RIM FARM GATE ACCESS SCHEMES (NSW)

SCHEMES USING THE ROAD INFRASTRUCTURE MANAGEMENT APPLICATION FOR TRANSPORT FOR NSW

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RIM FARM GATE ACCESS SCHEMES (NSW)

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ABOUT US

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

- 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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APPENDICES

1 INTRODUCTION

1.1 PURPOSE

This document describes the following RIM Farm Gate Access (NSW) schemes associated with the Road Infrastructure Management (RIM) application:

- RIM Semi-Trailer Farm Gate Access Scheme (NSW)
- RIM B-Double Farm Gate Access Scheme (NSW)
- RIM Road Train Farm Gate Access Scheme (NSW)

RIM Farm Gate Access (NSW) schemes are made available by Transport for NSW (TfNSW) to monitor road utilisation of eligible high productivity vehicles on low-volume council roads on NSW restricted access vehicle (RAV) road networks.

1.2 SCOPE

This document describes RIM Farm Gate Access (NSW) schemes and how they are used with the RIM application.

The following information is included:

- parameters of RIM Farm Gate Access (NSW) schemes;
- key processes of RIM Farm Gate Access (NSW) schemes;
- roles and responsibilities of RIM Farm Gate Access (NSW) scheme participants; and
- scheme descriptions in appendices.

1.3 BACKGROUND

Farm Gate Access is a joint initiative of TfNSW, local council and industry. It is intended to enable safe and legal heavy vehicle access for vehicles operating under the Livestock Loading Scheme and Grain Harvest Management Scheme on first and last mile journeys by connecting RAV networks to the 'farm gate'.

The NSW Farm Gate Access Network is described on the TfNSW website. It is a network that will appear on the Livestock Loading Scheme, Grain Harvest Management Scheme and Restricted Access Vehicle maps in participating council areas and includes travel and road conditions that apply on that network.

The following NSW vehicle categories are eligible for applicable Farm Gate Access schemes:

- Semi-Trailers
- B-Doubles
- Type 1 A-Double Road Trains
- Modular B-Triple Road Trains
- B-Triple Road Trains
- AB-Triple Road Trains.

An eligible vehicle must be fitted with a telematics device to participate in a RIM Farm Gate Access (NSW) scheme.

A RIM Farm Gate Access (NSW) scheme is a specific use of the RIM application linked to delivering a policy objective. To participate in a RIM Farm Gate Access scheme, an Operator (e.g. a transport operator) must conform with the requirements specified within the *NSW Class 3 Livestock Transportation Exemption Notice* or the *NSW Class 3 Grain Harvest Management Scheme Mass Exemption Notice* ('the applicable Notice'), which are available on the National Heavy Vehicle Regulator (NHVR) website.

Note: Participating councils may identify any infrastructure constraints and operating conditions to be attached to the applicable Notice. An operating condition may include which eligible NSW vehicle category can operate in the council's area.

Enrolment in the RIM application, which is administered by TCA as part of the National Telematics Framework (NTF), is one of the requirements that must be met by the Operator. 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 applicable Notice
- The collection of data from vehicles enrolled in accordance with the requirements of the RIM application for the scheme.

Note: The Operator may be eligible to perform the role of ASP in full or part, subject to the approval of TCA.

ASPs provide data to TCA. TCA will aggregate, de-identify and process the data to enable the generation of reporting for use by TfNSW and local governments in NSW via the Telematics Analytics Platform (TAP).

The RIM application is offered at Level 1 Assurance (see Appendix A for a definition of Level 1 Assurance).

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

2 RIM FARM GATE ACCESS SCHEMES (NSW)

2.1 PARTICIPANTS

Figure 1 outlines the key interactions between participants for the use of the RIM application for a RIM Farm Gate Access (NSW) scheme:

- The Authority (TfNSW) 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–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–Operator Agreements available to participants. TCA also receives telematics data from ASPs; performs data aggregation, de-identification and processing; and makes standard and specialised reporting 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–Operator Agreement.

Figure 1: Scheme Participants and Key Interactions
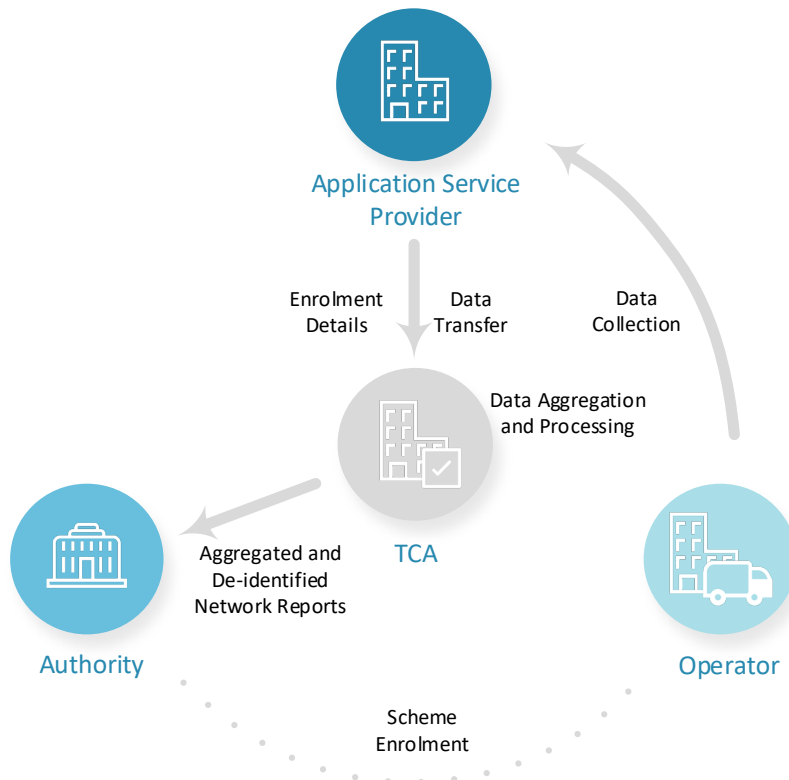
Note: *The ASP may also be the Operator.*

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

2.2 COMMON SCHEME FEATURES

This section describes the common features of a RIM Farm Gate Access (NSW) scheme. For information on features that are specific to a RIM Farm Gate Access (NSW) scheme, refer to scheme descriptions in the appendices of this document.

a. <u>ASP Registration</u>

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

b. <u>Enrolment</u>

ASPs will enrol vehicles in the RIM application and a RIM Farm Gate Access (NSW) scheme at the request of the Operator.

The ASP will manage key steps of enrolment including approval, and as necessary, cancellation and replacement.

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 a RIM Farm Gate Access (NSW) scheme.

Figure 3 shows the reporting processes for a RIM Farm Gate Access (NSW) scheme

Figure 4 shows the enrolment cancellation and reporting processes for a RIM Farm Gate Access (NSW) scheme.

c. <u>Devices and Data Collection</u>

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 (as determined by the ASP); and

- date and time data.

d. <u>Data Reporting</u>

The ASP shall transfer data records collected through the RIM application to TCA no less frequently than each calendar month and as described in *Road Infrastructure Management Functional and Technical Specification*.

e. <u>Data Processing and Reporting</u>

TCA will perform data transformation, data aggregation, de-identification and processing functions on data obtained from position records. TCA will make data reporting 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 reporting will be subject to agreed terms reached between TCA and the Authority.

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

A **Scheme Participation Report** will be made available to the Authority 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
Aggregated Measures	• 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 *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.* • Count of Operators with vehicles participating in the scheme • Count of ASPs reporting data for vehicles participating in the scheme
Dimensions	• Operator • ASP

2.3   KEY SCHEME PROCESSES

Figure 2 outlines the key actions taken by each participant during the pre-enrolment stage of the operation of a RIM Farm Gate Access (NSW) scheme.

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

Figure 2: Pre-Enrolment Process

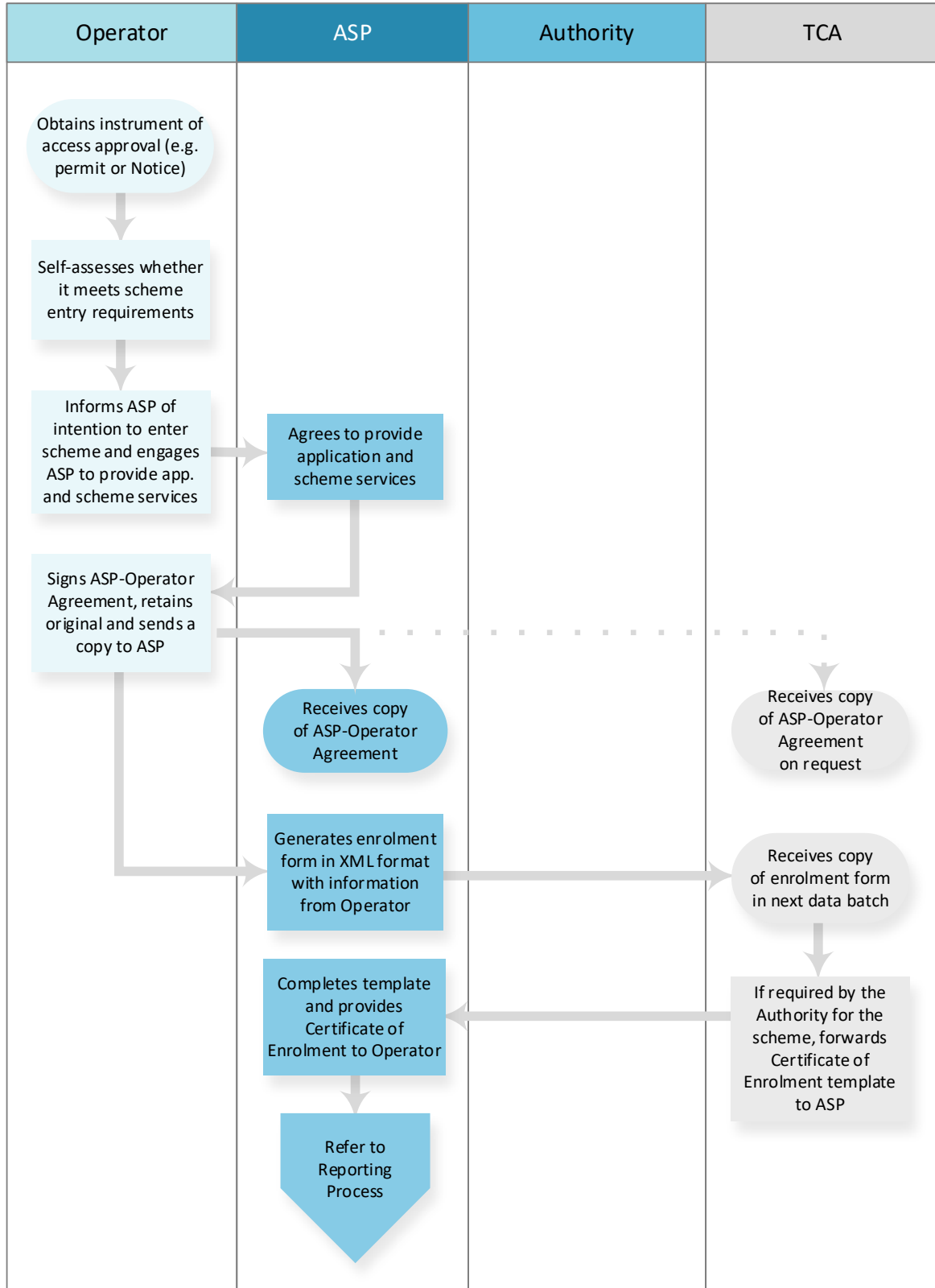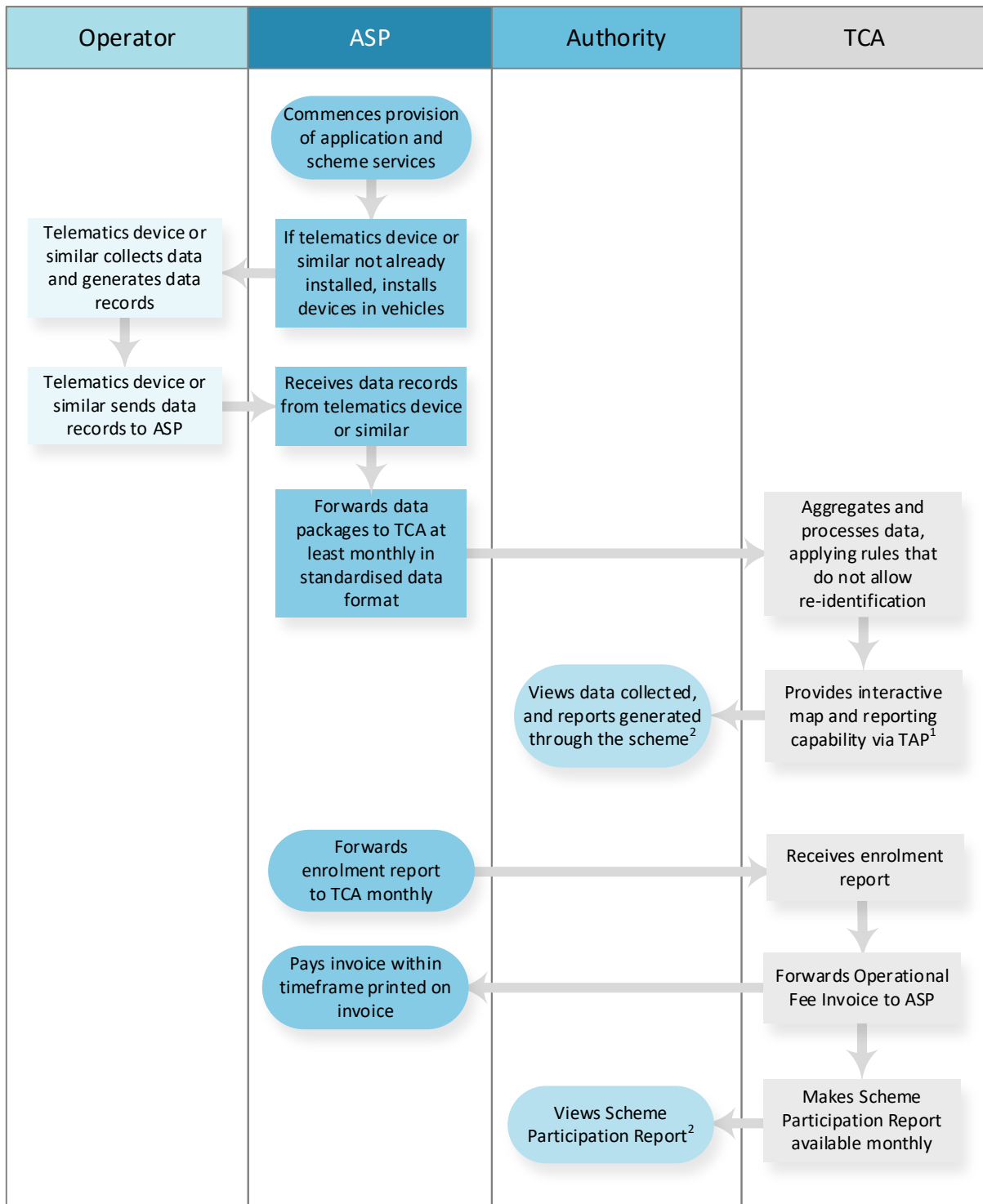| Operator	ASP	Authority	TCA
Obtains instrument of access approval (e.g. permit or Notice)			
Self-assesses whether it meets scheme entry requirements			
Informs ASP of intention to enter scheme and engages ASP to provide app. and scheme services	Agrees to provide application and scheme services		
Signs ASP-Operator Agreement, retains original and sends a copy to ASP	Receives copy of ASP-Operator Agreement		Receives copy of ASP-Operator Agreement on request
	Generates enrolment form in XML format with information from Operator		Receives copy of enrolment form in next data batch
	Completes template and provides Certificate of Enrolment to Operator		If required by the Authority for the scheme, forwards Certificate of Enrolment template to ASP
	Refer to Reporting Process		

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

Figure 3: Reporting Processes

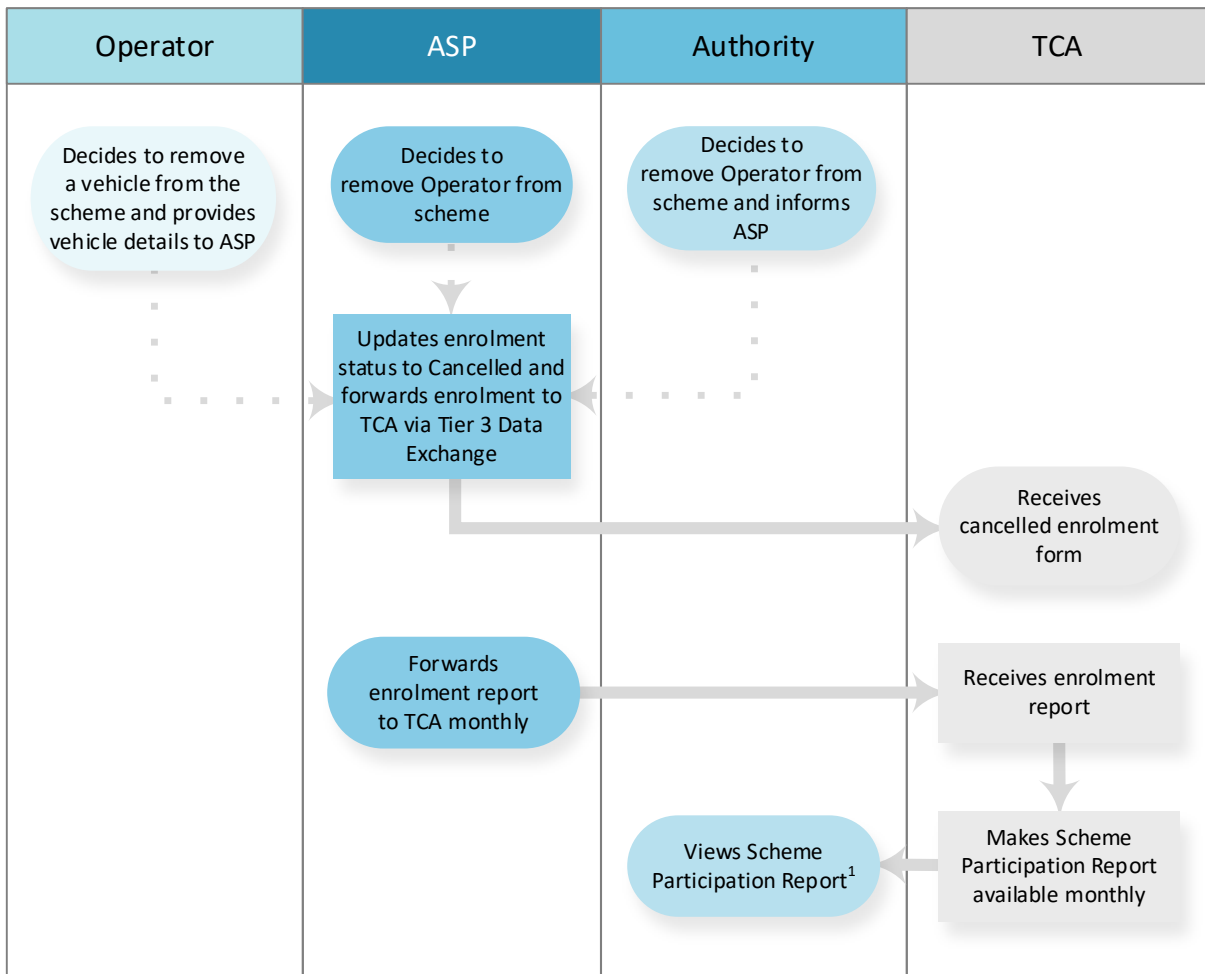| Operator	ASP	Authority	TCA
	Commences provision of application and scheme services		
Telematics device or similar collects data and generates data records	If telematics device or similar not already installed, installs devices in vehicles		
Telematics device or similar sends data records to ASP	Receives data records from telematics device or similar		
	Forwards data packages to TCA at least monthly in standardised data format		Aggregates and processes data, applying rules that do not allow re-identification
		Views data collected, and reports generated through the scheme[2]	Provides interactive map and reporting capability via TAP[1]
	Forwards enrolment report to TCA monthly		Receives enrolment report
	Pays invoice within timeframe printed on invoice		Forwards Operational Fee Invoice to ASP
		Views Scheme Participation Report[2]	Makes Scheme Participation Report available monthly

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, the Authority 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

Operator	ASP	Authority	TCA
Decides to remove a vehicle from the scheme and provides vehicle details to ASP	Decides to remove Operator from scheme	Decides to remove Operator from scheme and informs ASP	
	Updates enrolment status to Cancelled and forwards enrolment to TCA via Tier 3 Data Exchange		
			Receives cancelled enrolment form
	Forwards enrolment report to TCA monthly		Receives enrolment report
	Views Scheme Participation Report[1]		Makes Scheme Participation Report available monthly

1. Local governments in NSW may also view this information.

2.4 ROLES AND RESPONSIBILITIES

In delivering the objectives of a RIM Farm Gate Access (NSW) 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–Operator Agreement for use with the scheme and make it available to ASPs;
- ensure that the TAP is set up to enable the Authority and participating local governments in NSW to access reporting generated by the scheme (in accordance with the intended purpose as agreed by the Operator in the ASP–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;
- if required by the Authority, 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 the Authority and participating local governments in NSW with reporting outlined in 2.2e via TAP; and
- ensure the confidentiality of ASP data is maintained.

The Authority will:

- maintain policy documentation required by the Authority for the scheme;
- undertake program coordination activities related to the scheme with TCA;
- access reporting 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–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 (or similar) and the reporting of data received from those devices;

- if required by the Authority, 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 Authority website (or other website as applicable, such as the NHVR) and determine whether they meet those conditions;

- obtain the applicable Notice from the NHVR website and ensure compliance with Notice 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–Operator Agreement;

- follow rules for enrolment in the scheme;

- store original signed ASP–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
NHVR	National Heavy Vehicle Regulator
NTF	National Telematics Framework
RAV	restricted access vehicle
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–Operator Agreement	A written agreement between an ASP, an Operator and TCA which sets out the terms on which the ASP will provide application services to the Operator, and the intended purpose for collecting data from the Operator's vehicle(s) enrolled in the scheme.
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. *See also jurisdiction.*
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
NSW Farm Gate Access Network	A network in participating council areas connecting first and last mile journeys, as described on the TfNSW website, with travel and road conditions that apply on that network.
Operator	An entity that operates one or more vehicles eligible to enter a scheme.
restricted access vehicle (RAV)	A vehicle which exceeds the overall dimensions of vehicles as defined in the Heavy Vehicle National Law.
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.

Term	Definition
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.
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.
vehicle category	A named business-level description of a prime mover/rigid truck and any trailers as defined by a vehicle category dataset approved for use by TCA. Example: 'Semi Trailer 6 Axle'.

B   RIM SEMI-TRAILER FARM GATE ACCESS SCHEME (NSW)

Purpose

The RIM Semi-Trailer Farm Gate Access Scheme (NSW) is a scheme administered by TfNSW to monitor road utilisation of the NSW vehicle category 'Semi-Trailer' operating under the applicable Notice on the NSW Farm Gate Access Network (noting the Notice to operate will be related to this network only, and any other Notices or permits that vehicles operate under are considered separately).

Background

To participate in the scheme, Operators must conform with the requirements specified within the applicable Notice on the NHVR website. Semi-Trailers up to 19 m must be fitted with a telematics device.

TfNSW monitors vehicles enrolled in the scheme on routes as described in the applicable Notice and indicated on network maps available on the TfNSW website.

Scheme Features

Through TAP, the Authority and participating local governments in NSW will have access to specific reporting that includes road utilisation of Semi-Trailers on the NSW road network.

Other aspects of this scheme operate in accordance with generic RIM Farm Gate Access (NSW) processes, such as ASP Registration, Enrolment, Data Reporting, and Data Analysis and Reports. For more information, see 2.2.

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
RIM Semi-Trailer Farm Gate Access Scheme (NSW)	RIMSTFGA	NSW

C   RIM B-DOUBLE FARM GATE ACCESS SCHEME (NSW)

Purpose

The RIM B-Double Farm Gate Access Scheme (NSW) is a scheme administered by TfNSW to monitor road utilisation of the NSW vehicle category 'B-Double' operating under the applicable Notice on the NSW Farm Gate Access Network (noting the Notice to operate will be related to this network only, and any other Notices or permits that vehicles operate under are considered separately).

Background

To participate in the scheme, Operators must conform with the requirements specified within the applicable Notice on the NHVR website. B-Doubles up to 26 m must be fitted with a telematics device.

TfNSW monitors vehicles enrolled in the scheme on routes as described in the applicable Notice and indicated on network maps available on the TfNSW website.

Scheme Features

Through TAP, the Authority and participating local governments in NSW will have access to specific reporting that includes road utilisation of B-Doubles on the NSW road network.

Other aspects of this scheme operate in accordance with generic RIM Farm Gate Access (NSW) processes, such as ASP Registration, Enrolment, Data Reporting, and Data Analysis and Reports. For more information, see 2.2.

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 C.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
RIM B-Double Farm Gate Access Scheme (NSW)	RIMBDFGA	NSW

D   RIM ROAD TRAIN FARM GATE ACCESS SCHEME (NSW)

Purpose

The RIM Road Train Farm Gate Access Scheme (NSW) is a scheme administered by TfNSW to monitor road utilisation of 'road trains' operating under the applicable Notice on the NSW Farm Gate Access Network (noting the Notice to operate will be related to this network only, and any other Notices or permits that vehicles operate under are considered separately).

Background

To participate in the scheme, Operators must conform with the requirements specified within the applicable Notice on the NHVR website. The following NSW vehicle categories must be fitted with a telematics device:

- Type 1 A-Double Road Train (up to 36.5 m)
- Modular B-Triple Road Train (up to 35.0 m)
- B-Triple Road Train (up to 36.5 m)
- AB-Triple Road Train (up to 36.5 m).

TfNSW monitors vehicles enrolled in the scheme on routes as described in the applicable Notice and indicated on network maps available on the TfNSW website.

Scheme Features

Through TAP, the Authority and participating local governments in NSW will have access to specific reporting that includes road utilisation of road trains on the NSW road network.

Other aspects of this scheme operate in accordance with generic RIM Farm Gate Access (NSW) processes, such as ASP Registration, Enrolment, Data Reporting, and Data Analysis and Reports. For more information, see 2.2.

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 D.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
RIM Road Train Farm Gate Access Scheme (NSW)	RIMRTFGA	NSW