Forum Train Europe FTE
The European coordination platform of railway undertakings

FTE
FORUM TRAIN EUROPE
PLANNING TRAINS TO CONNECT EUROPE

Redesigning Timetabling (TTR)
for Effective Capacity Management
Kongres Kolejowy: 17 November 2022

Mission

FTE is <u>the</u> European platform for Railway Undertakings
for Capacity Management and Timetabling

What is FTE about?

- Discussion platform for passenger and freight RUs to consolidate the positions towards projects and key stakeholders (e.g. IMs)
- Promotion of European-wide standardisation
- Advisor and co-developer of European capacity management processes (e.g. TTR program) and IT (e.g. PCS, ECTM)
- Timetabling conferences to coordinate international trains
- Networking

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FTE Community

Almost 90 members in all over Europe

Passenger and Freight RUs

incumbents & new entrants

Non-RU capacity applicants

Railway service providers

What is TTR?

The **Timetabling Process Redesign** (TTR) is a programme:

- To upgrade capacity management processes to the 21st Century needs

- Make the Single European Railway Market reality in the Capacity Management

- Digitalise and automatise the processes

MARKET
SHARE
EFFICIENCY

CURRENT
TIMETABLING
PROCESS
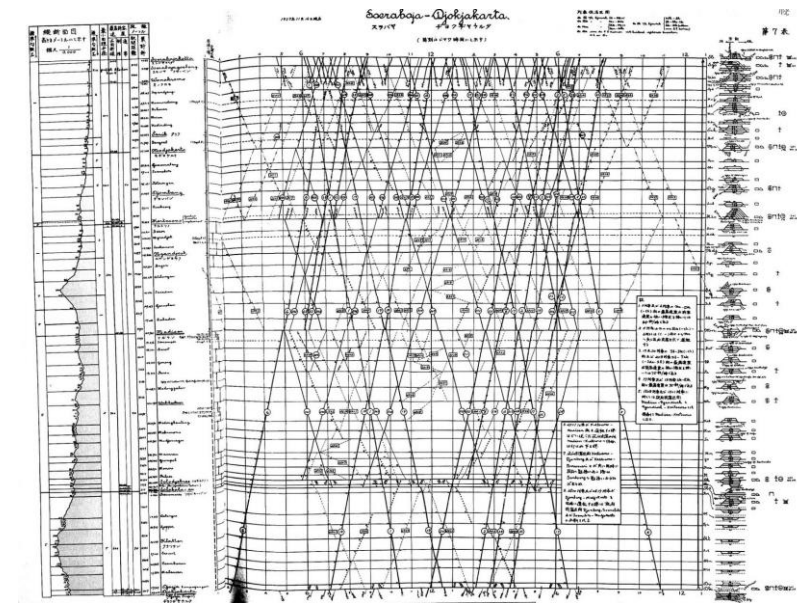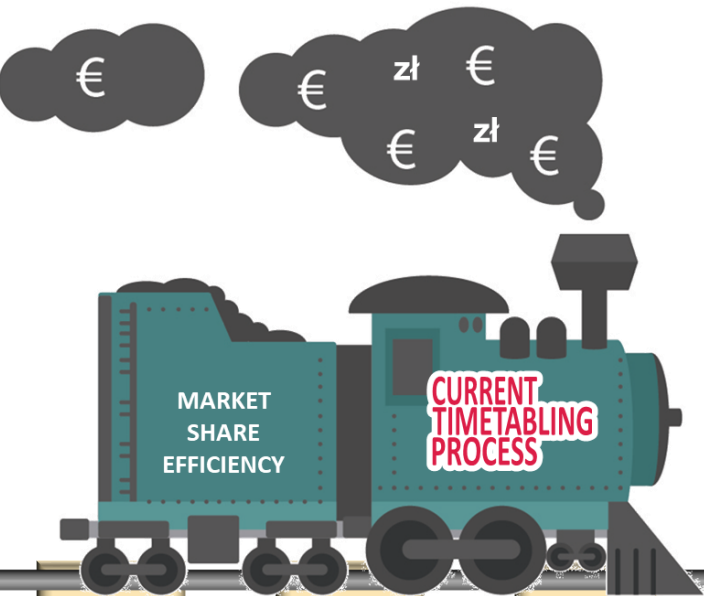
TTR – the sector approach

Joint TTR programme was launched in 2014 by FTE/RNE with the support of ERFA. Today has full attention of the EC, IRG-Rail and other stakeholders.
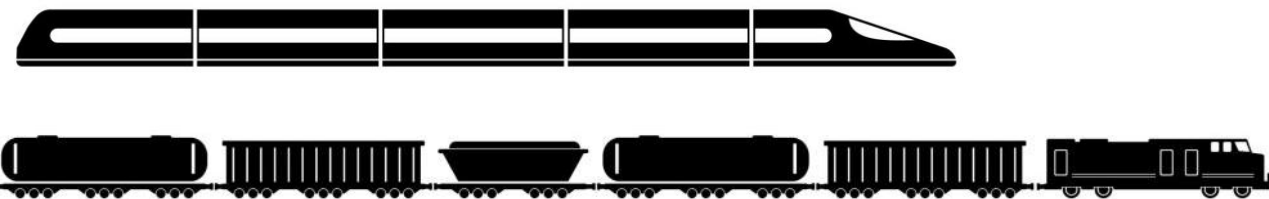
#30by2030

EUROPEAN
GREEN
DEAL

Already in 2014 was late!
Changing system and philosophy takes years...

What should TTR bring to the sector?

(only selected highlights)
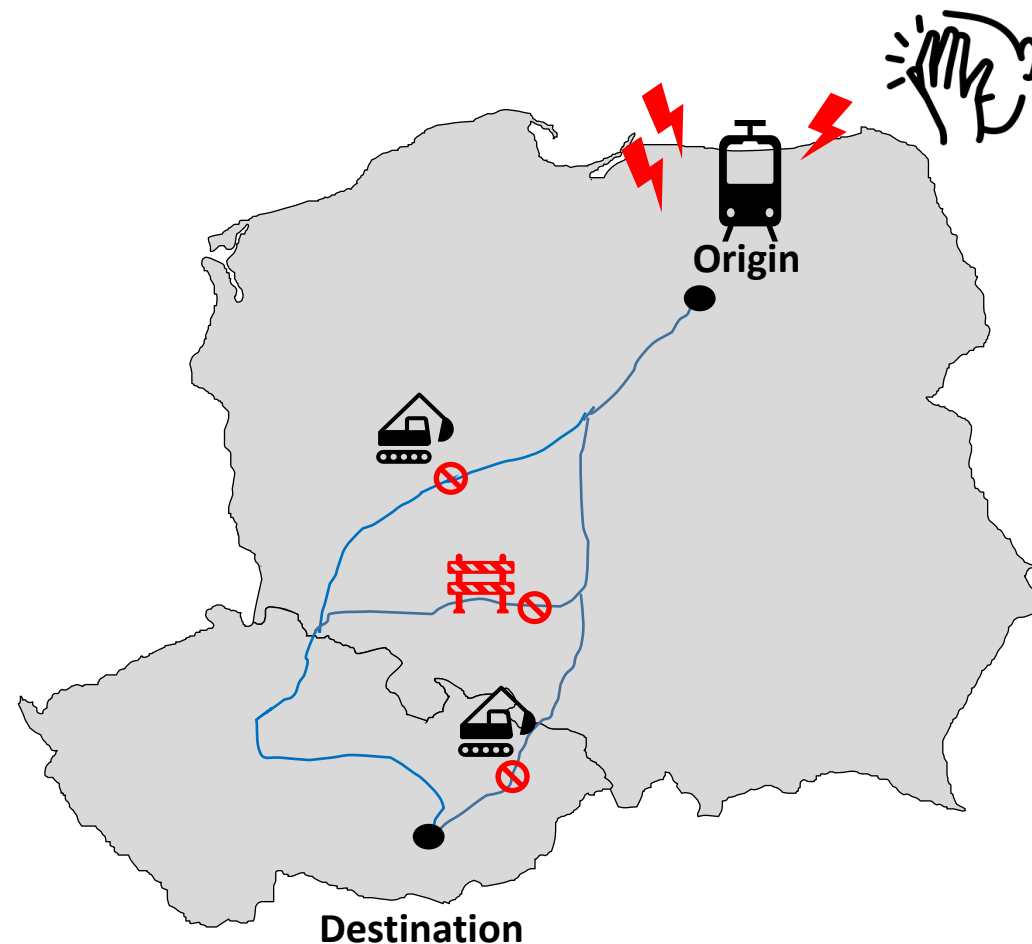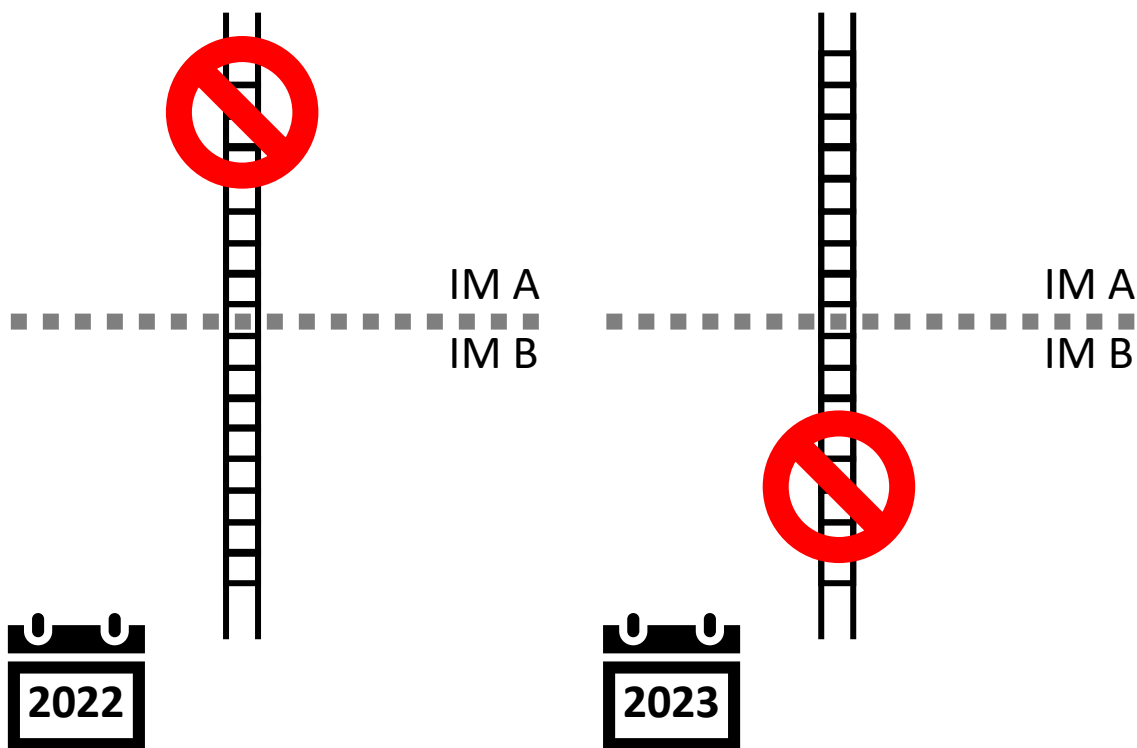
TTR
Timetabling and Capacity Redesign

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NOW

— Temporary Capacity Restrictions (TCRs) not coordinated

① one TCR ends, another begins on the same line

② TCRs at the same time on re-routing lines

IM A
IM B

IM A
IM B

2022

2023

Origin

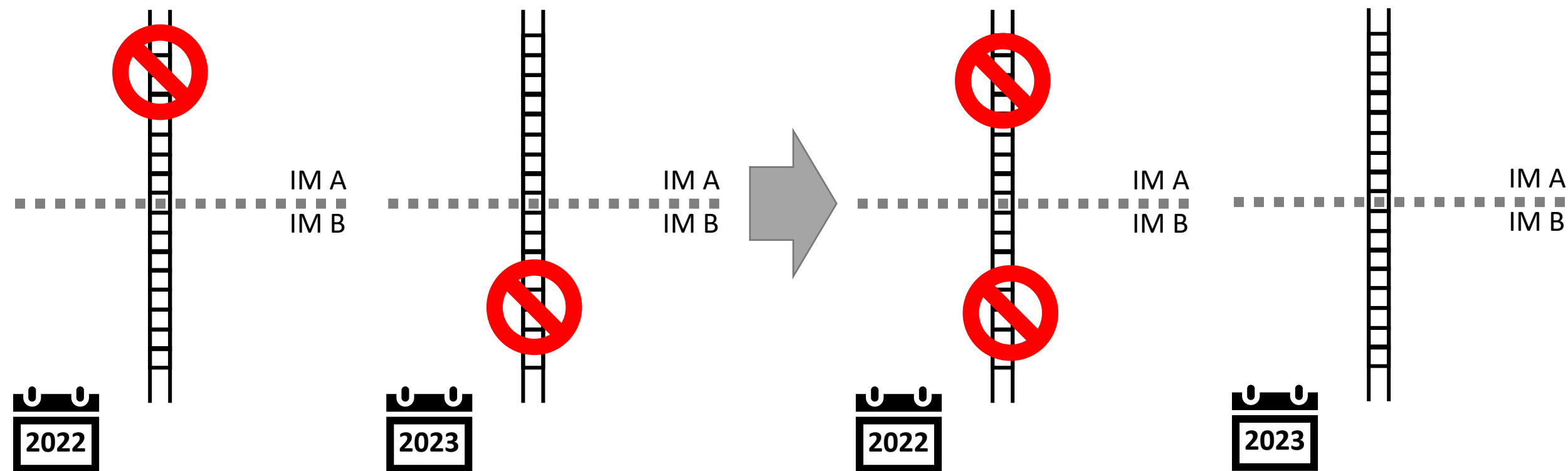Destination
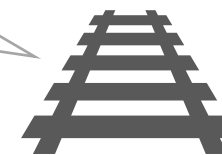
Proper and reliable TCR planning

- Timely TCR planning – coordination nationally and internationally
  → **more capacity on existing infrastructure**

TCR planning

Information about TCRs often too late

TCR information is not user-friendly

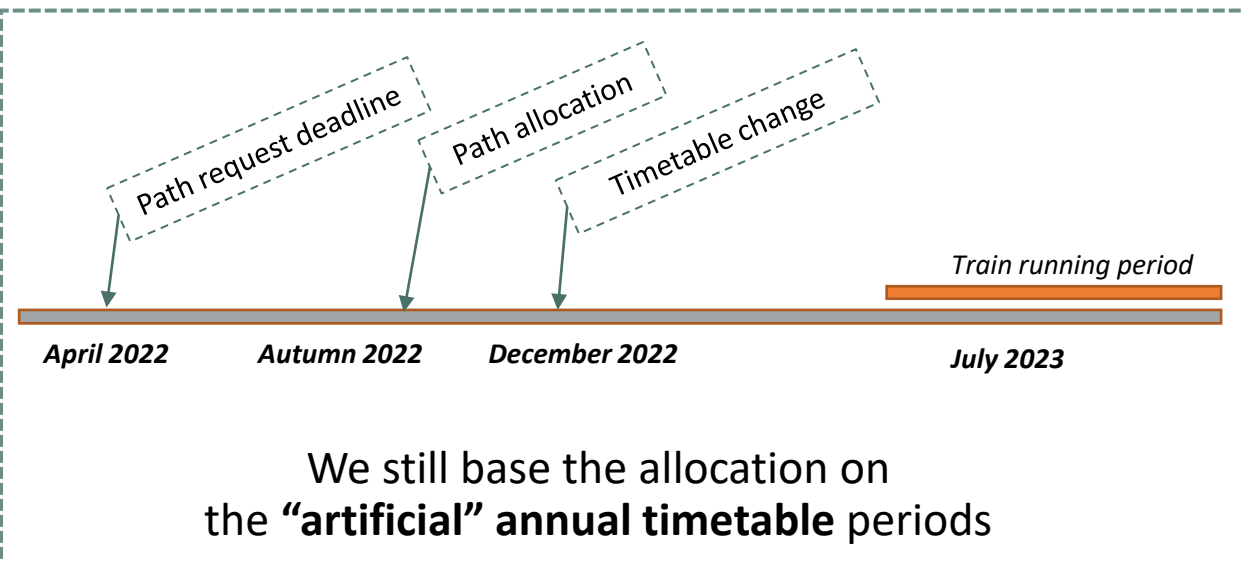Here is the TCR overview for next 3 months!

Excel file...2653 rows with TCRs? And that is only 1 IM

Train cancellations... Longer and more expensive re-routings...

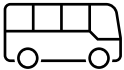| OKRESOWY HARMONOGRAM ZAMKNIĘĆ TOROWYCH W OKRESIE 13.03.2022 - 11.06.2022																	
Nr linii	IZ	Całodobowe	Lp.	Szlak lub stacja	Nr toru	w godz.		Rodzaj robót	Sposób prowadzenia ruchu	Ograniczenie obok miejsca robót		Termin robót		Zlecający - Wykonawca/	Nr IDD	Nr wg. KPK	ID EPM - SKRJ
						od	do			V = km/h	w km	od	do	Kontowanie			
353	13	24	2781	Turzno - Kowalewo Pomorskie	1	00:01	23:59	Ograniczenie prędkości;na przejeździe;kolejowo-drogowym w km;156,914 Regulamin Tymczasowy Nr IZ-703-154/2020 faza VI	Ograniczenie Powiązane	20	156.909 - 156.919	2022-03-13	2022-06-11	IRERT5 (Zachodni)	5	1.068	01212|ot|161
353	13	24	2782	Turzno - Kowalewo Pomorskie	1	00:01	23:59	Ograniczenie prędkości w torze nr ;obok miejsca robót. Regulamin Tymczasowy Nr IZ-703-154/2020 faza VI	Ograniczenie Powiązane	50	156.66 - 157.49	2022-03-13	2022-06-11	IRERT5 (Zachodni)	5	1.068	01212|ot|162
353	13	24	2783	Turzno - Kowalewo Pomorskie	1	00:01	23:59	Ograniczenie prędkości;na przejeździe;kolejowo-drogowym w km;155,064 Regulamin Tymczasowy Nr IZ-703-154/2020 faza VI	Ograniczenie Powiązane	20	155.061 - 155.071	2022-03-13	2022-06-11	IRERT5 (Zachodni)	5	1.068	01212|ot|164
353	13	24	2784	Turzno - Kowalewo Pomorskie	1	00:01	23:59	Ograniczenie prędkości na przejeździe kolejowo-drogowym od km 158,561 do km 158,571 w pobliżu miejsca robót dla p.o. Rychnowo Wielkie. Regulamin Tymczasowy Nr IZ-703-154/2020 faza VI	Ograniczenie Powiązane	20	158.561 - 158.571	2022-03-13	2022-06-11	IRERT5 (Zachodni)	5	1.068	01212|ot|163
353	13		2785	Turzno - Kowalewo Pom.	2	7,00	10,00	DPUS w km 160,700-161,140 (440 m)	Torem nr 1	50	160,700-161,140	05.04.2022	dzień	PNI W-wa	5		6444
353	13		2786	Wąbrzeźno - Książki	2	22,00	5,00	DPUS w km 177,200-178,200 (1000 m), z wyłączeniem napęcia	Torem nr 1	50 20	177,200-178,200 SSP 176,397; 177,283; 177,843; 179,031	04.04.202	dzień	PNI W-wa	5		7436
353	13		2787	Nieszawka - Toruń Towarowy	304	23,00	4,00	Przegląd sieci sekcja L-40	Torem nr 303			28/29.03.2022	noc	IZ Bydgoszcz EZSZ Toruń	5		6455
353	13		2788	Nieszawka - Toruń Towarowy (+202, 102)	303,304	23,30	4,30	Przegląd sieci sekcja L-63, 64)	Torem nr 301 i 302			29/30.03 30/31.03.2022	noc	IZ Bydgoszcz EZSZ Toruń	5		6465
353	13		2789	Jabłonowo Pomorskie	1	7:00	11:00	DPUS w km 193,450-194,200 (750 m)	czynne krawędzie peronowe przy torach 2,4,6,8,mozliwoć krzyzowania	50	193,450-194,200	30.03.2022	dzień	PNI W-wa	5		6500
353	13		2790	Jabłonowo Pomorskie	2	11:00	15:00	DPUS w km 193,550-194,350 (800 m)	czynne krawędzie peronowe przy torach 1,4,6,8,mozliwoć krzyzowania	50	193,550-194,350	30.03.2022	dzień	PNI W-wa	5		6500

Capacity allocation: behind the market needs

Path request deadline

Path allocation

Timetable change

Train running period

April 2022   Autumn 2022   December 2022   July 2023

We still base the allocation on
the **"artificial" annual timetable** periods

The allocation for passenger RUs is too late!

Current start of ticket sales

🚆	1-2 months in advance
🚌	4-5 months in advance
✈	6-11 months in advance

**The allocation for freight RUs
is too early and not flexible**

Better to know
8-15 months
ahead...

Just tell me
the day before
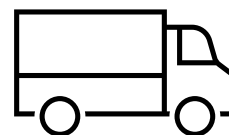
Earlier ticket sales

Annual timetable allocation will be earlier than today:
→ **Earlier ticket sales** for passengers (tickets for Christmas already in summer)

Earlier and more stable TCR planning

Stabilisation of timetables **several month prior the train departure:**

→ **Earlier ticket sales** for passengers

→ **Higher passenger satisfaction** (no changes in timetables after ticket is sold)

→ Easier shift and loco planning for both passenger and freight RUs

→ **Higher predictability and better service** for rail freight customers

Departure: in 130 days
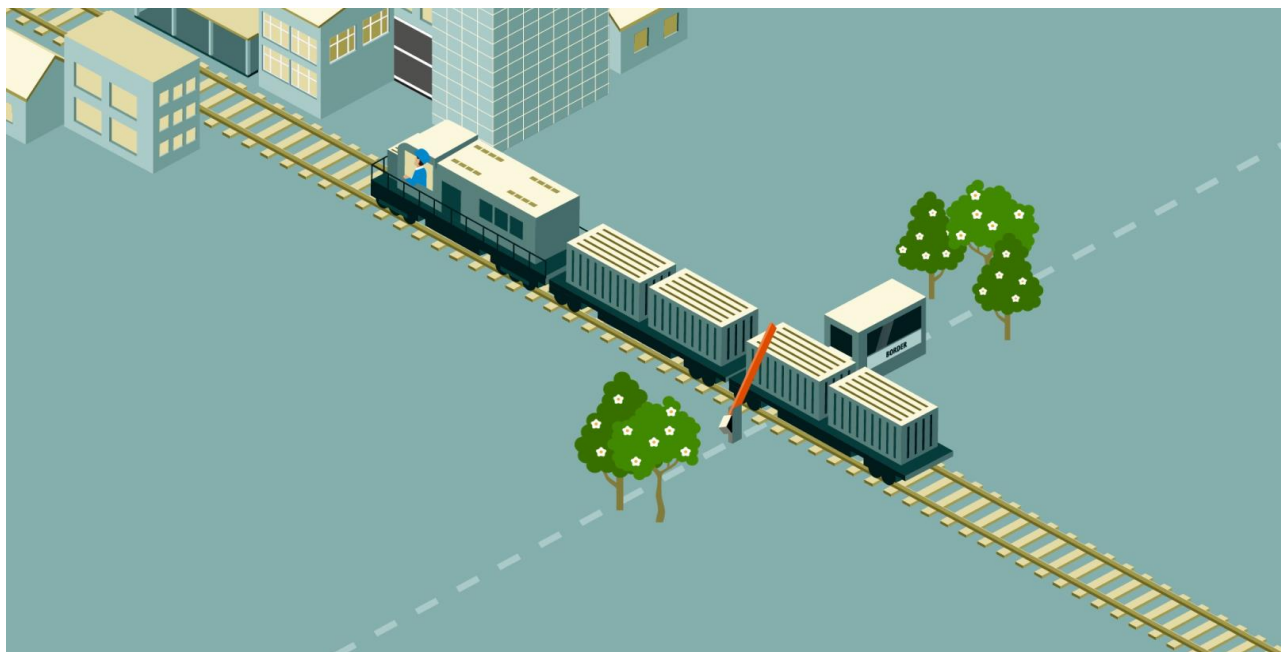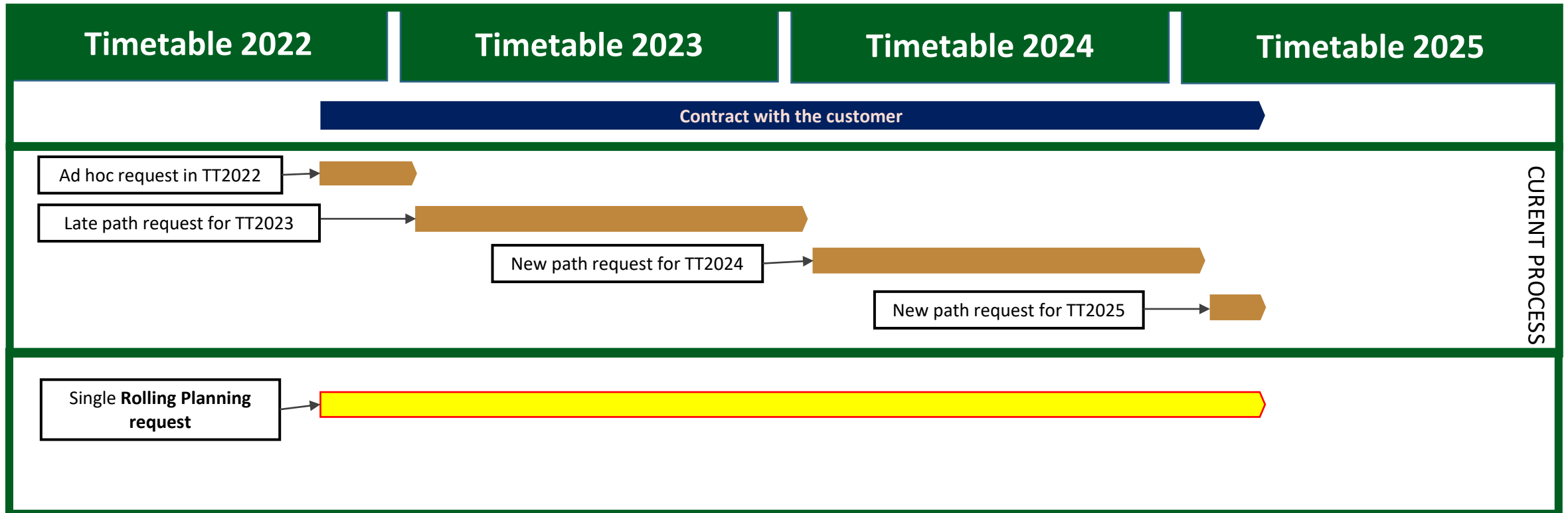
New product: Rolling Planning

- Freight RUs get contracts every month – freight **cannot wait 8-15 months** for good capacity.
- Need for **good safeguarded capacity*** from Annual Timetable, ready for requests when the freight RU already knows the contract details.

→ **Competitive capacity at short notice**
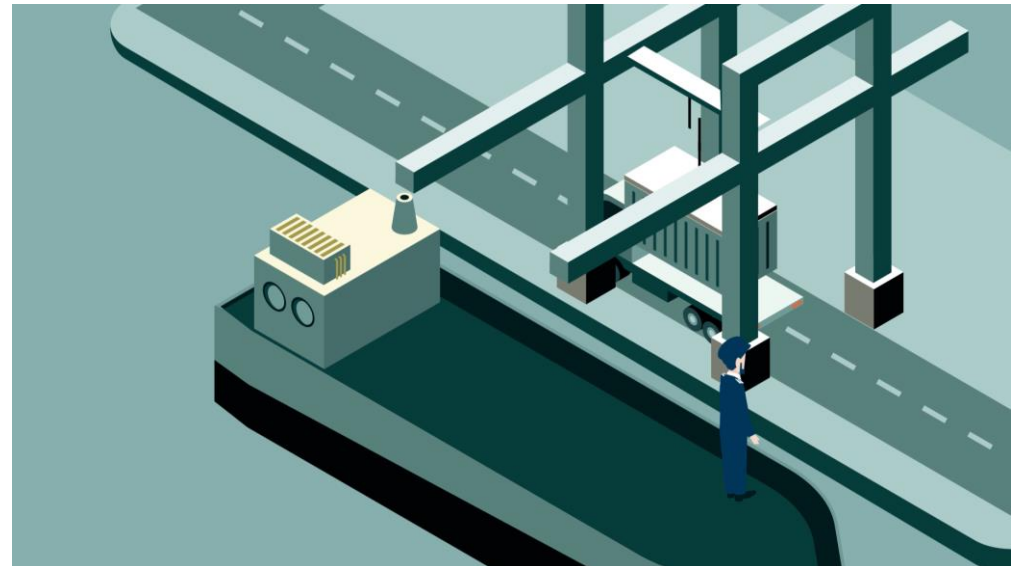
* Not only residual capacity after TCRs for ad hoc.

New product: Rolling Planning

- Freight contracts (compared to passenger) do not correspond to annual timetable period
→ **Single request with multi-annual validity** for the whole transport contract period.
→ No need to request several times in several TT-periods.

Timetable 2022	Timetable 2023	Timetable 2024	Timetable 2025

Contract with the customer

Ad hoc request in TT2022

Late path request for TT2023

New path request for TT2024

New path request for TT2025

CURENT PROCESS

Single **Rolling Planning** request

Critical problem: National thinking

Often good intentions
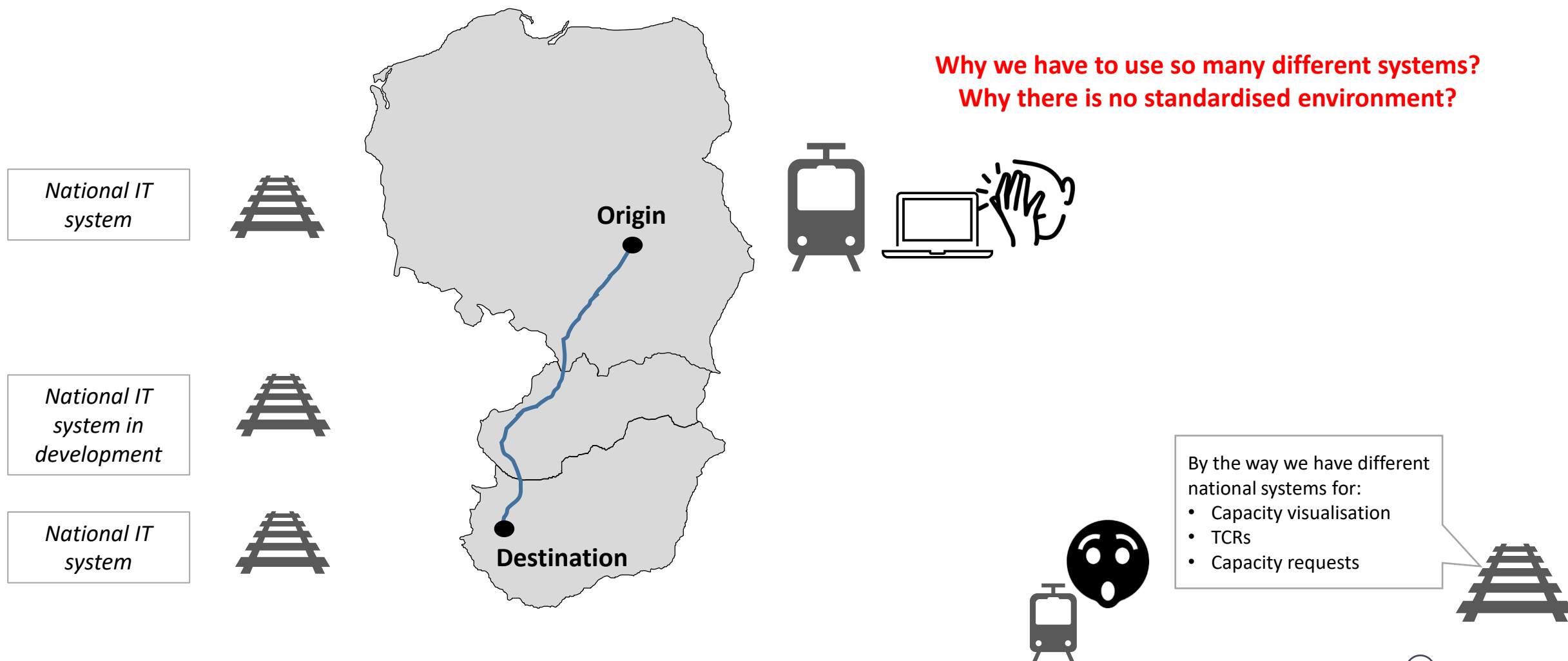
Negative impact

National thinking

~~Network thinking~~

Harmonisation of national processes

Fragmented national capacity management processes will unify. Easier access to capacity, easier cross-border operation: **all countries = same rules → less workload, less bureaucracy**


Single European Railway Area

National thinking (process and IT)

Why we have to use so many different systems?
Why there is no standardised environment?

National IT system

National IT system in development

National IT system

Origin

Destination

By the way we have different national systems for:
• Capacity visualisation
• TCRs
• Capacity requests

Digitalisation

- All **systems connected to European IT Landscape**
- Requesting paths for all countries via common standardised TAF/TAP TSI ecosystem*
- Visualisation of capacity and TCR impact (stop to extensive excel files)
- **Automation and optimalisation** of processes:
  → Better quality of timetables
  → Lower workload – less costs

*with the same TAF/TAP TSI interpretation
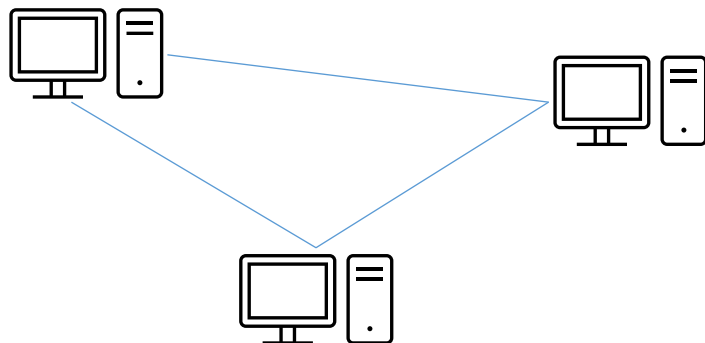
Summary and TTR implementation
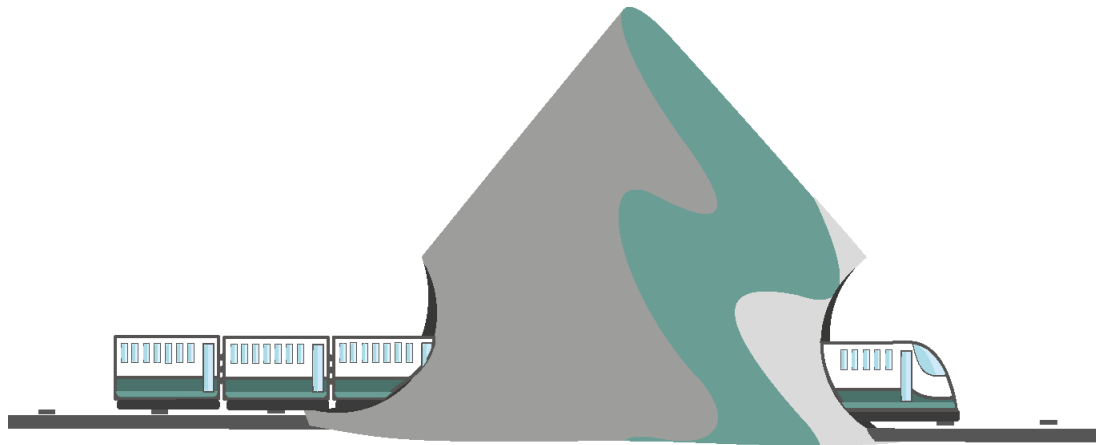
# Overview: Benefits, Challenges, Threats

Benefits

- **Conceptual and long-term planning**
  - → stable and predicative business
  - → less replanning, lower costs
- **Better utilisation of existing capacity**
  - more capacity, shorter travel times
  - → Higher competitiveness for rail,
  - → New business opportunities
- **Transparent environment**
- **Process harmonisation** in whole Europe
  - → easier operation internationally → lower costs
- **Digitalisation and automation**
  - → lower costs

Challenges

- Change Management → organisations and thinking must change (both IMs and RUs)
- IT systems might need investments

Threats

- Countries will do own "national" TTR interpretation
- IMs implement in different speed
- RUs and sector not ready on time
- Low awareness of TTR and disinformation
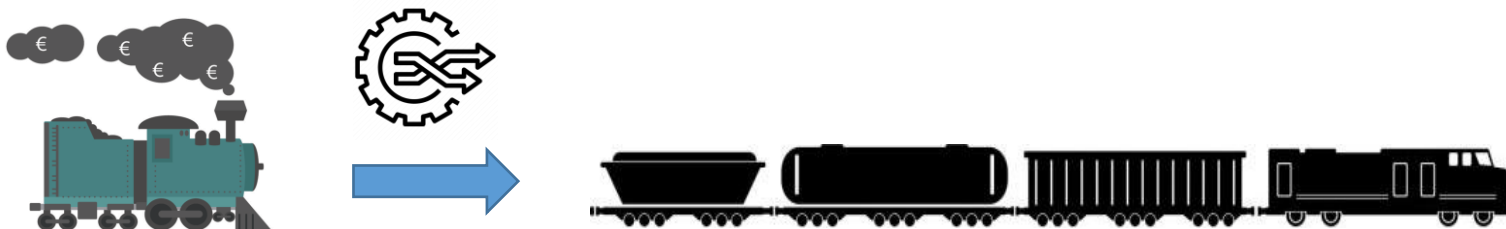
Low awareness of TTR

- Low awareness → disinformation
- Examples of repetitive <u>mistakes</u>:

⊗ *TTR is only about international timetabling*

⊗ *TTR is not possible when there are many infrastructure upgrades (TCRs)*

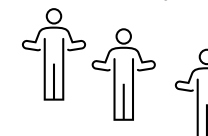⊗ *In TTR, RUs will have to request capacity 2-3 years ahead ...flexibility will be lower...*

~~ad hoc~~

⊗ *TTR is only for western EU countries*

We are special

I am different

We are special

TTR implementation

The European plan is to implement TTR for 2025
(with first deliverables already in 2022)

Some IMs are progressing (also in CEE region)

The European Commission:
• started the process of EU law revision to support TTR
• made available funding for implementation

**We need you on board! And now!
It is an opportunity!
Together IMs-RUs can make future better!**

IMs implementing TTR and having national project manager

Where to get more information about TTR?

- TTR Article in Polish in Miesięcznik Rynek Kolejowy (10/2022)
- TTR video in English / Polish: Forum Train Europe YouTube
- TTR Brochure in English: https://ttr.rne.eu/ttr-media-2/
- FTE website: https://www.forumtraineurope.eu/services/ttr/
- FTE LinkedIn: https://www.linkedin.com/company/forum-train-europe-fte

Thank you for attention

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