

Strengthening regional rail freight services - a Thuringian case study as part of the CE-Interreg project REIF

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Abstract. How to revitalise and strengthen regional rail freight services as the feeding network for a growing modal share of railway transport? Answering this question is the key driver for the EU Interreg project REIF. Within that project a group of ten partners from six central European countries and regions seeks to analyse and identify technical, organisational, and financial bottlenecks that prevent regional freight railways from claiming bigger shares of the transport market. While the modal share of rail freight services among the REIF partners and in other regions is too often too low, reasons for that are typically quite different and require individual assessment. Taking the case study Thuringia as an example this conference contribution presents the REIF core methodology consisting of a status quo market potential analysis, bottleneck analysis, selection and implementation of a pilot action, and finally policy recommendations and conclusions. Due to the high importance and multitude of perspectives and expectations regarding regional freight railways special focus will be laid on the presentation of the systematic stakeholder integration as a core mean to understand existing drawbacks and to jointly develop broadly accepted solutions and supporting schemes.

1 Motivation and introduction of the REIF project

Across Europe rail freight transport has lost market shares dramatically. To halt this negative trend huge investment programs are under way with a focus on the main transport corridors. Complementary to these initiatives the Interreg Central Europe Project “REIF – Regional Rail freight Transport – Revitalised”¹ was initiated in 2018. This project aims at increasing the modal share of rail freight transport by strengthening the regional feeder network. The Thuringian Ministry of Infrastructure and Agriculture (TMIL) has gathered a consortium of ten actors from six European countries, i.e. Austria, Croatia, Italy, Poland, and Slovenia to tackle this challenge.

The main objective of REIF is the promotion of regional rail freight transport as feeder network of the large transport corridors (TEN – Trans European Network) in Central Europe by

refocusing political action on regional rail freight infrastructure and intense cooperation with regional stakeholders.

By doing this, REIF – ending in 2022 – aims at removing regional bottlenecks and upgrading branch lines. Additionally, REIF plans to improve design and implementation of freight infrastructures by strengthening capacities in multimodal logistics management.

2 Status quo - the regional market potential for rail freight services

The Free State of Thuringia is located centrally in Germany and Europe. The railway network has good connections to Saxony and Saxony-Anhalt with thus an indirect connection to three TEN-T corridors. The Free State features 1,500 km rail network and some 10,000 km of roads. Together with the developments of the ports at the Baltic and Adriatic Sea these are very good

¹ for details see: <https://www.interreg-central.eu/Content.Node/REIF.html>

prerequisites for Thuringia to participate positively in the development of both transport volumes and logistic concepts.

Relative to its size and population, Thuringia has the densest rail network (per capita) in Germany [1] but reserves in capacity and network utilization [2]. There has been a number of railway line shutdowns and closures in Thuringia in the last decades. Since 1994 roughly 40 lines have been closed which makes an overall length of 466.9 km of disused lines [3]. Because of that, there is a high potential to reactivate lines for passenger and freight transport and at the same time to increase the currently modest modal share of only 4 % of rail freight transport in Thuringia which is far below the average of Germany reaching 18 % [4].

Especially for regional rail freight transport there are potentials of modal shift to rail. Industrial sites receiving or shipping rail freight suitable goods, like the wood and paper industry, can be found at various places, even with already existing but currently disused infrastructure. Container terminals and further loading points (for combined transport) are scarce in Thuringia and need further extension to support (intermodal) rail freight transport in the region.

3 Stakeholder involvement and dialogues – case study Thuringia

The participation of experts and citizens demonstrably has the effect that political processes are designed more effectively, sustainable solutions are developed and trust in the state and politics is increased. Developing a culture of participation thus becomes an urgent issue on the political agenda of the state government of Thuringia. Within the REIF project aiming at fostering regional rail freight services the following two forms of stakeholder participation were implemented:

- Round Table Rail Freight Transport (3.1)
- Market Player Involvement Group (3.2)

While both formats were planned as interactive workshops this approach had to be modified due to Covid-19. In spring and summer of 2020, a series of expert interviews were held to incorporate the stakeholders' perspectives on rail freight in Thuringia. To allow for multi-player interaction different online formats will be carried out in the further course of the project.

3.1 Round Table Rail Freight Transport

Although direct control transport of goods by rail lies not within the responsibility of the federal state, the Thuringian government supports rail transport. This support is primarily looking at the non-federal owned railway infrastructure. The

Thuringian Ministry for Transport wants to establish a funding scheme to support connecting railways and regional infrastructure companies to put more freight on the railway system.

Thus in 2018 a "Round Table Rail Freight Transport" has been set up to deepen the exchange between actors in Thuringia. Within the REIF project this Round Table is designed to meet on a frequent basis revealing obstacles for rail freight services and discussing which joint action may help to overcome some of these obstacles. The later described pilot action will test potential solutions and is being monitored and discussed by the Round Table.

3.2 Market Player Involvement Group

Supporting the Round Table with a more local focus REIF established a Market Player Involvement Group consisting of the important players of the freight transport in the area of the planned pilot action and added by local and regional administrations as well as the interested public. With their practical experience, this group helped to identify obstacles and to define a viable pilot action. Moreover, this group will support the REIF team at carrying out the pilot action.

4 Identified bottlenecks

As a result of the expert interviews and further research a significant number of bottlenecks was identified using a jointly developed scheme to differ between technical, institutional, and financial bottlenecks.

In Thuringia the following four crucial bottlenecks were identified:

- Missing funding scheme to plan and support passenger and freight services when branch-lines are considered for re-opening.
- Lack of regional freight hubs to ease intermodal load shifts for smaller quantities.
- Infrastructural deficits in terms of insufficient axle loads, missing electrification and loading facilities.
- Missing links in railway network.

5 Pilot Action – reactivation of a branch line for passenger and freight services

One of REIF tasks is to derive a pilot action addressing the most important bottlenecks and thus removing one or more of the identified obstacles. Ideally, the knowledge gained can be generalized and transferred to other projects in regional and transnational context. Two realistic approaches for a pilot action have been derived from the identified bottlenecks:

- (A) The development or upgrading of existing or additional loading points
- (B) Closing gaps in the network by reactivating disused (branch) lines.

Table 1 and figure 1 give an overview on the potential pilot actions identified in these two groups.

Table 1. Potential pilot actions identified in Thuringia

Loading infrastructure	Closing gaps (reactivation) ²
A1) General tool for identifying suitable locations	B1) "Ohratalbahn"
A2) Railport Nordhausen	B2) Rail gap closure "Hoellentalbahn"
A3) Railport Erfurt Freight depot	B3) Rail gap closure Eisfeld – Coburg
A4) Railport „Erfurter Kreuz“	B4) Werratal-, Rennsteig-, Pfefferminzbahn

After identifying and evaluating the advantages and disadvantages of these proposals, the topic B1) was chosen as pilot action, considering that:

- In this pilot action, three of the four identified bottlenecks can be worked on - more than in any other possible project.
- Initial practical results are possible during the REIF project time and resources.
- The project is on the political agenda of the state government (i. e. coalition agreement) and will hence benefit from political support.

The "Ohratal Railway" is a 36 km long railway line in Thuringia between the Gotha and Graefenroda mainline junctions. Passenger traffic was discontinued in 2012. Freight trains run only on a 5 km long section between Gotha and Emleben serving a fuel depot. The remainder of the route has been closed but not officially been demounted and repurposed. The railway infrastructure is still in place, but has to be reactivated and, in some cases, to be thoroughly renovated. All major stakeholders are involved in the development and implementation of this pilot action, e. g.:

- Local and regional authorities,
- Railway operating and infrastructure companies,
- Logistics companies, and interested industrial, forest and agricultural companies,
- Associations and interest groups.

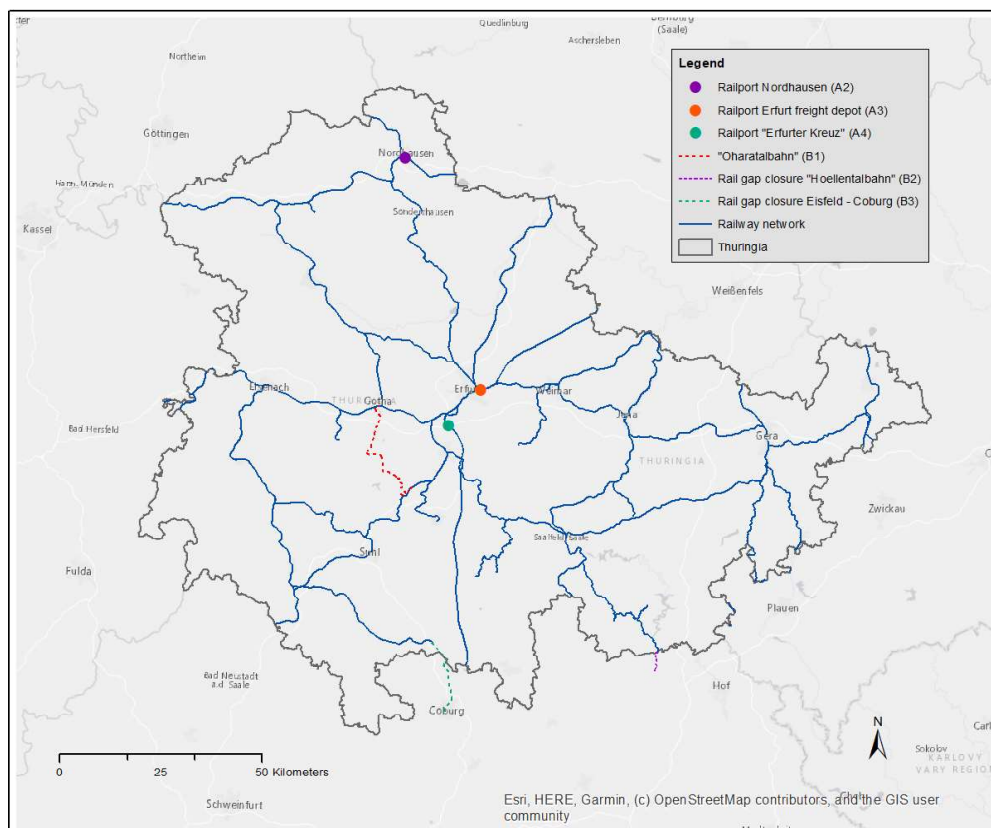


Figure 1. Potential pilot actions identified in Thuringia

² all of the routes B1-B4 are also listed in the VDV paper "On the agenda: reactivation of railway lines" [5]

6 Next steps and recommendations

The pilot action will serve as a technical as well as socio-technical blueprint to base reactivation projects on a broad stakeholder participation with thorough consideration of passenger and freight requirements regarding design and economic viability.

As a next step a feasibility study will examine the railway line and its catchment area with emphasis on freight traffic. In a further step, the organizational and investment measures can be derived.

As a preliminary conclusion the presented case study showed that there is no simple connection between the most important bottlenecks and one universal remedy to achieve higher modal shares of rail freight traffic. Potential solutions need to be based on intense stakeholder involvement, analysis of specific bottlenecks, and thus deriving adequate and individual solutions.

Regarding the pilot action (and other similar cases), it is strikingly clear to all actors that reactivation will only be possible by offering freight and passenger traffic. If only one of these two traffic services are implemented, sufficient profitability cannot be achieved.

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