EUROPEAN UNION AGENCY FOR RAILWAYS

EUROPORTE

SNCF RÉSEAU

epsf sécurité ferroviaire

European Commission

Agenda

- **Presentation by Executive Director of ERA**
  - Background
  - 4th Railway Package : Vehicle Authorisation and Checks before the use of vehicle(s)
- **Practical case**
  - Introduction of the case by ERA
  - Role of the stakeholders by EUROPORTE, SNCF Réseau, EPSF
  - What a RU shall check
- **Questions/Answers?**

Checks before use of vehicles: Background

- **Most common practice today**
  - Route Compatibility between vehicle(s) and route(s) is usually checked by IM with the information of the vehicles characteristics, at authorisation stage or after authorisation.
- **In 4th RP, clear distinction between authorisation and use:**
  - Vehicle authorisation for placing on the market (instead of 'placing in service');
  - Checks before the use of authorised vehicles, where
    - The RU is responsible to perform the compatibility check between vehicles and routes on the basis of RINF, the relevant TSIs and/ or any relevant information to be provided by the infrastructure manager.

Vehicle Authorisation and Checks before use of vehicles
4th Railway Package

Applicant define and demonstrate:

- **Area of use** (e.g France (RFN), Belgium)
- **Technical compatibility with the Network(s) of the area of use** (e.g 3kV, 25kV, KVB, TBL1+, D4 etc.)
- **Conditions for use and other restrictions** (e.g max speed 140km/h)

Railway Undertaking checks using its SMS process :

- Vehicle(s) is authorised and Registered
- Compatibility between Vehicle(s) and indented Route(s)
- Proper integration in the train composition

Vehicle authorisation for placing on the Market

Checks before the use of authorised vehicles

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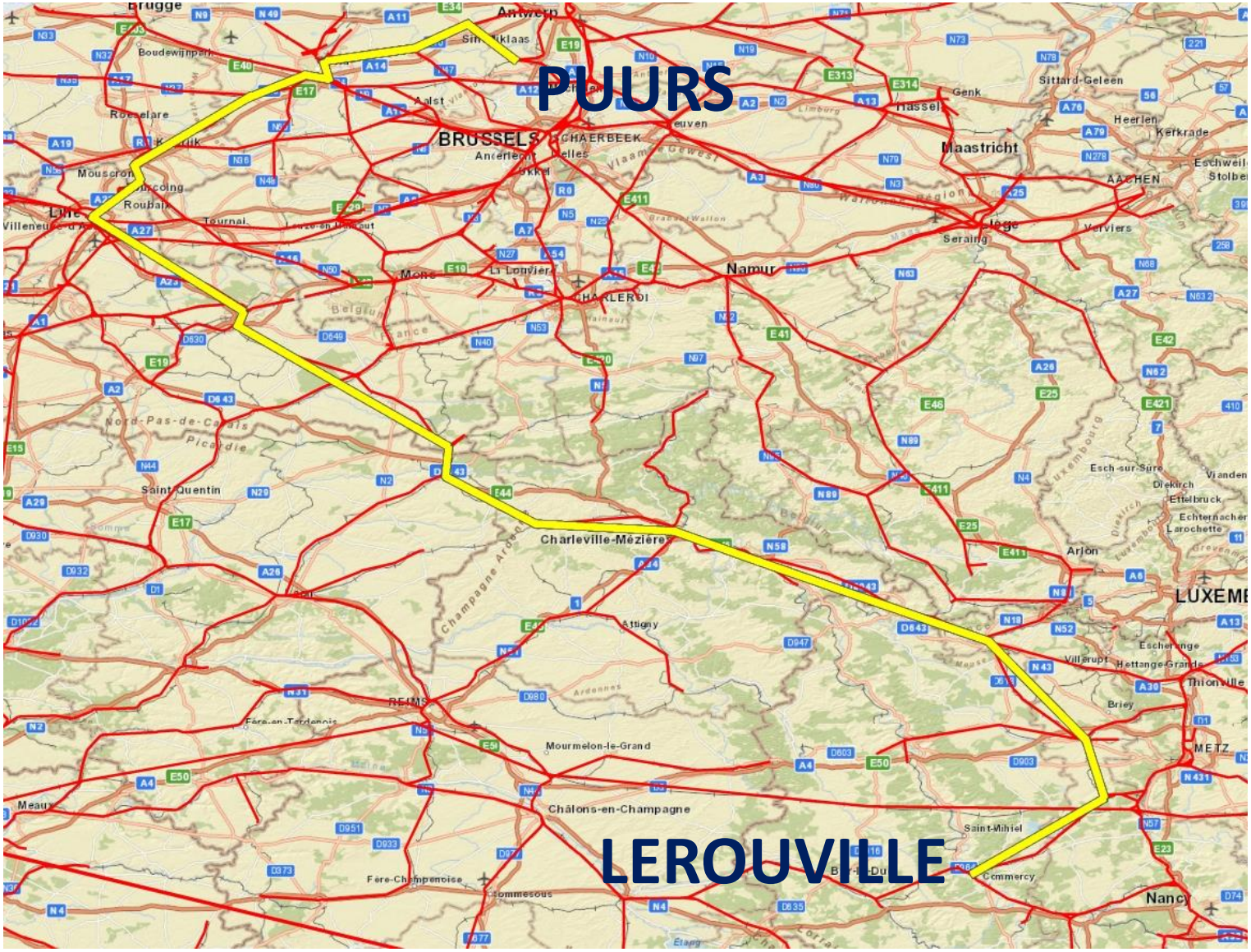
Getting new train on track: A practical case



- Transport of dangerous goods: Phosphoric acid.
  - code dangerous good : 1805;
  - code danger : 80;
  - packing group 3 : Low danger

Getting new train on track
A practical case

- Train composed of authorised vehicles (Area of Use : France, Belgium and Germany):
  - Diesel Loco
  - WAG Type ZACNS

Getting new train on track

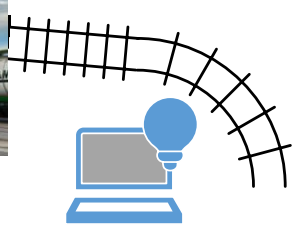
Path request

Operation

Authorised & Registered

Vehicle Route Compatibility Check

Vehicle data



RINF

Train composition & other aspects

Under Safety Management System

Vehicles authorised and registered

Royaume de Belgique
Service de Sécurité et d'Interopérabilité des Chemins de Fer

Autorisation de mise en service pour une série de véhicules
Numéro de l'autorisation : BE 51 2012 0004

Locomotive diesel-électrique série Eurolok 4000 Type II variantes B-F et D-B-F

Annexe 1

Références des documents sur lesquels se fonde la présente autorisation + Caractéristiques techniques principales + Conditions d'utilisation + Echéancier

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Route compatibility check between Vehicle and Route

Route compatibility is performed by comparing the values of identified interface between Vehicle and intended Route using a defined procedure

RCC interface	*Vehicle information*	*Route information available in RINF or provided by IM*	*Procedure*
Gauging *	Vehicle gauge : - Reference profiles for which the vehicle was authorised; - other gauges assessed.	1.1.1.1.3.1.1 gauging 1.2.1.0.3.4 gauging	Comparison of the declared gauge value(s) (reference profiles) between Vehicle/Train and the route. **Note.** - For the specific case in section 7.3.2.2 of Loc&Pas TSI, a specific procedure can be applied: IM shall make available the relevant information. - Geometry of particular points (e.g. section of tunnel, bridges) covered by the reference profile declared in RINF. In duly justified cases, discussion between IM and RU might be needed for checking these specific points.
Train detection systems *	Type of train detection systems for which the vehicle has been designed and assessed.	1.1.1.3.7.1 Type of train detection system	Comparison of the declared type of train detection system(s) between Vehicle/Train and the route. **Notes:** - In duly-justified cases, tests and/or checks could be done after authorisation, involving RU and IM.
Wheelset	Wheel set gauge	1.1.1.1.4.1 Nominal track gauge 1.2.1.0.4.1 Nominal track gauge	Comparison of the declared track gauge between Vehicle wheelset gauge with track gauge of the intended route.
Wheelset	Minimum in-service wheel diameter	1.1.1.1.5.2 Minimum wheel diameter for fixed obtuse crossings	Comparison of the declared minimum wheel diameter between Vehicle and the route/

Route compatibility check between Vehicle and Route

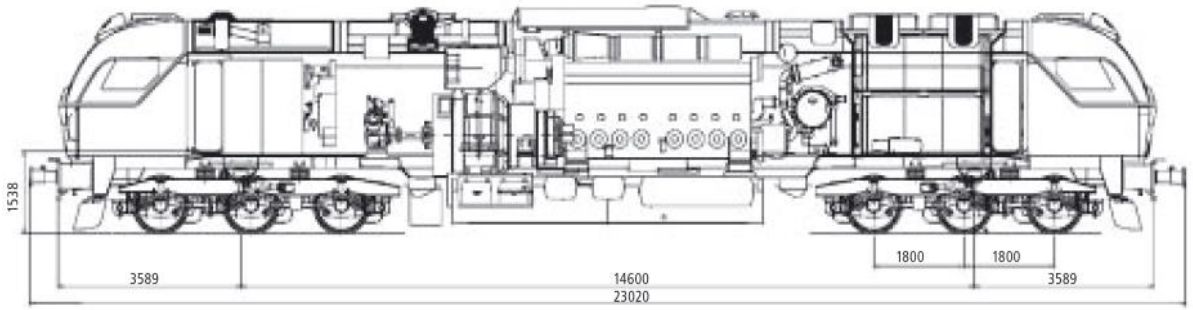
Most of the Route compatibility items require a simple comparison

Interface	Vehicle data in ERATV and technical file		Route information available in RINF or provided by IM		Results
	ERATV	Value	RINF ref	Value	
Gauge	4.2.1	G1	1.1.1.1.3.1.1 1.2.1.0.3.4	G1	
Train detection systems	4.14.1	track circuits axle counters loops	1.1.1.3.7.1	track circuits axle counters	
Wheel set gauge	4.1.3	1435 mm	1.1.1.1.4.1 1.2.1.0.4.1	1435 mm	
Minimum in-service wheel diameter	4.8.2	991 mm	1.1.1.1.5.2	330 mm	

Route compatibility check between Vehicle and Route

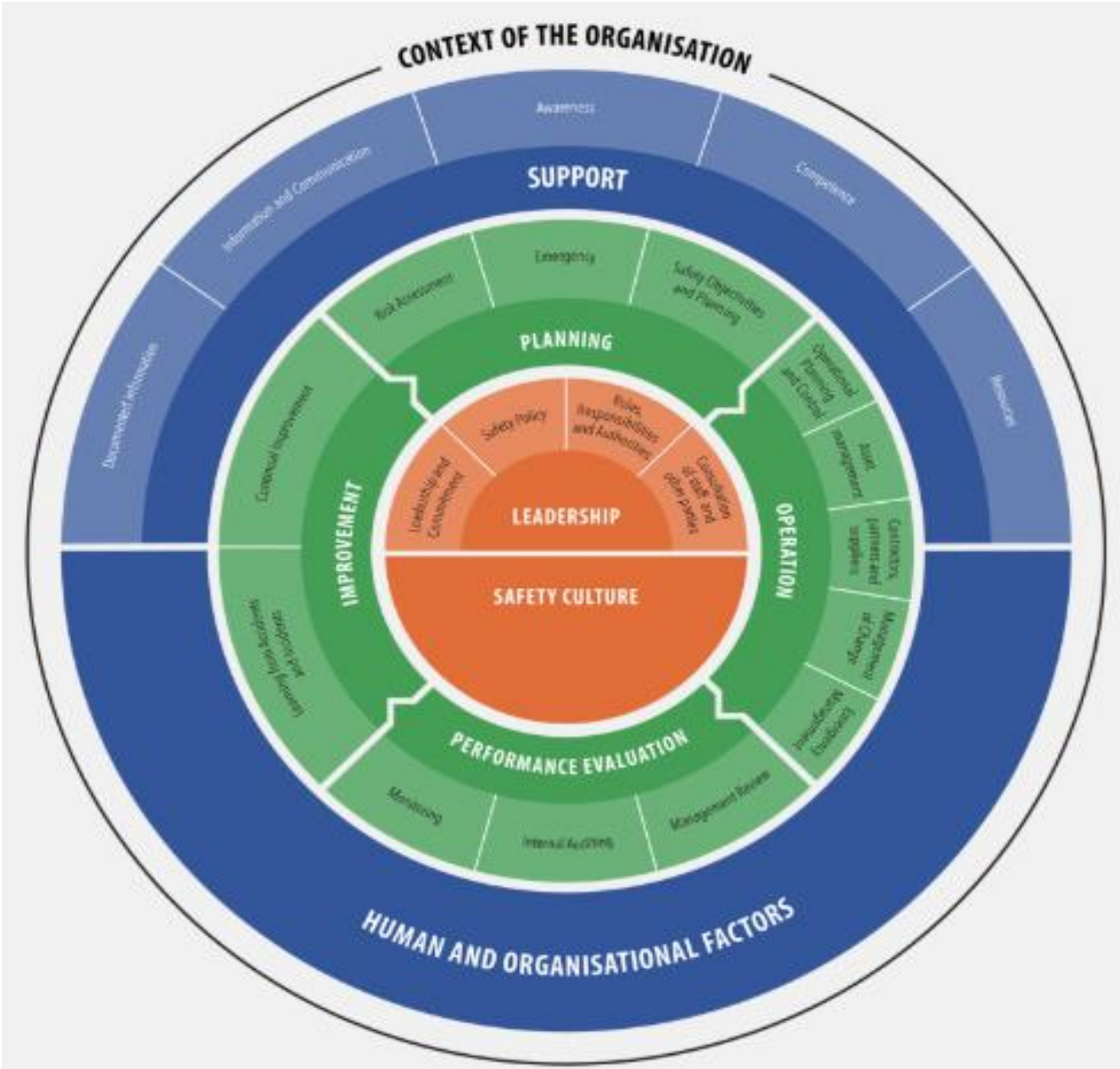
Some items to be checked need dedicated competences
(e.g Traffic loads and load carrying capacity of infrastructure)

- RU perform static and dynamic compatibility checks with the IM procedures

Interface	Vehicle data in ERATV and technical file		Route information available in RINF or provided by IM		Results
	ERATV	Value	RINF ref	Value	
• Design mass (working order, normal and exceptional payload), 4.5.2 : 121000 kg • Static axle load (working order, normal and exceptional payload), 4.5.3: 20160 kg • Maximum design speed , 4.1.2.1 : 120km/h • Vehicle length, 4.8.1 : 23,02m • Position of the axles along the unit (axle spacing): 					 Compatible with lines classified C4

IM role

Supervision of stakeholders



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Train composition

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Key messages

1. Vehicle Route compatibility check is not Vehicle authorisation.
2. RU is responsible for Vehicle Route compatibility check - IM to support.
3. Existing vehicle route compatibility checks remains valid if no change in vehicle nor in route.
4. SMS of RUs and IMs might have to be adapted to include RCC.
5. Results of vehicle route compatibility check are used also for Train composition (which is a different process from the Vehicle RCC).

Thank you for your attention!

Questions?

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