Transport Certification Australia

TMA ZEHV Monitoring Schemes (NSW) (Trial)

A scheme trial using the Telematics Monitoring Application (TMA) for Transport for NSW

May 2024

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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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1 Introduction

1.1 Purpose

This document describes the TMA ZEHV Monitoring Schemes (NSW), which are being trialled and made available by Transport for NSW. The following schemes are associated with the Telematics Monitoring Application (TMA):

- TMA ZEHV Monitoring Scheme (NSW)
- TMA ZEHV with Smart OBM Monitoring Scheme (NSW).

TMA ZEHV Monitoring Schemes (NSW) will enable monitoring of eligible zero-emission heavy vehicles (ZEHV) on the ZEHV network in New South Wales (NSW).

1.2 Scope

This document describes the TMA ZEHV Monitoring Schemes (NSW) and how they are used with the TMA application.

The following information is included:

- Scheme parameters
- Key scheme processes
- Roles and responsibilities of scheme participants.

1.3 Background

The NSW Government has an objective to achieve a 50% reduction in emissions on 2005 levels by 2030 and to reach net zero emissions by 2050. The use of heavy ZEHVs on approved parts of the NSW road network will help further that goal.

A ZEHV is a new or retrofit vehicle, with a gross vehicle mass (GVM) or aggregate trailer mass (ATM) of over 4.5 tonnes mass, that generates no tailpipe carbon emissions measured in terms of carbon dioxide equivalent.

This scheme trial is part of the broader 'TMA and RIM ZEHV Monitoring Scheme Trial' for Transport for NSW, which includes the following in separate documents:

- RIM ZEHV Monitoring Scheme (NSW), for ZEHVs at up to 18.0 tonnes on the tandem drive axle, or up to 10.5 tonnes on the single drive axle, or operating with a tri-drive axle; with trailers that operate at equivalent General Mass Limits (GML) or Concessional Mass Limits (CML)[1]
- TMA ZEHV Monitoring Schemes (NSW), for ZEHVs that either:
    - Operate at up to 18.0 tonnes on the tandem drive axle, or up to 10.5 tonnes on the single drive axle, with trailers at equivalent Higher Mass Limits (HML)[2]; or
    - Operate above 18 tonnes and up to 18.5 tonnes on a tandem drive axle, and are fitted with a Smart On-Board Mass (OBM) system, with trailers operating at equivalent GML, CML or HML (see footnotes).

  Note: ZEHVs enrolled in a TMA ZEHV Monitoring Scheme (with or without Smart OBM), which is a higher level of assurance, do not need to be enrolled in a RIM ZEHV Monitoring Scheme (NSW).

The scheme trial was developed by Transport for NSW to determine whether ZEHVs are suitable for the freight task currently performed by heavy vehicles with combustion engines, and assess their impact on the ZEHV network in NSW.

[1] GML and CML are referred to in the *New South Wales Class 3 Zero Emission Vehicle Mass and Dimension Exemption Notice* as M1 and M2 masses respectively.

[2] HML is referred to in the *New South Wales Class 3 Zero Emission Vehicle Mass and Dimension Exemption Notice* as M3 mass.

A unique feature of the TMA ZEHV Monitoring Schemes (NSW) as part of the scheme trial is ability to source additional data that will provide insight into the impact of these vehicles on the network. This includes:

- Obtaining the tare mass of the enrolled prime mover or rigid truck, and vehicle registration data, if the scheme does not require fitment of a Smart OBM system;
- Pairing it with data records of the enrolled vehicle; and
- Irrespective of whether a Smart OBM is required, visualising movements of the de-identified data to inform the performance of the trial.

To participate in a TMA ZEHV Monitoring Scheme (NSW), a transport operator ('Operator') must conform with the requirements specified within the instrument of access approval, which is the *New South Wales Class 3 Zero Emission Vehicle Mass and Dimension Exemption Notice* ('Notice') issued by the National Heavy Vehicle Regulator (NHVR)[3].

Enrolment in the TMA application is performed by the certified Application Service Provider (ASP) selected by the Operator[4].

The ASP is responsible for the installation of a TCA-approved[5] telematics device in the vehicle being utilised in accordance with the Notice.

If Smart OBM is required by a scheme, the Smart OBM system supplier (or Operator-nominated personnel that the supplier authorises as suitably trained) is responsible for the installation of a Smart OBM system in the vehicle being utilised in accordance with the instrument of access approval.

The ASP is responsible for the collection of data from vehicles enrolled in accordance with the requirements of the TMA application for the scheme.

ASPs provide data records to TCA. TCA analyses the data and makes reporting available to Transport for NSW (and other bodies authorised by the Authority) via the Telematics Analytics Platform (TAP).

The TMA application[6] is offered at Level 2 Assurance appropriate to these vehicles (see Appendix A for a definition of Level 2 Assurance).

[3] Participation in the scheme trial does not exempt an Operator from the requirement to comply with conditions set out in any Notice or permit under which they are operating.

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

[5] TCA approval of a telematics device or a Smart OBM system may be in the form of type-approval or an equivalent approval mechanism acceptable to TCA. ASPs must meet applicable requirements in the functional and technical specification, irrespective of the approval mechanism.

[6] The TMA application can be used for a variety of purposes. In this document, TMA is described in the context of the schemes, which have specific business requirements associated with the standard operation of the TMA application.

2 TMA ZEHV Monitoring Schemes (NSW)

2.1 Trial Objectives

The trial will commence when ASPs monitoring vehicles operating in the trial start sending data to TCA via approved mechanisms. The trial will run for 24 months after commencement, and its efficacy will be assessed at the end of that period.

As part of the trial, TMA ZEHV Monitoring Schemes (NSW) will be limited to ZEHVs (as described in the Notice) operating in NSW that have installed telematics devices for use at Level 2 Assurance or higher, and where required by a scheme, a TCA-approved Smart OBM system.

The trial has several objectives that will be used to determine its success. The trial will:

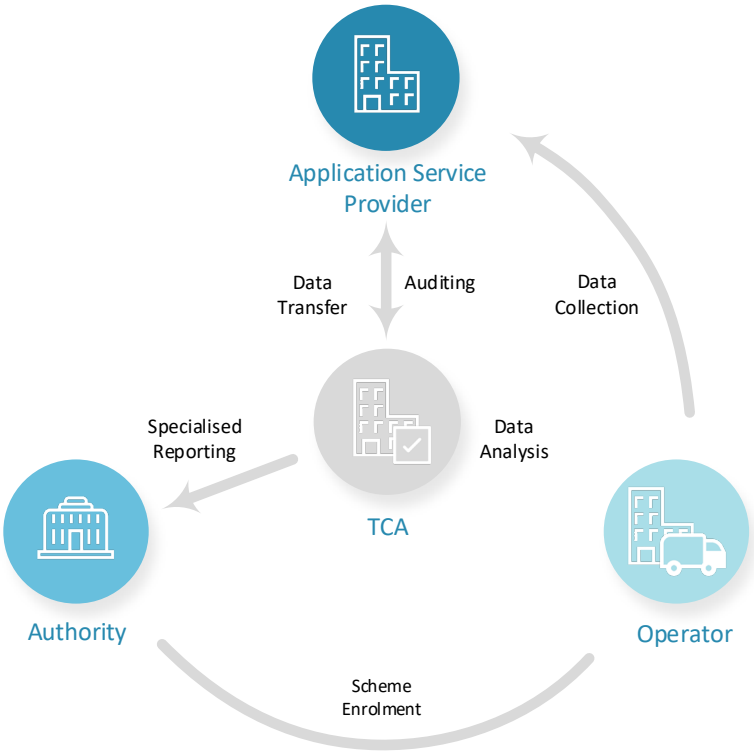
- Enable ZEHVs enrolled in the scheme to obtain access to approved parts of the NSW road network (as described in the Notice for the vehicle type and characteristics)
- Make telematics data of ZEHVs enrolled in the scheme available to the Freight Branch at Transport for NSW (and other bodies authorised by the Authority, such as councils and relevant third parties) with agreed graphical representation via TAP or specialised reporting method
- Enable Transport for NSW to derive meaningful information from telematics data of TMA ZEHV Monitoring Schemes (NSW) to:
    - Determine the suitability and reliability of ZEHVs to perform the freight task compared with heavy vehicles with combustion engines
    - Assess the impact of ZEHVs on approved parts of the NSW road network.
- Obtain feedback from Transport for NSW about aspects of the trial and use that feedback to refine the requirements for the operational phase of the scheme.

2.2 Participants

Figure 1 outlines the key interactions between participants for the use of the TMA application for a TMA ZEHV Monitoring Scheme (NSW):

- Transport for NSW, as the Authority 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 TMA 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, certified by TCA, offer telematics services (hardware, software and associated processes) to enable enrolment of eligible vehicles in the TMA application (as well as other applications available within the National Telematics Framework [NTF]), collection of data from installed telematics devices and reporting of data to TCA.
- TCA administers the TMA 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, sources additional data required by the trial, performs data analysis, 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: Interactions between scheme participants are consistent with interactions between TMA application participants, and are not specific to the scheme.

2.3 Common Scheme Features

This section describes the common features of a TMA ZEHV Monitoring Scheme (NSW). For information on features that are specific to a TMA ZEHV Monitoring Scheme (NSW), refer to the scheme descriptions in the appendices of this document.

a. ASP Certification

TCA will certify ASPs to provide services for the TMA application.

b. Enrolment

ASPs will enrol vehicles in the TMA application and a TMA ZEHV Monitoring Scheme (NSW) at the request of the Operator.

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

Figure 2 shows the pre-enrolment steps for a TMA ZEHV Monitoring Scheme (NSW).

Figure 3 shows the reporting processes for a TMA ZEHV Monitoring Scheme (NSW).

Figure 4 shows the enrolment cancellation and reporting processes for a TMA ZEHV Monitoring Scheme (NSW).

Note: See Appendices 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 TMA application is a telematics device, approved by TCA for use at Level 2 Assurance or higher.

The telematics device will collect:

- Position data at 30-second intervals (or as approved by TCA), and
- Date and time data.

The following applies **only** if required by a scheme:

- If mass and vehicle configuration data is required, the data will be collected from vehicles with TCA-approved Category B or C OBM systems ('Smart OBM systems') installed. The Smart OBM system shall collect the data at 5-minute intervals.

  Note: OBM systems are unable to provide reliable axle mass readings when a vehicle is in motion. The collection of mass records every 5 minutes is specifically for data analysis and the identification of possible changes to the load of a vehicle category.

Note: Refer to the scheme descriptions in the appendices of this document to determine whether the scheme requires this optional feature.

d. Data Reporting

The ASP shall transfer data records collected through the TMA application to TCA no less frequently than each calendar month, and as described in *Telematics Monitoring Application Functional and Technical Specification*.

e. Data Analysis and Reporting

TCA will make data analysis and reporting for the scheme available to the Authority and other bodies authorised by the Authority (such as councils and third-party asset owners) through TAP.

Through TAP, the Authority, and other bodies authorised by the Authority, will have access to:

- Interactive maps, which represent de-identified data using data elements collected as part of the scheme; and
- Specific reporting required for scheme management.

For the purposes of the scheme trial, and if a scheme does not require fitment of a Smart OBM system, TCA will seek to source the tare mass of the enrolled vehicle. TCA will then seek to match the tare mass of the enrolled vehicle to its data records.

For the purposes of the scheme trial:

- TCA will report additional de-identified non-TMA data types, using a format agreed with the Authority, that will indicate:
    - Tare mass of the enrolled prime mover or rigid truck
    - Vehicle type (i.e. prime mover or rigid truck)
- TCA will provide to the Authority, using a format agreed with the Authority, specialised reporting that includes:
    - Steer and drive axle masses in operation, obtained from Smart OBM systems (as applicable to a scheme)
    - Origin-destination data
    - Distance travelled
    - 'Hotspot' reporting (i.e. reports showing graphical representations that include statistical analyses of vehicle movement at locations nominated by the Authority).

Note:

(i) *The type, number, frequency and graphical output of specialised reporting will be subject to agreed terms reached between TCA and the Authority.*

(ii) *The TMA application relies on changes in vehicle position records over a 30-second period to derive vehicle speed. Average and maximum vehicle speed results are estimates only, and may be influenced by factors such as road geometry and GNSS quality. Authorities should exercise caution when interpreting vehicle speed derived from the TMA application.*

The use of TMA for this scheme is intended to provide a basic representation of vehicle movements based on the data collected and the use of data for the intended purpose of the scheme (as agreed by the Operator in the ASP–Operator Agreement).

A Road Usage Report will be made available to the Authority via TAP.

2.4 Key Scheme Processes

Figure 2 outlines the key actions taken by each participant during the pre-enrolment stage of the operation of a TMA ZEHV Monitoring Scheme (NSW).

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

Figure 2: Pre-Enrolment Process

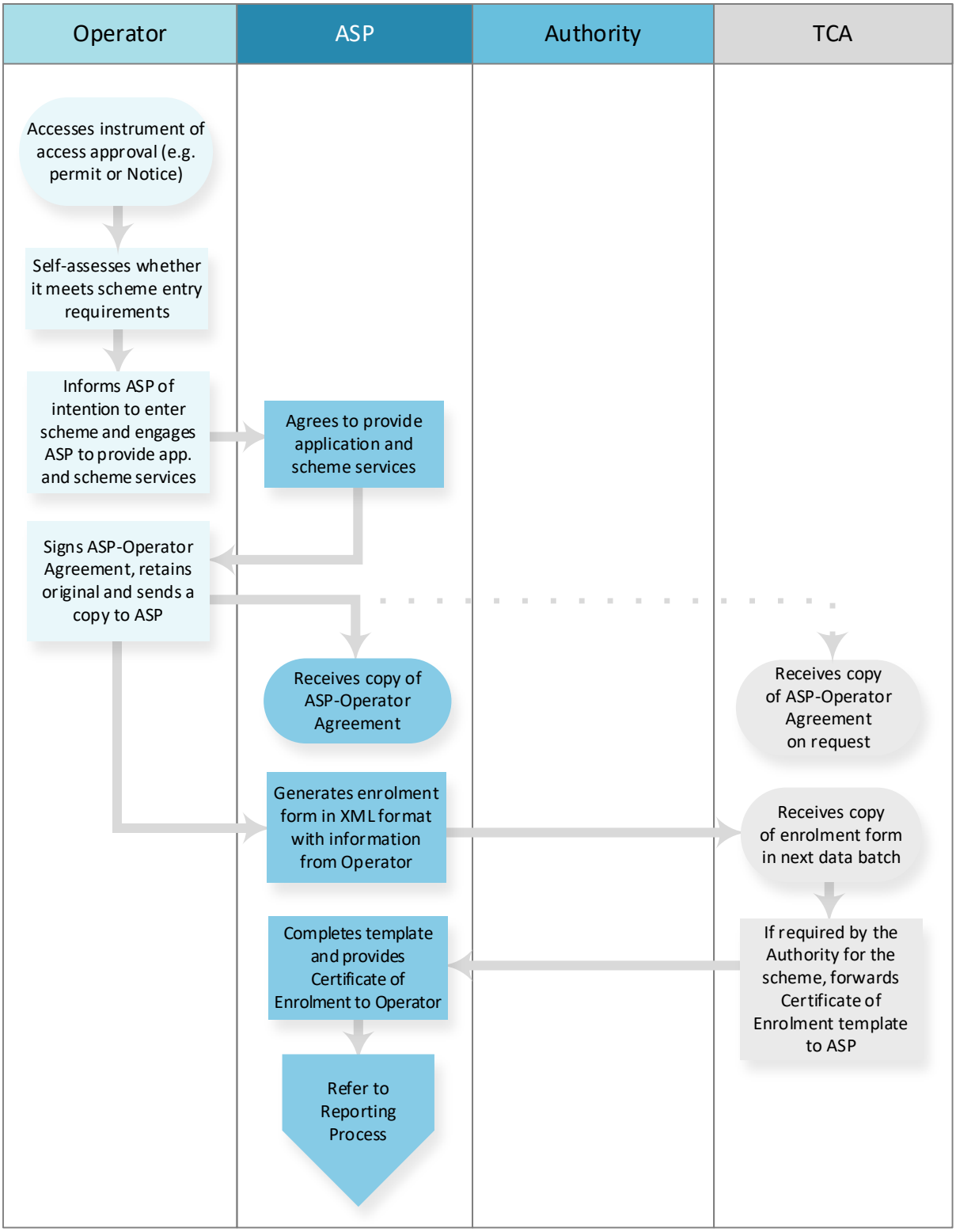
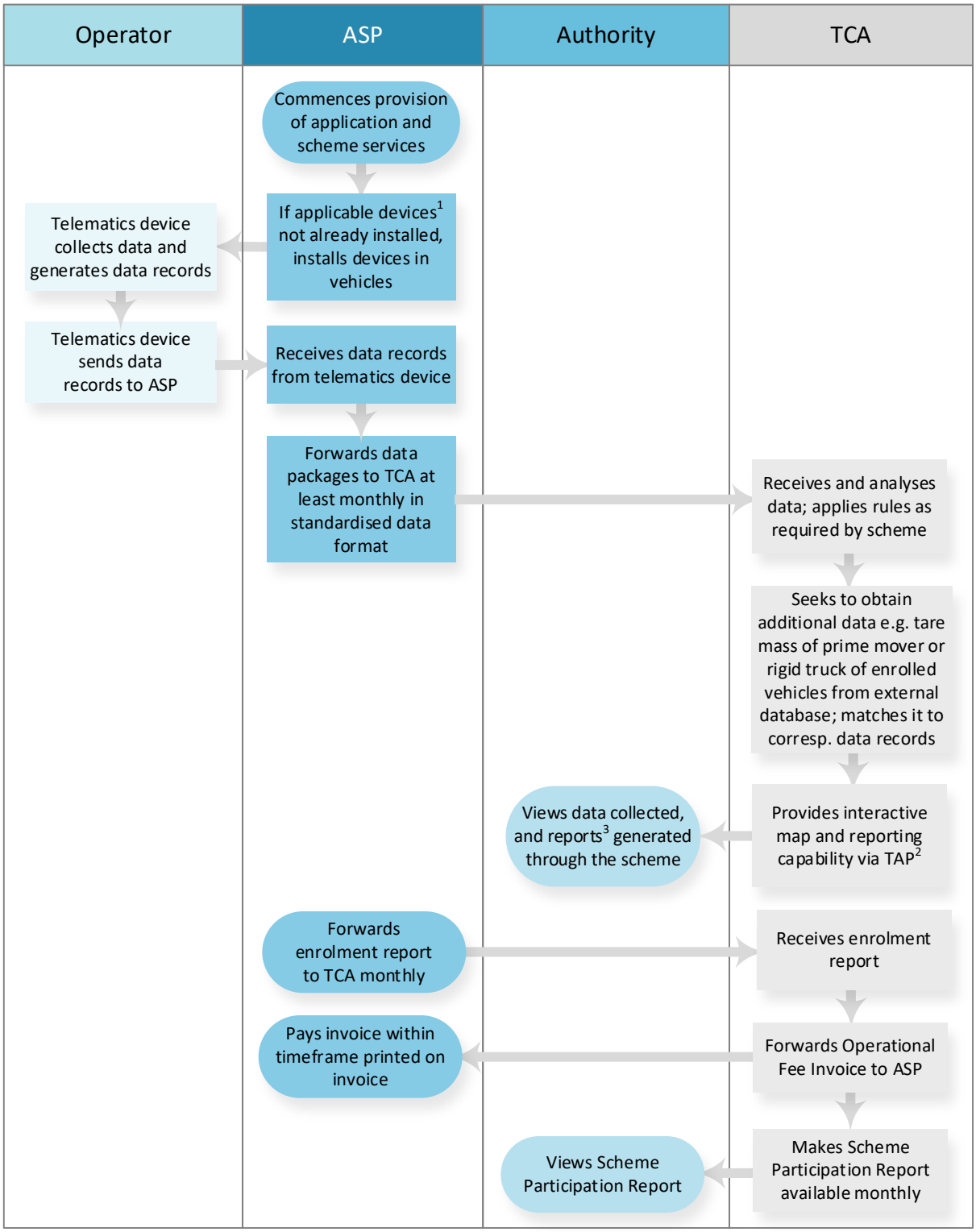


Figure 3 outlines the key actions related to data collection, record generation and reporting for the scheme.

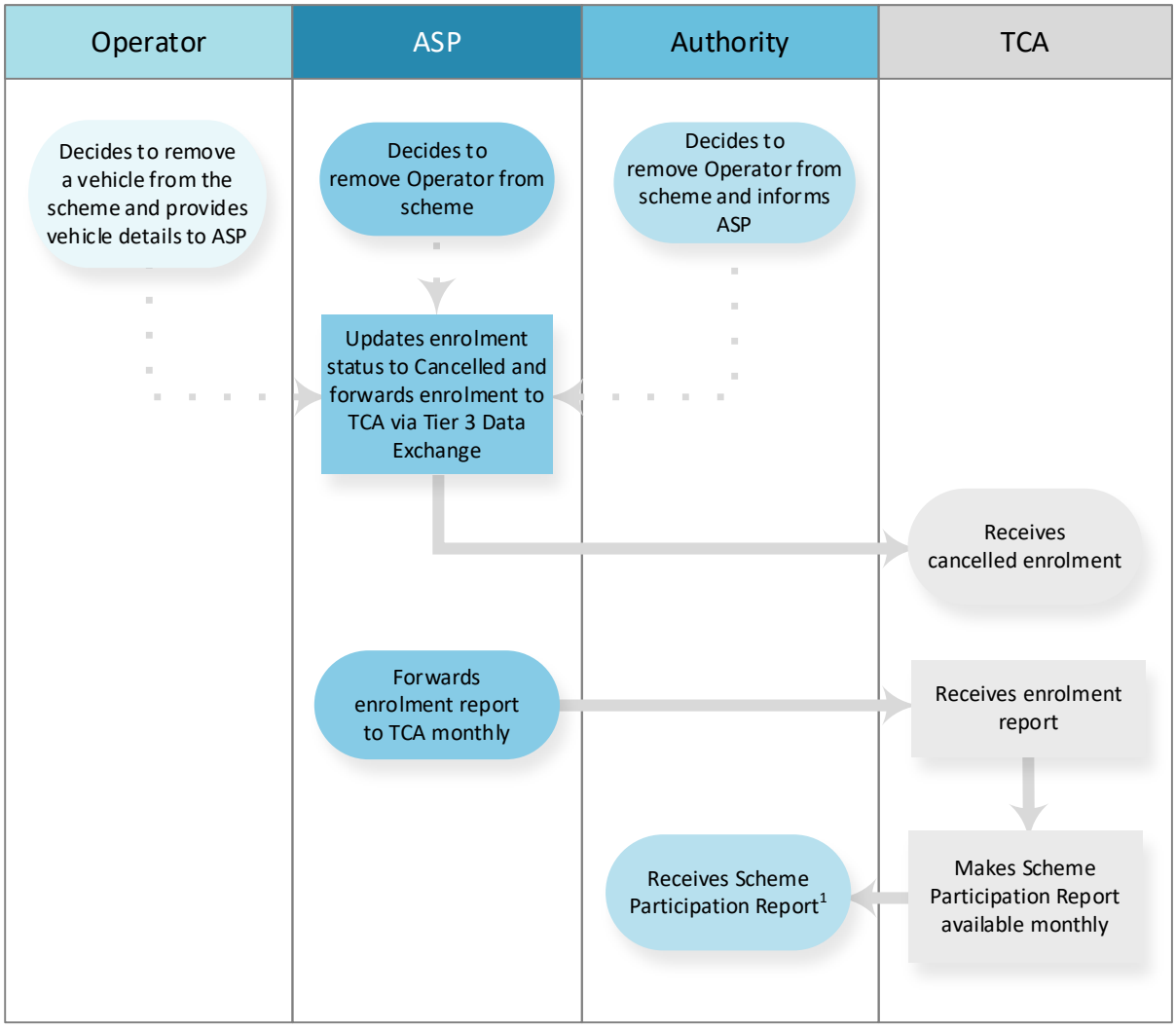
Figure 3: Reporting Processes



1. Applicable devices include a TCA-approved telematics device, and:
   - If mass and vehicle configuration will be collected, a TCA-approved OBM system at Category B or C; and/or
   - If comments are self-declared, a user interface connected to the TCA-approved telematics device.
2. Data will be updated at least monthly. For the purposes of this trial, TCA will make other specialised reporting available to the Authority as described in 2.3e.
3. The Authority will nominate the locations that will be subject to location-based reports (subject to agreed terms).

Cancellation of enrolment 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



1. Local governments approved by the Authority may also view this information.

2.5 Roles and Responsibilities

In delivering the objectives of a TMA ZEHV Monitoring Scheme (NSW), **TCA** will:

- Provide a document (this document) describing the use of the scheme as part of the TMA application, and stating its operation in the trial
- Produce or maintain collateral, as necessary, to support the scheme. Examples include the provision of current versions of:
    - *Telematics Monitoring Application Functional and Technical Specification*
    - *Telematics Business-to-Business Data Exchange Functional and Technical Specification*
    - *Telematics Device Functional and Technical Specification*
- Support the reporting of data records via Tier 3 Data Exchange using a RESTful Application Programming Interface (API), with these records formatted using a JSON format
- Support the reporting of enrolment forms and enrolment reports using a RESTful API, with these documents formatted using an XML format
- Inform ASPs of the scheme details and entry conditions
- Produce a ASP–Operator Agreement for use with the scheme and make it available from the TCA website
- Ensure that TAP and other reporting mechanisms are set up to enable the Authority and other bodies authorised by the Authority 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, etc. for receipt of data records from the TMA application
- Produce and execute an ASP–TCA Certification Agreement, which formalises the relationship between TCA and the ASP with regard to ASP certification, or update the current Agreement
- Assess and certify whether an ASP meets requirements to provide TMA services
- Approve devices used in the scheme
- Ensure the intellectual property rights of ASPs are protected when assessing whether an ASP can meet operational requirements of the scheme
- If required by the Authority, provide certified ASPs with the Certificate of Enrolment template
- After the end of each month, forward Operational Fee Invoices to ASPs upon receipt of enrolment reports
- If fitment of a Smart OBM system is not required by a scheme, seeks to source the tare masses of an enrolled prime mover or rigid truck from a recognised external database
- If fitment of a Smart OBM system is not required by a scheme, seeks to match the tare masses of the enrolled prime mover or rigid truck, and data obtained from its enrolment form, to its data records
- Provide the Authority with reporting outlined in 2.3e via TAP
- Ensure the confidentiality of ASP data is maintained
- Unless directed by the Authority and consented to by the Operator, de-identify the TMA telematics data it has received relating to the Operator’s nominated vehicle(s) 12 months from its receipt of the data.

The Authority will:

- Maintain documentation required by the Authority for the scheme
- Undertake program coordination activities related to the scheme with TCA
- Access reporting outlined in 2.3e 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 services for the scheme has been made
- Be responsible for the installation, operation and maintenance of telematics devices (and any connected devices) and the reporting of data received from those devices, and as described in the *Telematics Monitoring Application Functional and Technical Specification.*

  Note: With regard to Smart OBM systems, the ASP will ensure that the Smart OBM system supplier (or Operator-nominated personnel that the supplier authorises as suitably trained) installs a Smart OBM system.
- 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
- 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 and determine whether they meet those conditions
- Access the Notice from the NHVR website and ensure compliance with its 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 TMA 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
- 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
CML	Concessional Mass Limits
GML	General Mass Limits
GNSS	Global Navigation Satellite System
HML	Higher Mass Limits
NHVR	National Heavy Vehicle Regulator
NTF	National Telematics Framework
OBM	on-board mass
RIM	Road Infrastructure Management
TAP	Telematics Analytics Platform
TMA	Telematics Monitoring Application
UTC	Coordinated Universal Time
VIN	vehicle identification number
ZEHV	zero emission heavy vehicle

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 the context of an identified level of assurance.
Application Service Provider (ASP)	A service provider that has been certified by TCA as meeting the requirements of one of more telematics applications.
approval mechanism	The mechanism by which TCA approves a device, such as a telematics device or connected device, for use in a telematics application. The approval mechanism used may be type-approval, or an equivalent approval mechanism acceptable to TCA.
ASP–TCA Certification Agreement	The written agreement made between an ASP and TCA that recognises the fact that the ASP, having satisfied TCA's requirements for appointment as an ASP, is appointed in that capacity, and sets out the legal obligations of each party with respect to the ongoing role of the ASP.

Term	Definition
ASP–Transport 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, and compliance activities as necessary. An Authority may appoint an administrator to perform its functions. *See also: jurisdiction.*
Concessional Mass Limits (CML)	An allowance by the National Heavy Vehicle Regulator that allows National Heavy Vehicle Accreditation Scheme (NHVAS) members to utilise mass limits up to 5% above GML (subject to conditions) provided the operator is accredited under the NHVAS.
connected device	Any device or technology connected to a telematics device.
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.
General Mass Limits (GML)	Mass limits that apply generally to a heavy vehicle or to components of a heavy vehicle as imposed by Schedule 1 of the Heavy Vehicle National Law.
Higher Mass Limits (HML)	An allowance by the National Heavy Vehicle Regulator that provides a significant increase in the productivity of road freight transport heavy vehicles by allowing particular vehicles to access additional mass entitlements, subject to the following conditions: • Operators of vehicles or combinations running at HML on tri-axle groups are accredited under the Mass Management Module of the National Heavy Vehicle Accreditation Scheme (with an accreditation label fitted to the hauling unit). • Vehicles are fitted with certified road-friendly suspension. • Vehicles are travelling on an authorised route.
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 2 Assurance	Independent assessment of specific elements of a telematics application. Telematics data is combined with other data sources.

Term	Definition
OBM system	A device which measures the mass of axle groups of a vehicle. TCA categorises OBM systems as follows: • Category A – OBM systems in this category electronically display collected data to drivers and/or loaders. • Category B – OBM systems in this category also collect data and transfer the collected data to a telematics device using a mechanism agreed and implemented by the ASP and supplier of the OBM system. • Category C – OBM systems in this category collect data and transfer data records in a standardised way to a telematics device (in accordance with *Interconnectivity of Telematics Device with Other Systems Functional and Technical Specification*).
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.
Smart OBM system	An OBM system approved by TCA to Category B or C. *See also: OBM system*
telematics device	The primary telematics unit which monitors vehicle parameters, which may include identity, datetime, location, speed, vehicle category or mass.
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 certification and re-certification, 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.
zero emission heavy vehicle (ZEHV)	A new or retrofit vehicle, with a gross vehicle mass (GVM) or aggregate trailer mass (ATM) of over 4.5 tonnes mass, that generates no tailpipe carbon emissions measured in terms of carbon dioxide equivalent.

B TMA ZEHV Monitoring Scheme (NSW)

Purpose

The *TMA ZEHV Monitoring Scheme (NSW)* is a scheme made available by Transport for NSW to monitor road utilisation of ZEHVs up to 18 tonnes on the tandem drive axle or up to 10.5 tonnes on the single drive axle, operating trailers at equivalent HML[7], under the Notice on the ZEHV network of NSW.

Background

To participate in the scheme, Operators must conform with the requirements specified within the Notice. ZEHVs must meet requirements to operate trailers at equivalent HML and have up to 18 tonnes on the tandem drive axle or up to 10.5 tonnes on the single drive axle.

Eligible vehicles must be fitted with a TCA-approved telematics device.

Transport for NSW monitors vehicles enrolled in the scheme on the ZEHV network described in the Notice and indicated on network maps available on the Transport for NSW website.

Note: As described in the Background, ZEHVs enrolled in this scheme, which is associated with the higher assurance application TMA, can also operate trailers at equivalent GML or CML[8] masses on the ZEHV network and do not need to be enrolled in a RIM ZEHV Monitoring Scheme (NSW).

Scheme Features

Through TAP, the Authority and other bodies authorised by the Authority will have access to reporting as described in 2.3 that includes road utilisation of enrolled vehicles on the NSW road network.

Other aspects of this scheme operate in accordance with generic TMA ZEHV Monitoring Scheme (NSW) processes, such as ASP Certification, Enrolment, Data Reporting, and Data Analysis and Reports. For more information, see 2.3.

Note: TCA will seek to source the tare mass of the enrolled prime mover or rigid truck. TCA will then seek to match the tare mass of the enrolled prime mover or rigid truck to its data records.

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**
TMA ZEHV Monitoring Scheme (NSW)	TMAZEVNSW	NSW

[7] HML is referred to in the Notice as M1 mass.

[8] GML and CML are referred to in the Notice as M2 and M3 masses respectively,

C TMA ZEHV with Smart Monitoring Scheme (NSW)

Purpose

The *TMA ZEHV with Smart OBM Monitoring Scheme (NSW)* is a scheme made available by Transport for NSW to monitor road utilisation of ZEHVs greater than 18 tonnes and up to 18.5 tonnes on the tandem drive axle, operating trailers at GML, CML or HML[9], under the Notice on the ZEHV network of NSW.

Background

To participate in the scheme, Operators must conform with the requirements specified within the Notice. Eligible ZEHVs must meet requirements to operate trailers at equivalent GML, CML or HML, and have greater than 18 tonnes and up to 18.5 tonnes on the tandem drive axle.

Eligible vehicles must be fitted with a TCA-approved telematics device and a TCA-approved Smart OBM system.

Transport for NSW monitors vehicles enrolled in the scheme on the ZEHV network described in the Notice and indicated on network maps available on the Transport for NSW website.

Scheme Features

Through TAP, the Authority and other bodies authorised by the Authority will have access to reporting as described in 2.3 that includes road utilisation of enrolled vehicles on the NSW road network.

Other aspects of this scheme operate in accordance with generic TMA ZEHV Monitoring Scheme (NSW) processes, such as ASP Certification, Enrolment, Data Reporting, and Data Analysis and Reports. For more information, see 2.3.

Note: For this scheme, TCA will not seek to source the tare mass of the enrolled prime mover or rigid truck, as this information will be collected by the Smart OBM system.

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**
TMA ZEHV with Smart OBM Monitoring Scheme (NSW)	TMAZEVMASSNSW	NSW

[9] GML, CML and HML are referred to in the Notice as M1, M2 and M3 masses respectively.

Contact

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