

The vision and experience from ERA and rail sector around MMTIS and TAP-TSI

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1. Regulation (EU) 454/2011 (TAP TSI)
2. Links between the TAP TSI and MMTIS
3. ERAs contribution to
4. Revision of the TAP TSI

Regulation Telematics applications for passengers (TAP TSI)

Regulation for rail distribution is available and are legally binding within EU:

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

For technical details the regulation refers to:

- European standards
- Technical documents, annexed to the regulation

Info

- Publication of the Conditions of carriage (incl. Bike, PRM, car, luggage)

Timetable

- Provision of timetable data to other railway undertakings and 3rd parties (e.g. travel agencies)

Tariff

- Exchange of tariff data for international and foreign sales to other railway undertakings and third parties (e.g. travel agencies)
- Exchange of Domestic tariffs*

Booking

- Reservation of seats, bike places, PRM-seats ...
- Reservation of assistance for PRM in stations

Ticketing

- RCT2-tickets and Ticket as home-printed ticket for international and foreign sales tickets

Realtime

- Real-time information about train run (e.g. delays, rerouting, cancellation)

Other transport modes

- Exchange of timetable and tariff* data between rail and “other transport modes”

*) recommended to EC

- The technical aspects of the TSI's are defined in technical documents annexed to the TSI, thus legally binding
- TAP TSI technical documents derived from UIC-leaflets

TAP TSI technical document

B.1 - Computer generation and exchange of tariff data meant for international or foreign sales - NRT ticket

B.2 - Computer generation and exchange of tariff data meant for international and foreign sales - Integrated Reservation Tickets (IRT)

B.3 - Computer generation and exchange of data meant for international or foreign sales - Special offers

B.4 - Implementation guide for EDIFACT messages covering timetable data exchange

B.5 - Electronic reservation of seats/berths and electronic production of travel documents - Exchange of messages

B.6 - Electronic seat/berth reservation and electronic production of transport documents (RCT2 standards)

B.7 - International Rail ticket for Home Printing

B.8 - Standard numerical coding for railway undertakings, infrastructure managers and other companies involved in rail-transport chains

B.9 - Standard numerical coding of location

B.10 - Electronic reservation of assistance for persons with reduced mobility - Exchange of messages

Link between TAP TSI* (rail) and MMTIS (EU) 1926/2017

TAP TSI basic parameter “Management of connection with other modes of transport”

- *Exchange of static timetable information between railway undertakings and other modes of transport: **CEN/TS 16614-2:2020** (NeTEx);*
- *Exchange of stop/station data **CEN/TS 16614-1:2020** (NeTEx)*
- *Exchange of tariff data between railway undertakings and other modes of transport: **CEN/TS 16614-3:2020** (NeTEx)*
- *Exchange of dynamic data **EN 15531** (“SIRI”)*

Alternatives possible “... any machine-readable format fully compatible and interoperable with those standards or technical documents...”

Article 4 - Accessibility, exchange and reuse of static travel and traffic data

1. *Transport authorities, transport operators, infrastructure managers :*

...

*(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, ... or any machine-readable format fully compatible and interoperable with those standards and technical specifications;*

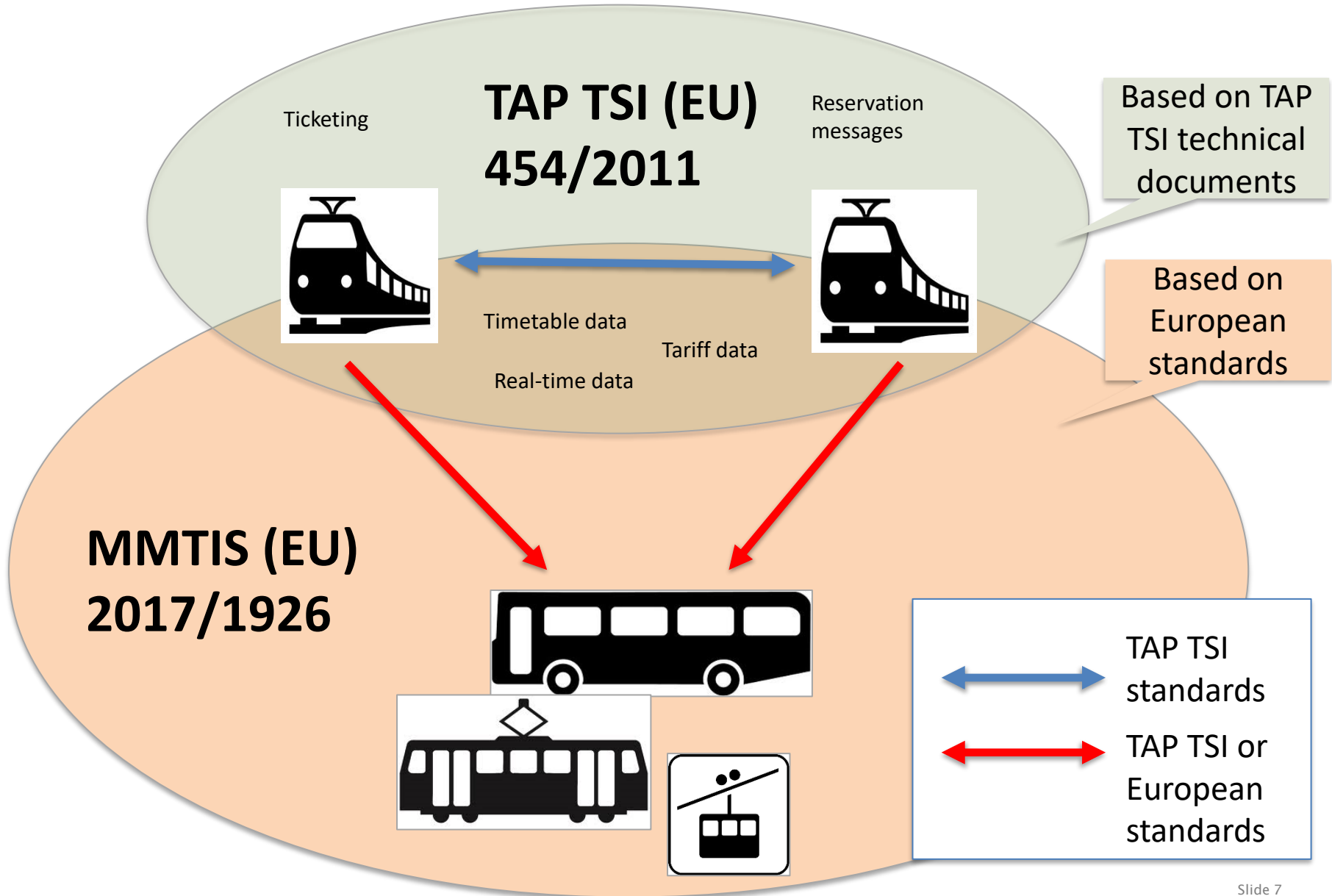
Article 5 - Accessibility, exchange and reuse of dynamic travel and traffic data

1. *Where the Member States decide to provide the dynamic travel and traffic data*

...

*(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.*

Used data exchange standards TAP TSI / MMTIS



Rail specific data exchange standards and NeTEx

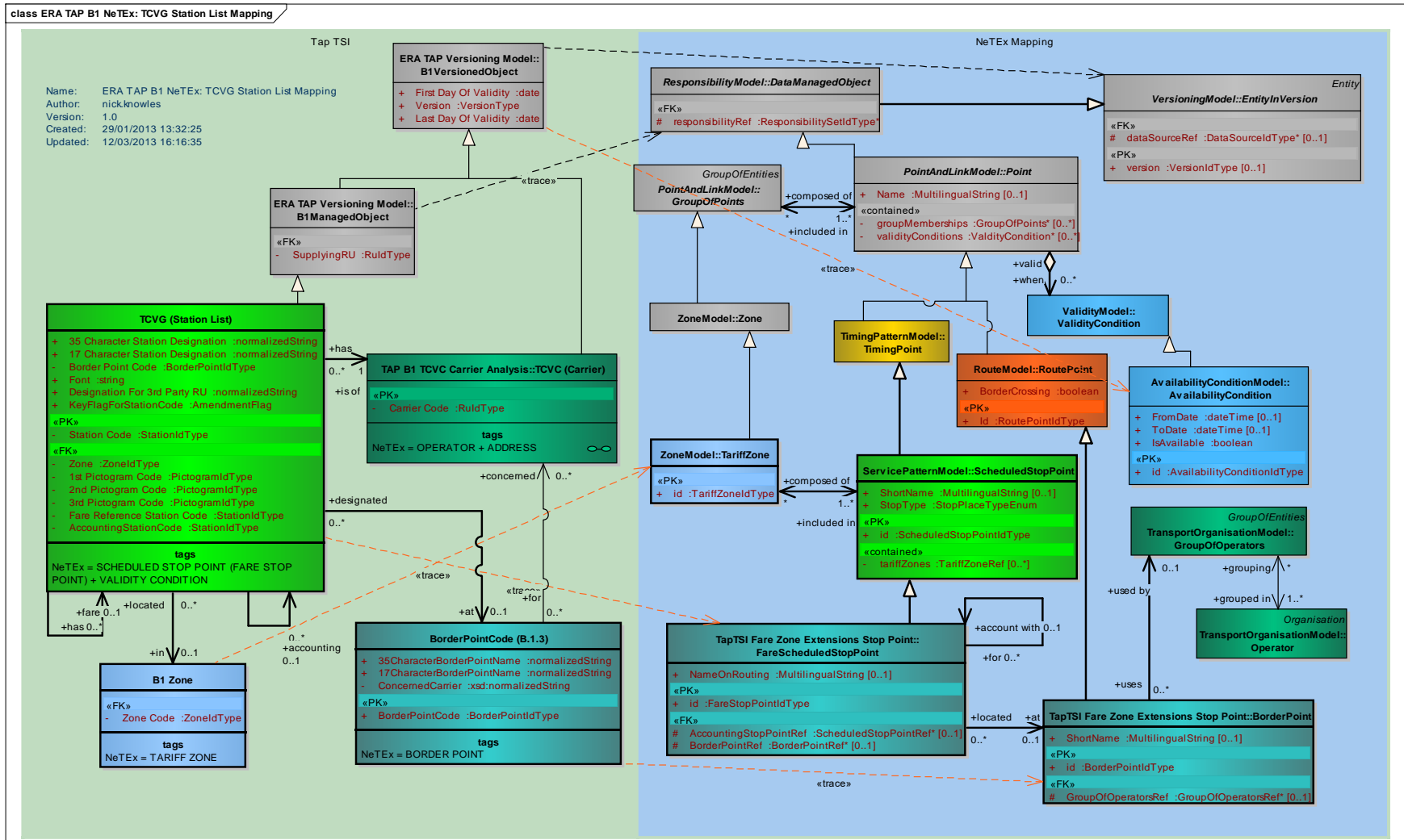
- Data exchange in (international) rail largely based on developments of the rail sector
 - UIC leaflets or IRS
 - TAP TSI integrated UIC leaflets as ERA technical documents for timetable data, tariff data
- Data exchange „... with other modes of transport ..“ is an important basic parameter of the TAP TSI
 - NeTEx is used to exchange rail data with other modes
- Rail sector always claims that the used standards are mode specific
- ERA analysed in several studies, how European standards such as NeTEx may be used to exchange
 - Timetable data
 - Tariff data for international and domestic tariffs
 - Data about the accessibility of railway stations

Conclusion: rail data can be exchanged using European standards

Example: B1 TCVG Detailed Mapping (NRT fare – stations)

Comma separated values

Transmodel/NeTEx



Mapping of timetable data:

- EDIFACT to NeTEx: <http://netex-cen.eu/wp-content/uploads/2014/06/NeTExMappingERA-TD-V04-ERA.xls>

Mapping of tariff data:

- TAP TSI B.1 (UIC 108-1) to NeTEx (see examples on NeTEx – github)*
- TAP TSI B.2 (UIC 108-2) to NeTEx (see examples on NeTEx – github)*
- TAP TSI B.3 (no UIC leaflet) to NeTEx (see examples on NeTEx – github)*

Exchange of domestic tariffs:

- ERA study concerning “Tariff data exchange for domestic rail tariffs”, see https://www.era.europa.eu/sites/default/files/library/docs/studies/tariff_data_exchange_for_domestic_rail_tariffs_en.pdf

*) https://github.com/NeTEx-CEN/NeTEx/tree/master/examples/standards/tap_tsi

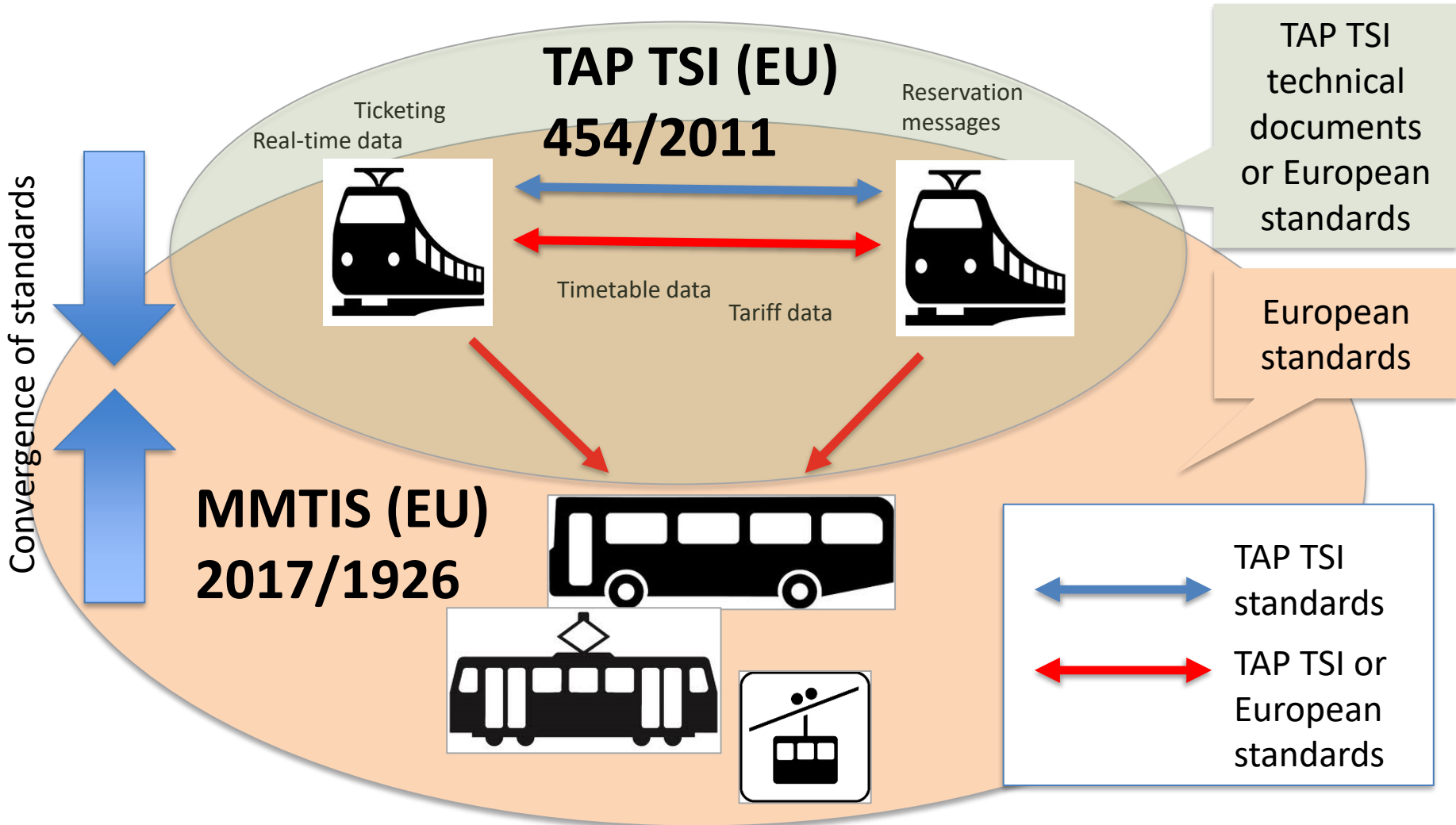
- TAP TSI revision is part of the TSI revision package 2020 – 2022 of the EC
- Publication of the recommendation in December 2021, further work on the technical documents until June 2022

	Key points
Timetable data exchange	Ensure the possibility to exchange timetable data for <u>rail</u> with NeTEx
	To ensure the exchange of timetable data in the context of connection with <u>other modes of transport</u> (NeTEx)
Tariff data exchange	Exchange of tariff data for <u>international and foreign sales</u> to other railway undertakings and third parties (e.g. travel agencies)
	Ensure the possibility to exchange tariff data for <u>domestic rail tariffs</u> (NeTEx)
	To ensure the exchange of fare information in the context of connection with <u>other modes of transport</u> (NeTEx)

	Key points
Ticketing	common framework including the security elements or the indirect fulfilment (<u>barcodes and key exchange</u>)
	Allow the international fulfilment as “ticket-on-departure” or “manifest-on-list” (<u>e-ticketing without media</u>)
	Technical document or standard on indirect fulfilment methods which are linked to the ticket and/or reservation and to the kind of media for domestic sales
	ticket control data exchange *
Booking	Take into account the industry-driven <u>Full Service Model initiative (Open Sales and distribution model - OSDM)</u> *
Accessibility	update profile for the <u>accessibility data</u> for European railway stations (using NeTEx)*
RU/IM	Merging TAF (for freight trains) and TAP TSIs
Real-time data	Provision of real time data concerning the rail passenger rights regulation to ticket vendors and tour operators

*) technical document to be delivered in 2022

Future data exchange TAP TSI / MMTIS





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