



Interoperability

TSIs applicable to Railway vehicles

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1. Purpose of the presentation
2. Geographical scope (Directives and TSIs)
3. Technical scope of TSIs
4. TSIs applicable to Railway vehicles:
 - a. Existing TSIs / scope
 - b. On-going developments
 - c. Final objective



- First Technical Specifications for Interoperability (TSI) were adopted in 2002.
- Since then, additional TSIs have been adopted, and a set of TSIs are now applicable to Railway vehicles.
- The Agency has received a new mandate from the Commission (dated 29/04/2010) to continue to develop, to extend the scope, and to rationalise the set of TSIs.

The purpose of this presentation is to synthesise the scope of the different TSIs applicable to Railway vehicles, and to present on-going developments.



2. Interoperability Directive(s) / TSI(s)

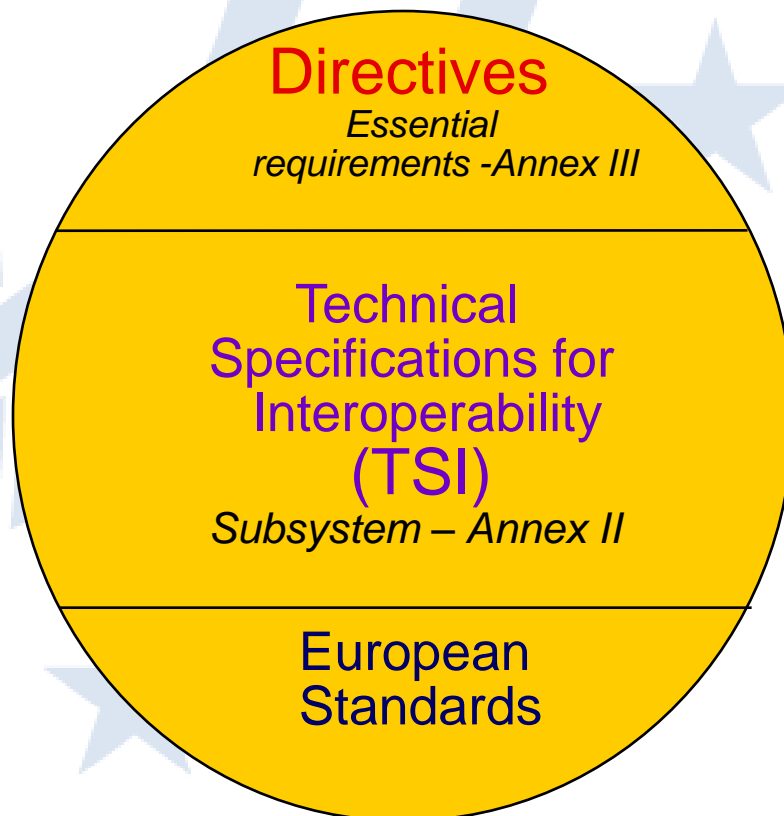
Legal framework for interoperability (based on the „new approach” procedures)

Clear separation between the EU legislation and the European standardisation.

EU legislative harmonisation (Directives) limited to the essential requirements.

For the Railway system, due to its technical complexity, Directives require an additional layer: Technical Specification for Interoperability.

Task of drawing up harmonised European Standards entrusted to European Standardisation Bodies. Standards give presumption of conformity, but remain of voluntary application (except if referred to in TSIs).





2. Interoperability directive(s) / TSI(s)

- The **purpose of the TSIs** is defined in the Interoperability Directive(s): compliance to **essential requirements** is established by reference to applicable TSI(s), provided that they exist and cover sufficiently those essential requirements.
- TSIs are developed and adopted in accordance with these Interoperability directives.
- The successive Interoperability directives cover a part of the EU Railway system, corresponding to their scope.
- This scope is based on a geographical scope: part of the railway network (lines) in each Member State.
- **The scope of a TSI is within the scope of the corresponding Interoperability directive(s)**; it may cover only a part of the scope of that directive(s).



2. Scope of Interoperability Directive (s)



Directive 96/48/EC: Interoperability on the High Speed Trans-European Network. (amended by Directives 2004/50/EC and 2007/32/EC)

Scope: High speed rail system, composed of lines declared as HS lines by Member States, and operation of rolling stock on these lines.

Repealed by Directive 2008/57/EC



Directive 2001/16/EC: Interoperability on the Conventional TEN. (amended by Directives 2004/50/EC and 2007/32/EC)

Scope: Conventional rail system, composed of lines declared as CR lines by MS, and operation of rolling stock on these lines.

Repealed by Directive 2008/57/EC



Directive 2008/57/EC: Interoperability of the Rail System within the Community

Scope: both HS and CR rail system, and extended to the whole of the Rail European Network (excepted parts excluded by MS).



2. Scope of Directive 2008/57/EC

1. The scope of the Directive is the **whole of the Rail European Network**.
2. **Member States** have to **transpose the Directive** in their laws, regulations and administrative provisions:
3. Member States **may exclude** from the measures they adopt in implementation of this Directive:
 - (a) **metros, trams and other light rail systems**;
 - (b) **networks that are functionally separate** from the rest of the railway system and intended only for the operation of **local, urban or suburban passenger services**, as well as railway undertakings operating solely on these networks;
 - (c) **privately owned railway infrastructure and vehicles** exclusively used on such infrastructure that exist solely for use by the owner for its own freight operations;
 - (d) **infrastructure and vehicles reserved for a strictly local, historical or touristic use**.



→ 19 July 2010

Directive
2008/57/EC
Article 1(3)
Article 38



2. Geographical scope of existing TSIs

- Under the Directive 96/48/EC:
 - A first group of TSIs were adopted in 2002, with a revision in 2008.Their geographical scope is the HS TEN network.
- Under the Directive 2001/16/EC:
 - A second group of TSIs were adopted in 2006.
 - A third group of TSIs were voted in 2009 & 2010 (to be adopted).Their scope geographical scope is the CR TEN network.
- Under both Directives 96/48/EC and 2001/16/EC:
 - 2 TSIs were adopted in 2008.Their geographical scope is both HS and CR TEN network.



4.a TSIs applicable to Railway vehicles: subsystems

- According to the directive(s), the **rail system** is broken down into the following **structural areas (subsystems)**:

- Infrastructure, Energy, Control-command and signalling, Rolling stock.

- A **railway vehicle** means “vehicle that runs on its own wheels on railway lines”.

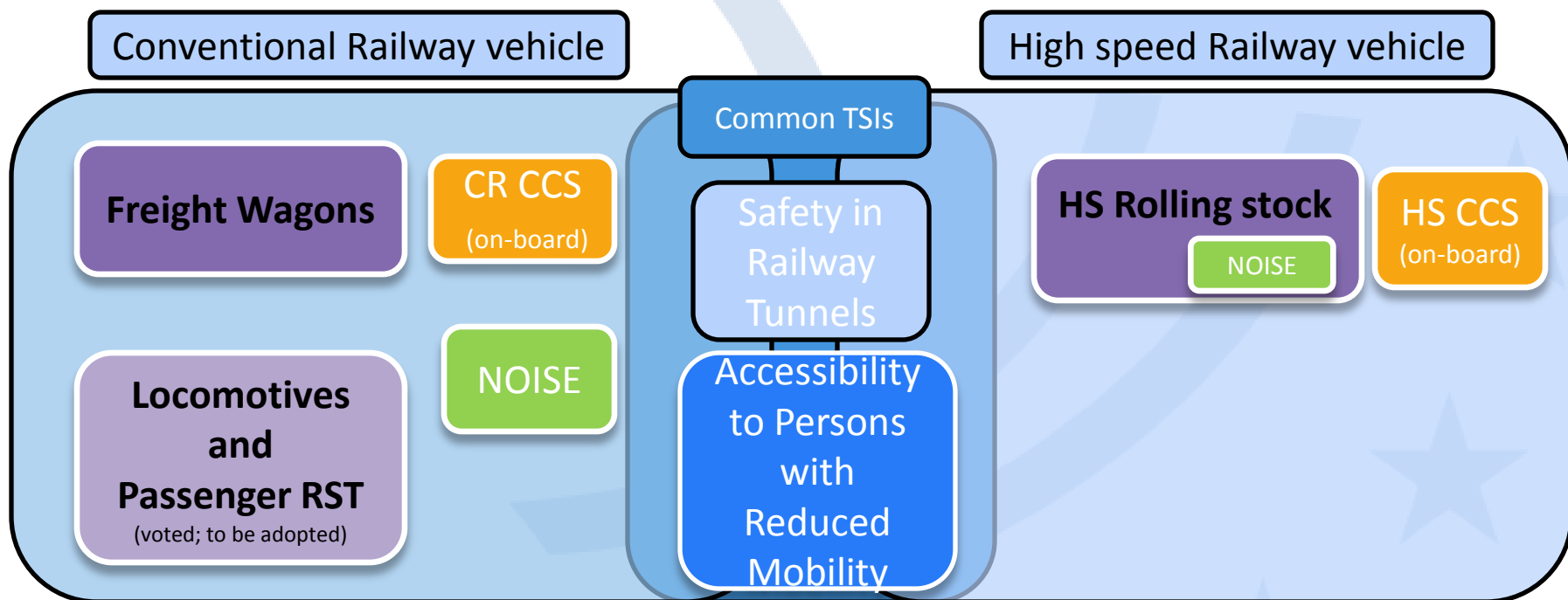
It may be composed of the following structural subsystems:

- “Rolling stock”.
- On-board part of “Control-command and signalling”.
- On-board part of “Energy” (consumption measuring equipment).

- The technical scope of TSIs refers to structural subsystems.
- For a railway vehicle, the compliance to the directive is established by reference to the TSIs applicable to the parts of subsystems that compose the vehicle.



4.a TSIs applicable to Railway vehicles: overview



- **CR Rolling stock TSIs:** applicable to vehicles:
 - running on CR lines.
 - maximum speed limited by the maximum speed of the CR lines.
 - also applicable to RST of maximum speed < 190 km/h running on HS lines.

- **HS Rolling stock TSI:** applicable to vehicles:
 - running on HS lines.
 - of maximum speed \geq 190 km/h



4.a TSIs appl. to Railway vehicles: technical scope

- Each TSI describes its technical scope.
- For TSI applicable to rolling stock, this scope covers:
 - Type of rolling stock: single vehicle, trainset...
 - Usage: freight, traction unit, passenger vehicle...
 - Possible train formation: fixed or predefined formation, general operation.
 - Limitations regarding particular characteristics: speed , wheel diameter, ...
- Vehicles in the scope of the HS RST TSI may be operated on the CR networks (in addition to the HS networks): they have then to comply to both HS and CR TSIs.



4.a TSIs applicable to Railway vehicles

- **For the HS network:**

- HS RST, HS CCS, SRT, PRM.

Note: the HS RST TSI applies to freight trains that are defined as fixed or predefined formation.

- **For the CR network:**

- Freight vehicles: Freight wagons, CR CCS, NOISE, SRT.
- Other vehicles: CR LOC&PAS TSI, CR CCS, Noise, SRT, PRM.

- **For the rest of the Railway system (off-TEN):**

- TSIs are not yet drafted.
- Therefore, national rules continue to apply.



4.b TSIs: on-going developments

- The CR TSI “Locomotives and Passenger RST” was voted in June 2010, and will be adopted (should apply from 01/06/2011).
Its includes a clause (n°6.2.5) that identifies the requirements for which an assessment against the equivalent clause of the HS RST TSI is valid for the CR “Locomotives and Passenger RST” TSI.
- The revised CR TSI “Noise” was voted in June 2010, and will be adopted (should apply from 01/01/2011).
- The CR and HS CCS TSI are under revision and will be merged (vote foreseen in 2011).
- The CR TSI “Freight wagons” is under revision (vote foreseen in 2011).



4.b TSIs: Extension of scope

The scope of the TSIs shall be progressively extended in accordance with Article 8 to the whole rail system, including track access to terminals and main port facilities serving or potentially serving more than one user, without prejudice to the derogations to the application of TSIs as listed in Article 9.

The Commission shall adopt, ..., one or more mandates aiming at the development of the new TSIs and/or the review of TSIs already adopted with a view to covering lines and vehicles not yet covered.



Directive
2008/57/EC

Article 1(4)

Article 8(1)



4.b TSIs: developments to be launched

- Extension of the scope of TSIs in order to cover the scope of the Directive.
- Closure of the open points.
- Rationalisation of the set of TSIs:
 - Analyse advantages and disadvantages of merging HS and CR TSIs.
 - Analyse advantages and disadvantages of including requirements of SRT, PRM and Noise TSIs in TSIs related to the subsystems «Rolling stock» and «Infrastructure».
 - Complementary studies have been launched; their conclusion (end 2010) may lead to a rearrangement of TSI requirements.

4.c TSIs applicable to Railway vehicles: final objective

- Set of TSIs covering the whole rail system.
- Avoid application of national rules in addition to TSIs.
- Facilitate the application of the TSIs by the different stakeholders of the Railway sector (Railway undertakings, manufacturers, notified bodies...).
- Avoid redundancies or inconsistencies between the different TSIs.
- Make easier the revision of TSIs.
- It is planned to have this set of revised TSIs covering the whole rail system drafted by 2013.



Thank you for your attention



Contact: hubert.lavogiez@era.europa.eu