



D.T1.2.1 WORK PAPER

Methodology for analysis of
market potentials for rail freight
transport

Version
1.0
01.2020

Table of Contents

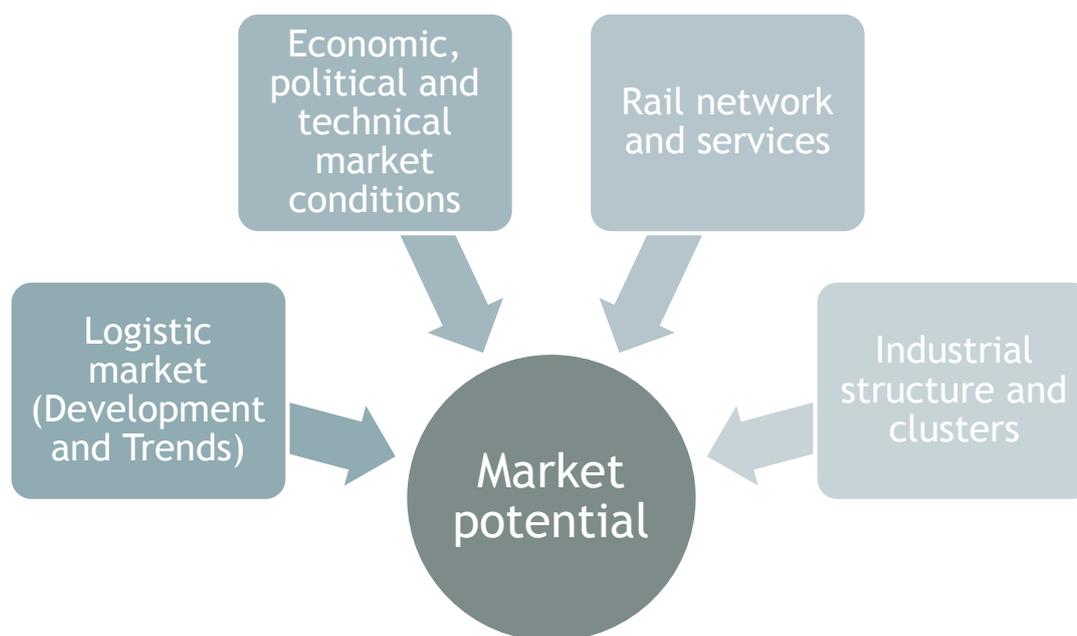
- 2
- 3
- 3
- 3
- 3
- 4
- 5
- 6

1. Introduction

The deliverable “Methodology for analysis of market potentials for rail freight transport” (D.T1.2.1) defines a common methodology for analysing the main market potentials for rail freight transport and services in each pilot region. The work paper is agreed by all partners and serves as the basis for the deliverable “Analysis of regional market potential for rail freight services” in WP 1 (D.T1.2.3). All partner regions will apply and implement the methodology in the respective regional context.

Market potential is the total demand for a product or service in a given business environment. For that it is very important to calculate the market potential and the actual value before a product or service can be implemented. Determining the main market potentials for regional rail freight transport and services is quite complex and goes beyond analysing only the market itself (the potential customers). The analysis shall help to find out the potential to shift goods transport from road to rail.

The following figure shall illustrate the impact of various factors on the market potential:



As every region and port examines different markets and analyses the individual and distinct market potential, this work paper drafts the frame in which every partner has to develop the own analysis with predefined chapters and main topics, but with suggested points to analyse. This can also be helpful if data is not available or relevant for the specific analysis of market potential.

Chapter 2.1. “Analysis of the rail network and services” and chapter 2.2. “Analysis of the logistic market (Development and Trends)” in this paper refer to a great extent to the analysis made in the regional baseline studies (D.T1.1.5) as a kind of summary of the baseline study and introduction for the analysis of the market potential.

Chapters 2.3. “Analysis of the economic, political and technical market conditions” and 2.4. “Analysis of the industrial structure and clusters” form the main part of the market potential analysis including the definition of rail suitable goods and industries for the territories (regions and countries) respective rail suitable loading units for the ports and their hinterland.



The paper concludes with a summary and recommendation of the main market potentials and chances for rail freight transport in the respective region or port (Chapter 3). The annex chapter should give the project partners the possibility to do an in-depth analysis if needed with the concentration on specialized issues that do not fit into other chapters or that are too detailed.

2. Status quo Analysis of Market Potential

2.1. Analysis of regional rail network and services

The analysis of the rail network and services on regional level serves as the basis for the analysis of the market potential because without existing railway lines and a certain level of network quality, freight transport on rail can hardly be implemented. Moreover, existing railway related services play an important role, like the maintenance of wagons or the possibility for shunting trains. This can be seen as the “ecosystem” of rail because the rail network and services are mutually related and dependent. Therefore, some suggestions for the analysis are the following:

- Existing railway lines
- Network utilization/freight volume
- Network quality, e.g. number of tracks, electrification...
- Existing railway related services (“ecosystem” of rail, e.g. the Entity in Charge of Maintenance ECM, Operators, Infrastructural Management, maintenance of wagons, shunting trains...)

2.2. Analysis of the logistic market (Development and Trends)

The analysis of the logistic market directly follows with both the former development of (rail) freight transport and trends of (rail) freight transport performance including the analysis of current transport flows. Points to analyse are therefore the following:

- Former development of (rail) freight transport (regional level)
- Analysis of current transport flows: How are the chances of Modal shift?
- Forecast of (rail) freight transport performance and development (if available)

2.3. Analysis of the economic, political and technical market conditions

The analysis of the economic, political and technical market conditions shall examine the framework conditions in these fields that can influence the market potential of rail freight transport. Aspects what will help to analyse are:

- Analysis of current economic conditions: *What are the general chances of expected rail policies regional and transregional?*
- Macroscopic trends



- Changing in industrial landscape, e.g. are there changes in industrial sectors/branches (industry to service)?
- Political measures decided, e.g. coal phase-out, programs for strengthening rail, digitalisation...?

2.4. Analysis of the industrial structure and clusters (potential customers)

Remark on methodology:

The given structure for 2.4 reflects an integrated assessment of the whole freight market (rail, road, waterways) in the given regional structure to then determine by suitable measures (e. g. check-list) the affinity of certain goods for rail shipment. This should help to identify potential fields of growth for rail traffic.

If for a region sophisticated transport models support a two-step approach with assessing the whole market in a first step and using other modules of the model to determine rail freight market share, the project partners providing the market potential analysis are free to define sub-chapters in this chapter to reflect that two step approach (see figure 1 in annex). This approach is also possible, if a region considers port and hinterland.

The analysis of the industrial structure and clusters shall give an insight of potential goods and customers (respective loading units for the ports) for the transport of freight on railway. First every partner shall analyse all freight and industries in general (including road suitable) to then define what is high rail freight suitability and which of the goods and industries (respective loading units for the ports) are high rail freight suitable. The table/check-list will help to give an overview of these goods and industries for regions and loading units for ports.

Aspects to analyse the industrial structure and clusters differ from port to regions, but mostly are:

- Location of major industries/companies (origin of resources/products) (size and branch) -> How is their rail accessibility/network access?
- Location of major logistic hubs (destination of resources/products) -> How is their Rail freight capacity / suitability?
 - e.g. existing connection, earlier (now closed) rail freight services and/or access points, production volume, 24/7 operation, bulk/heavy products/resources, present transport flows with/without intermodal transport, access to intermodal hubs...?
- Loading facilities
- Transport volume/quantity and group of goods
- Type of loading unit, e.g. container, trailer, general cargo in boxes...

In the analysis of market potentials for ports (Trieste, Koper) the ports themselves should be treated as origin/destination of goods whereas territories (regions, countries) should investigate businesses in their areas to receive/ship goods (with focus on industries prone to railway transport).



Goods (for regions)	High rail freight suitability	
	yes	no
timber and paper	x	
...		
...		

Loading units (for ports)	High rail freight suitability	
	yes	no
container	x	
...		
...		

Industries/companies (for regions only)	High rail freight suitability	
	yes	no
Pulp and Paper Factory Rosenthal, Thuringia	x	
...		
...		

3. Summary and recommendation

The analysis of the market potential shall conclude with a summary and a recommendation for the further work in the REIF project by referring and answering the following question:



➤ **What are the main market potentials and chances for rail freight transport?**

Annex

The annex chapter should give the project partner the possibility to do an in-depth analysis if needed with the concentration on specialized issues that do not fit into other chapters or that are too detailed.

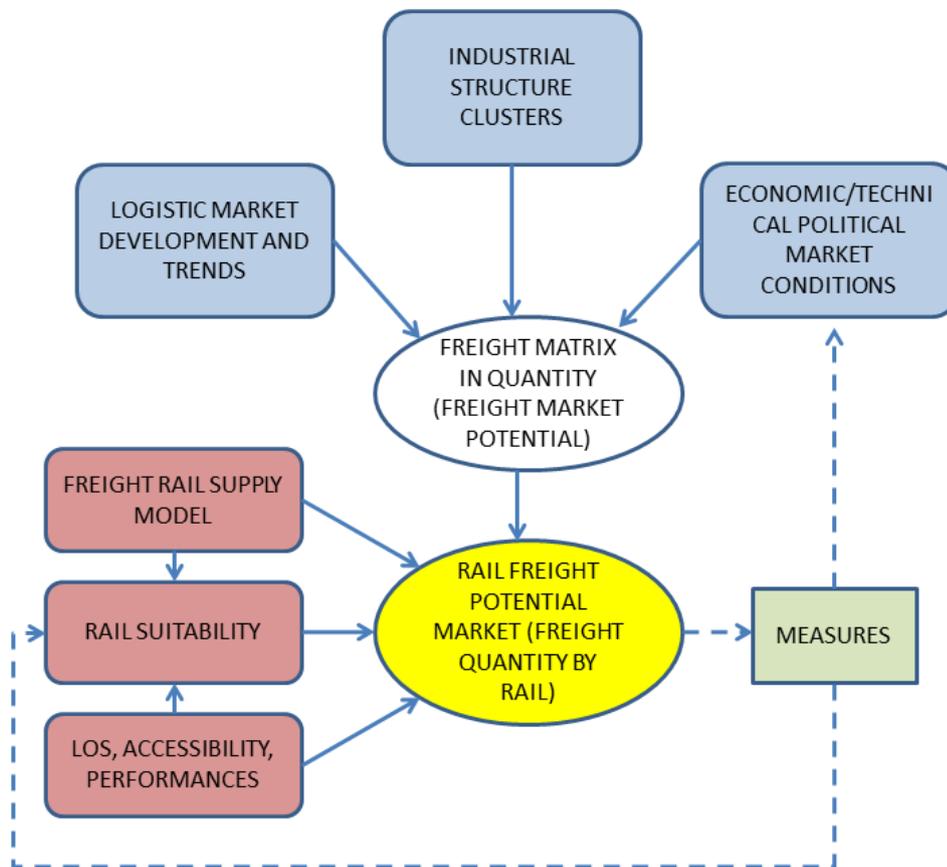


Figure 1: Two-step approach of analysing (rail) freight potential market; Source: ITL