

# Digitalisation as a game changer for the railways –

**Digital Capacity and Train Management** 

ERA Rail Data Forum - Cluj



General

## **Members**





General

# **Project Portfolio**





# From a national, annual and manual to a European, flexible and digital railway system

#### REMOVE

Different national Rules & Standards in every country

#### **Draft Capacity Regulation**

Implementing the Regulation for a Smart Capacity Management

#### **Digital Systems**

Sector and company digital systems using a common language "Telematics TSI"



# **RNE / IM Data and IT Stratey**



**Capacity Management** 

## **TTR for Smart Capacity Management**



Current **timetabling processes do not yet fit the market requirements** and lead to waste of capacity and resources.



To lead railways into a competitive position, the **processes will be completely reformed.** 



With "**TTR for Smart Capacity Management**" a market oriented, efficient, digitalized and competitive capacity management process will be introduced to serve passenger and freight needs.



The gradual implementation started in 2019, provided first deliverables for TT 2025 and TT 2026 and aims for a full roll-out by TT 2028.



Capacity Management

#### **Path Allocation Process**

**Applicants** (Railway Undertakings/RUs as well as non-RUs) need to be able to **run their trains on the available rail infrastructure** 

**Infrastructure Managers provide timetables** in which Applicants' train runs are scheduled – sometimes via Allocation Bodies (ABs)

The procedure of requesting, offering and allocating rail capacity is known as the **"Train Path Allocation Process"** 

For path allocation of international trains, **harmonized European timelines, procedures** and **IT systems** are necessary and are provided by RNE.



Digital Capacity Management

#### **Tools of Central IT**

TCR Tool



- TCRs creation
- Visualization
- Coordination
- Publication



- Capacity Models
- Capacity Needs Announcements
- Capacity Supply
- 'Positive' and 'negative' capacity overview

PCS - CB



- Path allocation
- Harmonized offers to customers in minutes
- Automated path creation
- Pre-check of TCRs



## **RNE Train Information System (TIS) – General Overview**



- Nearly 30.000 International freight, passenger and national freight trains can be identified in Train Information System
- Approximately 6 million TAF/TAP TSI messages exchanged daily in Train Information System
- Over 5.600 users from 29 IMs, 171 RUs and 18 Terminals connect every month with Train Information System



#### **RNE Train Information System (TIS)**

Countries already in TIS

Coming Soon



### **RNE Train Information System (TIS)**

#### Train weight **Train composition data Example:** Train length: 475 m Number of Wagons Train max. speed Train weight: 727 tons Number of wagons: 17 Train max. speed: 100 km/h Air brake type Hand brake type Train length **Technical Restrictions** Wagon position 1 Wagon position 2 Wagon length: 2.700 m Wagon length: 3.100 m Wagon weight empty: 27.100 kg Wagon weight empty: 30.060 kg Wagon number of axles: 4 Wagon number of axles: 4 Total load weight: 15.482 kg Total load weight: 16.810 kg



### **TIS Incident Management tool**

- Part of the Train Information System
- Designated for recording and sharing information about incidents
- Notifications for all affected companies, such as Infrastructure Managers and Railway Undertakings
- Handling of affected trains (parking, restarting)
- Tool for International Contingency Management cases





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