



Transport
for NSW



TfNSW MaaS Data Sharing Specification (TMDSS)

Document Summary Information		
Version		0.6
Version Release Date		14 February 2019
Status		Draft
Document Name		TfNSW MaaS Data Sharing Specification_v0.6.docx
Document Owner		Open Data and Innovation

PROPOSED SPECIFICATION

Version History

Version	Date	Comments	Author
0.1	20/11/18	Initial draft	Terence Khoo
0.2	29/11/18	Incorporate comments from Yvonne Lee, David Phillips and Ken Tsang	Terence Khoo
0.3	4/12/18	Added Schema Incorporate comments from Yvonne Lee	Terence Khoo
0.4	10/12/18	Format document	Terence Khoo
0.5	17/12/18	Changed the Schema Added sub section - App Developer Added fare_Info field in Legs Added AppDevID field in High level stats Added AppDevID field in App stats	Terence Khoo
0.6	14/02/2019	Incorporate the comments from ODI team, MaaS Innovation Challenge incubatees, TfNSW MaaS Innovation Challenge project teams	Terence Khoo

DRAFT

Table of Content

1	Overview.....	1
1.1	Purpose.....	1
1.2	Background	1
1.3	Scope	1
1.4	References	1
1.5	Abbreviations and Acronyms	2
2	Requirements	3
2.1	Data flow	3
2.2	File name.....	3
2.3	File format	3
2.4	File transfer	3
2.5	Frequency	3
2.6	Invalid or unreadable file.....	3
2.7	Validator	4
2.8	Reference Data	4
2.9	Files.....	4
2.9.1	Examples	5
2.10	GTFS and GTFS Realtime.....	5
2.11	Vehicle information (Realtime).....	6
2.12	GBFS	8
3	Schema	9
4	Data Specification	10
4.1	Trip.....	10
4.2	Leg	11
4.3	Trip Planning	12
4.4	Vehicle	13
4.5	Vehicle Service.....	13
4.6	Vehicle Trip	14
4.7	Vehicle Utilisation	14
4.8	Bookings.....	15
4.9	High level stats	16
4.10	High level stats – Travel Zone	17
4.11	Apps stats.....	17



4.12 Data mapping	18
4.12.1 Travel Zone	18
4.12.2 Route Type	18
4.12.3 Wheelchair Accessible	18
4.12.4 Ticket Type	18
4.12.5 Payment Type	19
4.12.6 Vehicle Type	19
4.12.7 Operator	19
4.12.8 Application	19
4.12.9 Vehicle Service Hour	20
4.13 Default value	22

DRAFT

1 Overview

1.1 Purpose

The purpose of this specification document is to define the specifications for data sharing between public transport operators, mobility-as-a-service (MaaS) operators and providers, and Transport for NSW (TfNSW). This document communicates the requirements and specifications for the stakeholders for the MaaS ecosystem.

The collected data are for the most part historical. TfNSW will use the data for analysis and future planning purposes. The data will give TfNSW an overview and understanding of the transport network and customers' preference for selecting the best options for their trips. In addition, TfNSW will also gain insights into the viability of different schemes which different MaaS operators and providers are running to determine the future roadmap for Transport.

In addition to collecting historical data, TfNSW are requesting the sharing of General Transit Feed Specification (GTFS), General Transit Feed Specification Realtime (GTFS Realtime), General Bikeshare Feed Specification (GBFS) and realtime vehicle information from all transport operators and providers. TfNSW is looking to publish these data feeds via Open Data Hub for products to ingest and provide trip planning and trip update functionalities. These feeds can be limited to be published to a private group, which consists of the participants from MaaS innovation challenge, unless the providers want it to be published publicly.

1.2 Background

Together with Future Transport, the Open Data and Innovation (ODI) team ran the MaaS innovation challenge in June 2018. The innovation challenge invited transport industry players to provide innovative solutions and products to give customers optimal door-to-door mobility service options and seamless combinations with the option to plan, book and pay.

In addition to understand the market's appetite for MaaS, TfNSW are building a MaaS ecosystem which requires data and APIs from the participants of the MaaS innovation challenge and the participating transport/mobility operators. The APIs are intended to be shared with the broader community for other products to include plan, book and pay functionalities.

1.3 Scope

This document covers the following scope of work:

1. File transfer and frequency
2. GTFS, GTFS Realtime, GBFS and Vehicle information (Realtime)
3. Requirements and validation
4. Data sharing definition

1.4 References

Document Name	Version
Operator Self-Reporting Interface Specification For On Demand Transport Services Contract (ODTSC)	1.5

1.5 Abbreviations and Acronyms

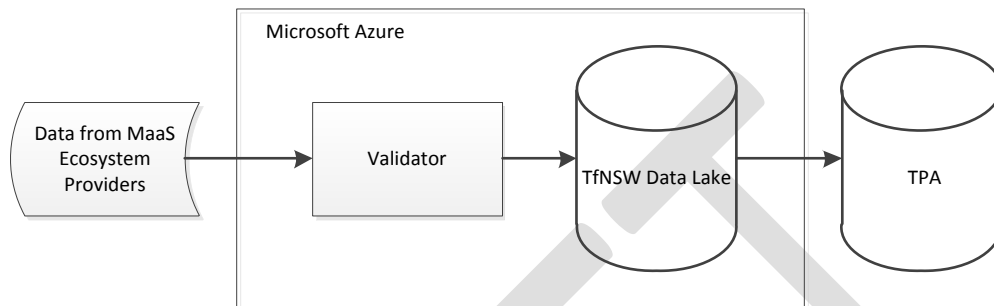
Abbreviations/Acronyms	Definition
API	Application Programming Interface
App	Application
AWS	Amazon Web Services
GTFS	General Transit Feed Specification
GTFS-r or GTFS-realtime	General Transit Feed Specification realtime
GBFS	General Bikeshare Feed Specification
Lat	Latitude
Lon	Longitude
MaaS	Mobility-as-a-Service
ODI	Open Data and Innovation (Team within Transport for NSW)
S3	Simple Storage Service
TfNSW	Transport for NSW
TPA	Transport Performance and Analytics
TZ	Travel Zone

DRAFT

2 Requirements

2.1 Data flow

The files will be uploaded or transferred from MaaS ecosystem providers' servers into the TfNSW Data Lake before any transfer to TPA database. There is a validator which will validate the file and data before the data is loaded in TfNSW Data Lake. The below diagram depicts the data flow where there is no error/issue with the file and data.



2.2 File name

There are restrictions on the file naming convention. The filename has to be kept the same throughout the period. If there is any change in the filename, the ODI team should be notified.

The file naming convention is <filename-yyyyMMddTHHmm>

2.3 File format

The allowed file format is CSV. The delimiters in a CSV file must be commas, and when a text value happens to contain a comma, that value (column) must be encased in double quotes.

2.4 File transfer

The file is to be uploaded into TfNSW Data Lake. Each data provider will be provided with access to TfNSW Azure environment. The file will be managed such that different data provider will not be able to see other providers' data.

2.5 Frequency

We expect the file to be uploaded on a daily basis or other agreed frequencies to TfNSW. The data can be one day old or historical data.

2.6 Invalid or unreadable file

The file will be checked and validated when it is transferred to TfNSW. There should be an alert triggered from the MaaS ecosystem provider (MaaS provider and transport operator) if the error occurred at the file transfer between the MaaS ecosystem provider server and TfNSW.

Incubatees should re-upload and replace the invalid or unreadable file once notified of such error.

Open Data Help (opendatahelp@transport.nsw.gov.au) should be notified of any invalid file issues.

2.7 Validator

A validator will be built to validate the file and data according to the requirements and data specification mentioned in this document before storing in TfNSW Data Lake. Any errors detected will be provided as feedback to the provider of the file to rectify.

2.8 Reference Data

The reference data values must be used when providing the data to TfNSW.

- Travel Zone
- Route Type
- Wheelchair Accessibility
- Ticket Type
- Payment Type
- Vehicle Type
- Operator
- Application
- Vehicle Service Hour

There may be future changes to the values in the data reference table. TfNSW ODI team will notify the changes to the data providers via email. There will also be a minor release of this document if the changes are deemed to have significant impact to a number of data providers.

2.9 Files

Below describes the files which were expected from MaaS ecosystem providers. Not all files are mandatory. However, if you are providing the file, there are some mandatory fields which you should provide.

Filename	Defines
Trip.csv	Describes the trip or journey of the customer.
Leg.csv	Describes the leg/s of the customer's trip.
Trip_Planning.csv	For trip planning product to indicate the trip plan results.
Vehicle.csv	Describes the vehicle used for passenger service.
Vehicle_Service.csv	Describes the service information of the vehicle i.e. vehicle shift while it is in operation.
Vehicle_Trip.csv	Mapping between vehicle shift and trip_id that is used within the GTFS feed.
Vehicle_Utilisation.csv	Describes the utilisation rate for the vehicle during the service period.
Bookings.csv	Describes the bookings for each operator.
High_Level_Stats.csv	For MaaS ecosystem provider to indicate the plan, book, take statistics from the customers' journey perspective
High_Level_Stats_TZ.csv	Indicates the top 100 travel zones.
App_Stats.csv	For MaaS ecosystem provider to indicate the statistics of their product.

2.9.1 Examples

Below are the examples of files which TfNSW is expecting from different type of providers.

1) Trip planning app

- a) TripPlanning.csv
- b) HighLevelStats.csv
- c) AppStats.csv
- d) HighLevelStats_TravelZone.csv

2) Transport service providers and operators

- a) Bookings.csv
- b) Vehicle.csv
- c) VehicleService.csv
- d) VehicleTrip.csv
- e) VehicleUtilisation.csv

3) Plan, book and pay app

- a) TripPlanning.csv
- b) Trips.csv
- c) Legs.csv
- d) HighLevelStats.csv
- e) HighLevelStats_TravelZone.csv
- f) AppStats.csv

4) Operator who has their vehicle fleet and app to plan, book and pay

- a) TripPlanning.csv
- b) Trips.csv
- c) Legs.csv
- d) HighLevelStats.csv
- e) HighLevelStats_TravelZone.csv
- f) AppStats.csv
- g) Bookings.csv
- h) Vehicle.csv
- i) VehicleService.csv
- j) VehicleTrip.csv
- k) VehicleUtilisation.csv

2.10 GTFS and GTFS Realtime

Where possible, the MaaS ecosystem provider, except bike share and scooters operators, shall provide TfNSW with GTFS and GTFS Realtime data feeds according to the TfNSW GTFS and GTFS Realtime Implementation Specification.

The purpose of TfNSW GTFS and GTFS Realtime Implementation Specification is to:

1. Localise the GTFS and GTFS Realtime specification to TfNSW needs

2. Reduce the complexity and risk of implementation e.g. If there are multiple ways of doing the same thing then this specification 'localises' each implementation to a single way, based on best practise, communications and processing efficiency, and requirements.
3. Ensure consistent interpretation of the GTFS and GTFS Realtime specification
4. Describe relevant TfNSW business rules that are necessarily absent from the GTFS and GTFS Realtime specification
5. Define GTFS and GTFS Realtime information sharing rules
6. Define common terminology.

The MaaS ecosystem providers are encouraged to share any suggested changes to the TfNSW GTFS and GTFS Realtime Implementation Specification with TfNSW.

2.11 Vehicle information (Realtime)

TfNSW want to know the vehicle occupancy and positioning information to understand the network capacity in real time. Trip planning apps or other booking services can also use the data to determine real time capacity information. This data feed must be updated at least every 15 seconds. It is expected that the source systems will have the capability to operate at 5 seconds and therefore the 15 second update will be near realtime.

Name	Type	Format/Units	Description	Example
Trip_ID	String	AAAAAA	This value referenced from the trip_id that is used within the GTFS feed or trip that is used within the GTFS Realtime feed. For non-timetabled services, this value is null.	1.AA51.1-SC0-1-sj2-2.1.R
Operator_ID	Numeric	NNNNNN	ID of the operator. Refer to 4.12.7 for the values.	900080
Latitude	Numeric	NNN.NNNNN N	The latitude of the vehicle.	-31.840233
Longitude	Numeric	-NN.NNNNNN	The Longitude of the vehicle.	145.612793
Timestamp	Numeric	NNNNNNNNN N	Moment at which the vehicle's real-time progress was measured. In POSIX time (i.e., the number of seconds since January 1st 1970 00:00:00 UTC).	1550199855
ID	String	AAAAAAAAAA	ID of the vehicle. This can be the vehicle registration ID of the vehicle or fleet number.	ODI 10 DT
Type	Numeric	N	Type of the vehicle. Refer to section 4.12.6	1

			for the values.	
Seats_Available	Numeric	NNN	This is the number of seats available in the vehicle.	12
Standing_Capacity_Available	Numeric	NNN	This is the standing capacity available in the vehicle.	12
Delay	Numeric	NNNN	<p>The current schedule deviation for the trip. Delay should only be specified when the prediction is given relative to some existing schedule in GTFS.</p> <p>Delay (in seconds) can be positive (meaning that the vehicle is late) or negative (meaning that the vehicle is ahead of schedule). Delay of 0 means that the vehicle is exactly on time.</p> <p>For non-timetabled services, this value is 0.</p>	0

TfNSW is expecting the file type to be JSON. Please see below for the JSON data structure.

```

{
  "trip": {
    "trip_id": "string",
    "operator_id": "number"
  },
  "position": {
    "latitude": "number",
    "longitude": "number"
  },
  "timestamp": "number",
  "vehicle": {
    "id": "string",
    "type": "number",
    "seats_available": "number",
    "standing_capacity_available": "number"
  },
  "delay": "number"
}

```

Note: This is not an extension to GTFS Realtime.

2.12 GBFS

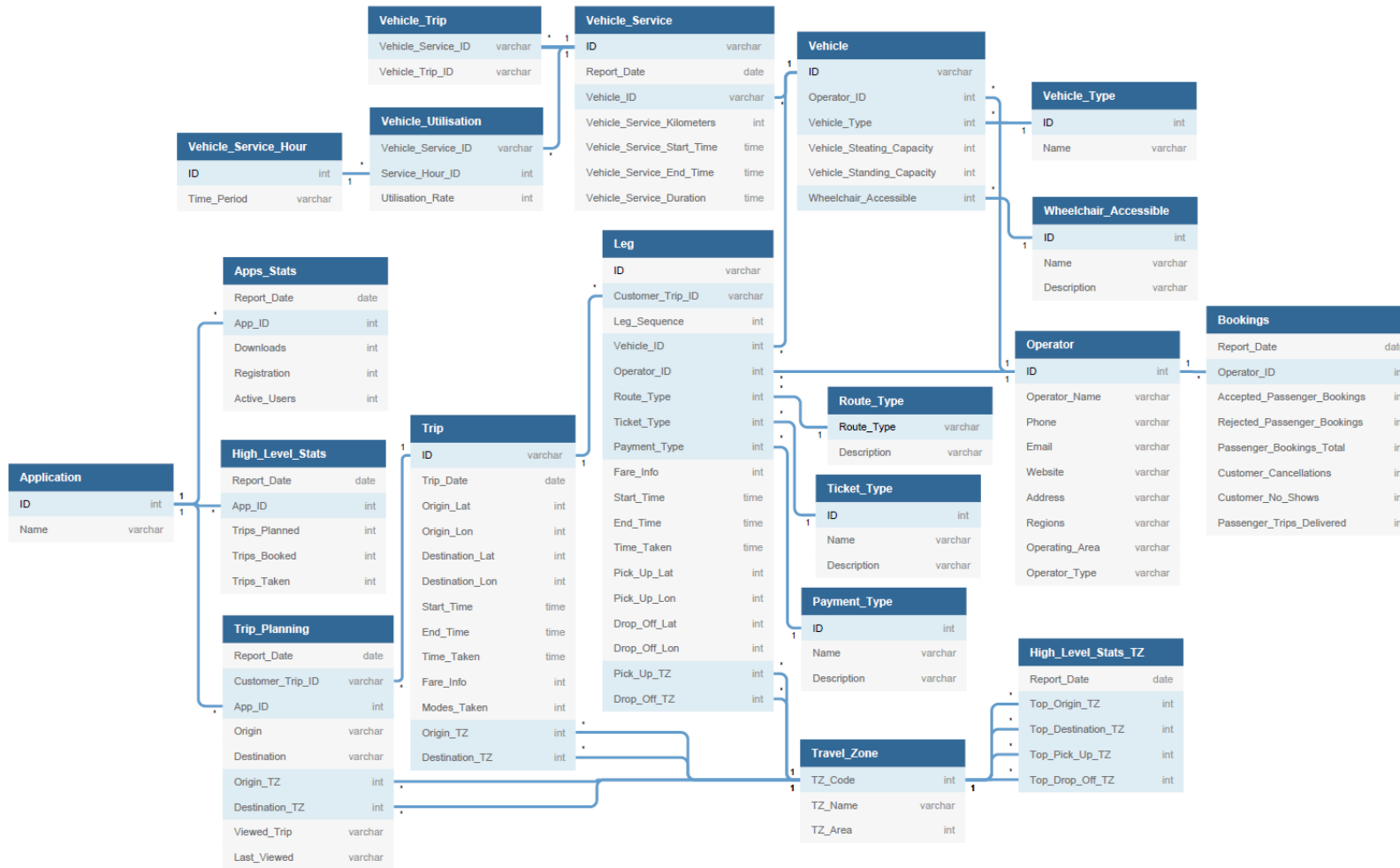
Bike share, scooters and car share operators are encouraged to provide TfNSW with GBFS data feeds according to the GBFS data standard. GBFS makes real-time data feeds in a uniform format publicly available online, with an emphasis on findability.

The current specification can be found at
<https://github.com/NABSA/gbfs/blob/master/gbfs.md>.

Below describes the files along with their associated content.

File Name	Required	Defines
gbfs.json	Optional	Auto-discovery file that links to all of the other files published by the system. This file is optional, but highly recommended.
system_information.json	Yes	Describes the system including System operator, System location, year implemented, URLs, contact info, time zone
station_information.json	Conditionally required	Mostly static list of all stations, their capacities and locations. Required of systems utilizing docks.
station_status.json	Conditionally required	Number of available bikes and docks at each station and station availability. Required of systems utilizing docks.
free_bike_status.json	Conditionally required	Describes bikes that are available for rent. Required of systems that don't utilize docks or offer bikes for rent outside of stations.
system_hours.json	Optional	Describes the hours of operation for the system
system_calendar.json	Optional	Describes the days of operation for the system
system_regions.json	Optional	Describes the regions the system is broken up into
system_pricing_plans.json	Optional	Describes the system pricing
system_alerts.json	Optional	Describes current system alerts

3 Schema



4 Data Specification

4.1 Trip

This file is used to describe the customer's trip from point A to point B. The data provided must reflect known customer journey throughout the entire trip.

Name	Type	Format/Units	Max Chars	M/O/D	Description	Example
ID	String	AAAAAA	26	M	ID of the customer's trip. This ID should be preceded with Operator ID or Application ID.	90000-0001
Trip_Date	Date	yyyyMMdd	8	M	Date of the report.	20181129
Origin_Lat	Numeric	-NN.NNNNNN	10	O	The latitude for the origin of the trip. The field value must be valid WGS 84 latitude.	-31.840233
Origin_Lon	Numeric	NNN.NNNNNN	10	O	The longitude for the origin name of the trip. The field value must be valid WGS 84 latitude.	145.612793
Destination_Lat	Numeric	-NN.NNNNNN	10	O	The latitude for the destination name of the trip. The field value must be valid WGS 84 latitude.	-31.840233
Destination_Lon	Numeric	NNN.NNNNNN	10	O	The longitude for the destination of the trip. The field value must be valid WGS 84 latitude.	145.612793
Start_Time	Time	HH:mm:ss	8	O	Start time for the trip. Follow Australia/Sydney time zone.	10:09:56
End_Time	Time	HH:mm:ss	8	O	End time for the trip. Follow Australia/Sydney time zone.	11:00:35
Time_Taken	Time	HH:mm:ss	8	O	Time taken to complete whole trip.	01:05:00
Fare_Info	Numeric	NNNNN	5	O	Total fare in cents for the whole trip. This includes any service fee that is being collected from the customer.	440
Modes_Taken	Numeric	N	1	O	The number of modes taken for the whole trip.	2
Origin_TZ	Numeric	NNNN	4	M	The travel zone of the origin.	1804

					Refer to section 4.12.1 for the values.	
Destination_TZ	Numeric	NNNN	4	M	The travel zone of the destination. Refer to section 4.12.1 for the values.	3244

Note: M/O/D: Mandatory/Optional/Defined

4.2 Leg

This file is used to describe the legs of each customer's trip.

Name	Type	Format/Units	Max Chars	M/O/D	Description	Example
ID	String	AAAAAA	26	M	ID of the leg. This ID should be preceded with Operator ID or Application ID.	900000-0001
Customer_Trip_ID	String	AAAAAA	26	M	ID of the referenced customer's trip.	900000-0001
Leg_Sequence	Numeric	NNN	3	M	Leg sequence of the trip.	1
Vehicle_ID	String	AAAAAAAAAA	10	O	ID of the referenced vehicle.	ODI 10 DT
Operator_ID	Numeric	NNNNNN	6	O	ID of the operator. Refer to 4.12.7 for the values.	1
Route_Type	Numeric	NNN	3	M	The route type that describes the type of transportation for the leg. Refer to section 4.12.2 for the values.	700
Ticket_Type	Numeric	N	1	O	The ticket type for the leg. Refer to section 4.12.4 for the values.	1
Payment_Type	Numeric	N	1	O	This is the payment type for the leg. Refer to section 4.12.5 for the values.	1
Fare_Info	Numeric	NNNNN	5	O	Total fare in cents for the leg. This includes any service fee that is being collected from the customer.	220
Start_Time	Time	HH:mm:ss	8	O	Start time for the leg. Follow Australia/Sydney time zone.	10:09:56
End_Time	Time	HH:mm:ss	8	O	End time for the leg. Follow Australia/Sydney time zone.	11:00:35
Time_Taken	Time	HH:mm:ss	8	O	Time taken for the leg.	00:50:39

Pick_Up_Lat	Numeric	-NN.NNNNNN	10	O	The latitude for the pick-up point of the leg. The field value must be valid WGS 84 latitude.	-31.840233
Pick_Up_Lon	Numeric	NNN.NNNNNN	10	O	The Longitude for the pick-up point of the leg. The field value must be valid WGS 84 longitude.	145.612793
Drop_Off_Lat	Numeric	-NN.NNNNNN	10	O	The latitude for the drop off point of the leg. The field value must be valid WGS 84 latitude.	-31.840233
Drop_Off_Lon	Numeric	NNN.NNNNNN	10	O	The Longitude for the drop off point of the leg. The field value must be valid WGS 84 longitude.	145.612793
Pick_Up_TZ	Numeric	NNNN	4	M	The ID of the pick-up point travel zone of the leg. Refer to Section 4.12.1 for the values.	1804
Drop_Off_TZ	Numeric	NNNN	4	M	The ID of the drop off point travel zone of the leg. Refer to Section 4.12.1 for the values.	3244

Note: M/O/D: Mandatory/Optional/Defined

4.3 Trip Planning

This file is for trip planning product to indicate the trip plan results.

Name	Type	Format/Units	Max Chars	M/O/D	Description	Example
Report_Date	Date	yyyyMMdd	8	M	Date of the report.	20181129
Customer_Trip_ID	String	AAAAAA	26	O	ID of the referenced customer's trip.	900000-0001
App_ID	Numeric	NNNNNN	6	M	ID of the Application. Refer to Section 4.12.8 for the values.	001
Origin	String	AAAAAA	100	M	Text of the origin which the customers searched for.	Manly Wharf, Manly
Destination	String	AAAAAA	100	M	Text of the destination which the customers searched for.	Circular Quay, Sydney
Origin_TZ	Numeric	NNNN	4	M	The travel zone of the trip plan origin. Refer to section 4.12.1 for the values.	1804
Destination_TZ	Numeric	NNNN	4	M	The travel zone of the trip plan destination. Refer to section 4.12.1 for the values.	3244
Viewed_Trip	String	NNNN-NNNN-	19	O	The viewed option of a trip plan by route type.	700-109-1604

Last_Viewed	String	NNNN-NNNN NNNN-NNNN- NNNN-NNNN	19	O	Refer to section 4.12.2 for the route type values. The last viewed option of a trip plan by route type. Refer to section 4.12.2 for the route type values.	700-109-1604
-------------	--------	--------------------------------------	----	---	------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------

Note: M/O/D: Mandatory/Optional/Defined

4.4 Vehicle

This file is used to describe the vehicle that was used or despatched by each operator to carry passengers.

Name	Type	Format/Units	Max Chars	M/O/D	Description	Example
ID	String	AAAAAAAAAA	10	M	ID of the vehicle. This can be the vehicle registration ID of the vehicle or fleet number.	ODI 10 DT
Operator_ID	Numeric	NNNNNN	6	M	ID of the operator. Refer to section 4.12.7 for the values.	900080
Vehicle_Type	Numeric	N	1	M	Type of the vehicle. Refer to section 4.12.6 for the values.	1
Vehicle_Seating_Capacity	Numeric	NNN	3	M	This is the total seating capacity in the vehicle. This figure should include the driver.	12
Vehicle_Standing_Capacity	Numeric	NNN	3	M	This is the total standing capacity in the vehicle For vehicle with no standing, this value is 0.	12
Wheelchair_Accessible	Numeric	N	1	M	Indicates if there is accessibility information for the trip. Refer to section 4.12.3 for the values.	1

Note: M/O/D: Mandatory/Optional/Defined

4.5 Vehicle Service

This file is used to describe the service information of the vehicle i.e. vehicle shift while it is in operation. An operator may despatch the same vehicle more than 1 time per day.

Name	Type	Format/Units	Max Chars	M/O/D	Description	Example
ID	String	AAAAAAAAAA	10	M	ID of the vehicle service shift. This ID should be preceded with Operator ID or Application ID.	900000-0001
Report_Date	Date	yyyyMMdd	8	M	Date of the report.	
Vehicle_ID	String	AAAAAAAAAA	10	M	ID of the referenced vehicle.	ODI 10 DT
Vehicle_Service_Kilometers	Numeric	NNN	3	O	The total number of kilometres travelled by the vehicle while it is in operation.	100
Vehicle_Service_Start_Time	Time	HH:mm:ss	8	O	Start time for the service.	10:09:56
Vehicle_Service_End_Time	Time	HH:mm:ss	8	O	End time for the service.	11:00:35
Vehicle_Service_Duration	Time	HH:mm:ss	8	O	Duration for the service.	01:05:00

Note: M/O/D: Mandatory/Optional/Defined

4.6 Vehicle Trip

This file is used to describe the mapping between vehicle service and trip_id that is used within the GTFS feed or trip that is used within the GTFS Realtime feed.

Name	Type	Format/Units	Max Chars	M/O/D	Description	Example
Vehicle_Service_ID	String	AAAAAAAAAA	10	M	ID of the referenced vehicle service.	900000-0001
Vehicle_Trip_ID	String	AAAAAA	26	M	This value referenced from the trip_id that is used within the GTFS feed or trip that is used within the GTFS Realtime feed.	1.AA51.1-SC0-1-sj2-2.1.R

Note: M/O/D: Mandatory/Optional/Defined

4.7 Vehicle Utilisation

This file is used to describe the utilisation rate for the vehicle that was used to ferry passengers.

Name	Type	Format/Units	Max Chars	M/O/D	Description	Example
Vehicle_Service_ID	String	AAAAAAAAAA	10	M	ID of the referenced vehicle service.	900000-0001

Service_Hour_ID	Numeric	NNNN	4	M	The service period for reporting. Refer to 4.12.9 for the values.	0100
Utilisation_Rate	Numeric	NNN	3	M	The utilisation rate, in percentage, of the vehicle. This figure includes the driver.	75

Note: M/O/D: Mandatory/Optional/Defined

4.8 Bookings

This file is used to describe the bookings and passenger trip delivery for each operator during a 24 hours period from 12.00am to 11.59pm. It should contain data of the completed trips only. Any trips that roll over to the next day shall be computed in the next day.

Name	Type	Format/Units	Max Chars	M/O/D	Description	Example
Report_Date	Date	yyyyMMdd	8	M	Date of the report.	20181129
Operator_ID	Numeric	NNNNNN	6	M	ID of the operator. Refer to 4.12.7 for the values.	1
Accepted_Passenger_Bookings	Numeric	NNN	3	M	The total number of passenger trips requested by customers where the operator accepts the booking and plans to fulfil the trip.	123
Rejected_Passenger_Bookings	Numeric	NNN	3	M	The total number of passenger trips requested by customers where the operator declines the booking and promptly notifies that it won't fulfil the trip.	123
Passenger_Bookings_Total	Numeric	NNN	3	M	The total number of passenger trips requested by customers, including both accepted and rejected passenger bookings.	123
Customer_Cancellations	Numeric	NNN	3	M	The total number of passenger trips requested by customers, that are accepted bookings by the operator, but the customer subsequently cancels the trip.	123

Customer_No_Shows	Numeric	NNN	3	M	The total number of passenger trips requested by customers, that are accepted bookings by the operator, but the customer was not at the pick-up location when service vehicle arrived at/after scheduled pick-up time.	123
Passenger_Trips_Delivered	Numeric	NNN	3	M	The total number of passenger trips requested by customers that are accepted bookings by the operator, and are successfully delivered. Customer Cancellations and Customer No Shows are not to be included in this total.	123

Note: M/O/D: Mandatory/Optional/Defined

4.9 High level stats

This file is used to indicate the statistics for each product from the customers' journey perspective during a 24 hours period from 12.00am to 11.59pm. It should contain data of the completed trips only. Any trips that roll over to the next day shall be computed in the next day.

Name	Type	Format/Units	Max Chars	M/O/D	Description	Example
Report_Date	Date	yyyyMMdd	8	M	Date of the report.	20181129
App_ID	Numeric	NNNNNN	6	M	ID of the Application. Refer to Section 4.12.8 for the values.	001
Trips_Planned	Numeric	NNNNN	5	M	A high level statistics of the number of trips planned.	12345
Trips_Booked	Numeric	NNNN	4	O	A high level statistics of the number of trips booked.	1234
Trips_Taken	Numeric	NNNN	4	O	A high level statistics of the number of trips taken.	1000

Note: M/O/D: Mandatory/Optional/Defined

4.10 High level stats – Travel Zone

This file is used to indicate the top customers' journey travel zones during a 24 hours period from 12.00am to 11.59pm. It should contain data of the completed trips only. Any trips that roll over to the next day shall be computed in the next day.

Name	Type	Format/Units	Max chars	M/O/D	Description	Example
Report_Date	Date	yyyyMMdd	8	M	Date of the report.	20181129
Top_Origin_TZ	Numeric	NNNN	4	O	Top 100 origin travel zone. Refer to Section 4.12.1 for the values.	1804
Top_Destination_TZ	Numeric	NNNN	4	O	Top 100 destination travel zone. Refer to Section 4.12.1 for the values.	1804
Top_Pick_Up_TZ	Numeric	NNNN	4	O	Top 100 pick-up travel zone. Refer to Section 4.12.1 for the values.	1804
Top_Drop_Off_TZ	Numeric	NNNN	4	O	Top 100 drop off travel zone. Refer to Section 4.12.1 for the values.	1804

Note: M/O/D: Mandatory/Optional/Defined

4.11 Apps stats

This file is for MaaS ecosystem providers' product to indicate the number of downloads, user registrations and active users per day.

Name	Type	Format/Units	Max Chars	M/O/D	Description	Example
Report_Date	Date	yyyyMMdd	8	M	Date of the report.	20181129
App_ID	Numeric	NNNNNN	6	M	ID of the Application. Refer to Section 4.12.8 for the values.	001
Downloads	Numeric	NNNN	4	M	The number of download events/app unit for the day.	1000
Registration	Numeric	NNNN	4	O	The number of users who register during the day.	1000
Active_Users	Numeric	NNNN	4	O	The number of active users for the day.	1000

Note: M/O/D: Mandatory/Optional/Defined

4.12 Data mapping

4.12.1 Travel Zone

The provided data should be mapped to travel zone 2016 as defined in the following site.

<https://opendata.transport.nsw.gov.au/dataset/travel-zones-2016>

4.12.2 Route Type

The table below list the values to be used for route type. ONLY the listed values are to be used.

Route Type	Description
103	Inter Regional Rail Service
106	Regional Train Service
109	Suburban Railway
200	Coach Service
204	Regional Coach Service
401	Metro Service
700	Bus Service
712	School Bus
714	Rail Replacement Bus Service
715	Demand and Responsive Bus Service
900	Tram Service
1008	Local Passenger Ferry Service
1500	Taxi Service
1506	Private Hire Service Vehicle
1600	Self Drive
1601	Hire Car
1604	Hire Cycle

4.12.3 Wheelchair Accessible

The table below list the values to be used for wheelchair accessibility. ONLY the listed values are to be used.

ID	Name	Description
0	No info	Indicates that there is no accessibility information for the trip
1	Yes	Indicates that the vehicle being used on this particular trip can accommodate at least one rider in a wheelchair
2	No	Indicates that no riders in wheelchairs can be accommodated on this trip

4.12.4 Ticket Type

The table below list the values to be used for ticket type. ONLY the listed values are to be used.

ID	Name	Description
1	Adult	Fare paid according to adult ticket fare. It is for customers 16 years of age and over who normally pay full fares.
2	Child/Youth	Fare paid according to child/youth ticket fare. It is for children aged

		4 – 15 years (inclusive).
3	Gold	Fare paid according to gold ticket fare. This is applicable to Opal fares.
4	Concession	Fare paid according to concession ticket fare.
5	School	Fare paid according to school ticket fare. It is for eligible school students.
6	Free	Fare paid according to free ticket fare.
7	Fixed	Fixed fare. It is for operators who only have one fixed fare for all customers.
8	Others	Other fare type.

4.12.5 Payment Type

The table below list the values to be used for payment type. ONLY the listed values are to be used.

ID	Name	Description
1	Opal	Fare payment conducted via Opal Card.
2	Credit Card	Fare payment conducted via Credit or Debit Card.
3	Cash	Fare payment conducted via cash payment.
4	Paypal	Fare payment conducted via Paypal.
5	Subscription	Fare payment conducted via Subscription.
6	Free	No payment. Free of charge.
7	Others	Other payment type.

4.12.6 Vehicle Type

The table below list the values to be used for vehicle type. ONLY the listed values are to be used.

ID	Name
1	Car
2	Lorry
3	Bus
4	Taxi
5	Train
6	Motor cycle
7	Vehicle with trailer
255	Undecodable vehicle type

4.12.7 Operator

The provided data should be mapped to operator list as defined in the following site.

<https://opendata.transport.nsw.gov.au/dataset/public-transport-location-facilities-and-operators/resource/20224158-c4e0-4868-8f4a#{>

Note: This list is not exhaustive. The list can be expanded as per request.

4.12.8 Application

The table below list the values to be used for MasS ecosystem providers' mobile or web application. ONLY the listed values are to be used.

Note: This list is not exhaustive. The list can be expanded as per request.

ID	Name
000001	Uber
000002	Tranzer
000003	Whim
000004	Swiftfare Fleet
000005	TripGo
000006	Mobike
000007	Lime

4.12.9 Vehicle Service Hour

The table below list the values to be used for vehicle service hour. ONLY the listed values are to be used.

ID	Time Period
0000	0000 hrs to 0015 hrs
0015	0015 hrs to 0030 hrs
0030	0030 hrs to 0045 hrs
0045	0045 hrs to 0100 hrs
0100	0100 hrs to 0115 hrs
0115	0115 hrs to 0130 hrs
0130	0130 hrs to 0145 hrs
0145	0145 hrs to 0200 hrs
0200	0200 hrs to 0215 hrs
0215	0215 hrs to 0230 hrs
0230	0230 hrs to 0245 hrs
0245	0245 hrs to 0300 hrs
0300	0300 hrs to 0315 hrs
0315	0315 hrs to 0330 hrs
0330	0330 hrs to 0345 hrs
0345	0345 hrs to 0400 hrs
0400	0400 hrs to 0415 hrs
0415	0415 hrs to 0430 hrs
0430	0430 hrs to 0445 hrs
0445	0445 hrs to 0500 hrs
0500	0500 hrs to 0515 hrs
0515	0515 hrs to 0530 hrs
0530	0530 hrs to 0545 hrs
0545	0545 hrs to 0600 hrs
0600	0600 hrs to 0615 hrs
0615	0615 hrs to 0630 hrs
0630	0630 hrs to 0645 hrs
0645	0645 hrs to 0700 hrs
0700	0700 hrs to 0715 hrs
0715	0715 hrs to 0730 hrs
0730	0730 hrs to 0745 hrs
0745	0745 hrs to 0800 hrs
0800	0800 hrs to 0815 hrs
0815	0815 hrs to 0830 hrs
0830	0830 hrs to 0845 hrs
0845	0845 hrs to 0900 hrs

0900	0900 hrs to 0915 hrs
0915	0915 hrs to 0930 hrs
0930	0930 hrs to 0945 hrs
0945	0945 hrs to 1000 hrs
1000	1000 hrs to 1015 hrs
1015	1015 hrs to 1030 hrs
1030	1030 hrs to 1045 hrs
1045	1045 hrs to 1100 hrs
1100	1100 hrs to 1115 hrs
1115	1115 hrs to 1130 hrs
1130	1130 hrs to 1145 hrs
1145	1145 hrs to 1200 hrs
1200	1200 hrs to 1215 hrs
1215	1215 hrs to 1230 hrs
1230	1230 hrs to 1245 hrs
1245	1245 hrs to 1300 hrs
1300	1300 hrs to 1315 hrs
1315	1315 hrs to 1330 hrs
1330	1330 hrs to 1345 hrs
1345	1345 hrs to 1400 hrs
1400	1400 hrs to 1415 hrs
1415	1415 hrs to 1430 hrs
1430	1430 hrs to 1445 hrs
1445	1445 hrs to 1500 hrs
1500	1500 hrs to 1515 hrs
1515	1515 hrs to 1530 hrs
1530	1530 hrs to 1545 hrs
1545	1545 hrs to 1600 hrs
1600	1600 hrs to 1615 hrs
1615	1615 hrs to 1630 hrs
1630	1630 hrs to 1645 hrs
1645	1645 hrs to 1700 hrs
1700	1700 hrs to 1715 hrs
1715	1715 hrs to 1730 hrs
1730	1730 hrs to 1745 hrs
1745	1745 hrs to 1800 hrs
1800	1800 hrs to 1815 hrs
1815	1815 hrs to 1830 hrs
1830	1830 hrs to 1845 hrs
1845	1845 hrs to 1900 hrs
1900	1900 hrs to 1915 hrs
1915	1915 hrs to 1930 hrs
1930	1930 hrs to 1945 hrs
1945	1945 hrs to 2000 hrs
2000	2000 hrs to 2015 hrs
2015	2015 hrs to 2030 hrs
2030	2030 hrs to 2045 hrs
2045	2045 hrs to 2100 hrs
2100	2100 hrs to 2115 hrs
2115	2115 hrs to 2130 hrs

2130	2130 hrs to 2145 hrs
2145	2145 hrs to 2200 hrs
2200	2200 hrs to 2215 hrs
2215	2215 hrs to 2230 hrs
2230	2230 hrs to 2245 hrs
2245	2245 hrs to 2300 hrs
2300	2300 hrs to 2315 hrs
2315	2315 hrs to 2330 hrs
2330	2330 hrs to 2345 hrs
2345	2345 hrs to 0000 hrs

4.13 Default value

If no data is provided for the optional field, the field shall be an empty string.

DRAFT