

- # European Rail Traffic Management System

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Foundation for the urban environment

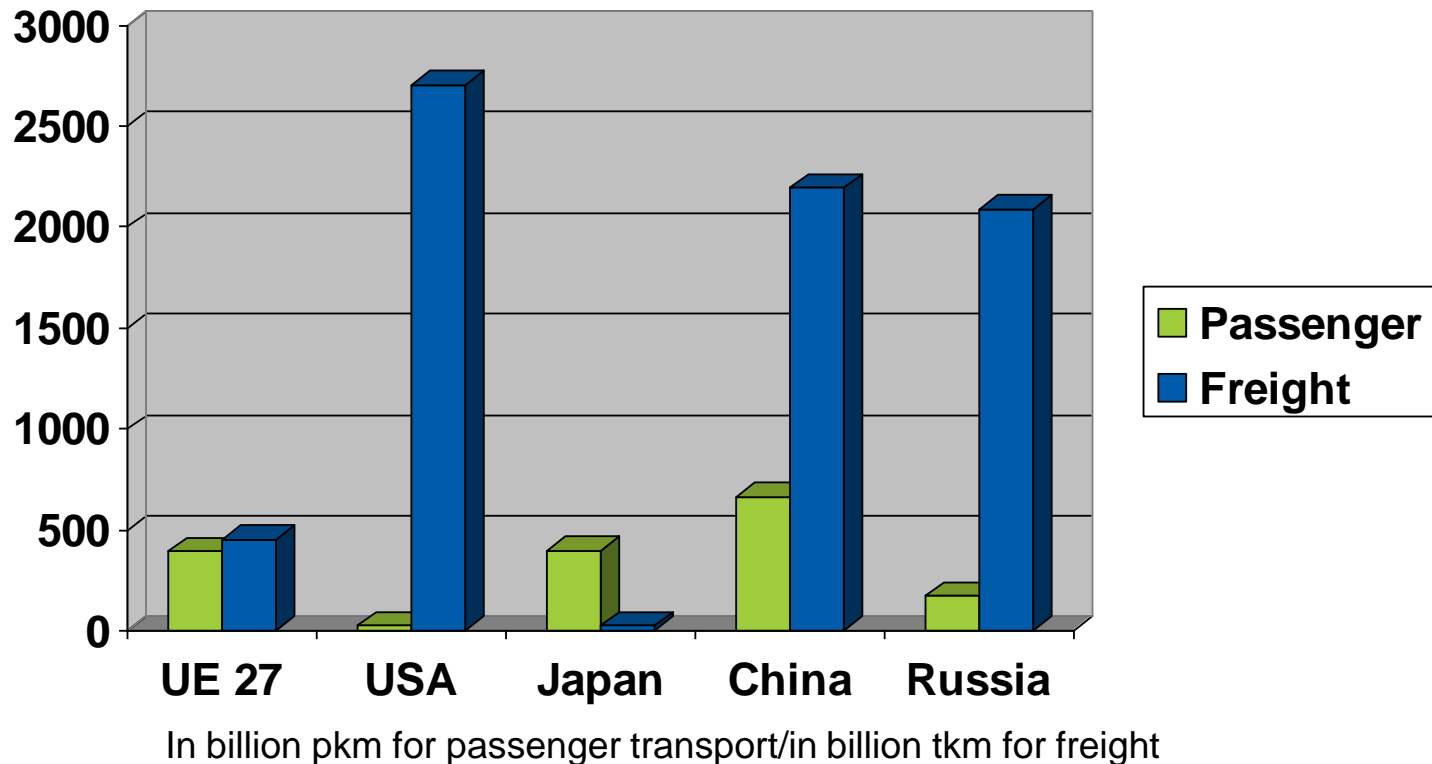


Promoting Rail within an Intermodal European Network (1)

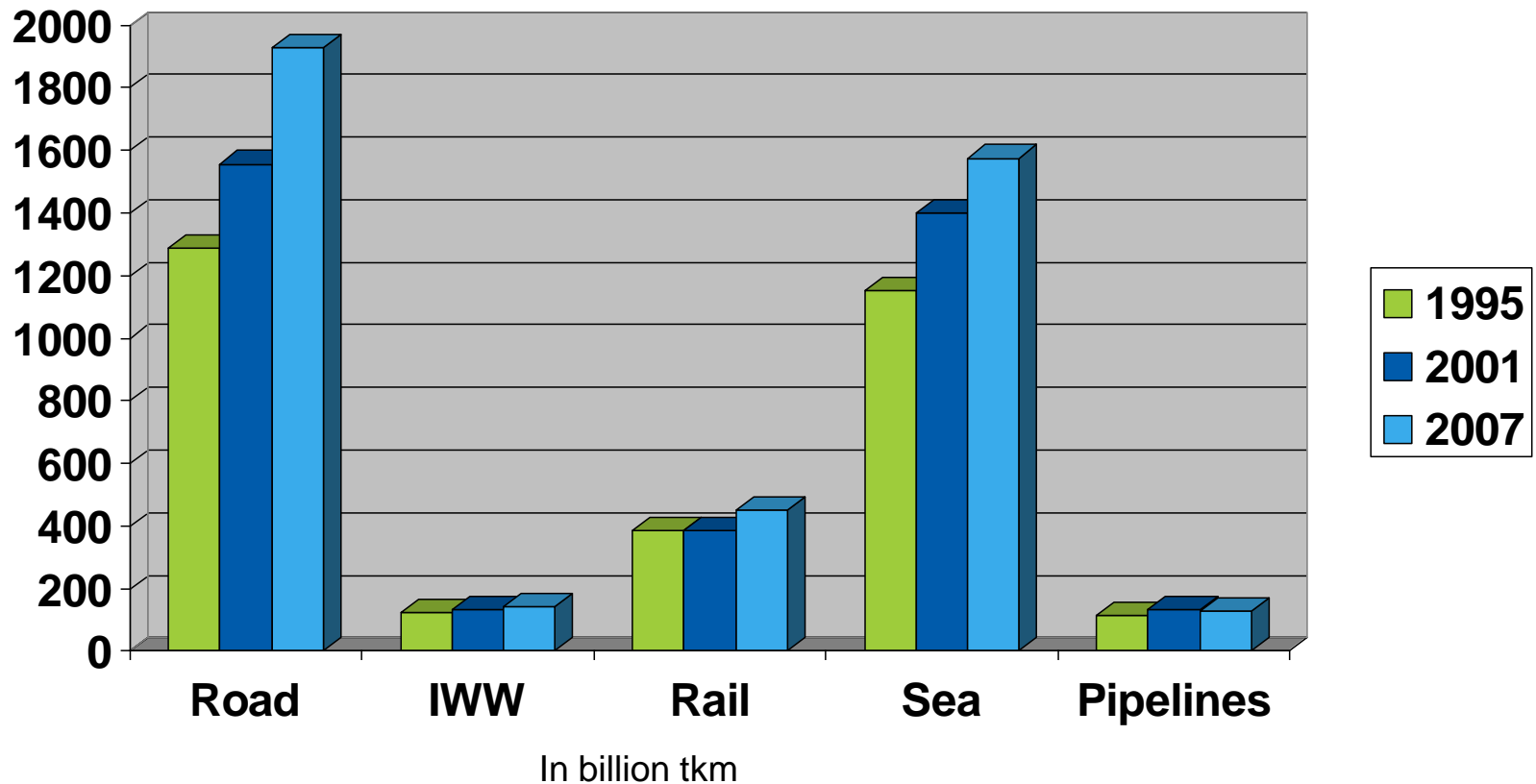
*Climate issues pulls rail back to the fore
front of a sustainable transport policy*

Rail Freight in the EU – Where are we compared to our world economic competitors?

Passenger and freight rail transport in traffic volume (2007)



Rail Freight in the EU – Where are we compared to other freight transport modes? (1/3)



● Rail Freight in the EU – Where are we compared to other freight transport modes? (2/3)

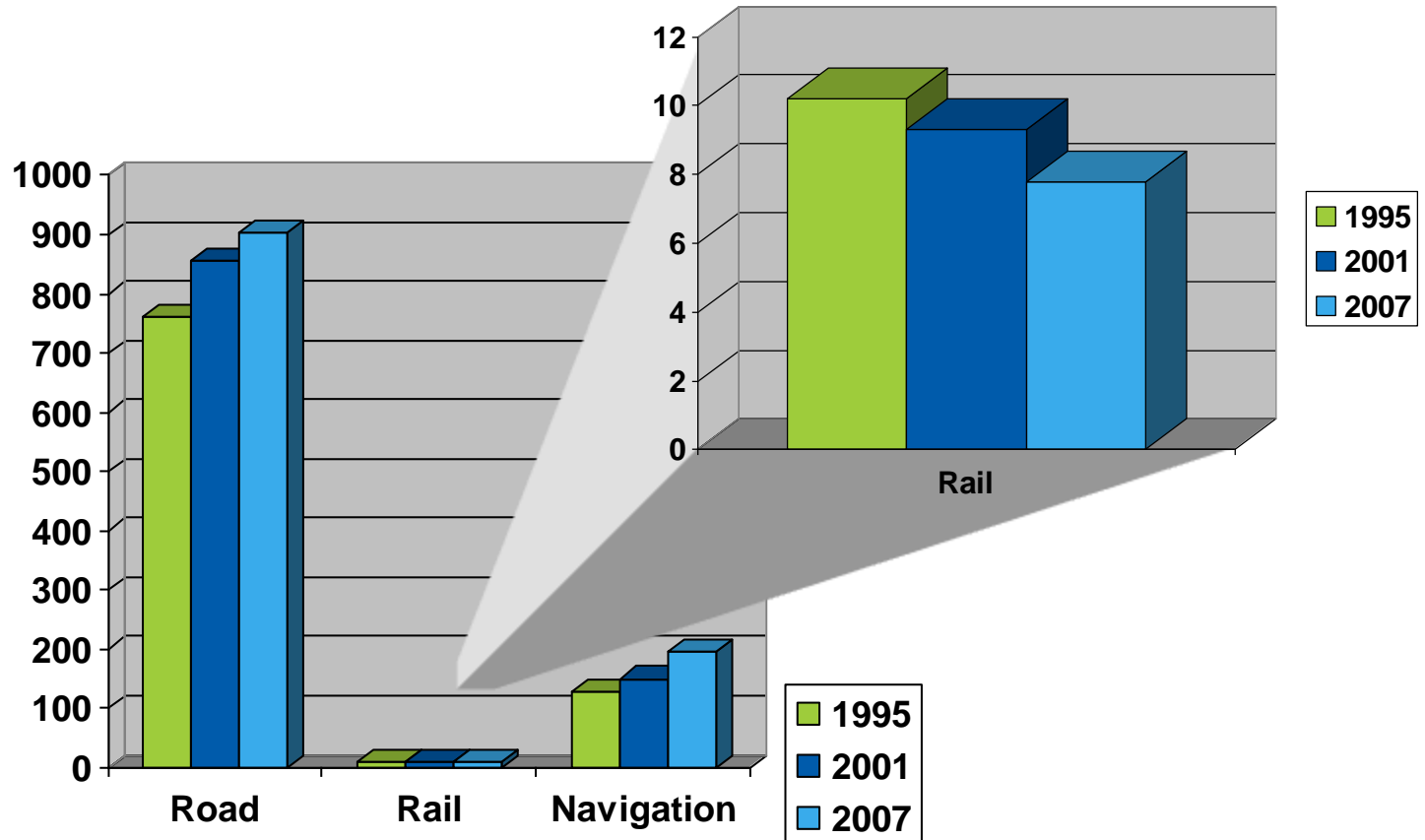
Average yearly growth per transport mode (1995-2007)

Road	+ 3.4%
Rail	+ 1.2%
IWW	+ 1.3%
Sea	+ 2.7%
Pipelines	+ 1.0%

Freight Intermodal Split in 2007 (USA, 2006)

Road	45.6%	(31.8%)
Rail	10.7%	(45.6%)
IWW	3.3%	(8.2%)
Sea	37.3%	
Pipelines	3.0%	(14.4%)

Rail Freight in the EU – Where are we compared to other freight transport modes? (3/3)





Promoting Rail within an Intermodal European Network (2)

*Improvements are needed to make rail
freight competitive*

● Market improvements

- Reliability (delay < 30 mn): On average on the major rail freight corridors, punctuality of freight trains hardly reaches 65%...
- Price transparency: The price of rail freight is two-fold:
 - » The price that a customer pays to the rail operator, which is market based
 - » The price that rail operators pay to infrastructure managers which is related in principle to the marginal cost of infrastructure use and is nationally defined.

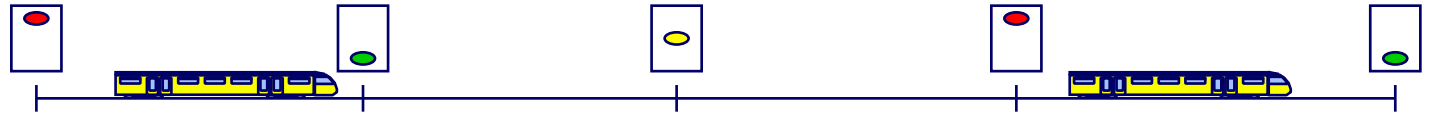
The level of track access charges remain untransparent and are disconnected from market needs that are corridor oriented

● Operational improvements

- The previous items are related to operational improvements such as:
 - » Capacity increases (→ removal of bottlenecks, tighter speed control, better coordination of path allocations)
 - » Interoperability (→ control command and signalling, capacity standards...)
- Some measures, less costly than infrastructure investments, would as well contribute to significantly improve rail freight competitiveness:
 - » Improvement of joint traffic management along major rail freight corridors
→ Purpose of the EC rail freight regulation proposal
 - » Improvement of interoperability and speed control
→ **ERTMS**

● What is ERTMS? (1)

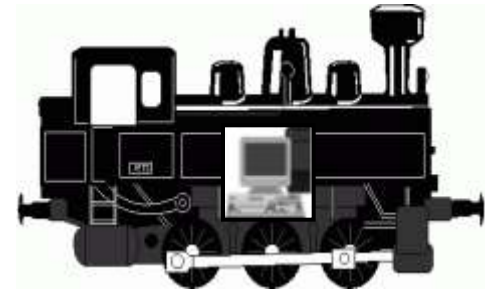
ETCS - Train Control System



- Ensures adequate **safety margin** between trains
- Increases **line capacity**

How ?

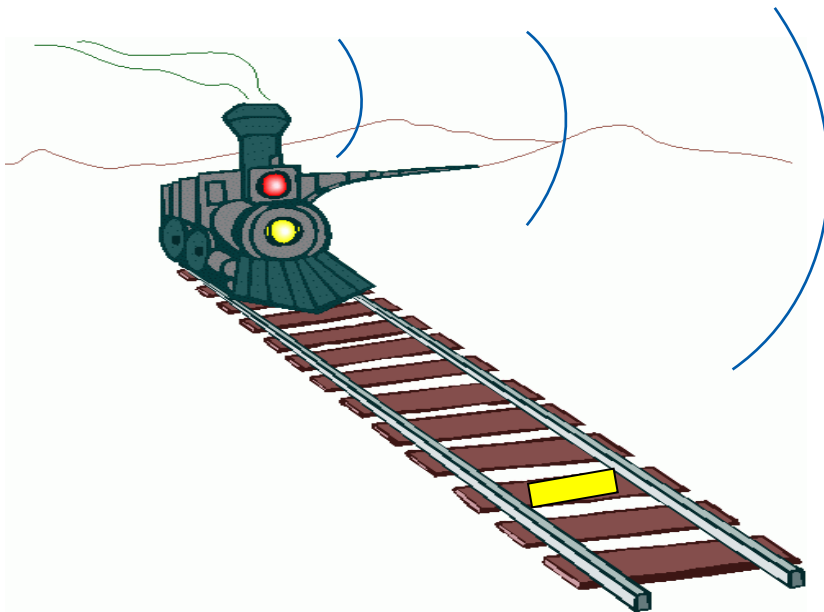
- **Speed limits** are transmitted from track to train
- **Driver's screen** shows permitted maximum speed
- On-board computer **stops the train** if the speed limit is exceeded.



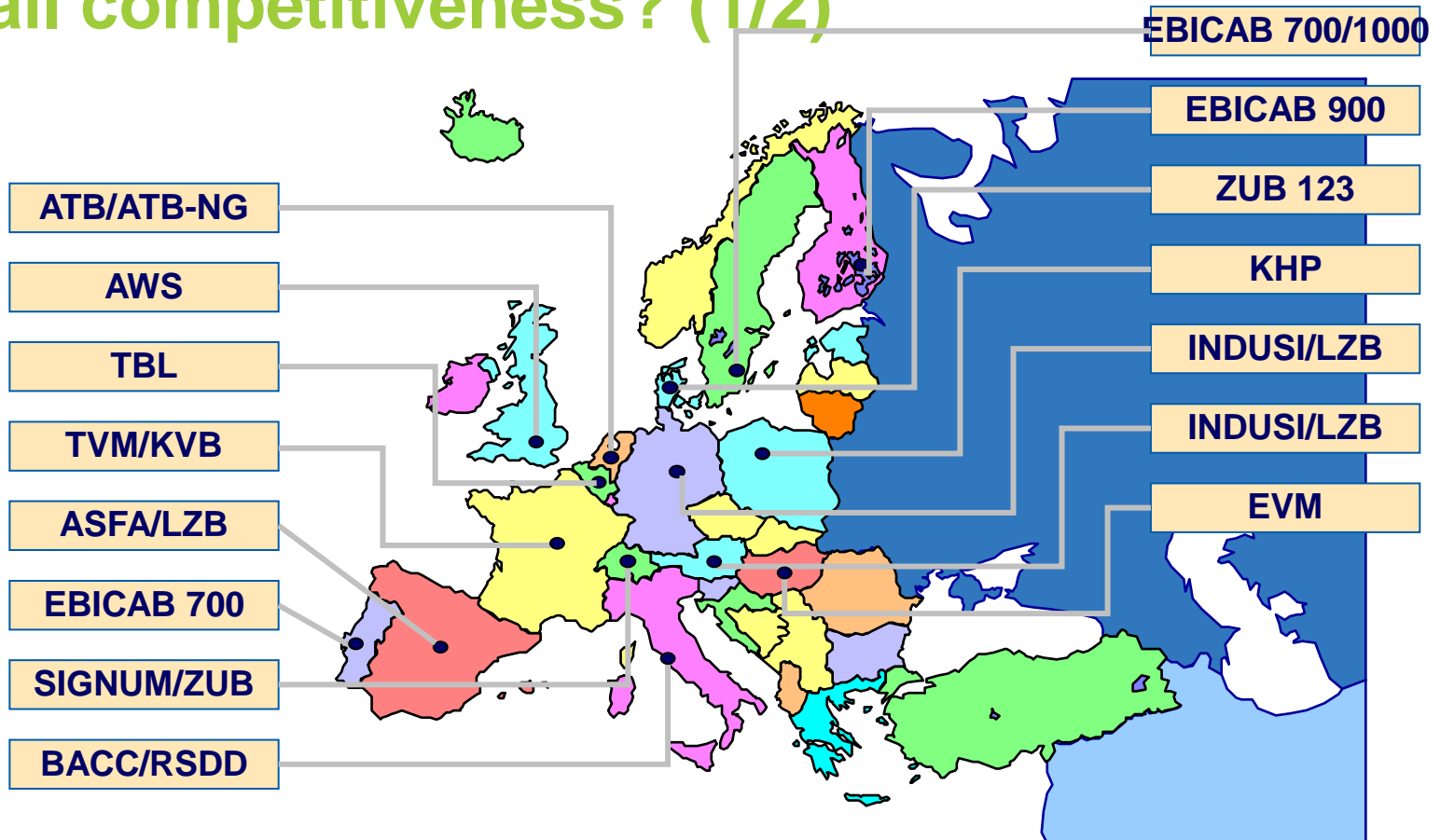
● What is ERTMS? (2)

GSM-R

A radio system similar to GSM (but with specific frequencies) for **voice** and **data exchange** between driver and central control.



● What value added does ERTMS bring to rail competitiveness? (1/2)



- Over 20 different **speed control** systems
- and 17 **train radio** systems

● What value added does ERTMS bring to rail competitiveness? (2/2)

- **A decrease of costs**

The deployment of ERTMS helps reduce these costs provided :

- ✓ manufacturers, infrastructure manager and railway undertakings proceed at a coordinated pace...
- ✓ ...thereby generating economies of scale

- **A guarantee of interoperability:**

ERTMS has a single standard 2.3.0d since April 2008. Version 3 is expected for the End of 2012.

● Current situation

More than 2.000 km are in service in Europe, mainly in the High Speed sector (In China, the equipment of about 3700 km of tracks until 2010 has been contracted).

Three main challenges for ERTMS in Europe:

- *Ensuring continuous equipment along corridors* (including terminals) → Purpose of the European deployment plan
- *Ensuring technical compatibilities of equipped lines* → Need of a long term testing strategy
- *Reduce ETCS equipment costs* → Work on the right price for the industry and work with national safety authorities for a “1 test fits all” approach so as to reduce safety homologation costs

● Why a European deployment plan?

The need for an approach promoting corridor rather than being nationally based is acknowledged by all actors.

On a corridor, a single « non equipped » section jeopardises the whole project.

A European Deployment Plan shall ensure that the key sections of the national deployment plans will be equipped.



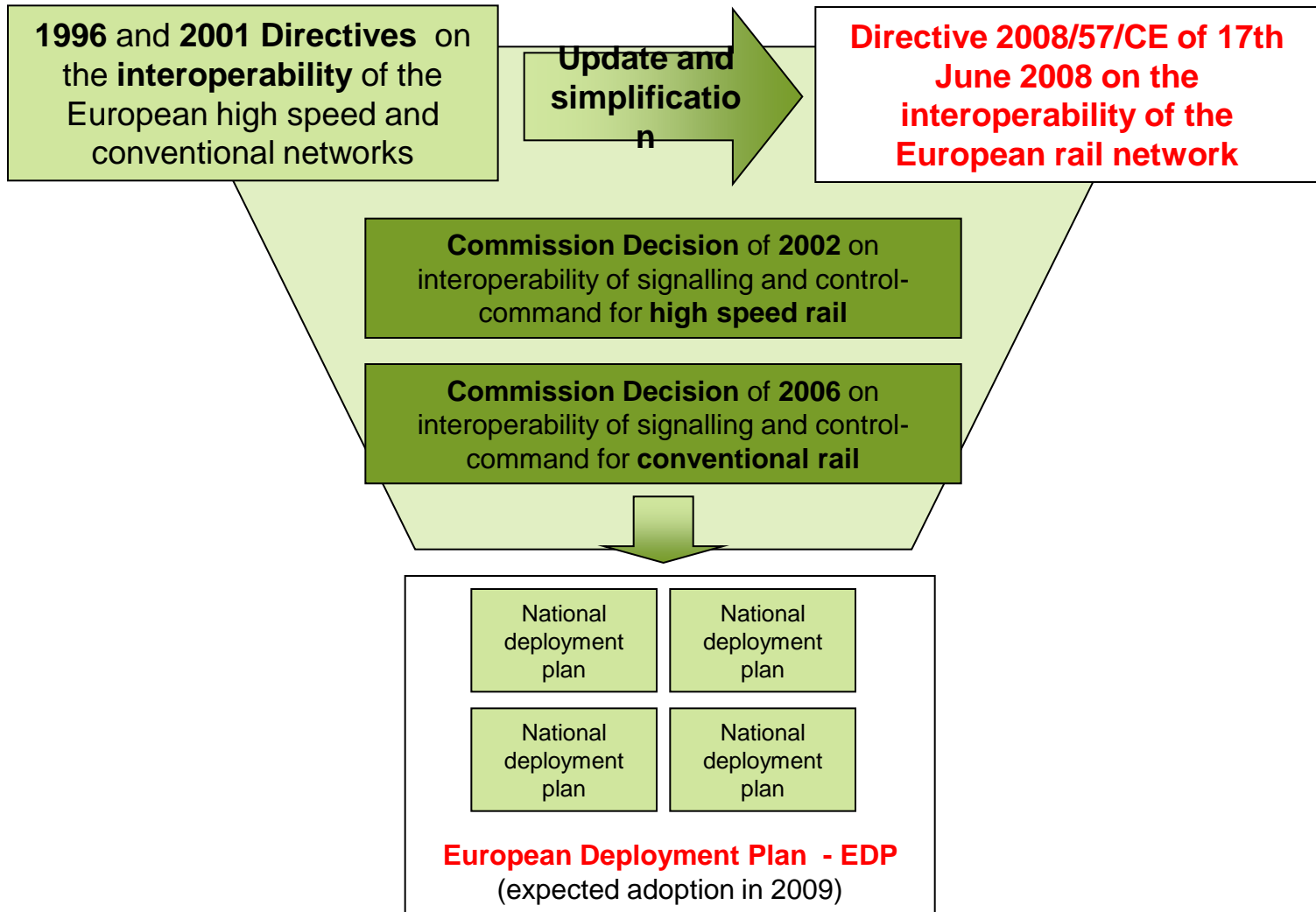
Furthermore, the EDP shall provide trust by setting transparent and binding objectives. Indeed...

... Railway Undertakings need commitments as regards infrastructure investment before investing in ERTMS.

... Infrastructure Managers need commitments as regards the equipment of the neighboring lines.

... Manufacturers need visibility on the long term demand to increase and improve their capacity.

The European Deployment Plan - The legal framework



● Additionally, the main railway organisations and the European Commission signed a Memorandum of Understanding

The MoU was signed on 4th July 2008 in Rome and focuses on the swift deployment of ERTMS along corridors.

More specifically, it settles a cooperation framework for the main public and private rail actors to reach a common technical standard.

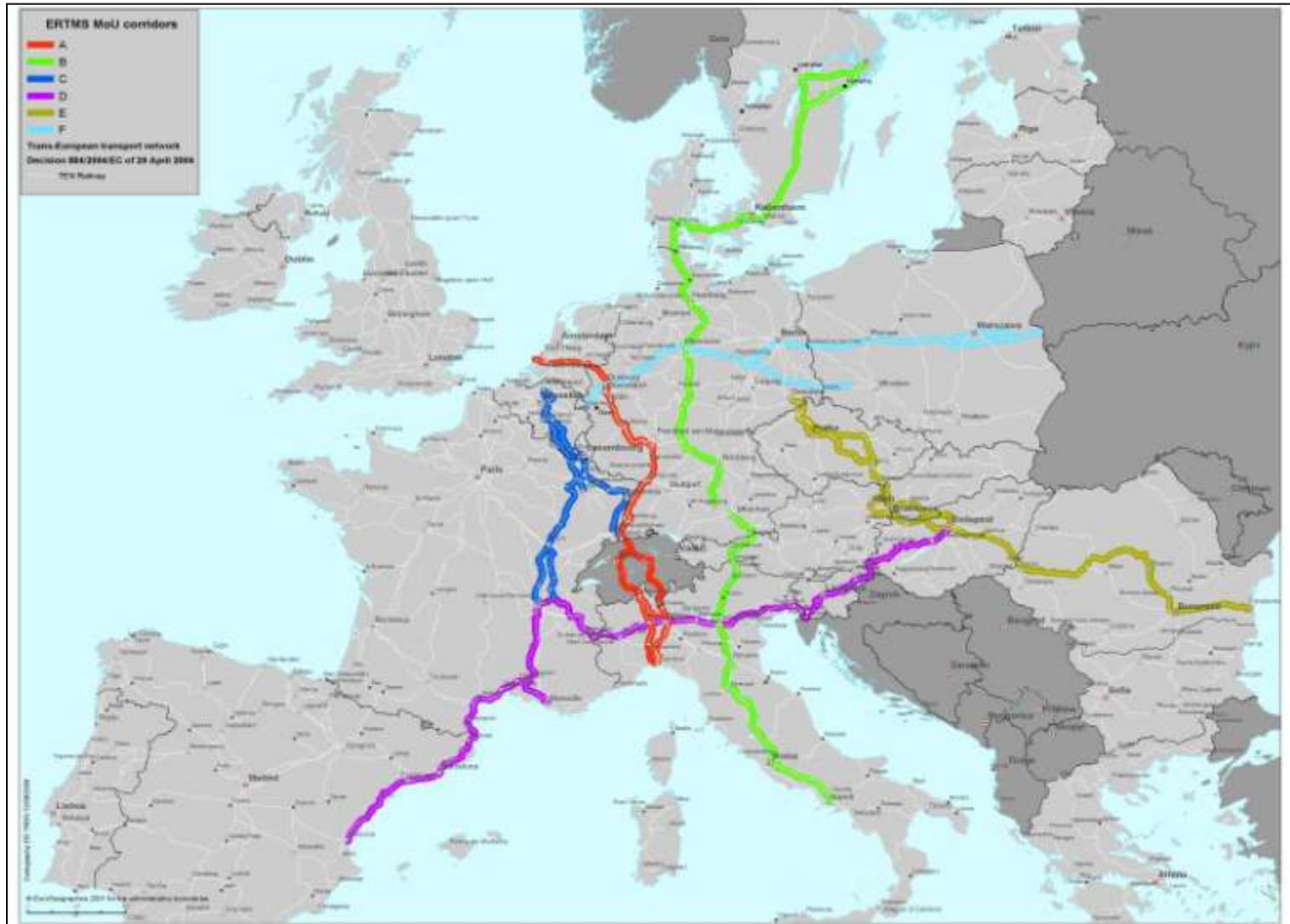
This standard (version 3.0.0.) is scheduled to enter into force at the end of 2012.





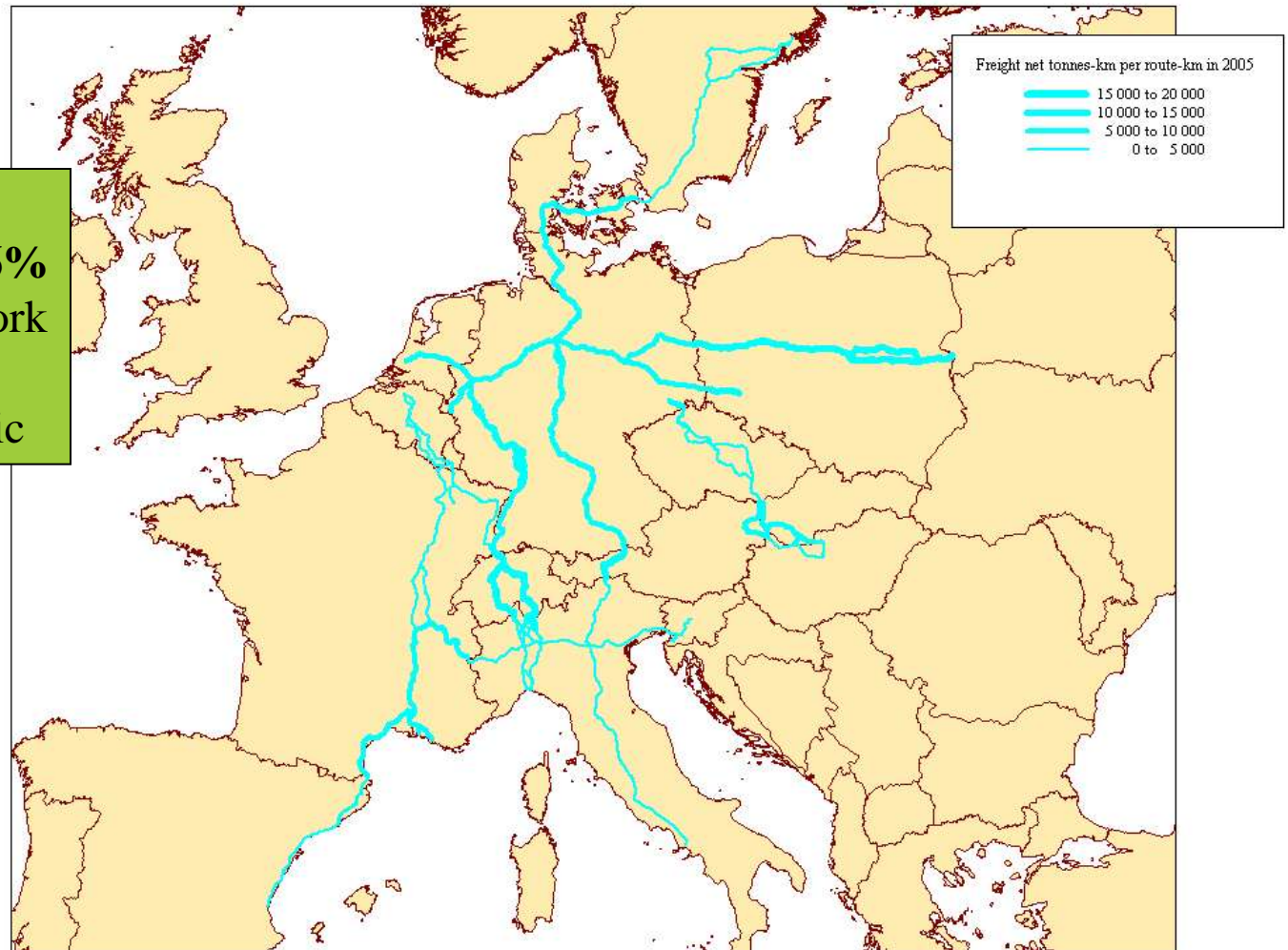
The Corridor approach and the implementation of the EDP

● The EDP privileges the six ERTMS Corridors

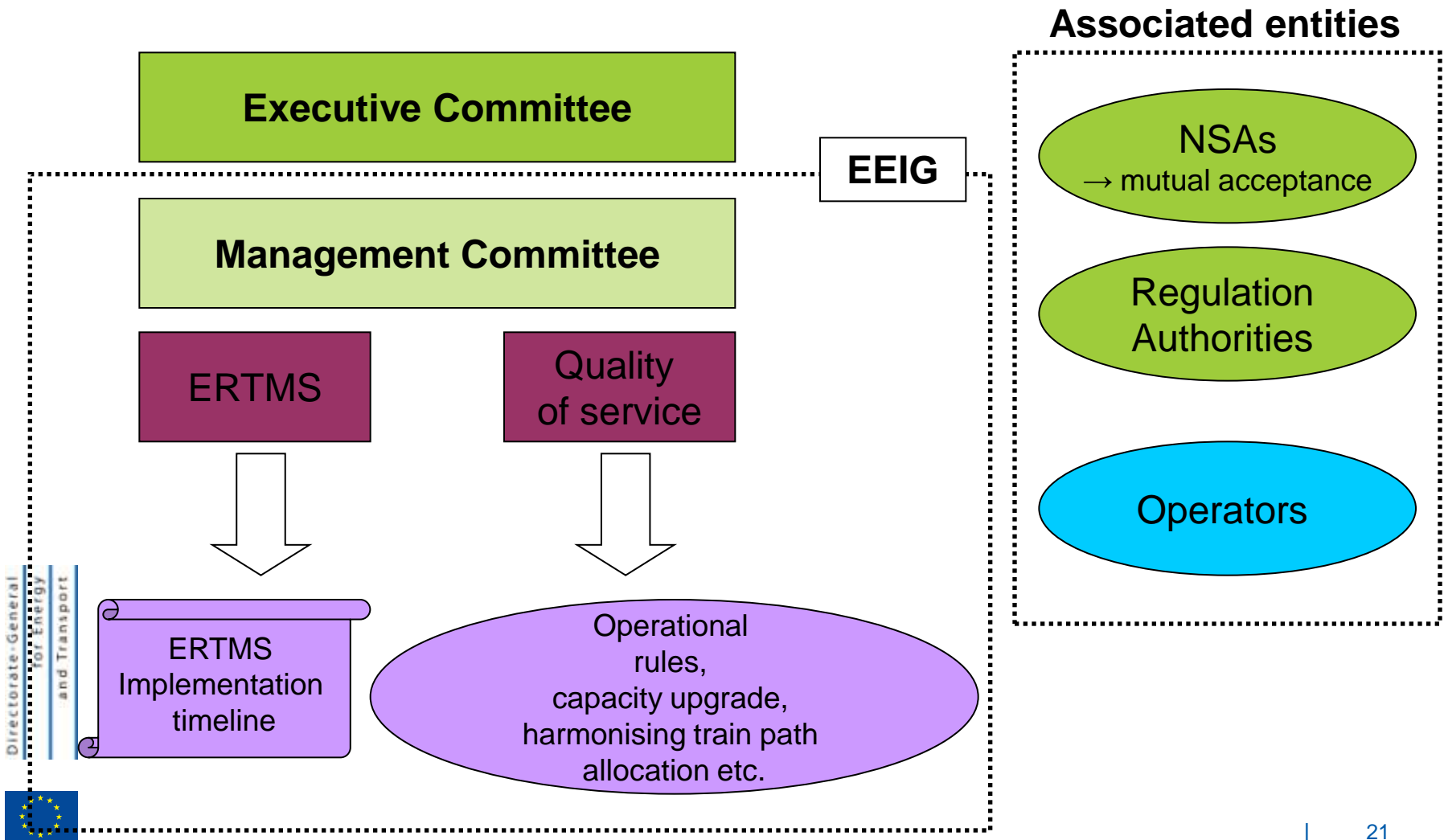


Originally, the six corridors result from a joint approach between European Commission and Rail Stakeholders

The 6 corridors represent about **6%** of the total network but **20%** of the total freight traffic



A common governance scheme to all six corridors

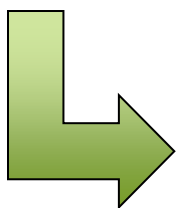


● The six corridors have reached various development stages

	Letter of Intent	Two-Layer Governance Structure	EEIG
Corridor A	Yes	Yes	Yes
Corridor B	Yes	Yes	No
Corridor C	Yes	Yes	Yes
Corridor D	Yes	Yes	Yes
Corridor E	Yes	Yes	No
Corridor F	Yes	No	No

● The EDP aims at filling up network gaps

Ensure that Member States respect the National Deployment Plans for tracks of European importance. It promotes a corridor approach.



2015 : Equipment of specific corridor sections according to national deployment plans (+ two short border sections in Germany).

2020 : The main freight zones throughout Europe should be linked to one another through the corridors.

- The final text is expected to be adopted by the European Commission in the mid of July and to enter into force on 1 September 2009
- Fulfilling the targets laid down in the European Deployment plan requires active cooperation of all actors.



What now?...

Optimize deployment conditions



Improve mutual acceptance

- Needs of an effort to develop bilateral cross-acceptance of rolling stock and of operational rules.
- Pre-conditions:
 - » Building up a long term testing strategy : ongoing work between the EC, the ERA, UNIFE and the corridors
 - » Improve cooperation and procedural coordination among National safety authorities and Notified bodies
 - » Standardise trackside and on-board equipment
 - » Improve and harmonise testing specifications, references and procedures
 - » Harmonise operational rules (E.g.: Driver licenses, transboundary operation rules, single train standards...)



Improve EU financing tools

- Integrating the six rail freight corridors in the scope of the TEN-T priority projects would make them eligible to a larger envelope of TEN-T financing
- Need of better articulating the use of EU Grants with other instruments such as the EC/EIB Loan guarantee for TEN-T instrument
- Explore alternative financing methods and cash collection models, provided the corridors are able to deliver a relevant business case.

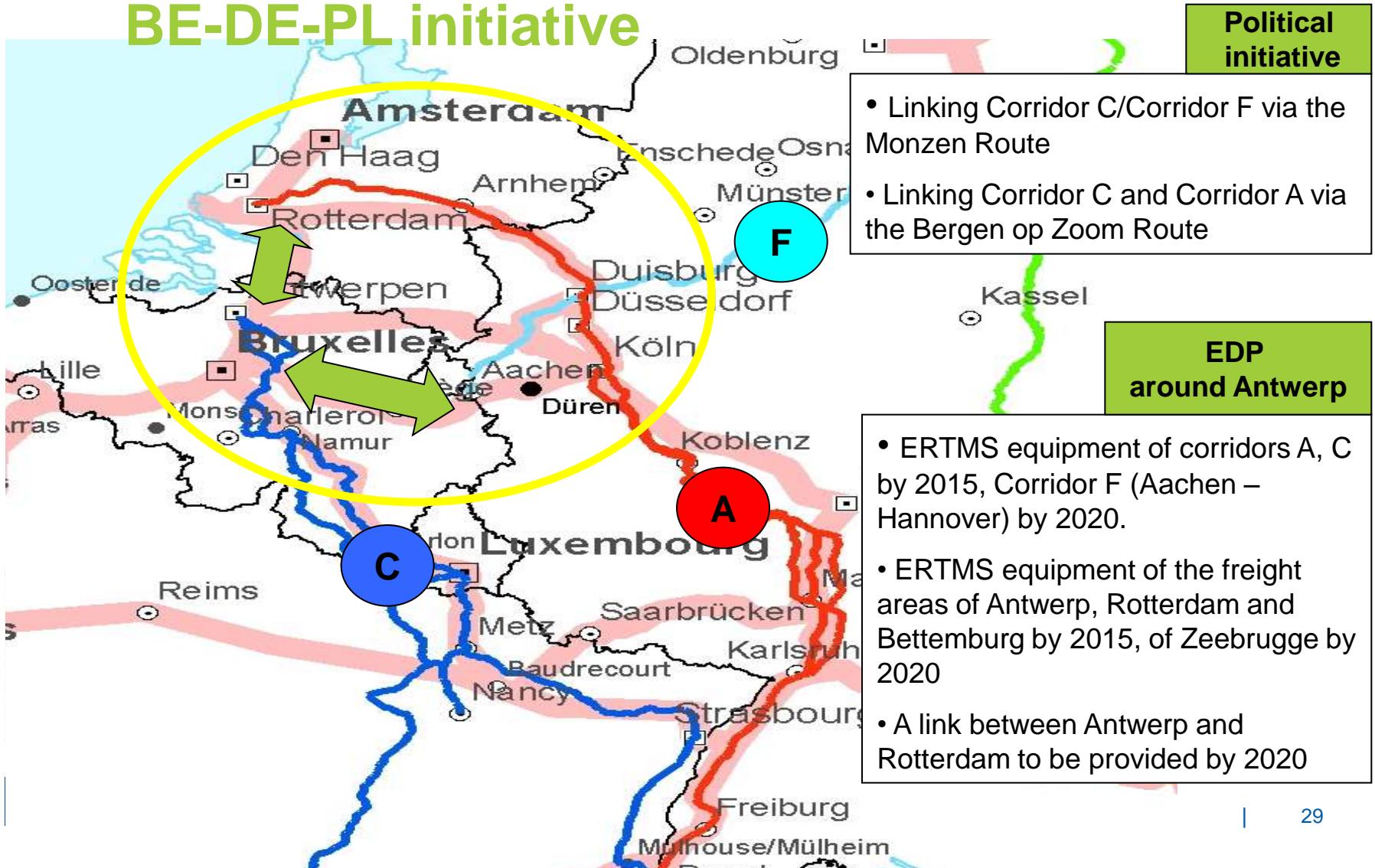
● Let an efficient rail freight network emerge

- The Regulation concerning the European rail network for competitive freight foresees the institutionalisation of nine freight corridors throughout Europe,
 - » the six ERTMS corridors will be integrated.
 - » The regulation has entered into force on 9th November 2010
- Revision process of the 2004 TEN-T Guidelines → Occasion of integrating the six ERTMS freight corridors into the scope of the TEN-T priority projects, in coherence with the rail freight regulation
- Intergovernmental initiatives also work for the emergence of a network → NL-BE-DE-PL Initiative to interconnect Corridors A, C and F



A view from Belgium

The Ports of Antwerp and Rotterdam on the map of ERTMS corridors and the NL-BE-DE-PL initiative



Political initiative

- Linking Corridor C/Corridor F via the Monzen Route
- Linking Corridor C and Corridor A via the Bergen op Zoom Route

EDP around Antwerp

- ERTMS equipment of corridors A, C by 2015, Corridor F (Aachen – Hannover) by 2020.
- ERTMS equipment of the freight areas of Antwerp, Rotterdam and Bettemburg by 2015, of Zeebrugge by 2020
- A link between Antwerp and Rotterdam to be provided by 2020

● The Declaration of Rotterdam – 14 June 2010

