

OVERSIZE OVERMASS VEHICLE MOVEMENT SCHEME



**A SCHEME USING THE ROAD INFRASTRUCTURE
MANAGEMENT APPLICATION FOR TRANSPORT
FOR NSW**

JUNE 2020

OVERSIZE OVERMASS VEHICLE MOVEMENT SCHEME

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Transport Certification Australia (TCA) is a national organisation that provides assurance services relating to transport technologies and data to enable improved public purpose outcomes from road transport.

Priority outcome areas enabled by TCA services include improved road safety, transport efficiency, freight productivity, asset management and sustainability.

Key aspects of TCA include:

- An independent not-for-profit entity, with government oversight and ownership through Austroads
- Administration of the National Telematics Framework, including its rules, specifications, agreements, digital infrastructure and other supporting services
- Assurance services that support but are appropriately separated from regulators, policy makers and enforcement activities, and underpin telematics applications and associated information and data services
- Advice that is based on evidence and a deep subject matter knowledge
- Trusted partner to both government and industry stakeholders, enabling a nationally consistent open market, with services covering all road vehicle types and associated digital infrastructure.

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1 INTRODUCTION

1.1 PURPOSE

The Oversize Overmass Vehicle Movement Scheme ('the scheme') is a scheme administered by Transport for NSW (TfNSW) to monitor road utilisation of Class 1 Oversize Overmass (OSOM) vehicles on the NSW road network.

1.2 SCOPE

This document describes the scheme and how it will be used with the Road Infrastructure Management (RIM) application.

The following information is included:

- the scheme parameters;
- key scheme processes; and
- roles and responsibilities.

1.3 BACKGROUND

TfNSW and the National Heavy Vehicle Regulator (NHVR) aim to reduce the ongoing need for permits shorter than 3 months for laden OSOM vehicles or shorter than 12 months for unladen OSOM vehicles in NSW.

Through the scheme:

- An Operator (e.g. transport operator) of an eligible vehicle with laden movements can obtain a Class 1 OSOM permit of up to 12 months if the vehicle is enrolled in the RIM application.
Note: For Operators of eligible vehicles with laden movements who do not elect to enrol in the RIM application, permit duration is limited to a period of up to 3 months.
- An Operator of an eligible vehicle with unladen movements can obtain a Class 1 OSOM permit of up to 3 years if the vehicle is enrolled in the RIM application.

Note: For Operators of eligible vehicles with unladen movements who do not elect to enrol in the RIM application, permit duration is limited to a period of up to 12 months.

Initially, the NHVR will issue Class 1 OSOM permits of up to 3 months for laden travel or up to 12 months for unladen travel. Prior to the expiration of these permits, Operators will have the option to enrol their eligible vehicles in the RIM application.

If the Operator provides a current Certificate of Enrolment to TfNSW for the RIM application prior to the expiry of the initial consent, TfNSW will extend the consent (at no cost to the Operator) to a maximum period of 12 months for laden travel, or a maximum period of 3 years for unladen travel.

The use of the RIM application for monitoring OSOM vehicle movements aims to:

- reduce the need for Operators to obtain frequent permits for OSOM vehicle movements;
- provide insights into OSOM vehicle movements on the NSW road network; and
- enable aggregated and de-identified reports and analysis to be made available for TfNSW and local governments in NSW.

Combined with the approved permit data, the RIM application provides greater insights into OSOM vehicle movements across NSW.

To participate in the scheme, an Operator must conform with the requirements specified within the instrument of access approval, which is the applicable Class 1 OSOM permit available on the NHVR website.

Any vehicle being utilised in accordance with the instrument of access approval, and that operates under the applicable Class 1 OSOM permit (i.e. longer than 3 months duration for unladen travel or longer than 12 months duration for unladen travel) must be enrolled in the RIM application.

The RIM application is an application of the National Telematics Framework (NTF) and is offered at Level 1 Assurance (see Appendix A for a definition of Level 1 Assurance). The use of the RIM application for the scheme provides visibility on network-wide OSOM vehicle movements across the NSW road network.

Note: The RIM application can be used for a variety of purposes. In this document, RIM is described in the context of the scheme.

Enrolment in the RIM application is performed by the Application Service Provider (ASP) selected by the Operator.

The ASP is responsible for:

- The installation of a telematics device (if the vehicle is not already fitted with a telematics device) in the vehicle being utilised in accordance with the instrument of access approval
- The collection of data from vehicles enrolled in accordance with the requirements of the RIM application for the scheme.

Note: The Operator may be its own ASP if it uses its own system and/or prefers not to work with a third-party ASP.

Data received through the RIM application will be aggregated, de-identified and processed by TCA to enable the generation of reports for use by TfNSW and local governments in NSW via the Telematics Analytics Platform (TAP).

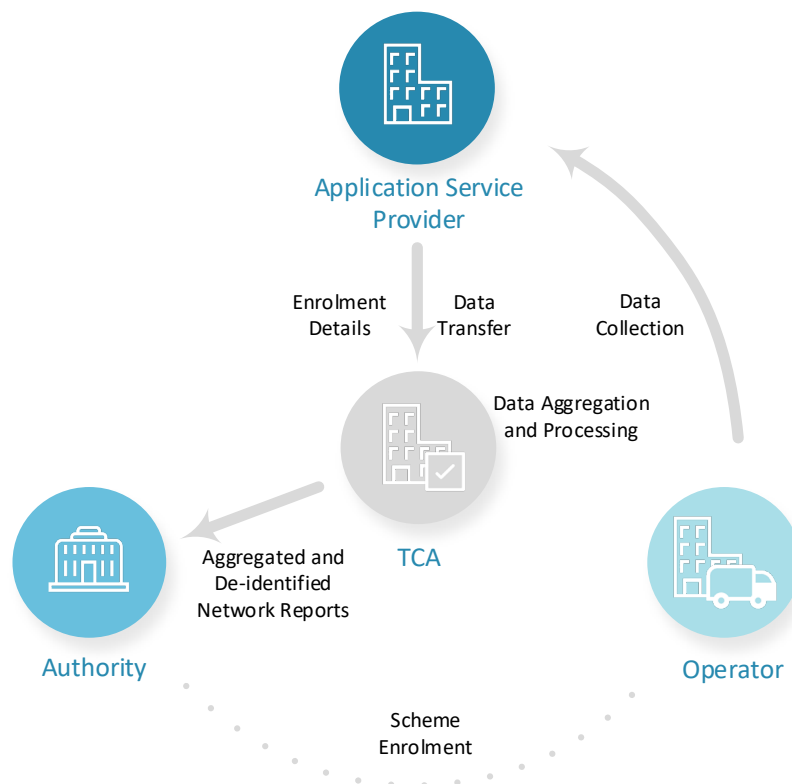
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2.1 PARTICIPANTS

Figure 1 outlines the key interactions between participants for the use of the RIM application for the scheme:

- The Authority, as the administrator of the scheme, requires the monitoring, with reporting, of the Operator's vehicle(s) as a condition of the Authority allowing the Operator and its vehicle(s) to participate in the scheme.
- Operators are vehicle operators that agree to enrol vehicles in the scheme, and consent to their data collected through the RIM application to be used for the intended purpose (as defined by the Authority and agreed to by the Operator in the ASP–Transport Operator Agreement).
- ASPs, registered by TCA, offer telematics services (hardware, software and associated processes) to enable enrolment of eligible vehicles in the RIM application (as well as other applications available within the NTF), collection of data from installed telematics devices, and reporting of data to TCA.
- TCA administers the RIM application and its schemes within the NTF, ensuring that data security and privacy concerns are managed. TCA receives vehicle enrolment details from Operators via ASPs, and makes ASP–Transport Operator Agreements available to participants. TCA also receives telematics data from ASPs; performs data aggregation, de-identification and processing; and makes standard and specialised reports available to the Authority (and other bodies authorised by the Authority) via TAP as agreed between the Authority and TCA, and in accordance with the intended purpose as agreed by the Operator in the ASP–Transport Operator Agreement.

Figure 1: Scheme Participants and Key Interactions



Note: The ASP may also be the Operator.

Interactions between scheme participants are consistent with interactions between RIM application participants, and are not specific to the scheme.

2.2 SCHEME PARAMETERS

This section describes the constraints and assumptions that will be used to deliver the RIM application for the scheme.

a. ASP Registration

TCA will register ASPs to provide services for the RIM application.

b. Enrolment

ASPs will enrol vehicles in the RIM application and the scheme at the request of the Operator.

The ASP will manage key steps of enrolment including approval, and as necessary, cancellation and replacement. There will be no interim enrolment.

Note: Operators are expected to be more inclined to have their vehicles monitored through the RIM application based on TfNSW transparently communicating the intended use of the RIM application, and obtaining assurance and safeguards from TCA that data collected through the RIM application will not be used for other, undisclosed purposes (such as compliance and enforcement).

Figure 2 shows the pre-enrolment steps for the scheme.

Figure 3 shows the reporting processes for the scheme

Figure 4 shows the enrolment cancellation and reporting processes for the scheme.

Note: See Appendix B, Table B-1, for values that must be entered into the Scheme and Authority Code data elements of an enrolment form or enrolment report.

c. Devices and Data Collection

The device used in the RIM application is a telematics device or similar.

The telematics device or similar will collect:

- position data at intervals of no greater than 1 minute and no less than 1 second, and as determined by the ASP; and
- date and time data.

d. Data Reporting

The ASP shall transfer data records collected through the RIM application to TCA no less frequently than each calendar month.

For this scheme:

- the preferred data reporting mechanism is TDE RESTful API, otherwise FTPS in accordance with Tier 3 Data Exchange (as described in *Telematics Business-to-Business Data Exchange Functional and Technical Specification*); and
- the data reporting format will be JSON.

e. Data Processing and Reports

TCA will perform data transformation, data aggregation, de-identification and processing functions on data obtained from position records. TCA will make data reports for the scheme available to TfNSW and local governments in NSW through TAP.

TCA will perform basic data cleaning, which includes:

- removal of duplicates;
- removal of anything that is not in the prescribed format;
- removal of alarm data; and
- if necessary, changing column names.

Incomplete or unacceptable data records will not be included in data processing.

Note: The type, number and frequency of road usage reports will be subject to agreed terms reached between TCA and TfNSW.

A **Road Usage Report** will be made available to TfNSW and local governments in NSW via TAP. Details of TAP utilisation and reports made available through TAP are, at the time of this document, being developed with TfNSW.

A **Scheme Participation Report** will be made available to TfNSW on a monthly basis via TAP. This report may include the following standard measures and dimensions as shown in Table 1.

Table 1: Scheme Participation Report

Report Content	Examples
Measures	<ul style="list-style-type: none">• Count of all vehicles participating in the scheme• Count of vehicles participating in the scheme that TCA received data from• Vehicles participating in the scheme that TCA did not receive data from for at least 30 consecutive days <p><i>Note: Reporting of this measure will include vehicle identities. A participating vehicle will only be included in this measure if, without a satisfactory explanation, it has not provided data for at least 30 consecutive days.</i></p> <ul style="list-style-type: none">• Count of Operators with vehicles participating in the scheme• Count of ASPs reporting data for vehicles participating in the scheme
Dimensions	<ul style="list-style-type: none">• Operator• ASP
Typical reporting	<ul style="list-style-type: none">• Month-on-month trends of data related to scheme participation• Count of the total number of traversals monitored by day of week (over defined time periods), in each direction, by vehicle category

2.3 KEY SCHEME PROCESSES

Figure 2 outlines the key actions taken by each participant during the pre-enrolment stage of the operation of the scheme.

Note: This process assumes that TCA has already registered the ASP to provide RIM application services.

Figure 2: Pre-Enrolment Process

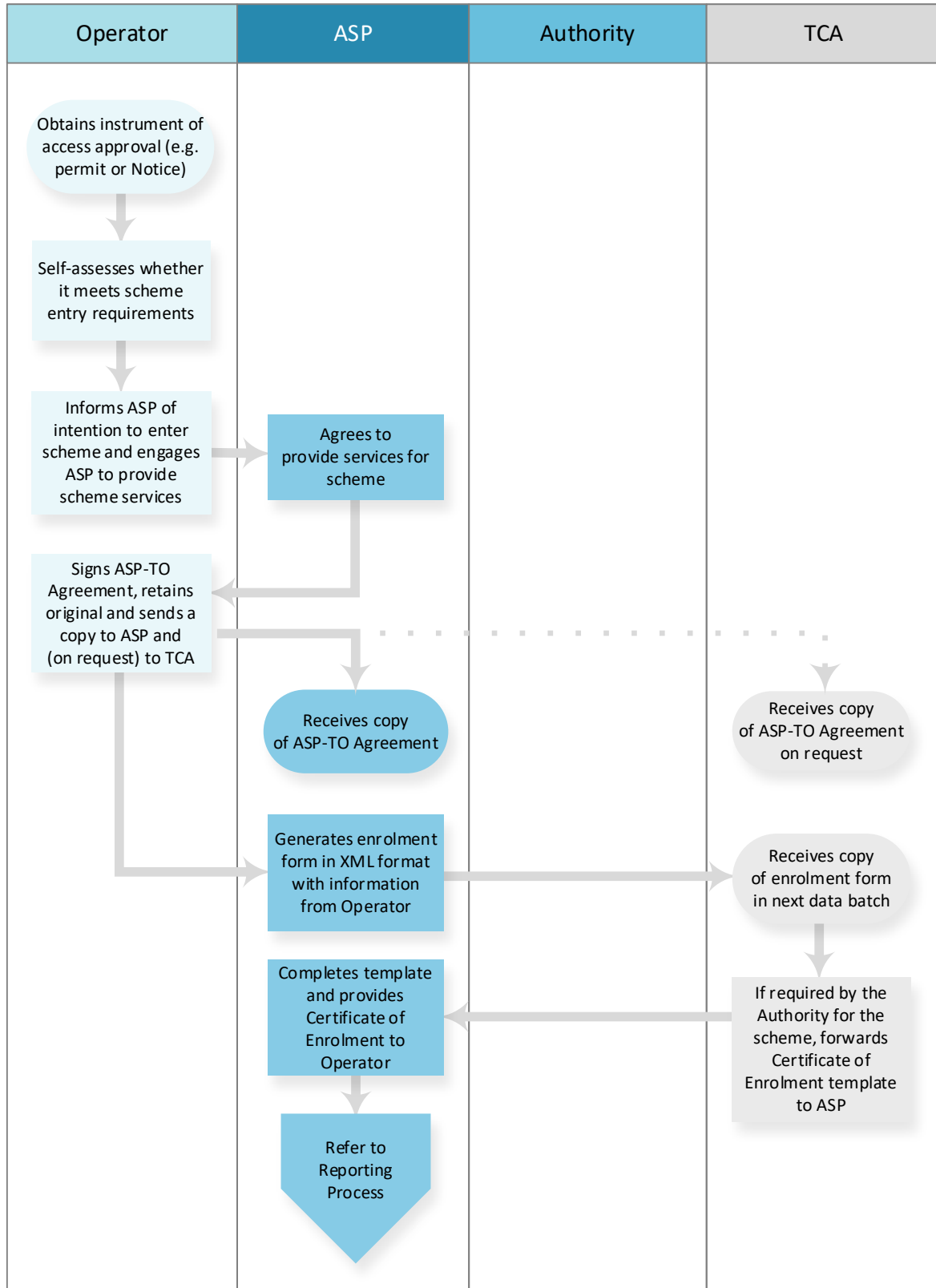
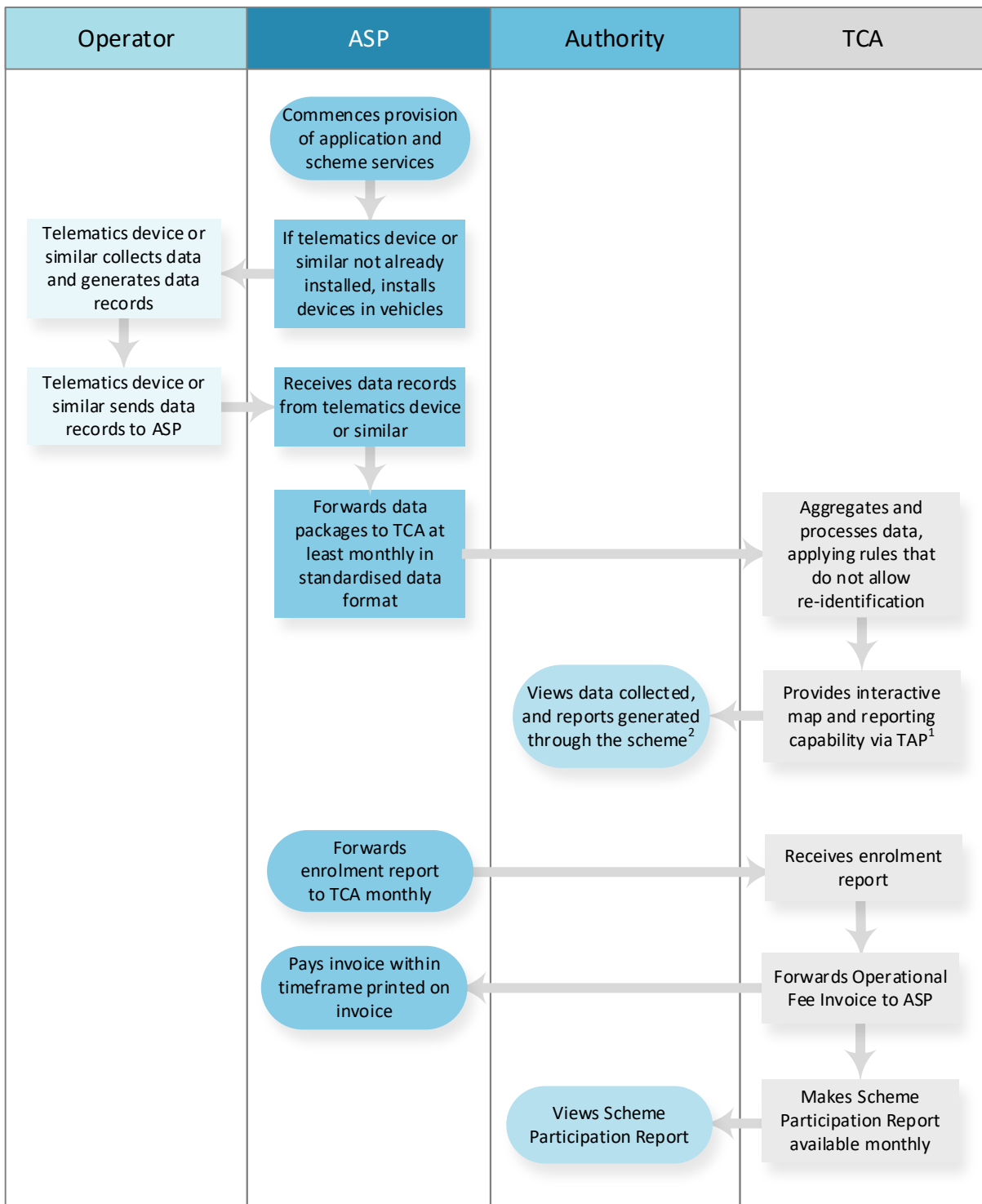


Figure 3 outlines the key actions related to data collection, record generation and reporting.

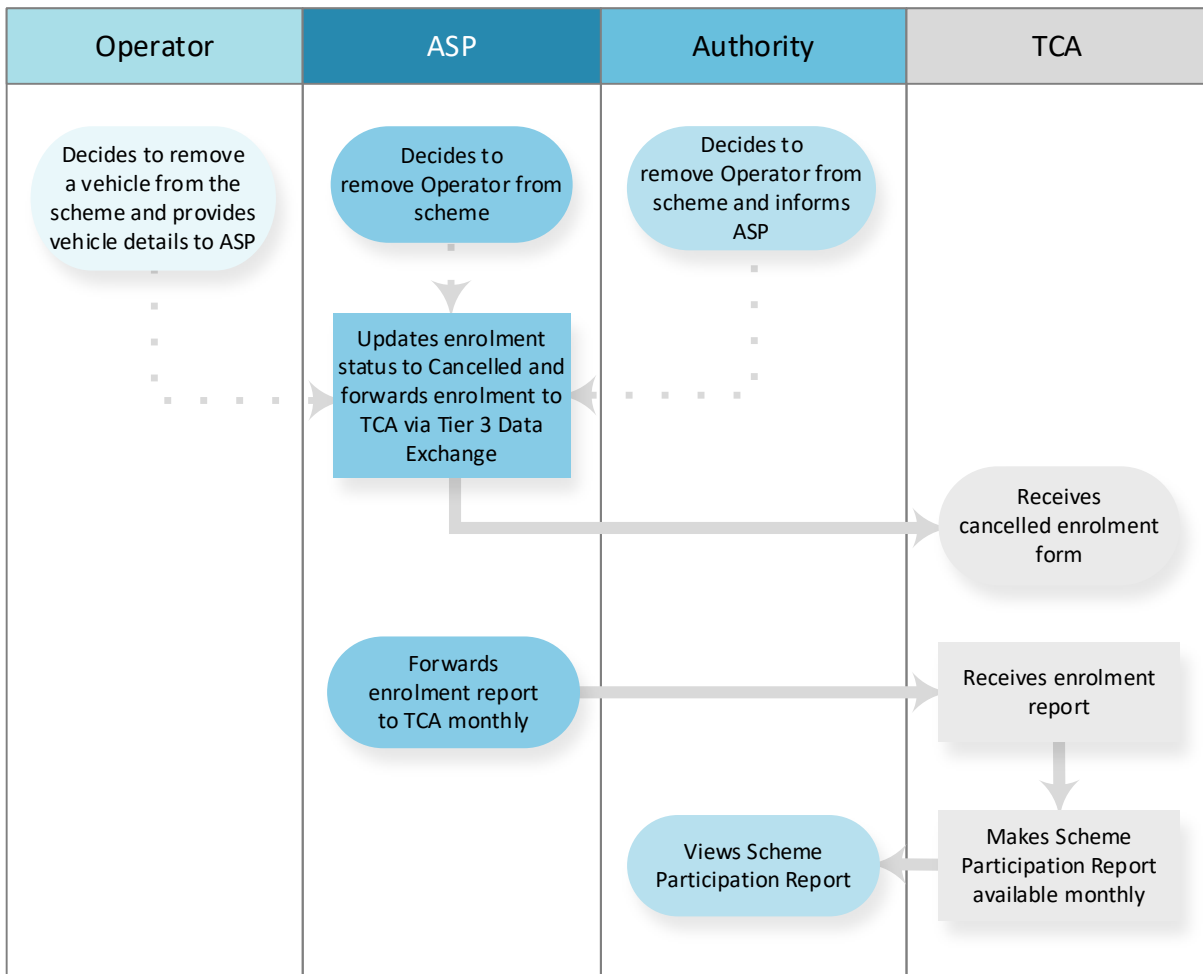
Figure 3: Reporting Processes



1. Data will be updated at least monthly.
2. Local governments in NSW may also view this information

Cancellation of scheme participation may be initiated by the Operator, TfNSW or the ASP.
 Figure 4 outlines the key actions to discontinue enrolment of a vehicle in the scheme.

Figure 4: Enrolment Cancellation and Reporting Processes



2.4 ROLES AND RESPONSIBILITIES

In delivering the objectives of the scheme, **TCA** will:

- provide a document (this document) describing the use of the scheme as part of the RIM application;
- produce or maintain collateral, as necessary, to support the scheme. Examples include the provision of current versions of:
 - *Road Infrastructure Management Functional and Technical Specification*;
 - *Telematics Business-to-Business Data Exchange Functional and Technical Specification*.
- support the reporting of data records via Tier 3 Data Exchange using a RESTful API, with these records formatted using JSON;
- support the reporting of enrolment forms and enrolment reports using a RESTful API, with these documents formatted using XML;
- inform ASPs of the scheme details and entry conditions;
- produce an ASP–Transport Operator Agreement for use with the scheme and make it available to ASPs;
- ensure that the TAP is set up to enable TfNSW and local governments in NSW to obtain reports generated by the scheme (in accordance with the intended purpose as agreed by the Operator in the ASP–Transport Operator Agreement),
- maintain the cloud environment and databases to support the ingestion of data from the RIM application, etc.;
- produce terms and conditions, which formalise the relationship between TCA and the ASP with regard to ASP registration;
- verify that an ASP meets requirements to provide RIM application services;
- provide registered ASPs with the Certificate of Enrolment template;
- at the end of each month, forward Operational Fee Invoices to ASPs upon receipt of enrolment reports;
- provide TfNSW and local governments in NSW with reports outlined in 2.2e via TAP; and
- ensure the confidentiality of ASP data is maintained.

TfNSW will:

- maintain policy documentation required by TfNSW for the scheme;
- request TCA to update to this scheme document as necessary
- undertake program coordination activities related to the scheme with TCA;
- access reports outlined in 2.2e via TAP, and review data trends and numbers of enrolled vehicles; and
- in conjunction with TCA, communicate scheme-related policy changes to industry and stakeholders.

ASPs will:

- interact with TCA to establish the delivery mechanism for provision of data packages to TCA (noting that a data package includes data records, enrolment forms and enrolment reports);
- receive notification from Operators regarding the enrolment status of vehicles in the scheme, and forward this information to TCA using an agreed mechanism on a monthly basis;
- provide the ASP–Transport Operator Agreement to an Operator once an agreement to provide application services for the scheme has been made;
- be responsible for the installation (if not already installed), operation and maintenance of telematics devices and the reporting of data received from those devices;
- provide Certificates of Enrolment to enrolled Operators, using the template received from TCA, and coordinate their removal from vehicles no longer enrolled in the scheme;
- pay Operational Fee Invoices received from TCA, generated upon receipt of enrolment reports, within the timeframe shown on the invoice;
- in the event of a device malfunction: liaise with the Operator and/or device supplier to resolve the issue;
- provide back office capability to process collected data records as required by the scheme; and
- deliver data records to TCA, using agreed data delivery mechanism, required data formats and meeting data reporting requirements.

Operators will:

- access scheme rules and entry conditions on the TfNSW website and determine whether they meet those conditions;
- obtain the applicable instrument of access approval from the NHVR website and ensure compliance with instrument of access approval requirements for the scheme;
- upon self-assessment that scheme entry conditions are met, notify the ASP of its intention to enrol in the scheme;
- agree to share data collected by its ASP with TCA for the scheme using a signed ASP–Transport Operator Agreement;
- follow rules for enrolment in the scheme;
- store original signed ASP–Transport Operator Agreement and forward copies to the ASP and TCA (on request);
- install telematics devices and engage an ASP to provide application services for the scheme; and
- notify the ASP of the date that a vehicle or the Operator will no longer participate in the scheme.

A ACRONYMS AND DEFINITIONS

ACRONYMS

Acronym	Definition
API	application programming interface
ASP	Application Service Provider
FTPS	File Transfer Protocol Secure
NTF	National Telematics Framework
OSOM	oversize overmass
RIM	Road Infrastructure Monitoring
TAP	Telematics Analytics Platform
UTC	Coordinated Universal Time

DEFINITIONS

Term	Definition
application	A capability of the NTF that provides business value to stakeholders, delivered as an assembly of policy, business components and technical components, within in the context of an identified level of assurance.
Application Service Provider (ASP)	A service provider that has been registered by TCA as meeting the requirements of one of more telematics applications. This may also be the Operator.
ASP–Transport Operator Agreement	A written agreement between an ASP, a Transport Operator and TCA which sets out the terms on which the ASP will provide application services to the Operator.
Authority	An entity, associated with a Jurisdiction, responsible for the administration of one or more NTF applications. An Authority may appoint an administrator to perform its functions. <i>See also Jurisdiction.</i>
data collection period	A whole number of days in the UTC time zone for which all application data is provided. Successive data collection periods are contiguous.
data package	A package of information sent via Tier 3 Data Exchange for a data collection period
data record	A discrete and defined set of data elements, generated by a device.
enrolment	Both the process and outcome by which an Operator enters an Authority’s scheme. Each vehicle must be enrolled for each scheme it participates in. Enrolment also confirms the application and conditions (if applicable) that the vehicle is monitored under.
enrolment form	An electronic document that formally and simultaneously records the enrolment of a vehicle within a scheme, and within the application required by that scheme.
enrolment report	A summary of enrolments relevant to a given Authority for a specified reporting period, including any aggregated data required by specific applications.
Jurisdiction	A geographical area containing a road network (i.e. typically an Australian state or territory).
level of assurance	An assurance level that supports telematics applications, structured around the intended use of a telematics application, risks being managed, and the needs and expectations of consumers and other stakeholders.
Level 1 Assurance	Self-assessment of data and no independent oversight of a telematics application
Operator	An entity that operates one or more vehicles eligible to enter a scheme.
scheme	The generic term for a specific use of an application linked to delivering a policy objective.
telematics device	The primary telematics unit which monitors vehicle parameters.
Tier 1 Data Exchange	A web services solution where structured information is exchanged that complies with requirements such as authentication, security, privacy and certainty of delivery. It includes exchanges of information related to a vehicle’s enrolment in telematics applications, conditions and adherence to those conditions.

Term	Definition
Tier 2 Data Exchange	The human-initiated (rather than automated) exchange of business-related information and advice. Typical exchanges via this tier include reporting of issues and resolutions, correspondence regarding recognition of the ASP to provide application services, advice regarding information and communications technology (ICT), data assurance and other reporting.
Tier 3 Data Exchange	The packaging and delivery of data packages, comprising data records and enrolment-related artefacts. Data packages have several uses which include data analysis by the recipient, data assurance, and for research purposes.

B DATA ELEMENT REFERENCE VALUES

Refer to the following when entering values into data elements for Scheme or Authority Code – for example, in an enrolment report or enrolment form.

Table B.1: Scheme Name and Authority Code

Scheme Name (full)	Scheme Data Element Value (e.g. for enrolment form or report)	Authority Code Data Element Value
Oversize Overmass Vehicle Movement Scheme	RIMOSOM	NSW



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