



# Using intelligent access to re-engineer bridges for heavy vehicle access

16 May 2024



# 1. Who is Austroads and TCA?

2. Intelligent Access and Smart OBM

3. Re-engineering road networks





*Austroads*



Transport Certification Australia

# Who is Austroads?

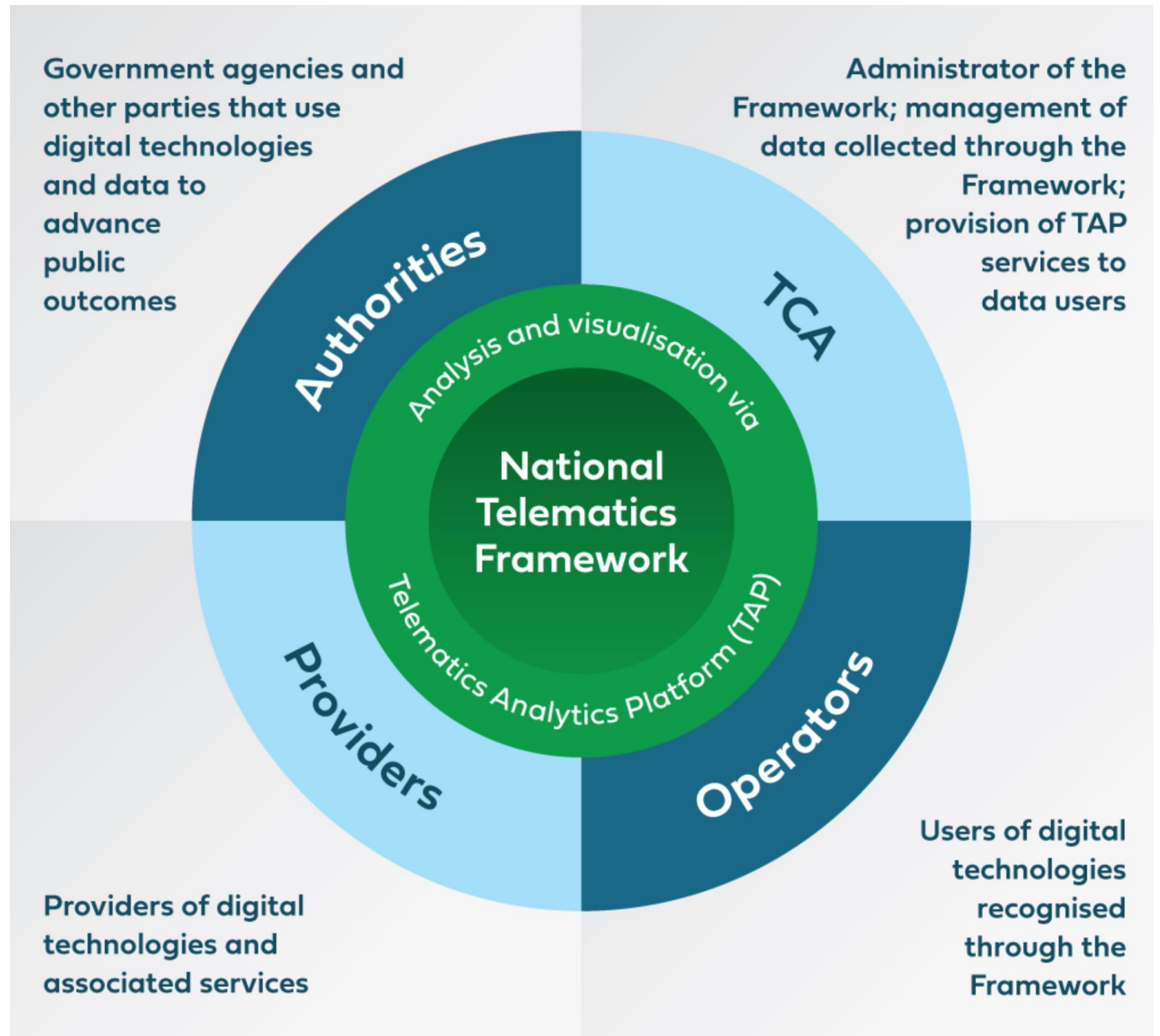
The collective of the Australian and New Zealand transport agencies, representing all levels of government.

A not-for-profit, nonpartisan organisation.

Funded and owned by Australian and New Zealand government transport agencies, but our work impacts a wide range of agencies including planning, service, infrastructure, health and safety, public health and policing.

Our focus is to support our member organisations to deliver an improved road transport network.

# What does TCA do?



# National Telematics Framework

- Recognised as an international standard by the International Standards Organization (ISO)
- **ISO 15638**: Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV)



# Harnessing the power of telematics

A significant number of commercial vehicles have some form of telematics ...

...resulting in unprecedented volumes of data being generated **every single day** on our road networks

# Harnessing the power of telematics

...but telematics data **is not** readily available to governments, road agencies and regulators

This is known as the problem of 'dark data'

**Intelligent Access overcomes this problem**



# Vehicle types covered by telematics schemes in Australia



A-Doubles



B-Doubles



AB-Triples



B-Triples



PBS-approved  
Vehicles



Road Trains



Semi-Trailers



Special Purpose  
Vehicle (SPVs)



Truck & Dog  
Trailers



Vehicles operating  
at higher mass  
limits (HMLs)



Low or Zero  
Emissions Heavy  
Vehicles (LZEHVs)





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# Smart OBM



Smart OBM systems collect and transmit mass data (so that it can be combined with telematics data)

Different technologies can be used to deliver Smart OBM

Smart OBM systems are type-approved by TCA

OBM may be referred to as:

- On-board scales
- On-board weighing
- Air pressure sensors
- Electronic Braking System (EBS)

# Smart OBM



INTEGRATED  
VEHICLE  
SOLUTIONS



1. Who is Austroads and TCA?
2. Intelligent Access and Smart OBM
- 3. Re-engineering road networks**

# The challenge

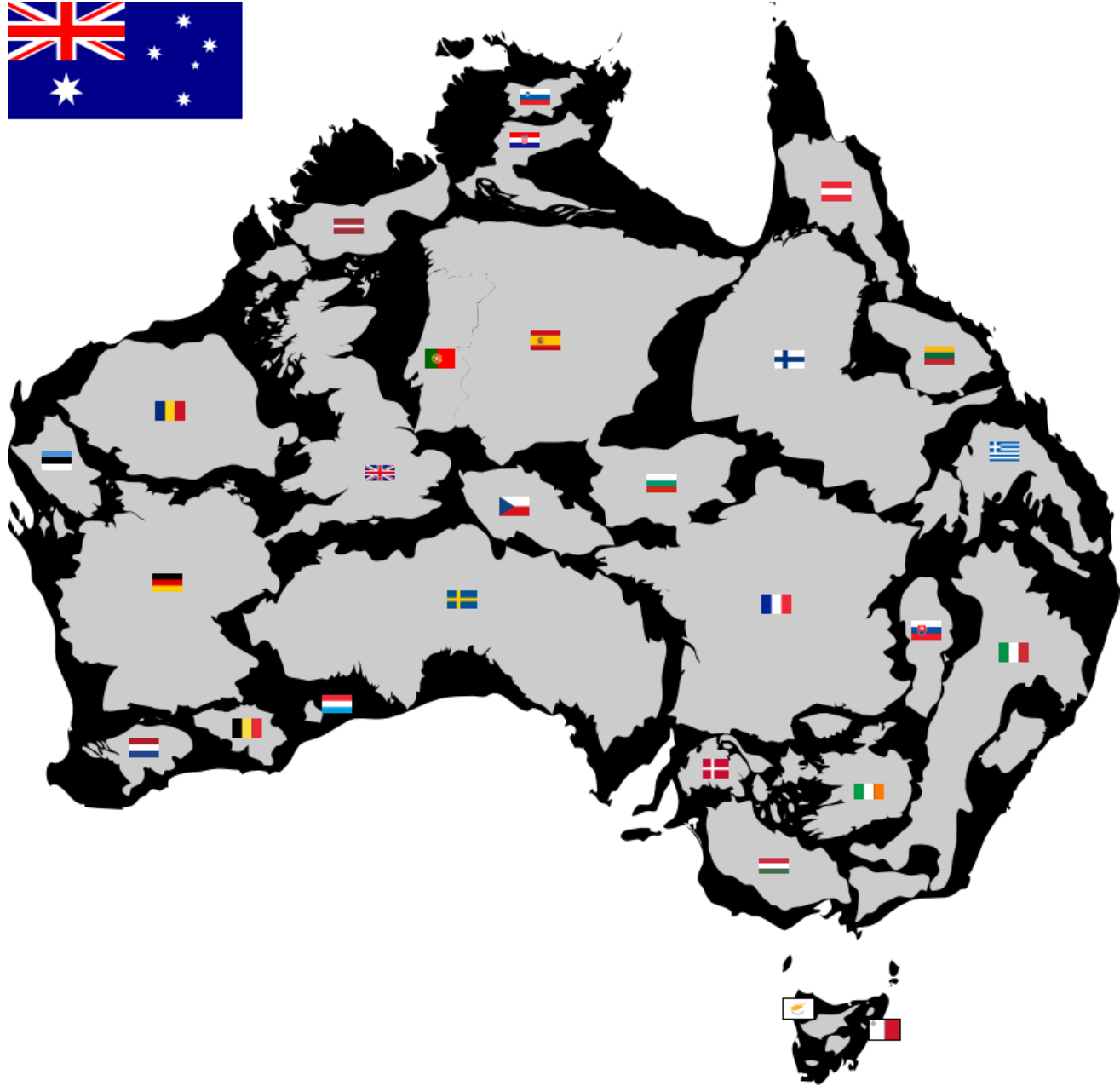
Heavy vehicle road use data is not consistently available to inform access decisions



# The challenge

Where data are available, conventional methods are typically limited to provide 'point-based' methods





# The opportunity

The collection of data from in-vehicle technologies presents new options

Access to location, configuration, mass and speed data *across the network* changes the paradigm

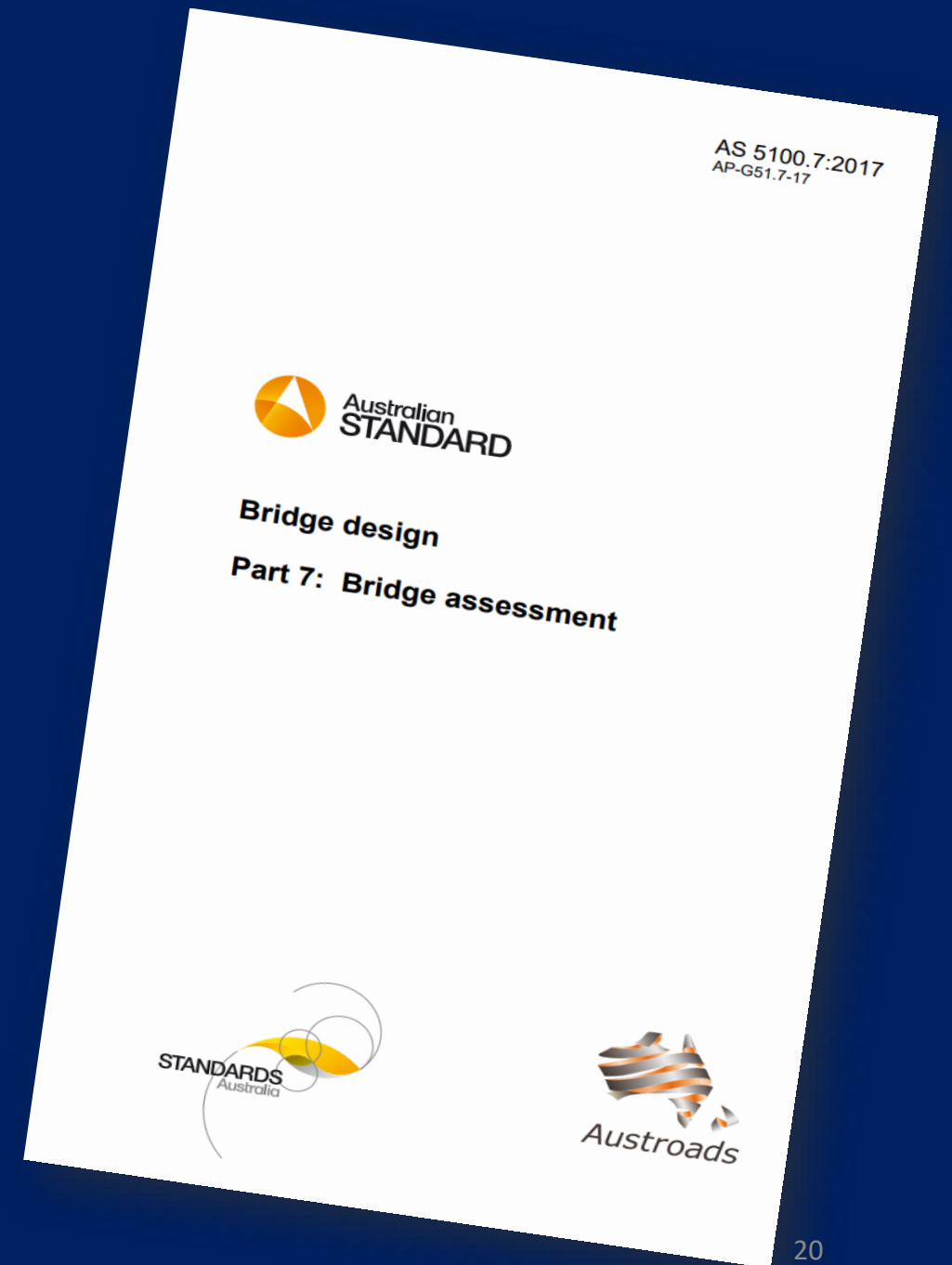


# The rule-book has been re-written...

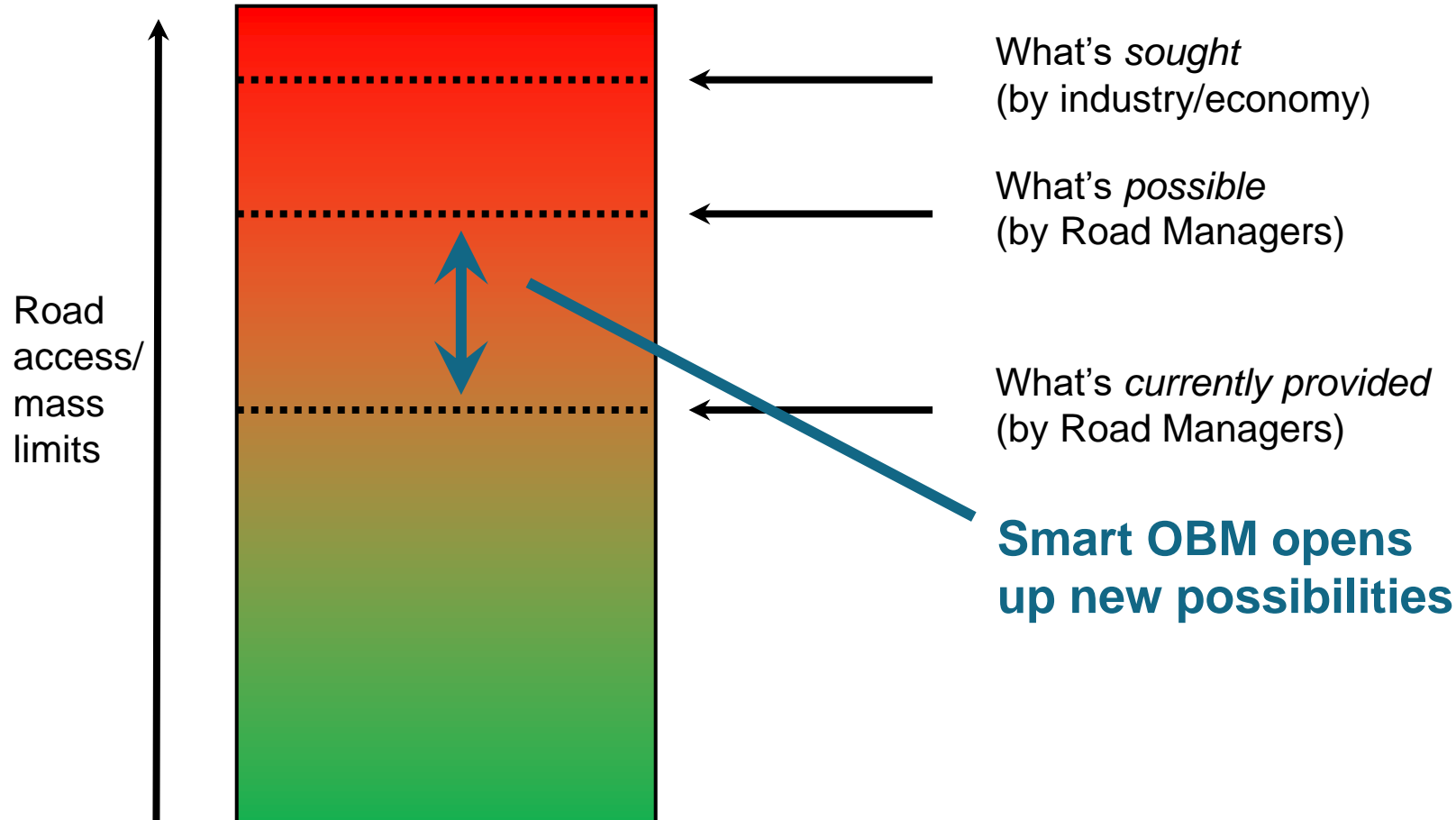
**AS 5100.7:2017** is the national standard for assessing bridge infrastructure.

It includes 'load factors' when assessing structures for heavy vehicle access.

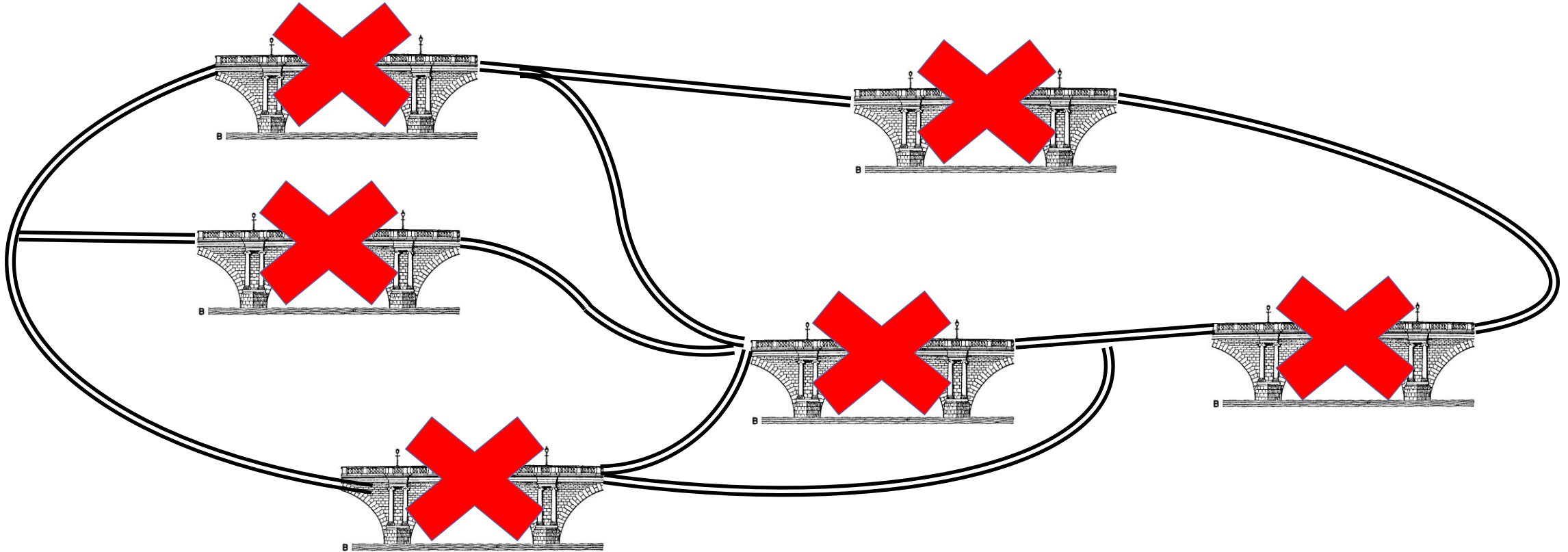
**Reduced** load factors for vehicles with Smart OBM...**opening-up** access to bridges and networks not otherwise possible.



# Smart OBM changes the paradigm



# What does it mean?



# How it all comes together

By country:

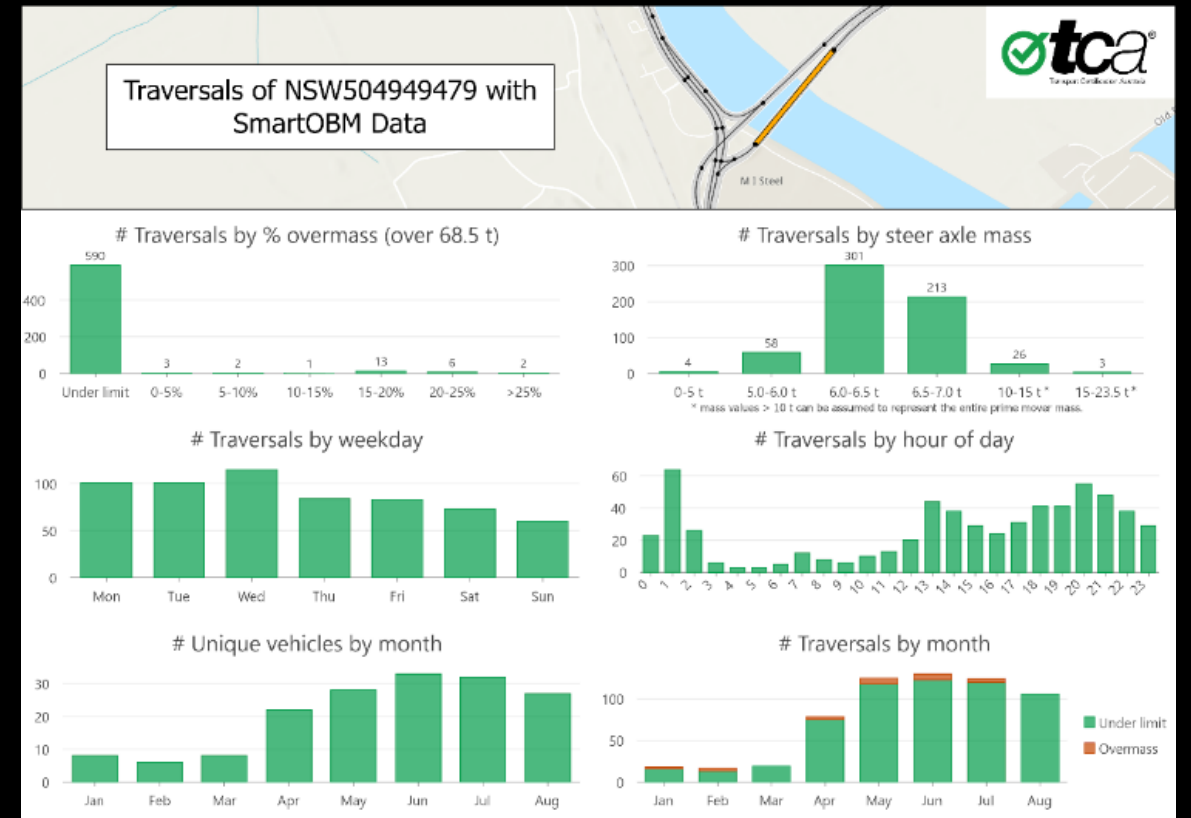
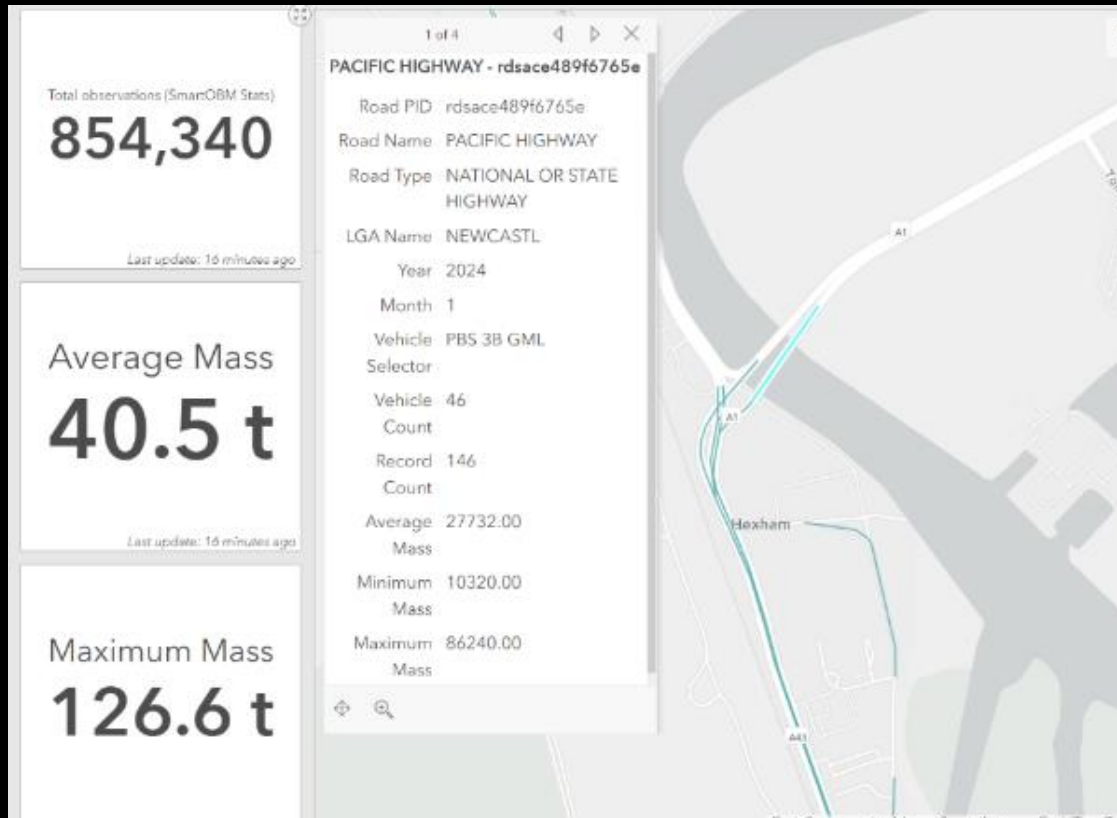


By region:



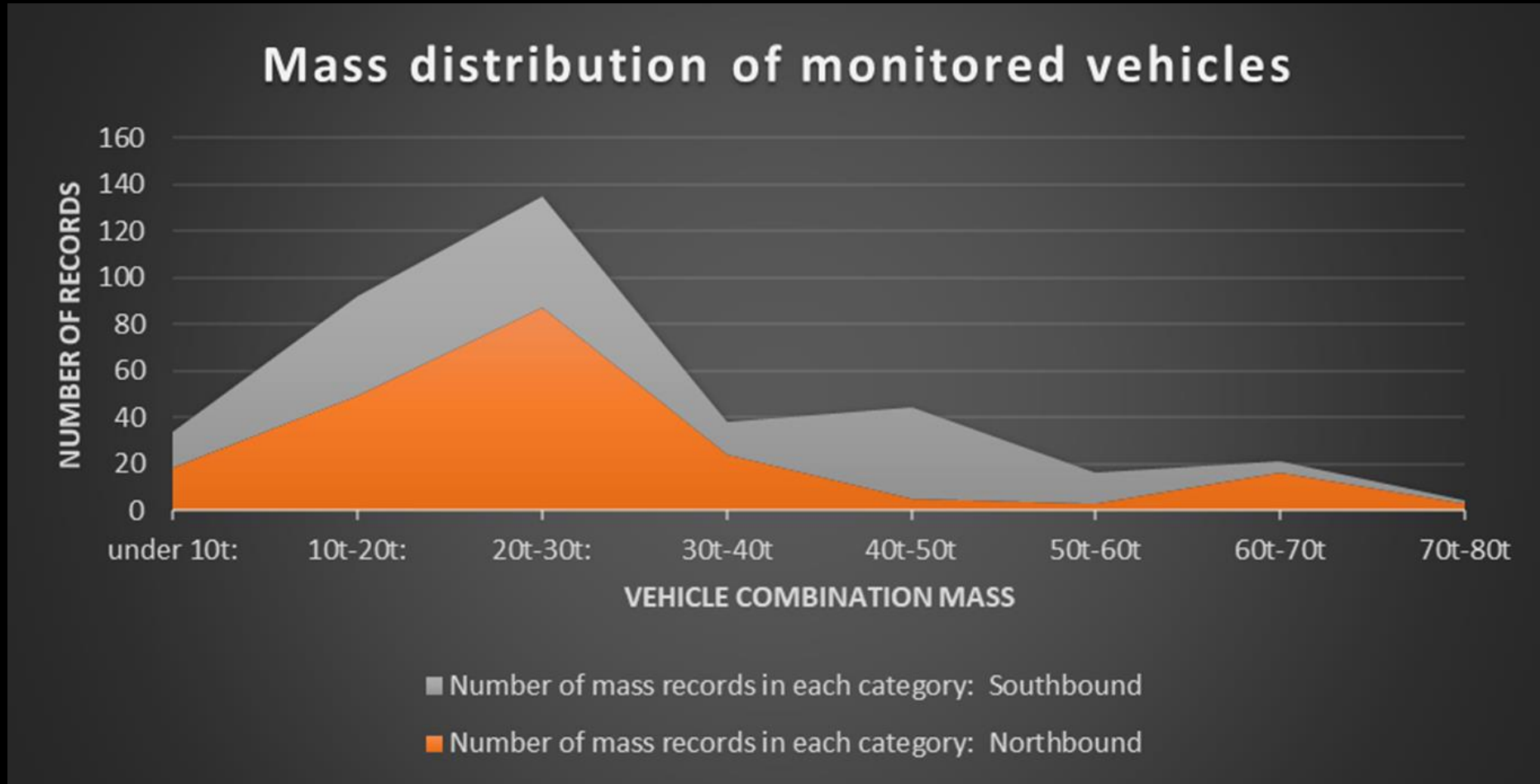
# How it all comes together

By structure:



# How it all comes together

By structure:





# How can I help?

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