

**Second Eurasian Connectivity and
Industrial Cooperation Forum (Europe)**



FERRMED-STUDY OF TRAFFIC AND MODAL SHIFT OPTIMISATION

Scope and purpose

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STUDY OF TRAFFIC AND MODAL SHIFT OPTIMISATION IN THE EU CORE NETWORK (I)

SCOPE

Considering

- there has been no increase in rail freight share in the last more than 10 years (17,9% in 2005 and 17,3% in 2017);
- EU “White Paper” target by 2030 (30% of freight land transportation over 300 km carried by rail or barge);
- the EU Transport Core Network is too vast (ca. 80,000 Km);

moving from road to rail requires the concentration of investments in a selective part of the main corridors of the Core Network.

Then, the objectives of the study are:

- To identify freight traffic by modality and globally in the main corridors of the EU Core Network
- To propose an Action Plan to achieve the EU “White Paper” targets by 2030 in the most crowded sections of the corridors, covering 60% of the traffic related to the EU Core Network

STUDY OF TRAFFIC AND MODAL SHIFT OPTIMISATION IN THE EU CORE NETWORK (II)

Structure and content

The study is structured in four parts:

1st part:

Traffic identification

2nd part:

Rail actions to shift traffic from road to rail

3rd part:

Rolling Stock

4th part:

Enviromental Impact

STUDY OF TRAFFIC AND MODAL SHIFT OPTIMISATION IN THE EU CORE NETWORK (III)

1st Part – Traffic identification

- The traffic in the countries crossed by the corridors of the European Rail Core Network will be analyzed.
- The Corridors areas in each country will be divided in sections in which rail, road and barge actual traffics will be analyzed.
- Current work progress:
 - ✓ **Information sources** have been searched and almost selected;
 - ✓ **Rail traffic:** Information (Eurostat and Infrastructure Managers) is available and complete, its analysis is in progress;
 - ✓ **Road traffic:** complete information on heavy road traffic in Spain available and processed; complete information in Germany and Denmark available; information availability of the rest of countries is still been searched;
 - ✓ **River traffic:** available information of the inland ports traffic. The traffic of barges in rivers and channels is still been searched.

STUDY OF TRAFFIC AND MODAL SHIFT OPTIMISATION IN THE EU CORE NETWORK (IV)

1st Part – Traffic identification

- With all suitably classified data, traffic tables (road, rail and barge) will be generated for each section of them in which the countries have been divided.
- From these tables, four traffic-flow EU-maps will be prepared:
 1. Road: Average Daily Intensity – ADI trucks
 2. Rail: Average Daily Intensity - ADI Passenger-trains and Freight-trains
 3. River: Average Daily Intensity - ADI barges
 4. Global: Total net tonnage / day
- These maps will show us the sections with the highest traffic. From this traffic information, the degree of saturation with the present disposal of infrastructures in each section will be consequently analysed.

STUDY OF TRAFFIC AND MODAL SHIFT OPTIMISATION IN THE EU CORE NETWORK (V)

2nd Part – Rail actions to shift traffic from road to rail

- In the sections with the heaviest traffic,
 1. strategic terminals, and
 2. most important feedersare firstly to be identified.
- Once the main lines, that interlink the terminals, including the back-up lines which complement them, are identified, following technical characteristics of each of them are to be determined:
 1. allowance of maximum length of freight trains (1stphase 760m, 2ndphase 1500m)
 2. Loading Gauge admitted (requested P 400 or GC-C)
 3. extent of implementation of ERTMS

STUDY OF TRAFFIC AND MODAL SHIFT OPTIMISATION IN THE EU CORE NETWORK (VI)

3rd Part – Rolling Stock

Absorbing the foreseen increase in the freight traffic, requires the disposal of Rolling Stock vehicles with further technical odds:

The study will consider the immediate most necessary technical characteristics (in the way towards “intelligent trains”):

- 1. Smart wagons**, with central beam, low platform, ...
- 2. Multi-tension and multi-signalling hybrid locomotives.**

STUDY OF TRAFFIC AND MODAL SHIFT OPTIMISATION IN THE EU CORE NETWORK (VII)

4th Part – Environmental Impact

- Comparative analysis between rail freight and road freight from the point of view of saving environmental costs will be carried out:
 - **Congestion costs** (queues)
 - **Pollution costs** (particles, nitrogen oxides emissions)
 - **Greenhouse costs** (carbon footprint)
- Evaluation of the estimated environmental impact is to be carried out (first approach plan: GHG-emission reduction of 40 million tons/year; NOx-emission reduction of 20%)

STUDY OF TRAFFIC AND MODAL SHIFT OPTIMIZATION IN THE EU CORE NETWORK (VIII)

FMWG TRAFFICS STUDY PROGRAMME CHRONOGRAM

ACTION / ACTIVITY	3Q 2019	4Q 2019	1Q 2020	2Q 2020	3Q 2020	4Q 2020	1Q 2021
Searching the sources and gaining the information							
Subdividing main corridors in sections of traffic							
Defining Strategic Terminals							
Drawing the Traffic Maps							
Analysing traffics and bottle necks							
Checking capacities of Terminals							
Analysing Interconnected Lines, Rail, Road and Barge							
Defining the sections corresponding to 60% of the Core Network traffic							
Preparing the Action Plan to achieve “EC White Paper” targets by 2030 in the sections (60% traffic) of the 9 TEN-T							
Publishing the FERRMED proposed ACTION PLAN							

STUDY OF TRAFFIC AND MODAL SHIFT OPTIMIZATION IN THE EU CORE NETWORK (IX)

MAIN TOPICS IN THE SHIFT TO RAIL –FINAL CONSIDERATIONS

- There is not a competition between road and rail; railway has to be the main complement to road traffic. Road is almost the best solution for the last mile. **Railway could be considered in the same way as a “ferry” on sea**, suitable to carry trucks and trailers for common long distances.
- To achieve the appropriate transfer from road to rail, **“Combined Transport” (CT) is key.**
- Therefore, forwarding of intermodal loading units like containers, swap bodies or semi-trailers is the base of CT and the best way to attain the targets of the EU-White Paper on transport.

STUDY OF TRAFFIC AND MODAL SHIFT OPTIMISATION IN THE EU CORE NETWORK (X)

- Development of the Study:
FERRMED MULTISECTORAL WORKING GROUPS, duly helped by experts from key institutions (Universities, Logistics/transport associations, technical organizations,...)

- Sources of information:
 - ✓ Eurostat
 - ✓ Rail freight Corridors' reports
 - ✓ EU Core Network Corridors' reports
 - ✓ Ministries of Transport of EU Member States
 - ✓ Transport system associations and technical/institutional organizations (UIC, CER, UIRR, OSJD, CCTT, IRU, EFIP, Shift2Rail, TIS,...)

- Main interlocutors:
 - European Commission
 - European Parliament
 - Ministries of Transport of involved EU Member States

FERRMED a.s.b.l.



**THANK YOU
VERY MUCH
FOR YOUR
ATTENTION**

**Спасибо вам
большое за
ваше
внимание**

**非常感谢您的关
注**