Interreg CENTRAL EUROPE

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Rail4Regions

# Test of the Tool-box for Loading Points
# D 2.3.1

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# 1. General Information

The responsible partner team, consisting of University of North (CR), Varaždin County (CR), University of Applied Sciences Erfurt (DE), Provincia Novara (IT) under the leadership of Thuringian Ministry for Infrastructure and Agriculture (DE) is developing the draft of a toolbox. This is intended for transport planners and spatial planners who are considering the construction or modernisation of a loading point for rail transport as well as the efficient utilization of existing loading points.

The pilot action tests the "Tool-box for loading points (D.2.2.1) in a real-case scenario in Thuringia.

The pilot action is based on the co-created draft solution and will be subject to transnational monitoring done by stakeholder workshops and **mutual tests.**

The overall objective is to provide freight forwarders, rail transport companies, combined transport operators and other logistics service providers using rail with an integrated source of information on a network of loading points, enabling them to identify relevant facilities for planning their services and optimising their transport and logistics chains.

# 2. Background and Context

## 2.1 Problem addressed

In the transport system, logistical nodes are interfaces at which goods and merchandise can be transferred into the transport system, transferred out of the transport system or realized through intermodal transport. They are just as important for the handling of transportation as the transport infrastructure in the form of roads, waterways or railroads.

The size and functionality of the nodes differs according to the number, size and functionality of the modules in the nodes. Logistics nodes can also be differentiated according to whether they are single-company or cross-company facilities. Nodes organized as individual companies generally have their own optimized logistics. Nodes at which several companies are located enable synergy effects through cross-company processing.

Unfortunately, the number of physical access points to the rail network has fallen sharply in recent decades, meaning that many shippers are no longer (or can no longer be) served via direct sidings. In addition, many freight stations and (open) loading tracks have been abandoned. This happened due to the exceeding costs to manage industrial sidings, expecially when the companies don't have volumes of goods able to justify the functioning of a siding.

Where shippers are unable to load goods and merchandise directly onto rail, this means additional costs for road transportation and transhipment. It also means that the modal share of goods being transported by road is rising, while the share of goods on trains is dropping. This is the direct opposite of the strategic goals that want to promote the higher usage of rail due to its capacity, safety and eco-friendliness.

One of the problems in the recent times is the focus of rail freight operators mostly on block trains or unit trains or trainload services. Such trains consist of the same type of wagons carrying the same type of goods, sometimes even for only one customer. Many operations which include single wagonload pick-ups and shunting operations have been gradually abandoned. Most important problems are that the operational costs of single wagon transport are not competitive at all with the road solution and the transport time, which is very uncertain and risks to be too long for the receiving companies.

If countries and regions could find the way to finance and implement the solutions that would support single wagon load shipments and shunting operations, that sometimes include operations at several nearby small stations and industrial sidings, that could make composing the full-length freight trains easy. Shunting operations can collect single wagonloads and single wagons being loaded in local loading points to full-length trains. They can also deliver single wagonloads to customers after these have arrived as parts of large trains. Such development could make shipping freight with rail much more attractive and feasible, and it could bring transportation sector closer to European Green Deal goals, meaning more safety, more carbon neutrality and less harmful emissions in general.

Another issue is that companies that want to transport their goods by rail cannot find the relevant information on where the most suitable loading points for them and their cargo are in their vicinity.

The aim of the multilingual toolbox as an information-based platform is to provide shippers, freight forwarders and operators with localized information on loading points and their technical and infrastructural equipment. It will also contain general information about the possibilities and framework conditions for the transportation of goods by rail. Further features such as existing connections, emissions of $CO_2$ calculation, what information is missing for my transport request and other similar functionalities can also be integrated.

## 2.2 Prior analysis

In order to make regional loading points as attractive as possible and to satisfy the specific requirements of different companies, they need a good infrastructure. The basis for this would be an accompanying information centre that provides a quick overview of the facilities (capacity, location, opening times, operator, etc.) at each loading point.

From the point of view of the stakeholders from the regional planning sector, all active and abandoned loading points in Thuringia would first have to be spatially identified and analyzed, based on the following features (not exhaustive)

- Locatability,
- presence of (which) facilities,
- ownership structure,
- condition of the loading point,
- active businesses/industries and potential interested parties on site,
- Loading potential (wood, glass, waste, etc.),
- the activability of the facility (temporary, permanent), etc. ... .

The result could be a map similar to that of the Thuringian brownfield register (https://www.brachflaechenkataster.de/). The functionality could then be the same:

- zoom in and
- click on the corresponding loading point and thus
- get all the necessary information.

Should we have this form of toolbox, the above-mentioned features could be used in a further step to identify freight loading points that have the potential to be reactivated or upgraded according to the needs of nearby buisinesses.

These could then become part of a spatial planning methods and principles. Although “Railway Tools” already offers similar functionality, it does not include a number of the features mentioned and also does not have any inactive/abandoned freight loading points. So, if we end up with our own toolbox it will help us, and also other stakeholders, to identify certain freight loading points which need to be reactivated or upgraded. This might turn out to be a very good result of the project activities and also something useful for the spatial planning stakeholders, their current spatial planning principles and the ones that still need to be defined in the future.

# 3. Methodology

Alignment of Pilot Action with broader regional or national development plans.

On national level the Pilot Action is in line with the Guiding principles and action strategies for spatial development in Germany (Adopted by the 41st Assembly of the Ministers for Spatial Development MKRO on March 9, 2016) especially Chapter 1.4 Ensuring infrastructure connections and mobility which states that the competitiveness of regions and sub-regions depends crucially on their transport connectivity and transport networks.

The primary goal remains to increase regional competitiveness through a sustainable and integrated overall transport system and to use the transport infrastructure more efficently. In addition to the expansion infrastructure for the development of the trans-European transport network with important hubs in the metropolitan regions all regions and sub-regions are to be connected to this network.

On regional level the Thuringian Spatial Development Program states the principle G 4.5.6 which says “the location conditions for the shipping industry should be improved by spatially significant planning and measures to upgrade rail freight transport, in particular to increase capacity and to maintain and expand the necessary capacity and expand the necessary loading points, freight stations and sidings.

Line closures should be avoided in particular on lines with regular rail freight traffic, demand for rail freight transport, adjacent to major industrial and commercial operations or the ones with corresponding potential”.

Involvement of key stakeholders in the planning design of Pilot Action

A total of 15 to 20 stakeholders from the fields of transportation, infrastructure operators, chambers of commerce, regional and state planning in Thuringia took part in designing the pilot action, shared their challenges and backgrounds and expressed their interest in developing an online information platform for rail freight transport.

Local stakeholders and experts from in the field of transport, local and regional governments and local economy from northern Croatia addressed the issue of lacking the information regarding the possibilities of freight transport in their region, and other similar regions as well. They stated that information tool that

could provide more information on places where terminals and loading points are could help them use railways for freight transport more.

Over the last 2-3 months Novara Region have been informally contacting their stakeholders and the companies that provided the initial case studies to gather their views on the creation of an interactive map. More recently, they have been sounding out the mood of companies operating freight terminals in order to obtain data from them for inclusion in the map. They received mildly positive feedback from all of them, pointing out that the tool can be useful as long as it is constantly updated and - possibly - extended to a larger territorial scale.

Expected level of improvements in entire logistics operations from origin to destination

The central innovation of the toolbox is the presentation of the existing local loading potential on one map together with the existing loading points and the rail network. The potentials are derived from existing business locations and industrial areas. To this end, general location information is used to filter out those sectors that use rail-related goods for supply and delivery.

For regional spatial planners, this mismatch map makes it easy to see where loading points are missing and should be replanned. It can therefore become an important tool for regional spatial planners. In addition to planning new loading points, it is also possible to underpin the decision to maintain little-used or temporarily decommissioned loading points with information on existing potential.

For logistics planners, it is possible to identify the most suitable loading terminal by combining the maps for potentials and for loading points. The available information about the loading points is of fundamental importance for this. They provide the latest data on, for example, technical equipment, opening hours, capacities, services, contacts, etc., which are important for making decisions about transport chains.

How the application of Pilot Project could generate a transition of freight transport from road to rail

**Testing Process:** Summarize how the toolbox was tested in a real-case scenario in Thuringia.

**Monitoring:** Include the role of the transnational team in monitoring implementation and modifying the guideline as needed (Workshops).

# 4. Outcomes

Information platform toolbox is under development

# 5. Conclusions

It was noted that there are already various national and European approaches and solutions that offer assistance for planning rail freight transport.

However, these existing solutions are generally inadequately supported with information (data) and only offer a subset of the total information required.

The toolbox described here aims to bring together several areas of information. The complete underpinning with data for entire regions goes beyond the possibilities of the 'Rail4Regions' project and can only be the subject of subsequent activities.

To evaluate the toolbox a set of questions will be distributed amongst regional stakeholders to ensure that all needed information is provided. The following list of questions was drawn up by the members of the working group.

# 6. Next steps

In a next step the information within the toolbox has to be filled for all loading points within the partner regions to show that this data also is available and usable at european level.

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