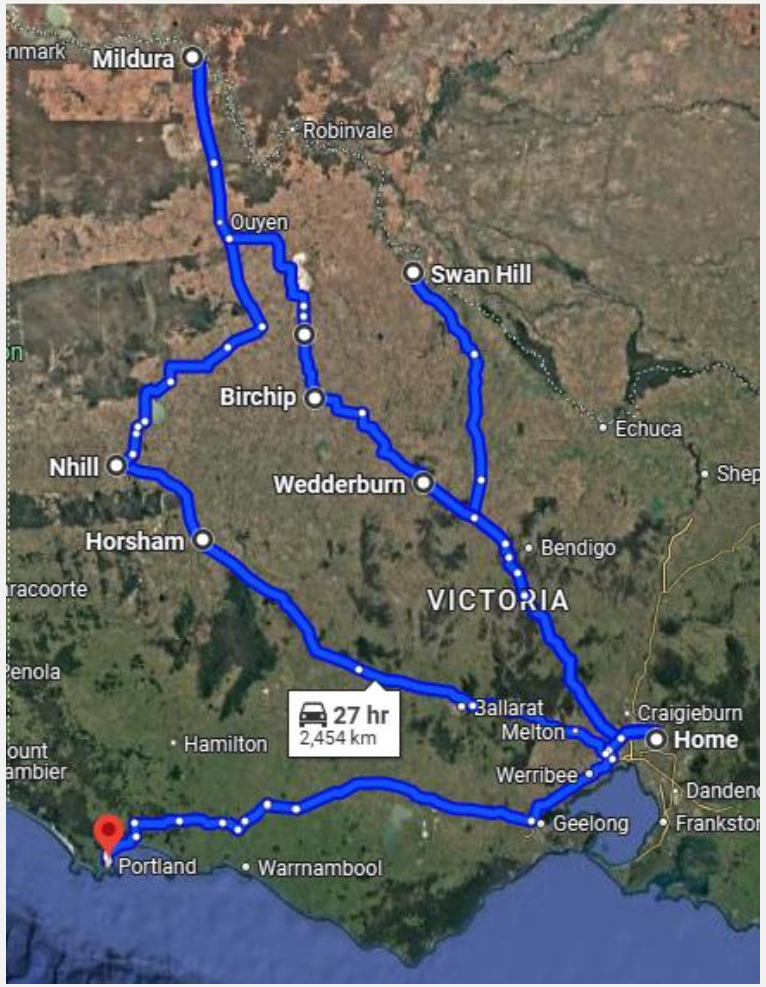
- **'LGA Heavy Vehicle Health Checks'.** DTP now meets, either face-to-face or via teams, with all road managers every two years.
- Last month we returned to Wangaratta Shire. Last week, for the first time, we met with Rural City of Swan Hill and Loddon Shire staff at their offices.
- There's been a rapid increase of local roads appearing on the NHVR mapped networks since DTP purchased 80 TAP Tool licences from TCA back early in 2023, and with their blessing, began training willing road managers.
- It's a very rewarding feeling to see the rapid, sometimes instant, awareness when a council officer see's the light and then gives us the **green** light to have their roads mapped.



TAPping into Victoria's road network

How DTP has supported LGAs to use telematics and provide data to enhance the NHVR's NNM

- Until recently, the stated focus our trips and on-line meetings was to train LGA staff to use TAP.
- It's clearly important to get the LGAs to use a tool which allows them to see how many and how often longer/heavier freight vehicles, as well larger cranes, are operating on their local roads.
- But my main mission has been to meet face-to-face with new, young, enthusiastic local access officers and engineers and discuss their local Heavy Vehicle road access issues.
- The key has been to get into in a room with council decision makers, to show them the how and whys, and that we really do care about them and their often significant road access issues.



TAPping into Victoria's road network

How DTP has supported LGAs to use telematics and provide data to enhance the NHVR's NNM

- Our meetings last week with Swan Hill and Loddon councils perfectly illustrates how much both the personal contact and the training in the use of TAP for mapping purposes grows networks.

- Rural City of Swan Hill not only amended and approved multiple roads on its PBS/HPFV networks after viewing the tool. It also came away from the meeting armed with knowledge prompting the approval and wide-spread expansion on more than half a dozen networks.

- Loddon Shire, a council with very few mapped roads, with an almost total reliance on permits, is also now on board. Similar to Swan Hill, half a dozen networks are now flagged for amendment and livestock and grain transport operators, in particular, will benefit from the Shire's approval to finally map key first/last kilometre access to key destinations.

TAPping into Victoria's road network

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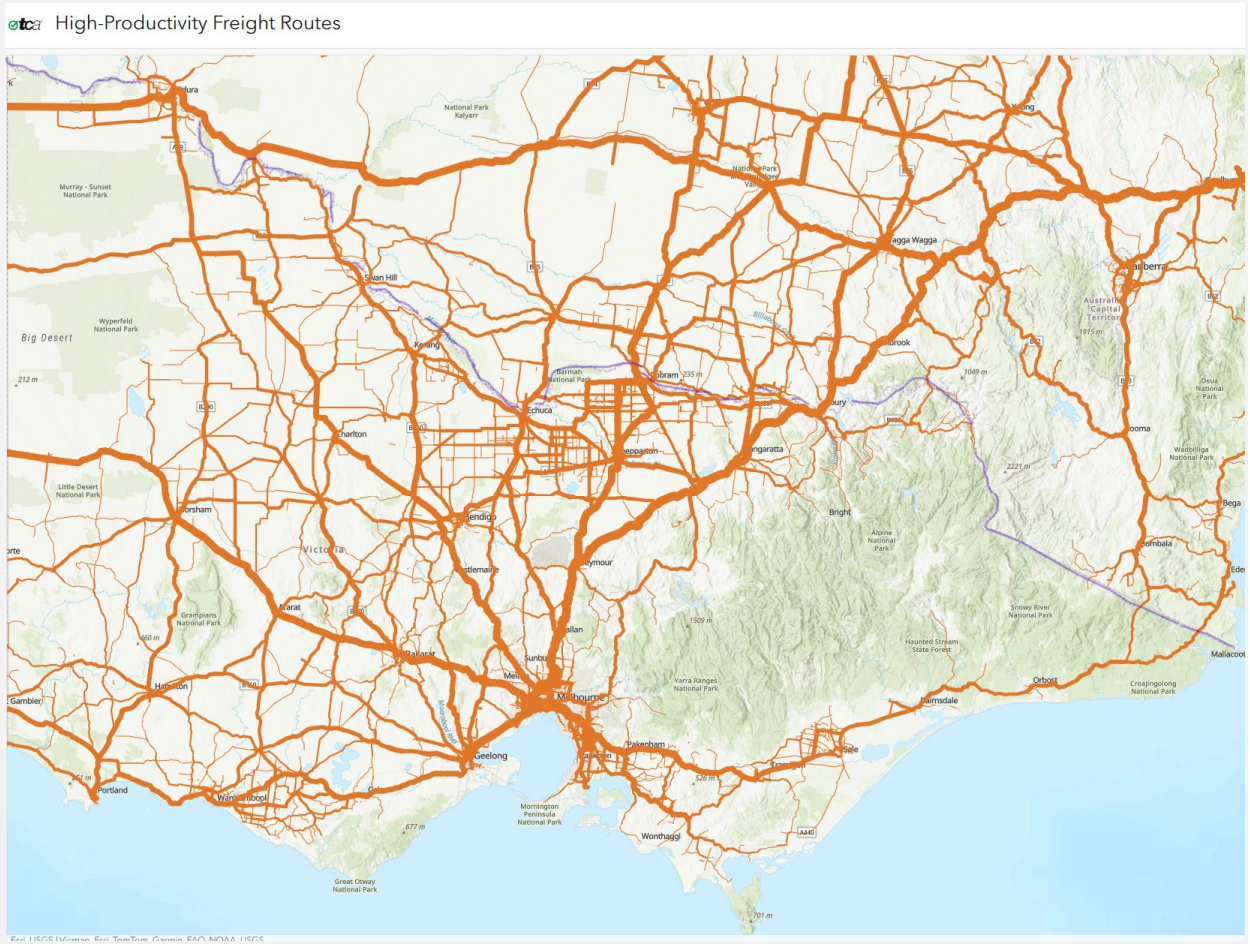
How DTP has supported its Regions to use telematics access to decision making

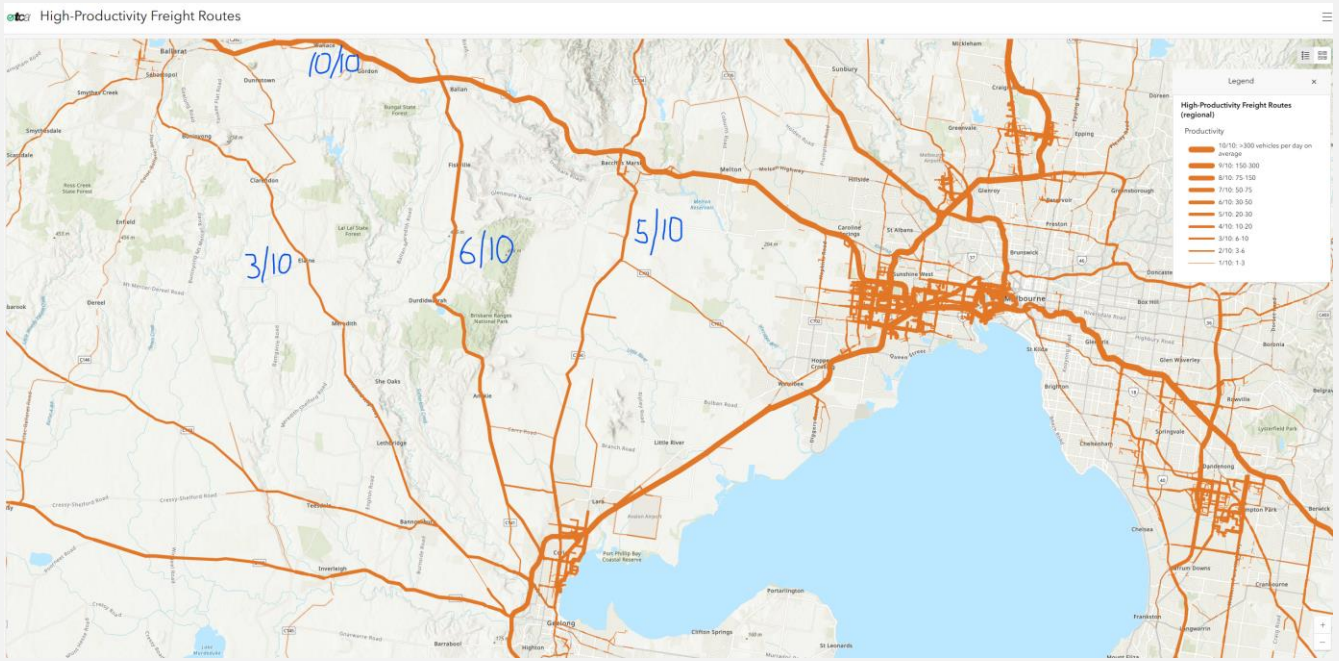
- TAP is the icing on the cake for heavy vehicle network access expansion on local roads, but it does far more for others in DTP and for road managers in general.
- Influences and, in many cases, provides evidentiary proof for business cases submitted for project funding such as bridge strengthening and targeted road improvement and maintenance.
- TAP's High Productivity Freight Routes traffic volume indicator, is now regularly being used by DTP regions for bridge and road upgrades.



TAPping into Victoria's road network

How DTP has supported its Regions to use telematics access to decision making

- DTP has not only rolled out the TAP Tool to LGAs and other road managers. We've also arranged TAP licences for, and provided training to, dozens of DTP Regional colleagues.
- A perfect case in is Barwon South-West Region's realisation that telematically-tracked HPFVs are using alternative routes between Geelong and Ballarat rather than the shorter, more direct general traffic route.
- Barwon South-West discovered that Ballan-Geelong Road is now the preferred HPFV route operators use to access Port of Geelong.



TAPping into Victoria's road network

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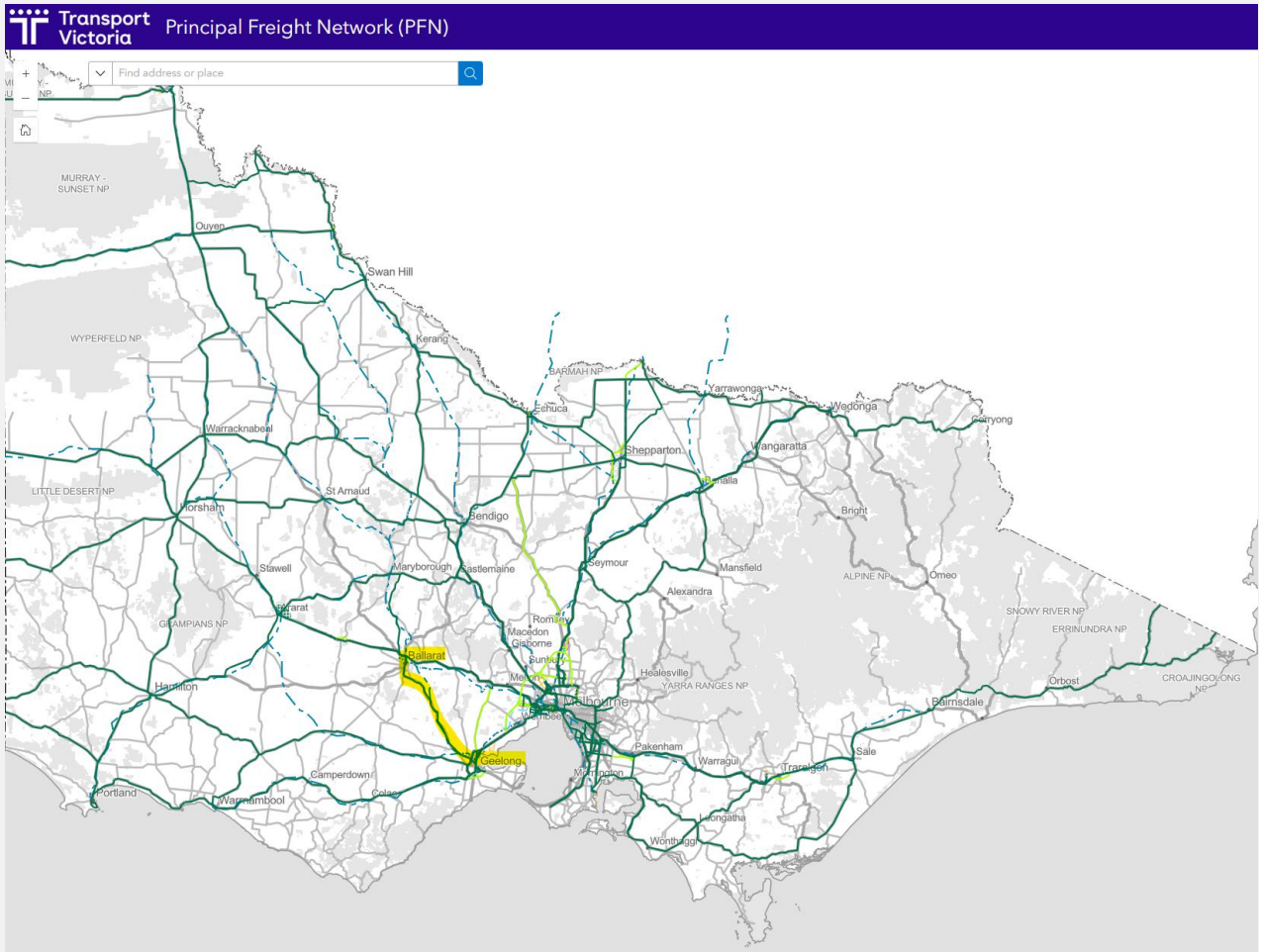
How DTP has supported its Regions to use telematics access to decision making

- See right that that the Midland Highway is clearly shown as the major Geelong-Ballarat transport route on the PFN.
- The revelation, that the Midland is no longer the preferred route, has led to the region re-prioritizing some of its projects for such things as road maintenance, upgrades and future proofing of the network.

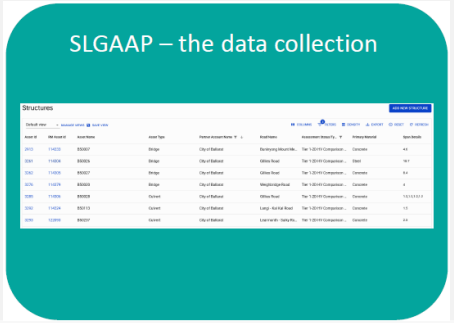


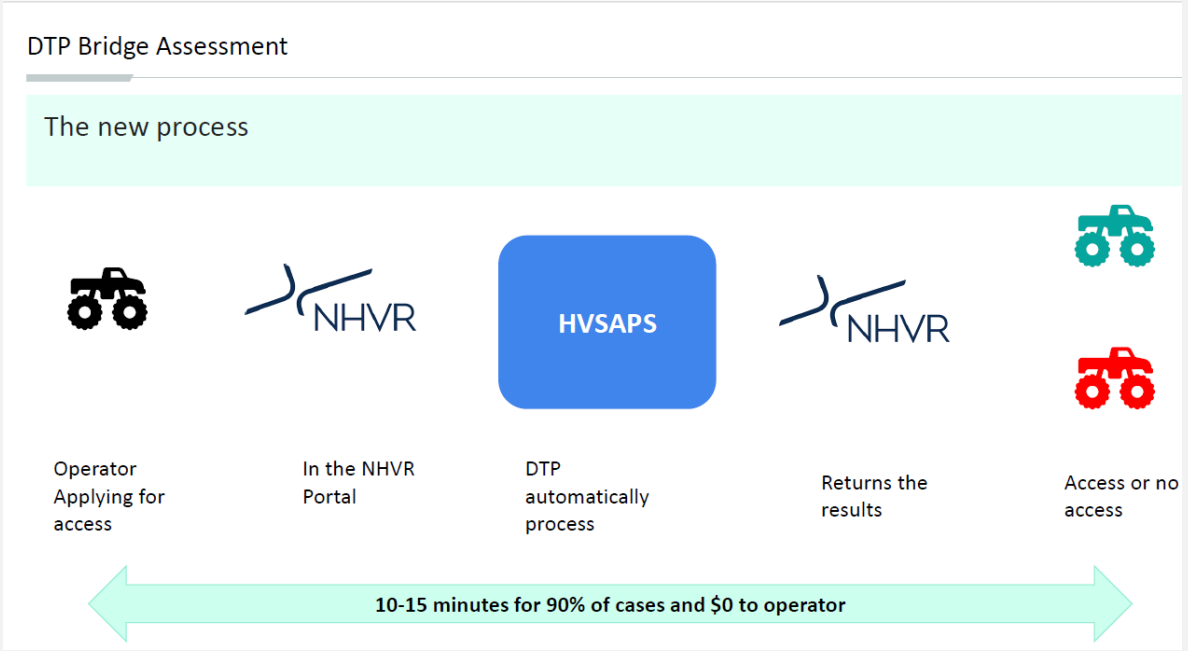
TAPping into Victoria's road network

Future plans

- NHVR's Strategic LGA Assessment Project (SLGAAP) – Phase 3, funding for Level 2 bridge assessments & collection of LGA bridge data for its National Automated Access System (NAAS).
- Contact: David S. White(NHVR) David.S.White@nhvr.gov.au

- DTP's Heavy Vehicle Structural Assessment Program (HV-SAPs): Class 1 & 2 Permits delivered in minutes for zero dollars.
- Contact: Ian Mond (DTP) Ian.Mond@transport.vic.gov.au





Questions?

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Topic	Date
LED Lighting in Existing Road Tunnels - Best Practice Approaches	29 July
Road Manager Operations Capability Framework	6 August
Austroads' Review of Movement and Place Guidance	21 August
Sustainability Review of Austroads Technical Specifications and Test Methods	2 September
Managing the Unexpected: A Framework for TMC Response to ITS Outages	28 October

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