TTR

For Smart Capacity Management

TTR Introduction

RailNetEurope

FTE FORUM TRAIN EUROPE

TTR Railforum

2 November 2022

Sustainable & Smart Mobility Strategy

- **By 2030**: Rail & waterborne intermodal transports will be able to compete on equal footing with road-only transports in the EU

- **By 2050**: Double rail freight traffic, trippled high-speed rail traffic

> **Through the implementation of this strategy, we will create an irreversible shift to zero-emission mobility while making our transport system more efficient and resilient.**
>
> EUROPEAN COMMISSIONER FOR MOBILITY AND TRANSPORT ADINA VĂLEAN

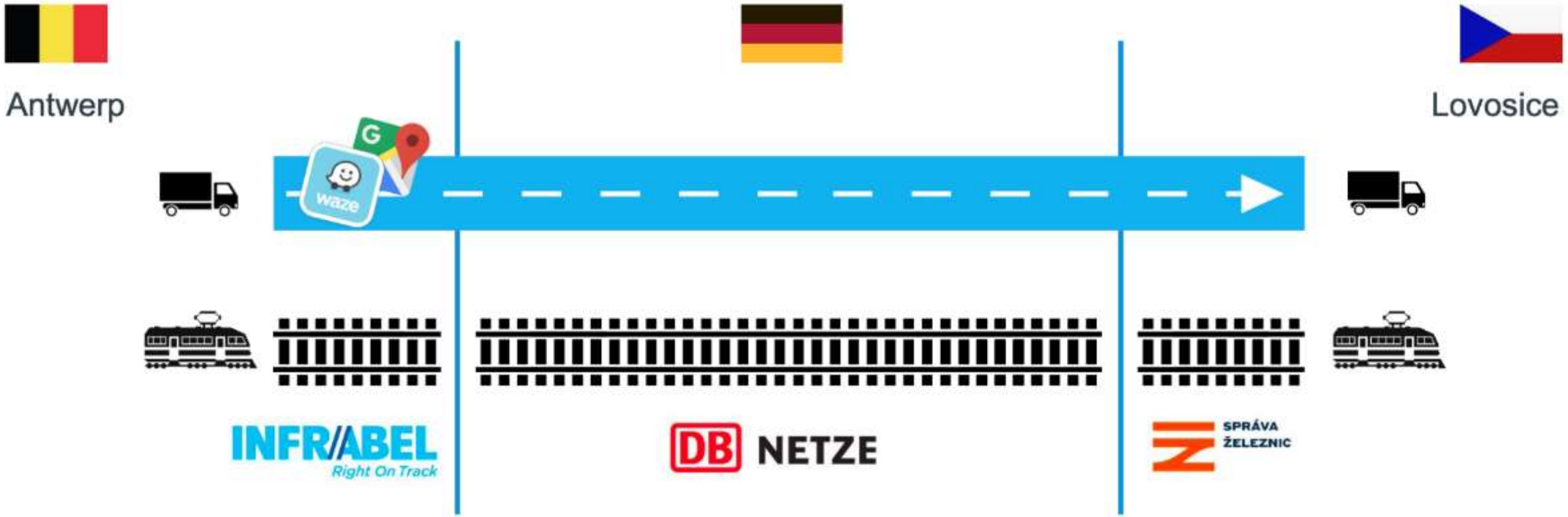
TO REALIZE THE GREEN DEAL OBJECTIVES
THE EUROPEAN RAIL FREIGHT SECTOR EXPRESSES A JOINT AMBITION

Copied from RFF

Today

- Infrastructure partially heavily overbooked
- No seamless international traffic planning
- Through Europe, over 50 % of freight train path requests are constantly modified
- Big waste of resources for RUs and IMs
- Late cancellation or unused capacity = capacity waste

DRIVING A TRUCK VS FREIGHT TRAIN ACROSS EUROPE



Railpaths to be requested 1 year upfront

Short-term rail path requests take hours

Cross-border rail path requests take weeks (28+ national platforms)

Limited options for IM's and RU's to optimize

Copied from RFF

Target Picture

- **Organizing transports on rail becomes as easy and as seamless as organizing transports on road.**

- **Rail can compete with other transport modes (aviation, road) by allowing a market-oriented point of booking.**

- **Governments and EC have established frameworks stimulating the modal shift.**

TTR Vision

- **Main focus on freight and passenger market needs with optimised request deadlines**
- **Improved reliability and stability incl. temporary capacity restrictions (TCRs)**
- **Binding implementation and application of the redesigned timetabling process (TTR)**
- **Increased efficiency (capacities, resources) in order to avoid duplication of work and planning efforts**

In Other Words, TTR Enables the European Railway Sector to…

… **increase customer satisfaction** by offering high quality train-paths in the long, medium and short term.

… **improve the use of available rail capacity** supporting the shift to rail in the modal split.

… **improve efficiency and transparency** in the capacity planning and allocation process.

… **ensure high return of investment**.

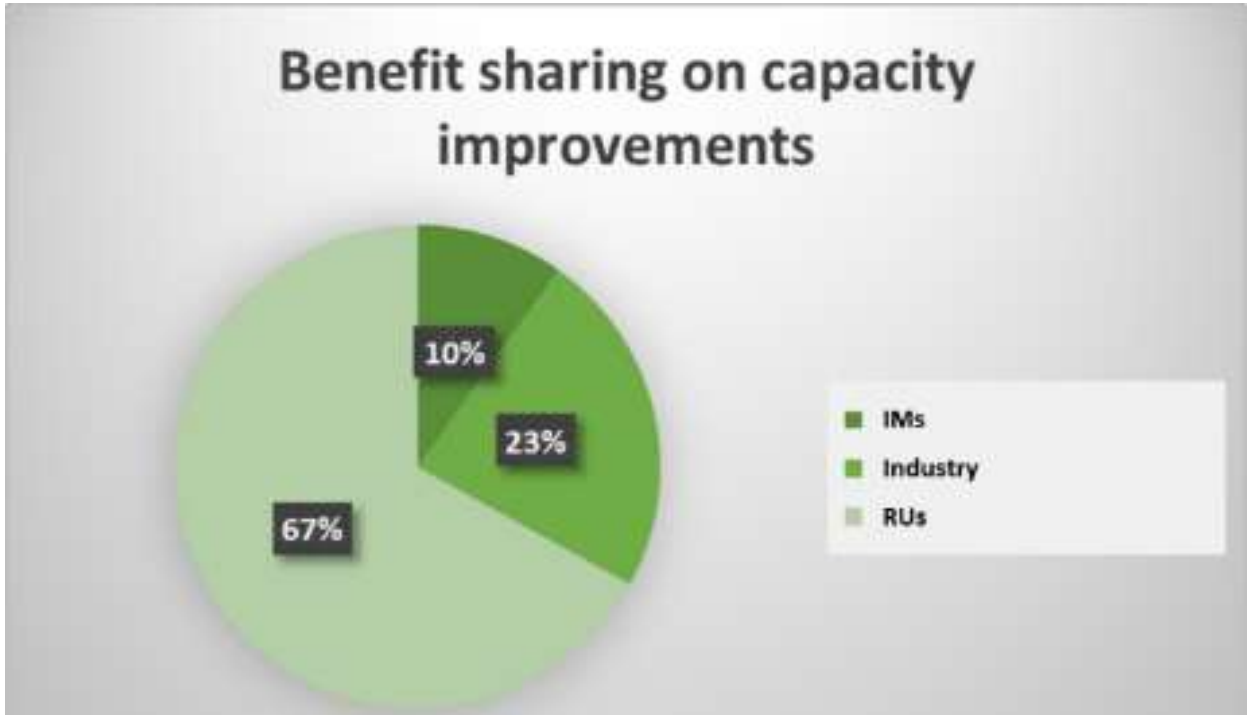
Smart Capacity Management

TimeTable & Capacity Redesign

Kristian Schmidt, Director for Land Transport at DG MOVE:

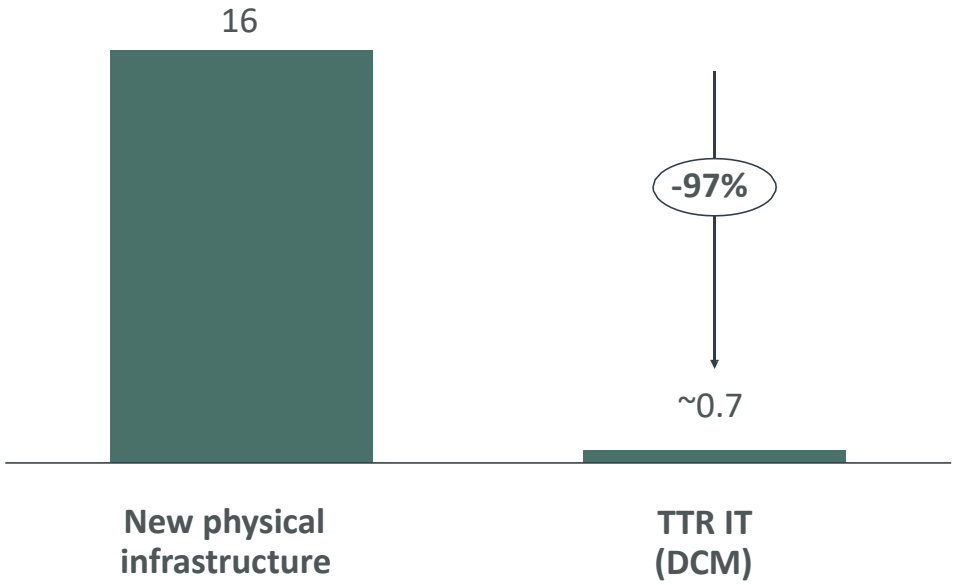
"We want to move from manual, annual and national to digital, flexible and European capacity management."

- **Reshape to how Infrastructure Managers manage capacity**
  - **Driving predictive maintenance**
  - **Creating instant capacity by fast and safe track access**
- **European benefits: 1 B€ investment to 2 B€ benefits annually**
- **Cooperation RailNetEurope and Forum Train Europe**
- **Significantly increase the competitiveness of the railway**



Smart Capacity Management (TTR) AS HIGHLY EFFICIENT INFRASTRUCTURE INVESTMENT

Estimated investment needed for 4% capacity increase on 50% of the network[1]
in billion EUR



Funding

- Investment of approx. 0,7 bn EUR required[2]
- Faster payback due to faster roll out vs new infrastructure
- TTR as capacity expansion is eligible for funding by EC/national governments (case example Germany)[4]
- Green Deal financing targeted by rail sector
- Funds to be released based on deployment commitment

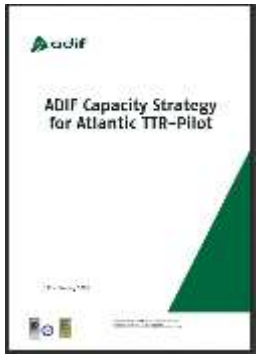
1 Current European Railway net: 270,000 km, cost for additional capacity: 3 Mio. EUR/km
2The study "TTR migration concept and IT landscape" refers to 675 Mio. EUR, including costs for countries, which are not part of the first wave 3 Higher maintenance costs for physical infrastructure not accounted for
4 IMs with little incentive to invest own money

What Changes are Needed?

- Process
- Digitalization
- Commercial Conditions
- Legal Framework

Advance Planning: From Rough to Detailed Information

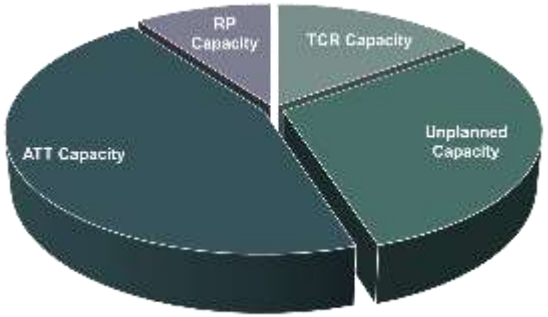
X-60



Capacity Strategy

Describes main principles to be used in the TCR planning and timetabling.

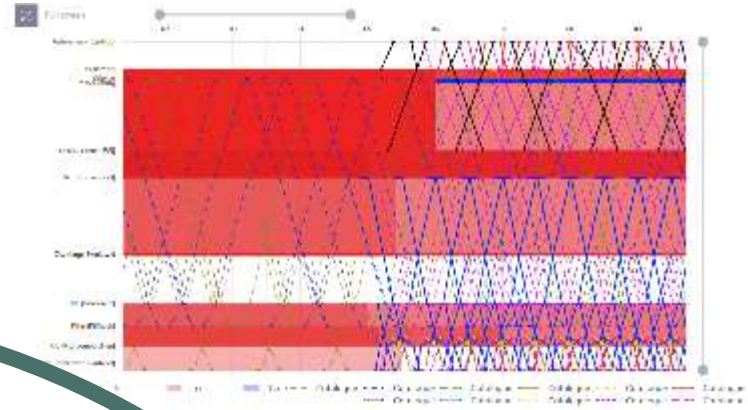
X-36



Capacity Model

Focuses on volumes and shares! Set the volumes of the transport per each market segment and the share for TCRs.

X-18



Capacity Supply

Shows all the objects (TCRs and commercial part) in a 365-days capacity diagram

X-11

Requests

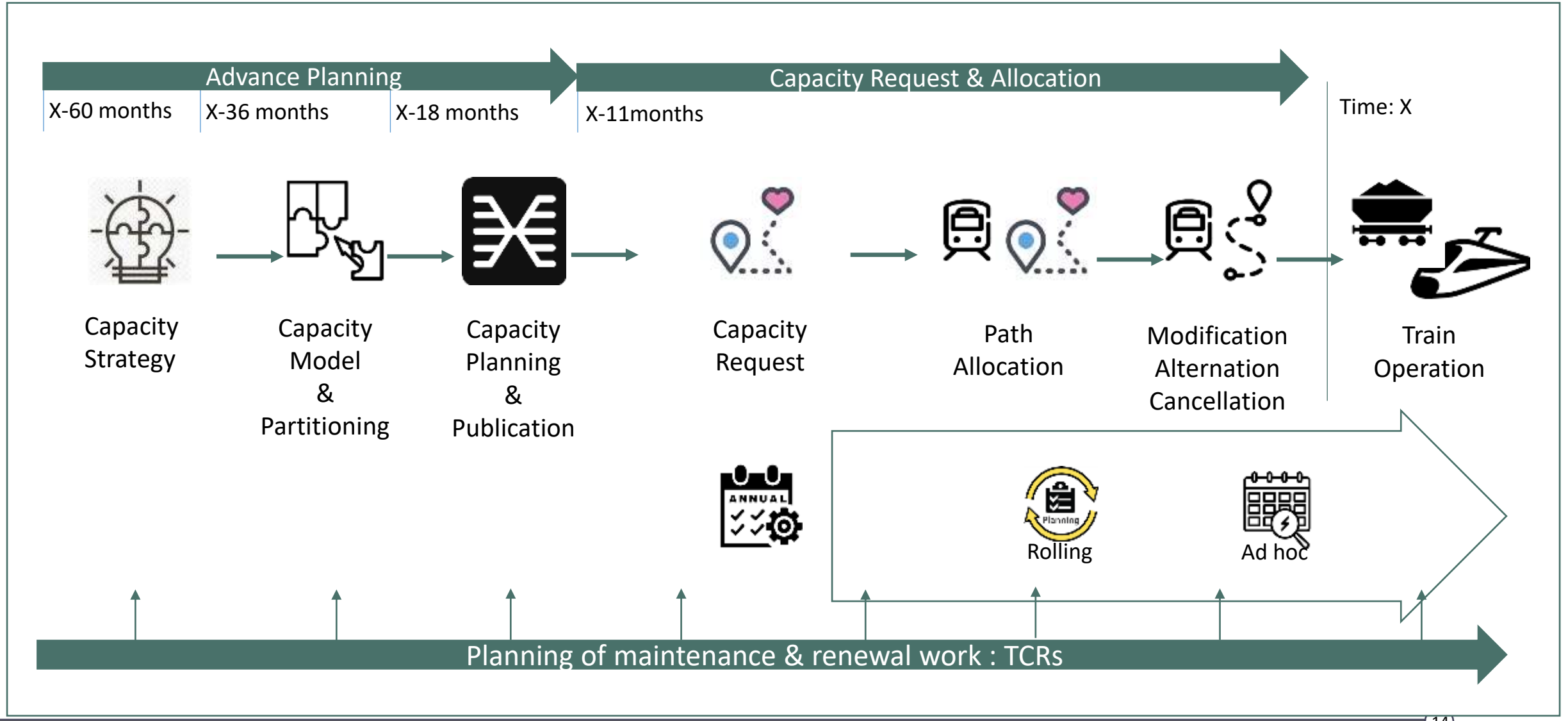
Differentiation of Path Request Types

		When?	Which capacity?
Annual Requests	Annual Request Placed on Time	X-11 – X-8.5	Pre-planned or non-pre-planned capacity
	Late Requests	X-8.5 – X-2	Residual capacity from annual requests (pre-planned and non-pre-planned capacity)
Short-Term Requests	Ad Hoc Request	X-2 – X+12	Residual capacity from annual requests and dedicated safeguarded capacity (Rolling Planning capacity remains safeguarded)
	Short-Term Ad Hoc Request	M-1 – M	Residual capacity from annual and rolling planning (<M-1) requests and dedicated safeguarded capacity
	Path Modification[1] /Alteration[2]	After allocation until X+12	Depending on original request: Residual capacity **OR** alternative rolling planning capacity
Rolling Planning Request		M-4 – M-1	Pre-planned (safeguarded) capacity

X-# = Number of months before the day of timetable change
M-# = Number of months before the first day of operation

1) Requested by applicant
2) Request by IM

What changes are needed?



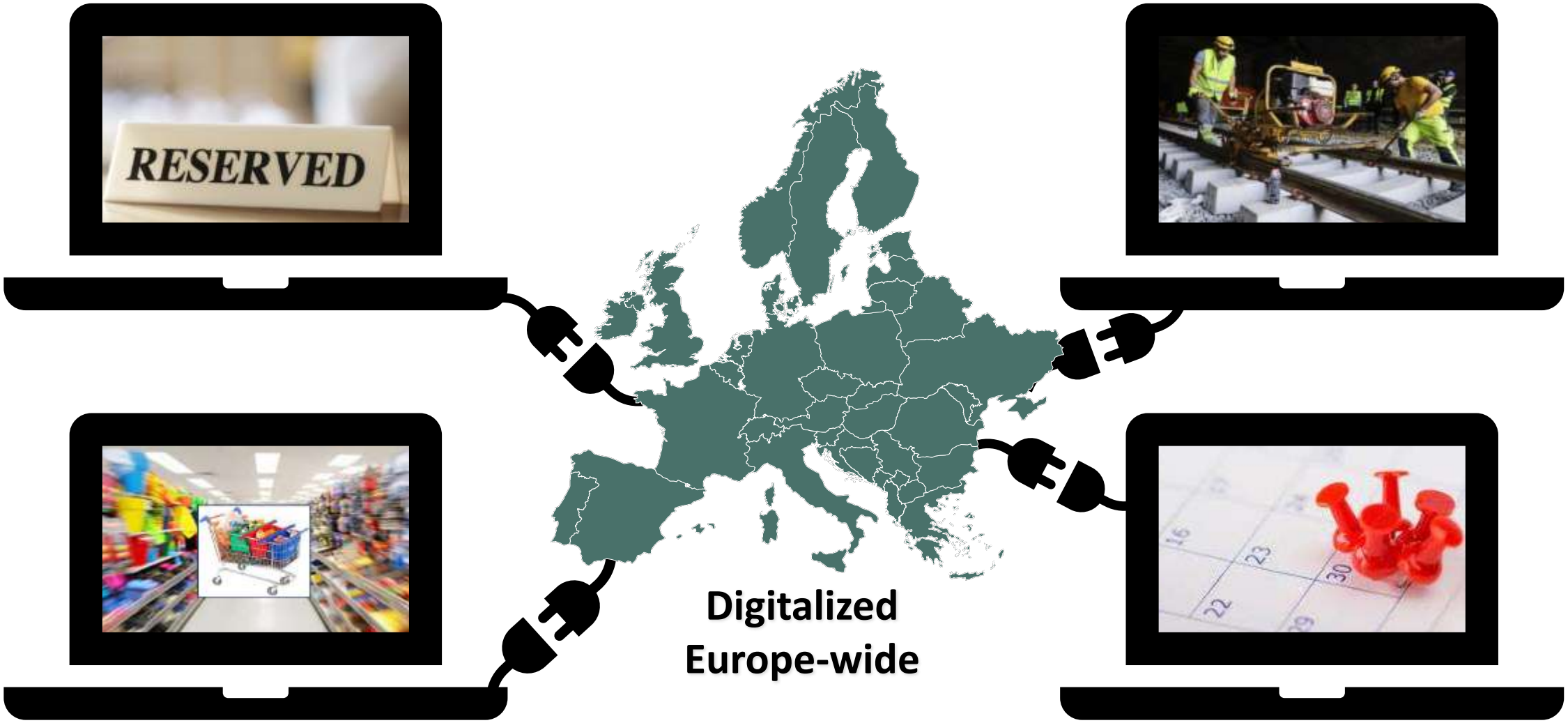
International Alignment of Works

Temporary Capacity Restrictions due to renewal works

Vision for the Sector

Harmonized
Europe-wide

Vision for the Sector



Current Legal Framework

- **Union law**
- **National law (incl. frameworks for capacity allocation)**
- **RB decisions**

Commercial Conditions

Adapt Commercial Conditions in order to enforce capacity-friendly behaviour, particularly regarding the number of:

- **Cancellations by RUs**
- **Modifications by RUs**
- **Non-usage of paths by RUs**
- **Cancellations by IM**
- **Alterations by IM**

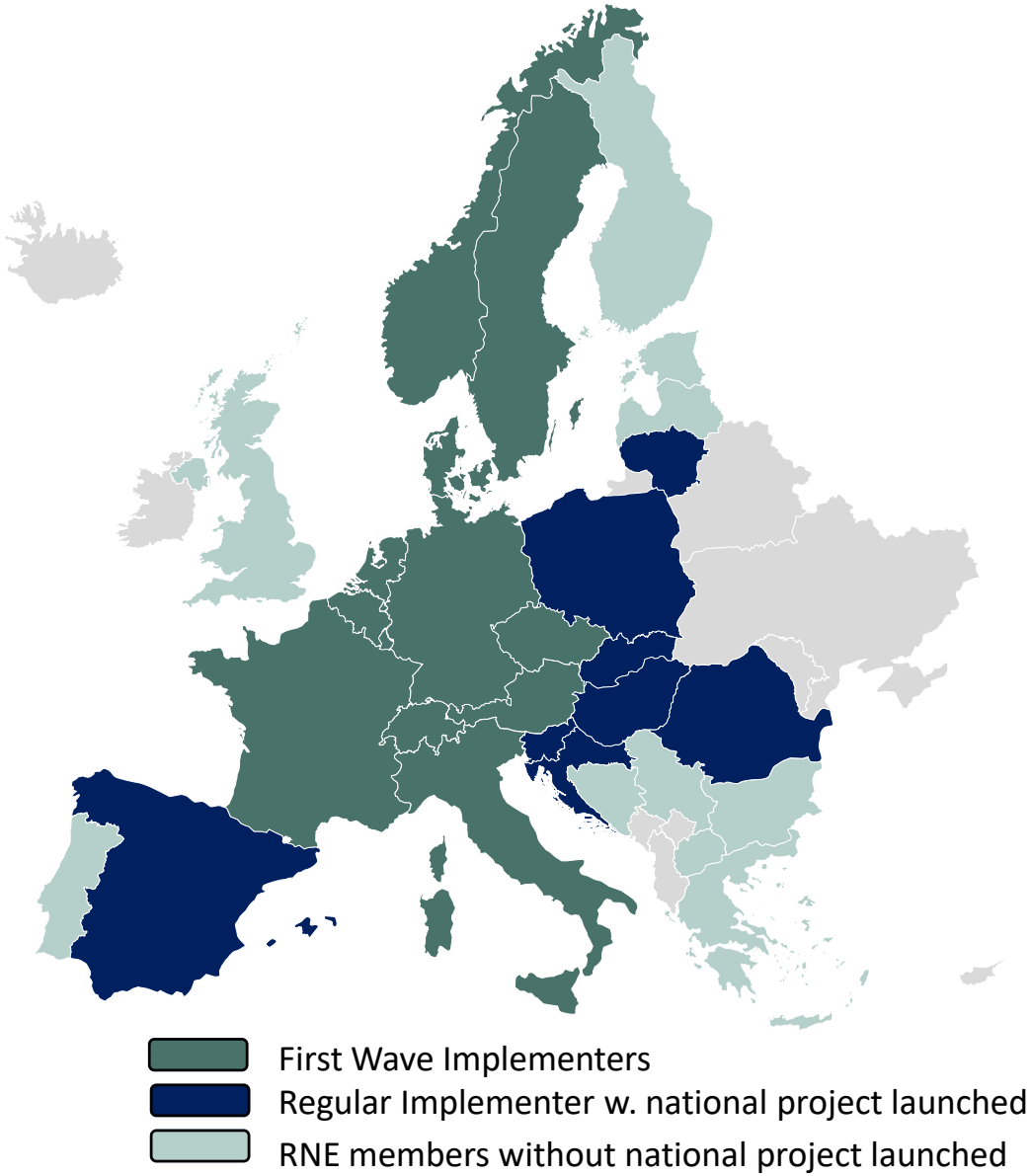
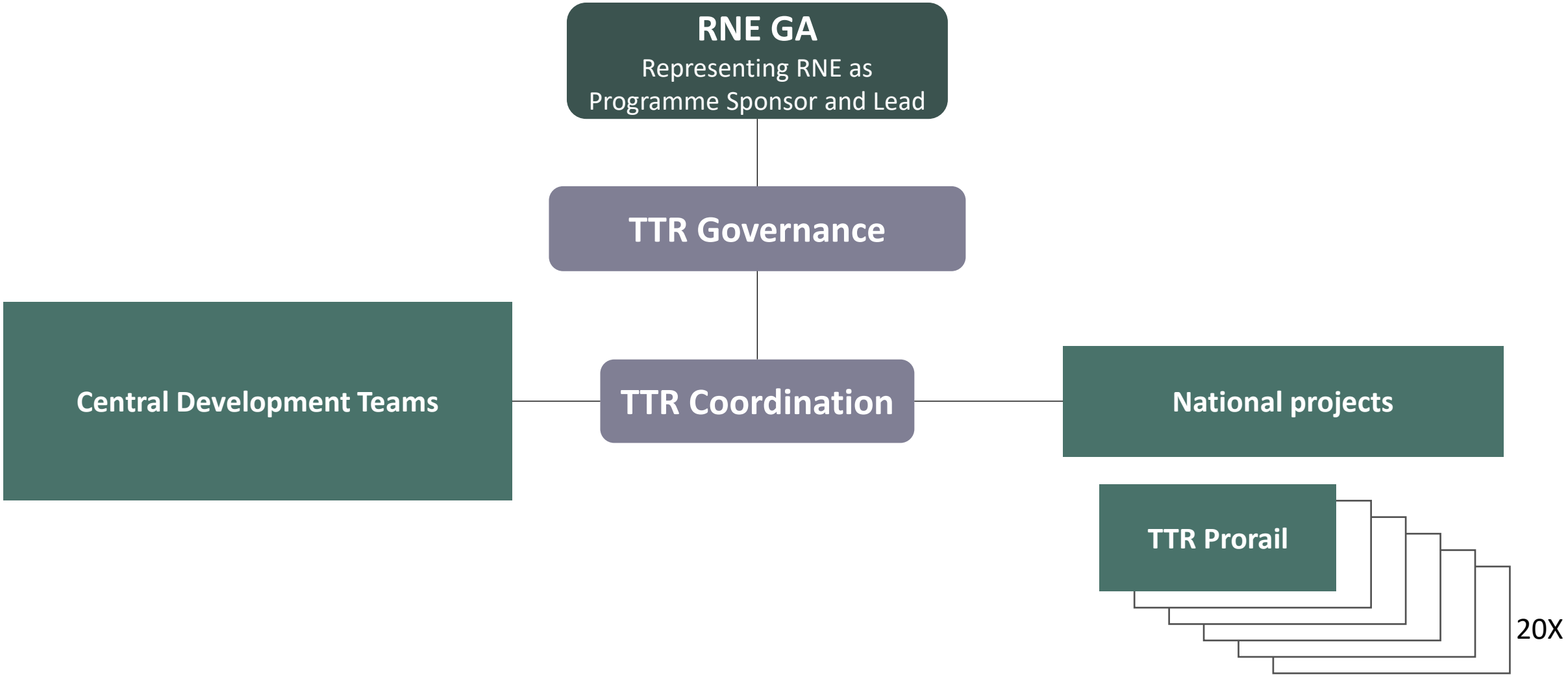
National Projects in EU

After the RNE GA approval in May 2020, several IMs agreed to participate as **first-wave implementers** now with a total of 11 countries:

- Austria
- Belgium
- Czech Republic
- Denmark
- France
- Germany
- Italy
- Luxembourg
- Netherlands
- Norway
- Sweden
- Switzerland

The following countries also conduct **national implementation projects**:

- Croatia
- Hungary
- Lithuania
- Poland
- Romania
- Slovakia
- Slovenia
- Spain



Overall TTR Structure