



Technical specifications for Interoperability (TSIs)



1. Content and Scope

2. Major differences between a TSI and UIC-leaflets / standards

3. When do they need to be applied ?



Railway Interoperability Directives are « new approach » Directives

Principles of « new approach » laid down in Council resolution, 1985 :

- Legislative harmonisation is limited to essential requirements to be met if products are to benefit from free movement within the Community
- Technical specifications that would enable products to meet the essential requirements set out in new approach directives are laid down in European 'harmonised' standards
- Compliance with 'harmonised' standards remains voluntary
- Products manufactured in compliance with 'harmonised' standards benefit from a presumption of conformity with the corresponding essential requirements.

Interoperability Directives add a « layer »:

Technical Specifications for Interoperability (TSIs)





In application of the “new approach process”
Interoperability Directive fixes essential
requirements:

- **Safety,**
- **Reliability and availability,**
- **Health**
- **Environmental protection**
- **Technical compatibility**

Plus requirements specific to each subsystem

Directive not ask directly for standards but
intermediate mandatory rules :

Technical Specifications for Interoperability - TSI



Content of a TSI

For the purposes of this Directive, the system constituting the **rail system may be broken down into the following subsystems, either:**

(a) structural areas:

- **infrastructure,**
- **energy,**
- **control-command and signaling,**
- **rolling stock;**

(b) functional areas:

- **traffic operation and management,**
- **maintenance,**
- **telematics applications for passenger and freight services.**



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Annex II

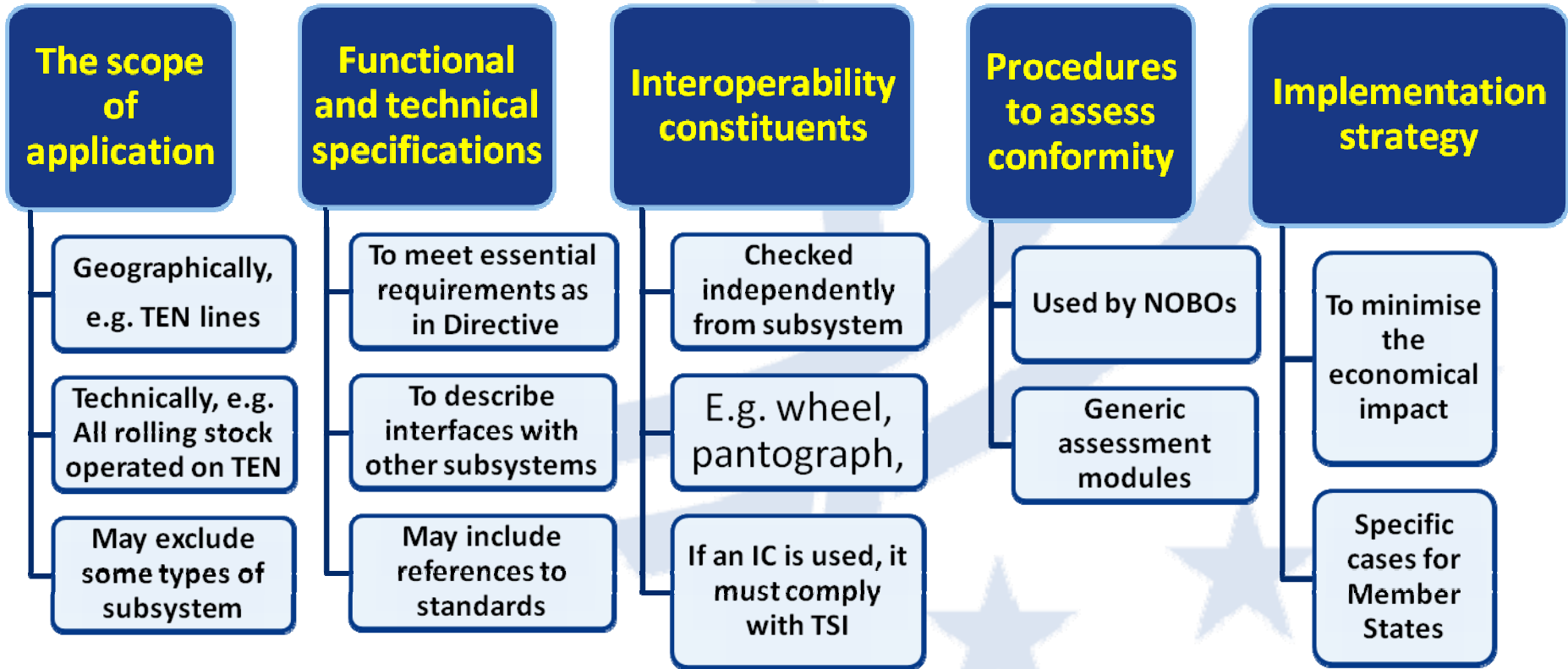


Content of a TSI

- 1. Each of the subsystems shall be covered by one TSI. Where necessary, a subsystem may be covered by several TSIs and one TSI may cover several subsystems.**
- 2. Subsystems shall comply with the TSIs in force at the time of their placing in service, upgrading or renewal, in accordance with this Directive; this compliance shall be permanently maintained while each subsystem is in use.**



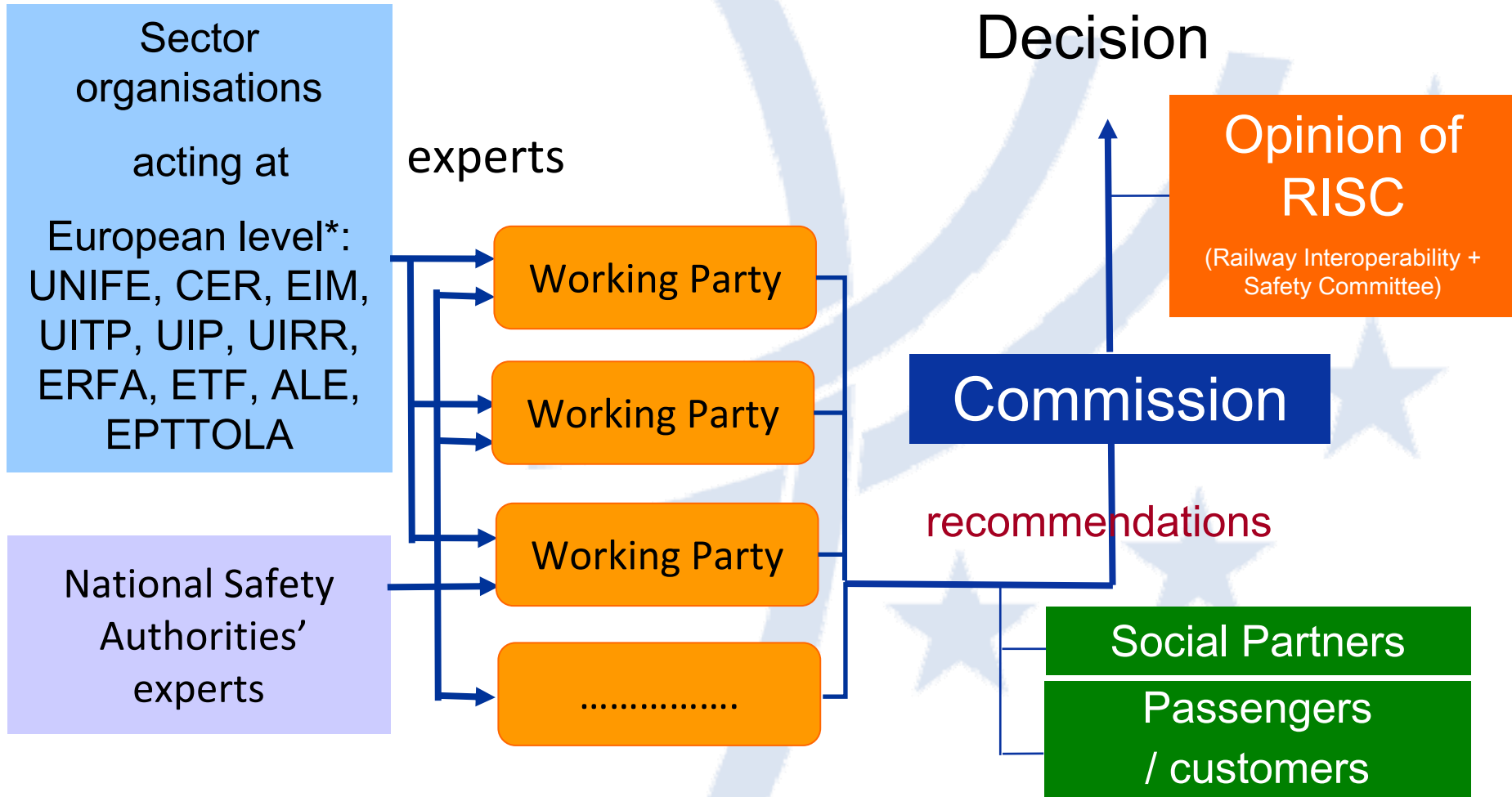
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Art. 5.1



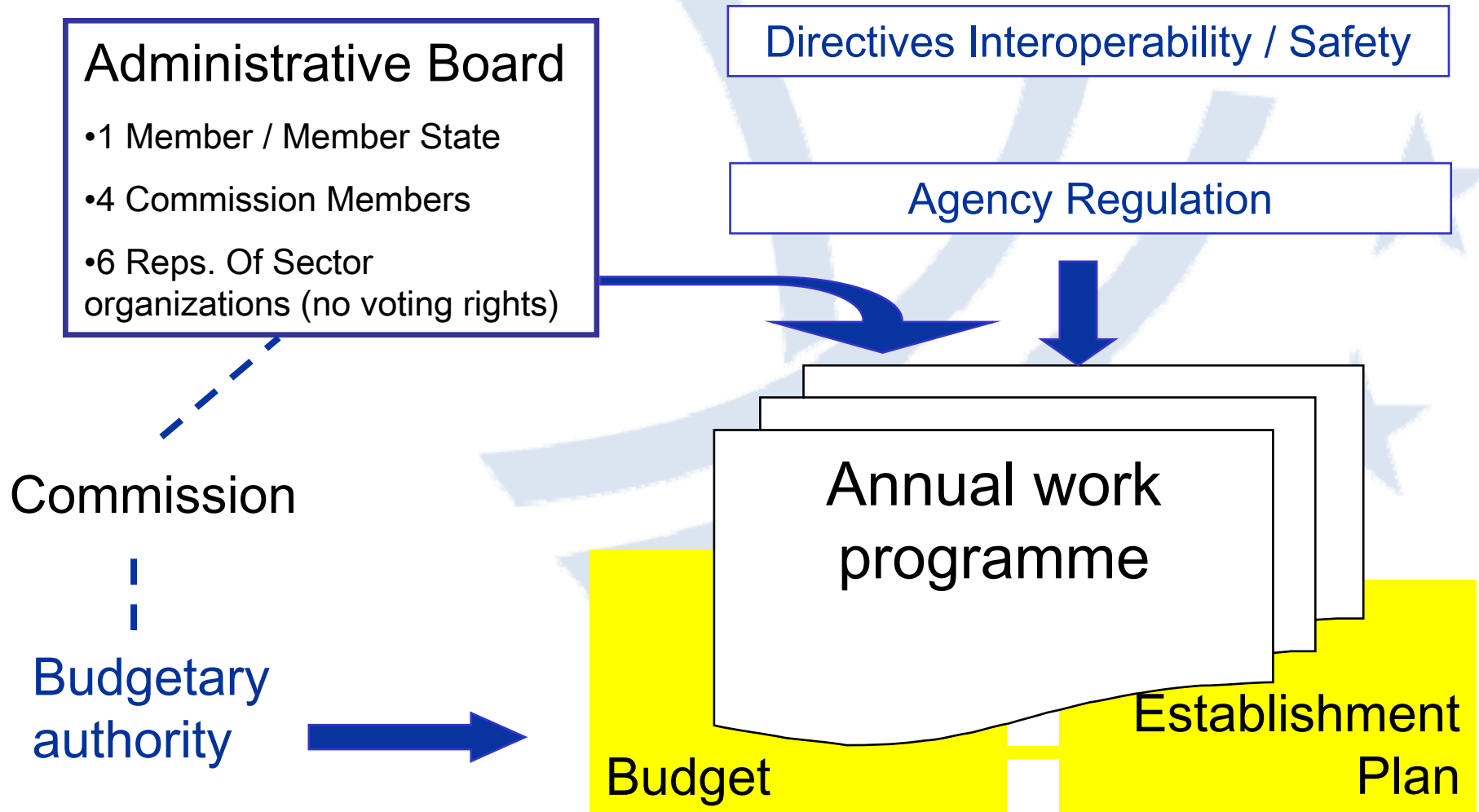
Both requirements & assessment procedures are mandatory



How does the Agency work?



* List established by Article 21 Committee on 22 February 2005, amended on 04.12.2009





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TSI

- legal act: Commission decision or regulation
- mandatory
- linked to Essential requirements
- assessment by NoBo (structural TSIs)

EN-Standard; UIC-leaflet

- CEN/ CENELEC or UIC
- voluntary (generally)
- can meet Essential requirements or support internal/commercial procedures / issues
- assessment by addressee



Content of TSI

TSIs **may take** an explicit, clearly identified reference to **European or international standards or specifications or technical documents published by the Agency.....**

These standards or specifications or technical documents shall be regarded as annexes to the TSI concerned and shall become **mandatory** from the moment the TSI is applicable,

TSIs shall be **published** by the Commission in the Official Journal of the European Union



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Art. 5.8
&
Art. 6.10



Example of mandatory application of standards:

Decision 2009/107 amending Decision 2006/861 “Wagons TSI”

Annex JJ-2

2.5. Dynamic behavior of the vehicle

In addition to the specifications of section 4.2.3.4 of this TSI, it is **required** that for the particular cases of the bogies not listed in annex Y, **EN 14363 or leaflet UIC 432 apply**

Chapter 6 – Assessment procedures

6.2.3.2.1.4. Exemptions from stationary tests

Freight wagons are exempted from the stationary tests mentioned in section 4.2.3.4.2.1 if they **comply with the requirements of UIC leaflet 530-2 (May 2006)**



Example of voluntary application of standards providing presumption of conformity:

Standards in CR Rolling stock – Freight wagons TSI (2006/861/EC)

<http://www.era.europa.eu/Document-Register/Pages/STND-CR-WAGON-TSI.aspx>

Pages 6 & 7 /13

Standards or other documents not referred in the rolling stock –freight wagons TSI (and therefore voluntary)

4.2.2.3.5	Securing of freight	UIC-577 Wagon stresses UIC-571-4 Standard wagons - Wagons for combined transport - Characteristics EN 12663-2 Railway applications - Structural requirements of railway vehicle bodies
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Authorisation for placing in service

Without prejudice to Chapter V, each Member State shall authorise the placing in service of those **structural subsystems** constituting the rail system which are located or operated in its territory.

...



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Art. 15.1



Placing into service

1. Before being used on a network, **a vehicle shall be authorized to be placed in service by the national safety authority** which is competent for this network, unless otherwise provided for in this Chapter.
2. A TSI conform vehicle shall be authorized in accordance with **Articles 22 or 23.**
3. A non-TSI conform vehicle shall be authorized in accordance with **Articles 24 or 25.**



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Art. 21



Placing into service

The first authorization shall be granted by a national safety authority as follows:

(a);

(b) in the case of vehicles bearing all necessary 'EC' declarations of verification .. a national safety authority may check ...:

- **technical compatibility** between the vehicle's relevant subsystems and their **safe integration** in accordance with Article 15(1),
- technical **compatibility** between the vehicle and the network concerned,
- **national rules** applicable to the **open points**
- **national rules** applicable to the **specific cases** duly identified in the relevant TSIs.



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Art. 22 b



After these subsystems have been placed in service, the **check shall be carried out**:

(a) for infrastructures, in the context of the granting and supervision of safety authorizations under Article 11 of Directive 2004/49/EC;

(a) for vehicles, in the context of the granting and supervision of safety certificates under Article 10 of Directive 2004/49/EC.



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Art. 15.3



Derogations

In the absence of relevant specific cases, a Member State **need not apply one or more TSIs :**

(a) for project,....,at an **advanced stage of development;**

(b) for project where the **loading gauge, track gauge, space between the tracks or electrification voltage** in these TSIs is not compatible with those of the existing subsystem;

(c) for project ... **separated or isolated** by the sea or separated as a result of special geographical ...;

(d) for project .. when the application of these TSIs would **compromise the economic viability** and/or the compatibility ...;

(e) **following an accident or a natural disaster,**;

(f) for vehicles **coming from or going to third countries with different the track gauge.**



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2008/57
Art. 9