REGULATIONS

COMMISSION DELEGATED REGULATION (EU) 2017/1926

of 31 May 2017

to the provision of EU-wide multimodal travel information services

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the
framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with
other modes of transport (1), and in particular Article 6(1) thereof,

Whereas:

(1) Article 3(a) of Directive 2010/40/EU sets as a priority action the provision of Union-wide multimodal travel
information services for the development and use of specifications and standards.

(2) Article 5 of Directive 2010/40/EU provides that specifications adopted in accordance with Article 6 of this
Directive should apply to the ITS applications and services when these are deployed without prejudice to the
right of each Member State to decide on the deployment of such applications and services on its territory.

(3) These specifications should apply to the provision of all travel information services without prejudice to
particular specifications adopted in other acts under Directive 2010/40/EU, notably Commission Delegated
Regulations (EU) No 886/2013 (2) and (EU) 2015/962 (3), as well as Commission Regulation (EU)
No 454/2011 (4).

(4) As regards the provision of multimodal travel information services, Directive 2003/98/EC of the European
Parliament and of the Council (5) sets out minimum rules for the reuse of public sector information throughout
the Union. With respect to the reuse of data held by transport authorities and transport operators, the rules
established by this Regulation, in particular the ones concerning data updates, should apply without prejudice to
the rules established by Directive 2003/98/EC.

Parliament and of the Council with regard to data and procedures for the provision, where possible, of road safety-related minimum
universal traffic information free of charge to users (OJ L 247, 18.9.2013, p. 6).
Parliament and of the Council with regard to the provision of EU-wide real-time traffic information services (OJ L 157, 23.6.2015, p. 21).
(4) Commission Regulation (EU) No 454/2011 of 5 May 2011 on the technical specification for interoperability relating to the subsystem
telematics applications for passenger services of the trans-European rail system (OJ L 123, 12.5.2011, p. 11).
(5) Whenever the measures provided for in this Regulation entail the processing of personal data, they shall be carried out in accordance with EU law on the protection of personal data, in particular Directive 95/46/EC of the European Parliament and of the Council (1) and Directive 2002/58/EC of the European Parliament and of the Council (2), as well as the national implementing measures thereto. Information relating to an identified or identifiable natural person should be processed in strict compliance with the data minimisation principle and only for the purposes of this Regulation and as long as necessary. Such data should not allow for the identification of an individual or make an individual identifiable whenever possible and when it does not hinder the purpose of this Regulation.

(6) Where the information service relies on the collection of data, including geo-location, end users should be clearly informed about the collection of such data, the arrangements for data collection and potential tracking, and the periods for which such data are kept. Appropriate technical measures (including privacy by design and data protection by design features) should be deployed by public and private data collectors such as transport operators, transport authorities, travel information service providers and digital map producers to ensure pseudonymisation (3) of the data received from end users.

(7) Directive 2007/2/EC of the European Parliament and of the Council (4) aims at creating a Union spatial data infrastructure which enables the sharing of and public access to spatial information, including information related to transport networks, across the Union, with a view to supporting Union environmental policies, and policies or activities which may have an impact on the environment. The specifications set out in this Regulation should be compatible with those established by Directive 2007/2/EC and Commission Regulation (EU) No 1089/2010 (5).

(8) The specifications set out in this Regulation should apply to all transport modes in the Union, such as schedule-based (air, rail including high speed rail, conventional rail and light rail, long-distance coach, maritime including ferry, metro, tram, bus, trolley-bus, cableways), transport on demand (shuttle bus, shuttle ferry, taxi, ride-share, car-share, car-pool, car-hire, bike-share, bike-hire, dial-a-ride) and personal based (car, motorcycle, bicycle, walking). Walking as a travel option to fulfil parts of the first and last mile of the journey is very relevant for multimodal travel information and can bring both environmental and network management benefits but also health benefits to the traveller directly.

(9) Regulation (EU) No 1315/2013 of the European Parliament and of the Council (6) establishes the transport infrastructure that is part of the core and the comprehensive trans-European transport networks. In order to address the travelling needs of end-users across the Union and to maximise the full potential of multimodal travel information, the full door-to-door network coverage is needed. Therefore, this Regulation should apply to the comprehensive TEN-T network, including Urban Nodes, and the other parts of the transport network.

(10) In order to support the provision of Union-wide multimodal travel information services, both centralised approaches based on data provisions and de-centralised approaches based on data and service provisions can be used. Therefore, this Regulation should include requirements for both data and service provision to support those two approaches. In order to facilitate the easy exchange and reuse of these data for the provision of comprehensive travel information services, transport authorities, transport operators, infrastructure managers or transport on demand service providers as appropriate should make the static data, corresponding metadata and

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(1) Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data (OJ L 281, 23.11.1995, p. 31). Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (OJ L 119, 4.5.2016, p. 1) will apply as of 25 May 2018. Articles 10 and 11 of Directive 95/46/EC and Articles 13 and 14 of Regulation (EU) 2016/679 provide a full list of information to be given to the data subject. Article 12 of Directive 95/46/EC and Articles 17 to 19 of Regulation (EU) 2016/679 identify other rights of individuals, such as the rights to access, the right to rectify, block, erase of destroy inaccurate or unjustified personal data.


(3) As defined in Article 4(5) of Regulation (EU) 2016/679.


Member States should be allowed to co-operate with one another to set up a common access point covering the available data of the participating Member States. Member States should be free to decide to use the access points established under other delegated acts adopted under Directive 2010/40/EU as the national access points for the data falling within the scope of this Regulation. Moreover, Member States should be free to decide to use pre-existing access points covering multiple sectors as the National Access Point. Member States may define which actor is responsible for the provision of the travel and traffic data listed in the Annex. In some cases transport operators, infrastructure managers and transport on demand service providers operate across different Member States and therefore more than one access point is relevant to provide access to the travel and traffic data. However, efforts should be made to avoid unnecessary duplication of data and take into account the shape and form of the relevant access points. Therefore, the relevant data and metadata could be listed in all relevant NAPs that take the form of a repository. In addition, if some of the relevant NAPs take the form of a database/data warehouse, then the data and metadata could be hosted in only one of them and listed in all others. Terms and conditions for the use of the traffic and travel data provided through the national access point may be determined, where appropriate, through a licence agreement.

The travel and traffic data listed in the Annex may be integrated into the national access point in a phased approach. Member States should be free to decide whether or not to integrate the data listed in the Annex ahead of the time limit set. Multimodal travel information services are based on both static and dynamic travel and traffic data as listed in the Annex. Static travel and traffic data is essential for information and planning purposes during the pre-trip phase and is therefore required by all Member States. Dynamic travel and traffic data, for example travel disturbances and delays, can allow end users to make well informed travel decisions and bring time savings. However, the integration of dynamic travel and traffic data within national access points may bring additional effort. Member States should be free to decide whether or not to include the dynamic travel and traffic data listed in the Annex though the national access point. Should they decide to do that the requirements of this Regulation should apply. To ensure that the development of multimodal travel information is consistent and coherent across the Union, Member States are encouraged to integrate the existing dynamic travel and traffic data through the national access point according to the following timeline: the travel and traffic data set out in point 2.1 of the Annex by 1 December 2019, the travel and traffic data set out in point 2.2 of the Annex by 1 December 2020 and the travel and traffic data set out in point 2.3 of the Annex by 1 December 2021.

In order to allow the successful and cost-efficient use of national access points, it is necessary to properly describe the content and structure of the relevant travel and traffic data by using the appropriate metadata (').

These specifications should not oblige transport authorities, transport operators, transport on demand service providers and infrastructure managers to start collecting any data that is not already available in machine readable format. The specific requirements regarding the static and dynamic travel and traffic data of different transport modes should only apply to the data that is actually collected and available in machine readable format. At the same time Member States should be encouraged to look for cost-effective ways that are appropriate for their needs to digitise existing static and dynamic data of different transport modes. Member States that start digitising static and dynamic travel and traffic information of different transport modes that can be used for multimodal travel information services are encouraged to start with the data defined in level of service 1 of the Annex and then beyond in level of service 2 and 3. The data defined in the first group are regarded as essential for the basic functioning of multimodal travel information services.

In order to develop a harmonised and seamless provision of multimodal travel information services and to support interoperability across the Union, a harmonised set of interoperable data exchange formats and protocols based on existing technical solutions and standards across different transport modes should be used at the national access point. Within the frame of multimodal travel information services there are a number of relevant pre-existing standards and technical specifications that exist covering road (DATEX II), rail (TAP-TSI technical
documents B1, B2, B3, B4, B8, B9), air (IATA SSIM) and underlying spatial data (INSPIRE). In such cases this Regulation should refer to the requirements already in place but such transport modes may choose to use other standards and technical specifications identified in the specification. However, duplication of the same travel and traffic data in more than one format should be avoided (for example urban rail data in either TAP-TSI or NeTEx). In the future such standards, notably DATEX II, may expand their scope to cover further urban elements, and if available they should be used in the frame of the specifications.

(16) For what concerns the exchange of static scheduled data (such as public transport, long distance coach and maritime including ferry), the relevant data in the national access point should use the CEN data exchange standard NeTEx CEN/TS 16614 based on the underlying conceptual data reference model Transmodel EN 12896: 2006 and subsequent upgraded versions or any machine-readable format fully compatible by the agreed timeline. For what concerns the exchange of dynamic public transport data, if Member States choose to include dynamic data in the national access point the relevant parts of the CEN public transport data exchange standard SIRI CEN/TS 15531 and subsequent upgraded versions or any machine-readable format fully compatible should be used. Member States may choose to continue using national public transport data standards at the Member State level for national operations but to ensure EU-wide interoperability and the continuity of services, the specified EU standards must be used at the national access point level. Member States may use translation and conversion methods to adhere to the European standardisation requirements. The version of the prescribed standards that is available at the time of date of application should be used. Any relevant updates that widen the scope and include new types of data should be used.

(17) To ensure the optimal use and full interoperability of the aforementioned standards between Member States, a common minimum profile that identifies the different key elements of the standard should be established and used within national access points. Member States’ national profiles must be based on a common minimum European profile when it exists.

(18) The provision of accurate and reliable travel information by service providers is essential for travellers across the Union. When changes occur, the relevant data should be updated by the transport authorities or transport operators through the national access point in a timely manner. Moreover, when travel and traffic data is used by a service provider, there is a risk of inaccurate travel information being displayed to users which may have a negative impact on the journey taken by the traveller. When any inaccuracies are detected by transport authorities, transport operators, infrastructure managers or transport on demand service providers, such errors should be corrected in a timely manner.

(19) At present, there are a substantial number of multimodal travel information services in Europe but those services that offer a full door-to-door routing result are mainly limited to the territory within a Member State. A key solution to enhance the geographical coverage of travel information services and to support Union-wide multimodal travel information is by linking local, regional and national travel information services. This involves the use of technological tools including interfaces to link existing information systems to exchange routing results. It is recommended that travel information services should use the European Technical Specification entitled ‘Intelligent Transport Systems — Public Transport — Open API for distributed journey planning 00278420’ currently under finalisation when performing distributed journey planning. When service providers establish handover points for distributed journey planning, such handover points should be listed in the national access point.

(20) Travel information services may provide multiple travel options to end-users with different transport operators. It is imperative that service providers are transparent in the criteria used to rank travel options and provide neutral travel information. Wherever possible, travel information service providers should provide information on the greenhouse-gas emissions of different modes to support the shift to sustainable modes of transport. It is also strongly encouraged for services providers to allow direct customer feedback regarding service quality.

(21) The use of static and dynamic data for the purpose of travel information services involves data from different actors across the value chain. In many cases the original data from a transport authorities, transport operators, infrastructure managers or transport on demand service providers will be used by a travel information service provider. In this instance it is imperative that the original source, the date and time of the last static update are indicated when used.
To maximise the foreseeable use of travel information services by persons with functional limitations, travel information service providers and Member States when implementing the delegated regulation should take into account relevant legislation as regards accessibility requirements such as the forthcoming European Accessibility Act. Relevant requirements include the accessibility of websites and mobile device-based services in a consistent and adequate way for users’ perception, operation and understanding.

In order to make sure that these specifications are correctly implemented, Member States should assess the compliance with the requirements concerning the accessibility, exchange, reuse and update of the multimodal travel data by the transport authorities, transport operators, transport on demand service providers and travel information service providers. To that end the competent authorities should be free to rely on self-declarations of compliance submitted by transport authorities, transport operators, infrastructure managers, transport on demand service providers or travel information service providers, and may randomly check the correctness of these declarations.

In order to monitor the implementation of this Regulation, Member States should provide the Commission with a report that describes the implementation of the different requirements.

Through the Connecting Europe Facility the Commission will support different technical requirements established within this Regulation through a programme support action (1), notably the establishment of the national access point, the conversion to prescribed data exchange standards and the use of common minimum profiles within national access points and the linkage of travel information services where relevant.

The European Data Protection Supervisor was consulted in accordance with Article 28(2) of Regulation (EC) No 45/2001 of the European Parliament and of the Council (2) and delivered an opinion on 22 August 2017.

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter and scope

1. This Regulation establishes the necessary specifications in order to ensure that EU-wide multimodal travel information services are accurate and available across borders to ITS users.

2. This Regulation applies to the entire transport network of the Union.

3. This Regulation shall apply in accordance with Article 5 of Directive 2010/40/EU.

Article 2

Definitions

For the purposes of this Regulation, the definitions set out in Article 4 of Directive 2010/40/EU and in Article 3 of Regulation (EU) No 1315/2013 shall apply.

The following definitions shall also apply:

(1) ‘accessibility of the data’ means the possibility to request and obtain the data at any time in a machine readable format;

(2) ‘data update’ means any modification of the existing data, including its deletion or insertion of new or additional elements;


(3) ‘metadata’ means a structured description of the contents of the data facilitating the discovery and use of this data;

(4) ‘discovery services’ means services allowing for the search of the requested data using the contents of the corresponding metadata and displaying such contents;

(5) ‘comprehensive trans-European transport network’ means the transport infrastructure that is part of the comprehensive network as defined in Regulation (EU) No 1315/2013;

(6) ‘access point’ means a digital interface where at least the static travel and historic traffic data together with the corresponding metadata are made accessible for reuse to users, or where the sources and metadata of these data are made accessible for reuse to users;

(7) ‘dynamic travel and traffic data’ means data relating to different transport modes that changes often or on a regular basis, as listed in the Annex;

(8) ‘static travel and traffic data’ means data relating to different transport modes that does not change at all or does not change often, or change on a regular basis, as listed in the Annex;

(9) ‘transport authority’ means any public authority responsible for the traffic management or the planning, control or management of a given transport network or modes of transport, or both, falling within its territorial competence;

(10) ‘transport operator’ means any public or private entity that is responsible for the maintenance and management of the transport service;

(11) ‘user’ means any public or private entity which uses the National Access Point such as transport authorities, transport operators, travel information service providers, digital map producers, transport on demand service providers and infrastructure managers;

(12) ‘end user’ means any natural or legal person who has access to travel information;

(13) ‘travel information service’ means an ITS service, including digital maps, that provides users, and end-users, with travel and traffic information of at least one transport mode;

(14) ‘historic traffic data’ means traffic characteristics depending on the hour, day, season based on previous measurements, including rate of congestion, average speeds, average travel times, as listed in the Annex;

(15) ‘timeliness of data’ means the availability of up to date data provided to users and end users sufficiently in advance to be useful;

(16) ‘travel information service provider’ means any public or private provider of travel and traffic information, excluding a mere conveyer of information, to users and end-users;

(17) ‘transport on demand’ means a passenger transport service which is characterised by flexible routing such as car-sharing, car-pooling, bike-sharing, ride-sharing, taxi, dial-a-ride services. These services usually require interaction between the transport on demand service provider and end-users before delivery;

(18) ‘transport on demand service provider’ means any public or private provider of transport on demand service to users and end-users, including travel and traffic information thereof;

(19) ‘linking of service’ means the connection of local, regional, and national travel information systems which are interlinked via technical interfaces to provide routing results or other application programming interfaces (APIs) results based on static and/or dynamic travel and traffic information;

(20) ‘handover point’ means the station, stop or location at which two travel information services’ routing results are linked to produce a journey;

(21) ‘multimodal travel information’ means information derived from any static or dynamic travel and traffic data, or both, for users and end-users, through any communication means, covering at least two modes of transport and allowing the possibility to compare transport modes;
(22) ‘routing result’ means the travel itinerary in a machine readable format resulting from an end-users’ journey request with reference to the hand-over point(s) used;

(23) ‘infrastructure manager’ means any public or private body or undertaking that is responsible in particular for establishing and maintaining transport infrastructure, or part thereof;

(24) ‘traveller transport service’ means any public or private transport service or any service which is available for collective use or private use by the general public covering different modes of transport.

Article 3

National access points

1. Each Member State shall set up a national access point. The national access point shall constitute a single point of access for users to at least the static travel and traffic data and historic traffic data of different transport modes, including data updates, as set out in the Annex, provided by the transport authorities, transport operators, infrastructure managers or transport on demand service providers within the territory of a given Member State.

2. Existing national access points that have been set up to comply with other delegated acts adopted under Directive 2010/40/EU may be used as national access points, if deemed appropriate by the Member States.

3. National access points shall provide discovery services to users, for example services allowing for the search of the requested data using the contents of the corresponding metadata and displaying such contents;

4. Transport authorities, transport operators, infrastructure managers or transport on demand service providers shall ensure that they provide the metadata in order to allow users to discover and use the datasets made accessible through the national access points.

5. Two or more Member States may set up a common access point.

Article 4

Accessibility, exchange and reuse of static travel and traffic data

1. Transport authorities, transport operators, infrastructure managers or transport on demand service providers shall provide the static travel and traffic data and historic traffic data listed in point 1 of the Annex, of the different transport modes by using:

(a) for the road transport, the standards defined in Article 4 of Delegated Regulation (EU) 2015/962;

(b) for other transport modes, the use of one of the following standards and technical specifications: NeTEx CEN/TS 16614 and subsequent versions, technical documents defined in Regulation (EU) No 454/2011 and subsequent versions, technical documents elaborated by IATA or any machine-readable format fully compatible and interoperable with those standards and technical specifications;

(c) for the spatial network the requirements defined in Article 7 of Directive 2007/2/EC.

2. The relevant static travel and traffic data listed in point 1 of the Annex that are applicable to NeTEx and DATEX II shall be represented through minimum national profiles.

3. Transport authorities, transport operators, infrastructure managers or transport on demand service providers shall provide the static travel and traffic data through the national access point in the required formats in line with the following timetable:

(a) for the travel and traffic data set out in point 1.1 of the Annex for the comprehensive TEN-T network, by 1 December 2019 at the latest;

(b) for the travel and traffic data set out in point 1.2 of the Annex for the comprehensive TEN-T network, by 1 December 2020 at the latest;
(c) for the travel and traffic data set out in point 1.3 of the Annex for the comprehensive TEN-T network, by 1 December 2021 the latest;

(d) for the travel and traffic data set out in points 1.1, 1.2 and 1.3 of the Annex for the other parts of the Union transport network, by 1 December 2023 at the latest.

4. APIs that provide access to static travel and traffic data listed in the Annex via the national access point shall be publicly accessible allowing users and end-users to register to obtain access.

**Article 5**

**Accessibility, exchange and reuse of dynamic travel and traffic data**

1. Where the Member States decide to provide the dynamic travel and traffic data of different transport modes listed in point 2 of the Annex through the national access point, transport authorities, transport operators, infrastructure managers or transport on demand service providers shall use:

(a) for the road transport the standards defined in Articles 5 and 6 of Delegated Regulation (EU) 2015/962;

(b) for the other transport modes: SIRI CEN/TS 15531 and subsequent versions, technical documents defined in Regulation (EU) No 454/2011 or any machine-readable format fully compatible and interoperable with those standards or technical documents.

2. The relevant travel and traffic data referred to in point 2 of the Annex applicable to SIRI and DATEX II shall be represented through minimum national profiles determined by Member States accessible through the national access point.

3. APIs that provide access to dynamic travel and traffic data listed in the Annex via the national access point shall be publicly accessible allowing users and end-users to register to obtain access.

**Article 6**

**Data updates**

1. Travel information services shall be based on updates of static and dynamic travel and traffic data.

2. When changes occur, the relevant static and dynamic travel and traffic data listed in the Annex shall be updated by transport authorities, transport operators, infrastructure managers or transport on demand service providers through the national access point in a timely manner. They shall in a timely manner correct any inaccuracies detected by them in their data or signalled to them by any user or end user.

**Article 7**

**Linking travel information services**

1. Upon request, travel information service providers shall provide to another information service provider routing results based on static, and where possible, dynamic information.

2. Routing results shall be based on:

(a) the enquirers start and end points of a journey along with the specific time and date of departure or arrival, or both;

(b) possible travel options along with the specific time and date of departure or arrival, or both, including any possible connections;

(c) the handover point between travel information services;

(d) in case of disturbances, alternative possible travel options along with the specific time and date of departure or arrival, or both, and any connections, where available.
Article 8

Requirements for service provisions reuse of travel and traffic data and linking of travel information services

1. The travel and traffic data listed in the Annex and the corresponding metadata including information on the quality thereof shall be accessible for exchange and reuse within the Union on a non-discriminatory basis, through the national or common access point and within a time-frame that ensures the timely provision of travel information services. They shall be accurate and up to date.

2. The data referred to in paragraph 1 shall be reused in a neutral manner and without discrimination or bias. Criteria used for ranking travel options of different transport modes or combinations thereof, or both, shall be transparent and not be based on any factor directly or indirectly relating to the user identity or, if any, the commercial consideration related to the reuse of the data and shall be applied on a non-discriminatory basis to all participating users. The first principle travel itinerary presentation shall not mislead the end-user.

3. Where reusing the static and dynamic travel or traffic data, the source of those data shall be indicated. The date and time of the last update of the static data shall also be indicated.

4. The terms and conditions for the use of the traffic and travel data provided through the national access point may be determined through a licence agreement. Those conditions shall not unnecessarily restrict possibilities for reuse or be used to restrict competition. Licence agreements, whenever used, shall in any event impose as few restrictions on reuse as possible. Any financial compensation shall be reasonable and proportionate to the legitimate costs incurred of providing and disseminating the relevant travel and traffic data.

5. Terms and conditions of linking travel information services shall be defined in contractual agreements between the travel information service providers. Any financial compensation of the expenses of linking travel information services incurred shall be reasonable and proportionate.

Article 9

Assessment of compliance

1. Member States shall assess whether the requirements set out in Articles 3 to 8 are complied with by the transport authorities, transport operators, transport on demand service providers and travel information service providers.

2. In order to conduct the assessment, the competent authorities of Member States may request from the transport authorities, transport operators, infrastructure managers, transport on demand service providers or travel information service providers, the following documents:

(a) a description of the travel and traffic data listed or stored in the access point(s) and the travel information services available including connections with other services if applicable, as well as the information on the quality thereof; and

(b) an evidence-based declaration of compliance with the requirements set out in Articles 3 to 8.

3. Member States shall randomly check the correctness of the declarations referred to in paragraph 2(b).

Article 10

Reporting

1. By 1 December 2019 Member States shall provide the Commission with a report on the measures undertaken, if any, to set up a national access point and on the modalities of its functioning.
2. Every other calendar year thereafter, Member States shall provide the Commission with a report containing the following information:

(a) the progress made in terms of the accessibility and exchange of the travel and traffic data types set out in the Annex;
(b) the geographical coverage and the travel and traffic data set out in the Annex accessible in the access point and the linking of travel information services;
(c) the results of the assessment of compliance referred to in Article 9; and
(d) where relevant, a description of changes to paragraph 1 or paragraph 2(b).

Article 11

Entry into force

This Regulation shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union.

This Regulation shall be binding in its entirety and directly applicable in all Member States.


For the Commission
The President
Jean-Claude JUNCKER
ANNEX

DATA CATEGORIES
(as referred to in Articles 3, 4, 5, 6, 8 and 10)

Partition of transport modes by type, such as:

**Scheduled**
Air, rail including high speed rail, conventional rail, light rail, long-distance coach, maritime including ferry, metro, tram, bus, trolley-bus.

**Demand-responsive**
Shuttle bus, shuttle ferry, taxi, car-sharing, car-pooling, car-hire, bike-sharing, bike-hire.

**Personal**
Car, motorcycle, cycle.

1. **The types of the static travel data**

1.1. **Level of service 1**

(a) Location search (origin/destination):
   (i) Address identifiers (building number, street name, postcode)
   (ii) Topographic places (city, town, village, suburb, administrative unit)
   (iii) Points of interest (related to transport information) to which people may wish to travel

(b) Trip plans:
   Operational Calendar, mapping day types to calendar dates

(c) Location search (access nodes):
   (i) Identified access nodes (all scheduled modes)
   (ii) Geometry/map layout structure of access nodes (all scheduled modes)

(d) Trip plan computation — scheduled modes transport:
   (i) Connection links where interchanges may be made, default transfer times between modes at interchanges
   (ii) Network topology and routes/lines (topology)
   (iii) Transport operators
   (iv) Timetables
   (v) Planned interchanges between guaranteed scheduled services
   (vi) Hours of operation
   (vii) Stop facilities access nodes (including platform information, help desks/information points, ticket booths, lifts/stairs, entrances and exit locations)
   (viii) Vehicles (low floor; wheelchair accessible.)
   (ix) Accessibility of access nodes, and paths within an interchange (such as existence of lifts, escalators)
   (x) Existence of assistance services (such as existence of on-site assistance)
(e) Trip plan computation — road transport (for personal modes):
   (i) Road network
   (ii) Cycle network (segregated cycle lanes, on-road shared with vehicles, on-path shared with pedestrians)
   (iii) Pedestrian network and accessibility facilities

1.2. Level of service 2

(a) Location search (demand-responsive modes):
   (i) Park & Ride stops
   (ii) Bike sharing stations
   (iii) Car-sharing stations
   (iv) Publicly accessible refuelling stations for petrol, diesel, CNG/LNG, hydrogen powered vehicles, charging stations for electric vehicles
   (v) Secure bike parking (such as locked bike garages)

(b) Information service:
   Where and how to buy tickets for scheduled modes, demand responsive modes and car parking (all scheduled modes and demand-responsive incl. retail channels, fulfilment methods, payment methods)

(c) Trip plans, auxiliary information, availability check:
   (i) Basic common standard fares (all scheduled modes):
      — Fare network data (fare zones/stops and fare stages)
      — Standard fare structures (point to point including daily and weekly fares, zonal fares, flat fares)
   (ii) Vehicle facilities such as classes of carriage, on-board Wi-Fi.

1.3. Level of service 3

(a) Detailed common standard and special fare query (all scheduled modes):
   (i) Passenger classes (classes of user such as adult, child, student, veteran, impaired access and qualifying conditions and classes of travel such as 1st, 2nd.)
   (ii) Common fare products (access rights such as zone/point-to-point including daily and weekly tickets/single/return, eligibility of access, basic usage conditions such as validity period/operator/time of travel/interchanging, standard point to point fares prices for different point to point pairs including daily and weekly fares/zonal fare prices/flat fare prices)
   (iii) Special Fare Products: offers with additional special conditions such as promotional fares, group fares, season passes, aggregated products combining different products and add on products such as parking and travel, minimum stay
   (iv) Basic commercial conditions such as refunding/replacing/exchanging/transferring and basic booking conditions such as purchase windows, validity periods, routing restrictions zonal sequence fares, minimum stay.

(b) Information service (all modes):
   (i) How to pay tolls (incl. retail channels, fulfilment methods, payment methods)
   (ii) How to book car sharing, taxis, cycle hire etc. (incl. retail channels, fulfilment methods, payment methods)
   (iii) Where how to pay for car parking, public charging stations for electric vehicles and refuelling points for CNG/LNG, hydrogen, petrol and diesel powered vehicles (incl. retail channels, fulfilment methods, payment methods)
(c) Trip plans:

(i) Detailed cycle network attributes (surface quality, side-by-side cycling, shared surface, on/off road, scenic route, ‘walk only’, turn or access restrictions (e.g. against flow of traffic)

(ii) Parameters needed to calculate an environmental factor such as carbon per vehicle type or passenger mile or per distance walked

(iii) Parameters such as fuel consumption needed to calculate cost

(d) Trip plan computation:

Estimated travel times by day type and time-band by transport mode/combination of transport modes

2. Types of the dynamic travel and traffic data

2.1. Level of service 1

Passing times, trip plans and auxiliary information:

(i) Disruptions (all modes)

(ii) Real-time status information — delays, cancellations, guaranteed connections monitoring (all modes)

(iii) Status of access node features (including dynamic platform information, operational lifts/escalators, closed entrances and exit locations — all scheduled modes)

2.2. Level of service 2

(a) Passing times, trip plans and auxiliary information (all modes):

(i) Estimated departure and arrival times of services

(ii) Current road link travel times

(iii) Cycling network closures/diversions

(b) Information service:

Availability of publicly accessible charging stations for electric vehicles and refuelling points for CNG/LNG, hydrogen, petrol and diesel powered vehicles

(c) Availability check:

(i) Car-sharing availability, bike sharing availability

(ii) Car parking spaces available (on and off-street), parking tariffs, road toll tariffs

2.3. Level of service 3

Trip plans:

Future predicted road link travel times