FLORENCE SCHOOL OF REGULATION

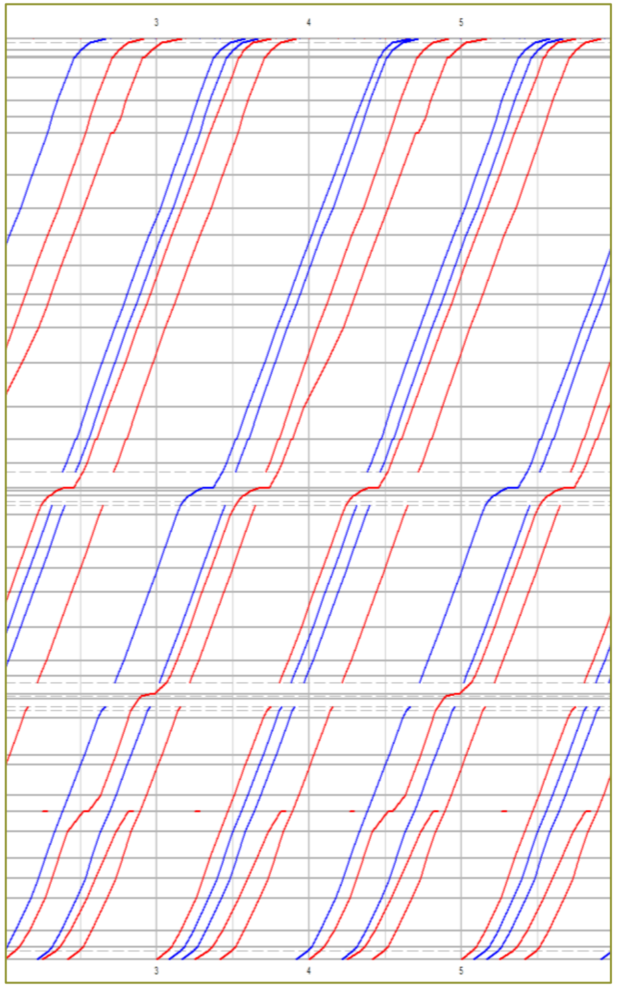
ROBERT SCHUMAN CENTRE

ACTIVE INFRASTRUCTURE MANAGEMENT

THE CASE OF SPAIN…AND THE EU

Juan Montero

LIBERALISATION IN SPAIN



Spain: Active infrastructure management (1)

- **ADIF consults with stakeholders to identify business models and capacity needs.**
- **ADIF <u>optimizes timetable</u>** (routes, stations, traveling times).
- **Framework agreements**
  - All framework agreements at the same time.
  - All services to start at the same time (approx.)

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Spain: Active infrastructure management (2)

- **ADIF designs THREE asymmetric <u>framework agreements:</u>**
  - They include the all the main corridors, NOT CORRIDOR BY CORRIDOR.
  - 70% capacity reserved in the framework agreements.
  - They have different sizes in terms of tracks (60%, 30%, 10%)
  - 10-year duration (also for RENFE).
- **ADIF “guiding mind”, CNMC close supervision.**

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COMPETITIVE ALLOCATION OF CAPACITY

- Six railway undertakings filed capacity requests for Framework Agreements.
- No capacity available for all 6, so competitive process triggered.
- ALLOCATION OF FA AS IN RECAST DIRECTIVE FOR CONGESTION.
- Allocation criterion: most intensive use of the infrastructure:

	No. of paths requested	% of the total no. of available paths in the package
PACKAGE A		
Renfe	632,305	86%
Globalvia	43,088	6%
PACKAGE B		
Ilsa-Trenitalia (Iryo)	245,513	70%
Eco Rail	228,451	65%
SNCF (Ouigo)	189,978	54%
Motion Rail (Talgo)	150,595	43%
Globalvia	43,088	12%
PACKAGE C		
SNCF (Ouigo)	109,590	100%
Eco Rail	98,100	89%
Motion Rail (Talgo)	94,495	86%

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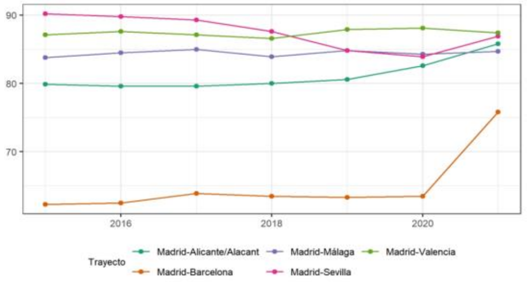
Spain: Active infrastructure management

Modal shift air to rail



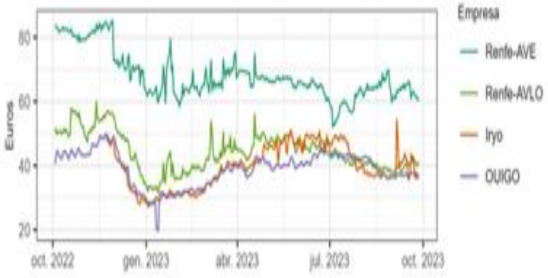
Source CNMC (2022), Informe Anual del Sector ferroviario 2021

Market shares

Madrid-Barcelona	
Renfe	58%
Iryo	22.4%
Ouigo	19.7%

Madrid-Valencia	
Renfe	49.6%
Iryo	28.5%
Ouigo	21.9%

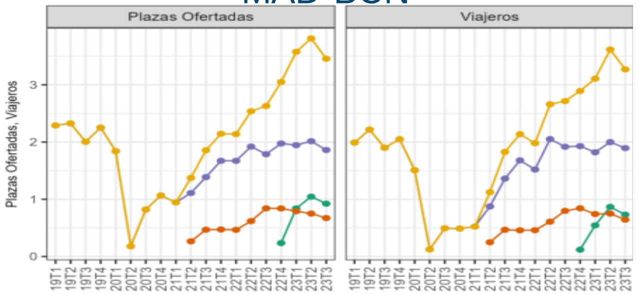
Prices



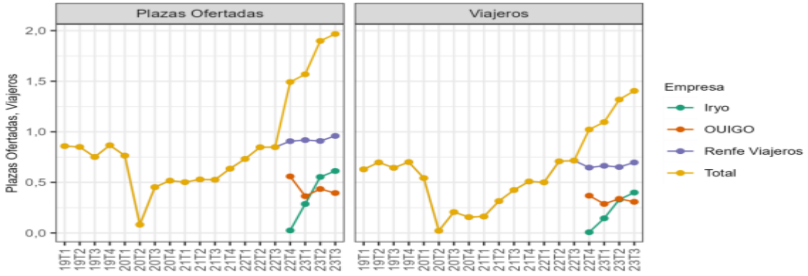
Source CNMC (2023), Informe Trimestral 2023 3T.

Passengers

MAD-BCN



MAD-VLC



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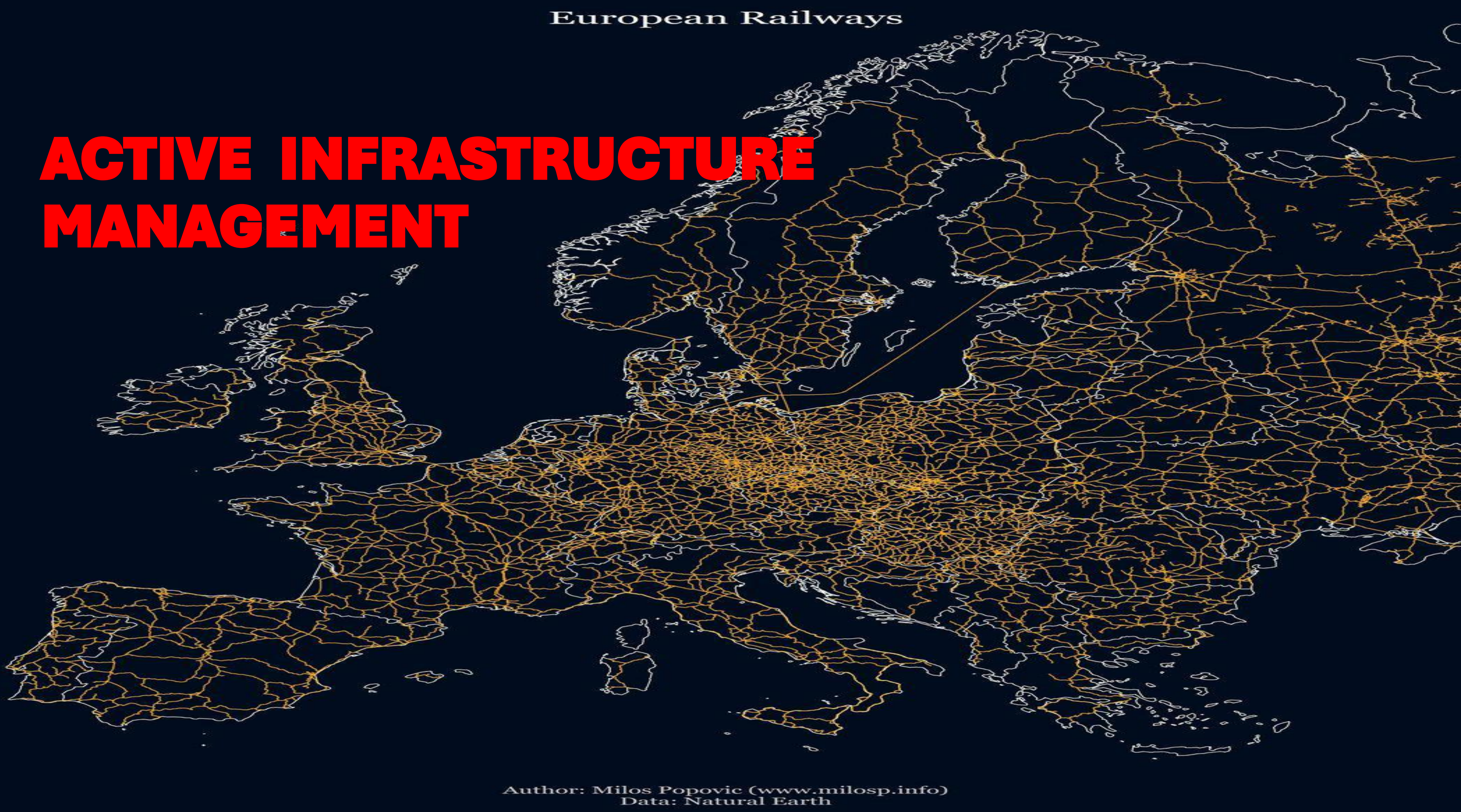
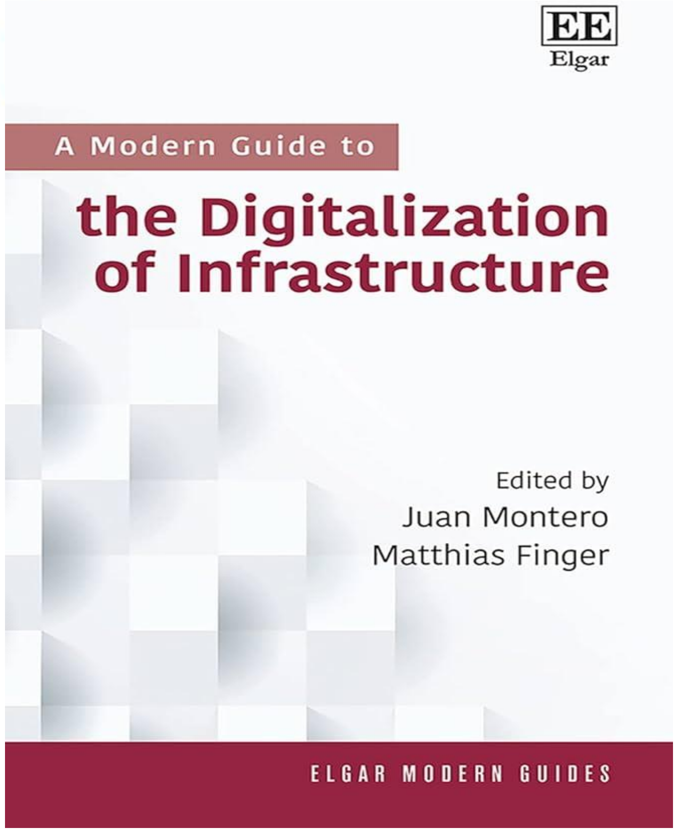
ACTIVE INFRASTRUCTURE MANAGEMENT





DIGITALIZATION…

- More data…
- More computer power (algorithms, AI, etc.)…
- More active management of capacity (demand)
- More active management of capacity (supply)
- Better matching of supply and demand, more efficiency.
- It's happening across all infrastructure-based industries

LEADS TO ACTIVE INFRASTRUCTURE MANAGEMENT

"Digitalizing infrastructure: active management for smarter networks", J Montero, M Finger, A Modern Guide to the Digitalization of Infrastructure, Elgar, 2021, 1-42

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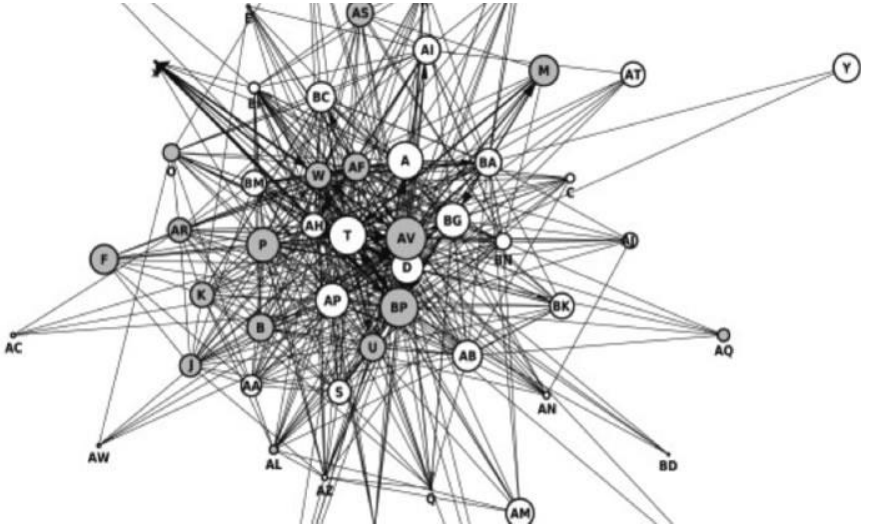
FROM FRAGMENTATION...

- EU introduced horizontal fragmentation (competition).
- EU introduced vertical separation/fragmentation.
- Service facility managers, manufacturers, digital platforms
- Regulatory bodies, Safety agencies.



...TO NETWORK INTEGRATORS

- Airport Operation Control Centers.
- Reinforcement of network managers, as EUROCONTROL in ATM.
- Digital platforms coordinate fragmented ecosystems

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IN RAILWAYS…

- EU fragmented the market: vertical separation & competition
- But there is an organic tendency to integrate the system.
- More pre-planning… (TCRs, stations in Italy).
- Framework agreements.
- Timetable redesign.
- Spanish liberalization strategy

INFRASTRUCTURE MANAGERS AS "GUIDING MINDS"

UIC/FSR, *Study on the regulatory framework*, October 2022

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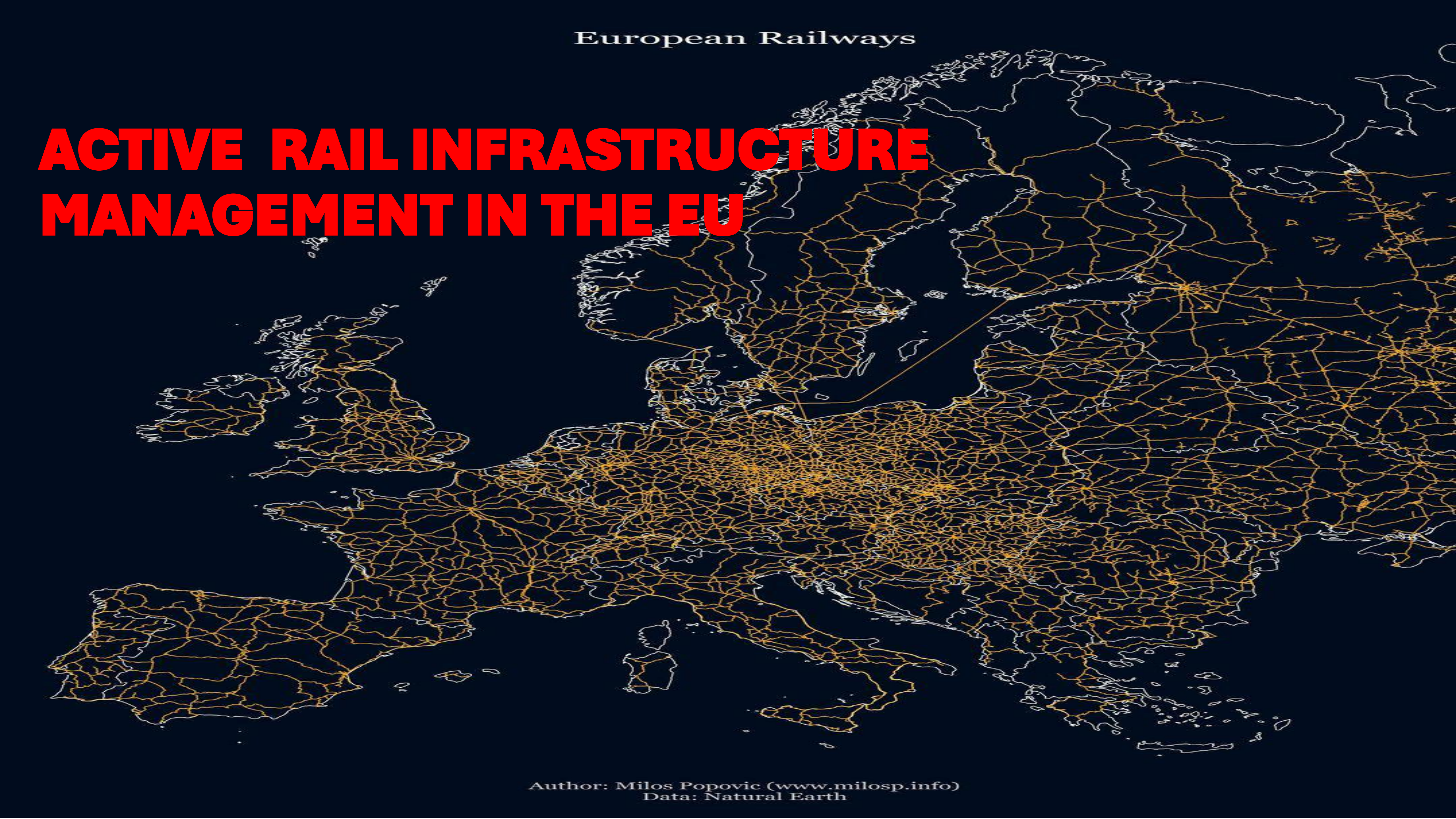
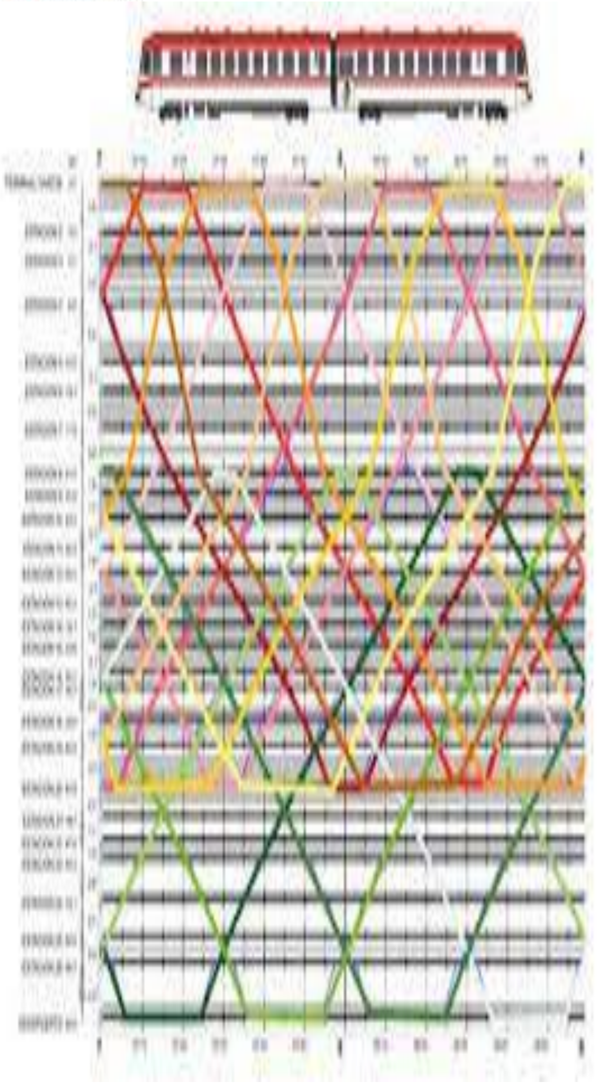
ACTIVE RAIL INFRASTRUCTURE MANAGEMENT IN THE EU



EU NETWORK

- **From national to EU networks.**
- **It is common to start with “regional approaches”.**
  - Functional Airspace Blocks (FABs) in ATM.
  - Power regions in electricity.
- **In railways: Rail Freight Corridors.**
- **Supposed to be a temporary solution.**



New Capacity Regulation

- Strategic planning for the allocation of capacity, five years in advance, and then a cycle.
- Supports timetable redesign.
- Supports active infrastructure management.
- Supports a more integrated system commercial/PSO services/freight.

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A CYCLE FOR CAPACITY MANAGEMENT

(1) New "strategic capacity planning" (5 years in advance):

- Capacity strategy (X - 60/36 months).
- Capacity model (X – 36/18 months).
- Capacity supply plan (X – 18/11 months).
  - Long-distance/PSO/freight

Consultation

(2) Annual allocation of capacity:

- Capacity supply plan (X – 11 months).
- Requests (X – 8.5 months).
  Conversion of framework agreements into paths.
- Draft working timetable (X – 6.5 months)
- Final working timetable (X- 5.25 months)

Socioeconomic criteria

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A CYCLE FOR CAPACITY MANAGEMENT

(3) Tactical Management:

Rolling planning process:

- Requests: 4-1 months before train run
- Allocation for up to 36 months

Ad hoc: 1 day before train run (5 for multi-network).

(4) Changes (with compensation) and rescheduling of allocated capacity

Florence School of Regulation Policy Brief:
"New rules for better rail capacity managment

THE EU LAYER

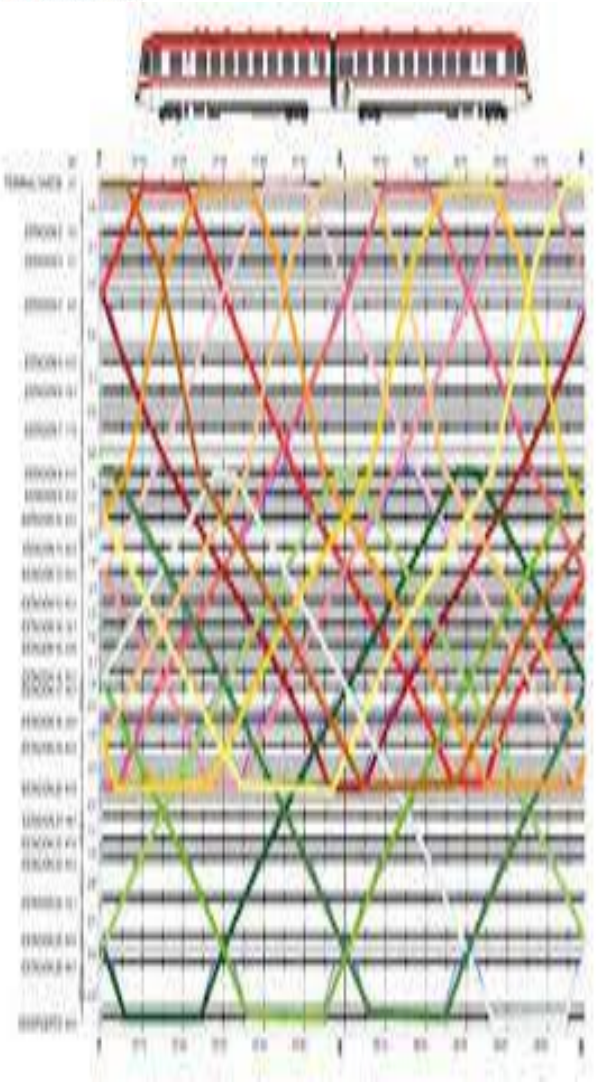
EUROPEAN NETWORK OF INFRASTRUCTURE MANAGERS (ENIM).

EUROPEAN NETWORK OF RAIL REGULATORY BODIES - ENRRB

PERFORMANCE REVIEW BODY

(as in ATM).

NETWORK COORDINATOR



Who takes the ultimate decisions on capacity allocation?

- Member States can provide "strategic guidance".
- IM takes the lead in planning, annual allocation, tactic response…
- Consultations with stakeholders.
- Regulatory Bodies "take decisions to amend" planning.
- ENIM ensures consistency, and cross-border.

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WHAT IS NEW?

Active Infrastructure Managers

↓↑

New consultation instruments

More regulatory supervision

A new EU layer

Performance review

Open questions…

- How active should IMs become?
- Are IMs in the best position to become the system integrator as they are monopolies?
- Need to reinforce consultations, how?
- More need for vertical separation?
- What role for regulatory bodies?
- Is anyone else better positioned to become the system integrator, maybe a separated entity?
- Is the model replicable at EU level? (system coordinator, etc).

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DĚKUJU!

juan.montero@eui.eu

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