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Rail4Regions

D.3.4.2
ACTION PLAN

Thuringia, Germany

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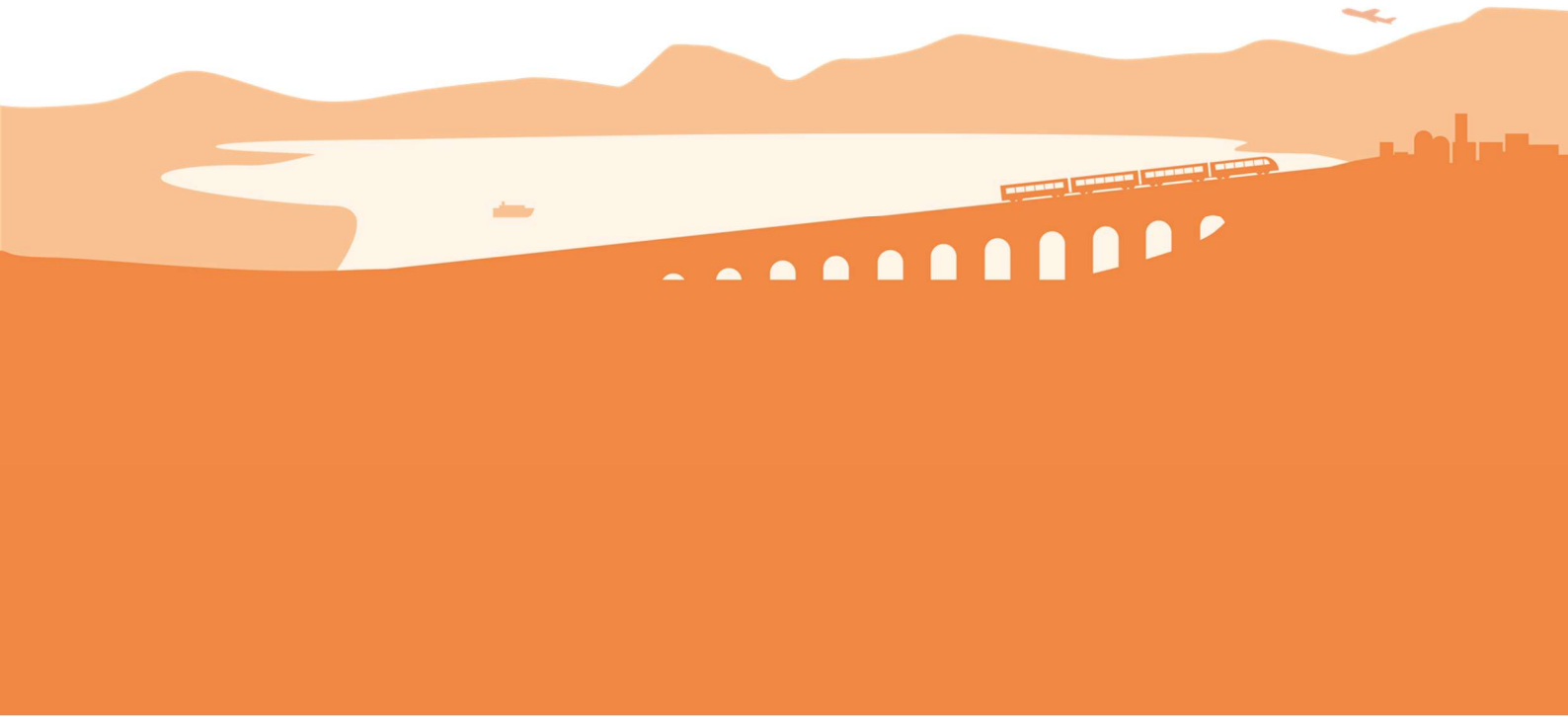

A. General information

Partner Organization

Name of Partner Organization: Thuringian Ministry of the Interior, Internal Affairs and Spatial Planning

Region **Covered**: Freestate of Thuringia

B. Regional context

Policy Application Processes

Rail infrastructure in the context of state and regional planning in Thuringia

The Free State of Thuringia is facing a number of challenges, particularly with demographic change, the consolidation of public budgets and the energy budgets and the energy transition. Against this backdrop, the state development program for the sustainable design of spatial development and preserving the diversity of Thuringia's cultural landscape is being developed. The State Development Program 2025 (LEP 2025) was adopted by the Thuringian state government and came into force on July 5, 2014. In 2024 parts of the program have been updated. It is planned to update the whole program in the upcoming years.

As an interdisciplinary master plan, the LEP provides normative guidelines and programmatic suggestions for the spatial development in Thuringia and consequently also for all programs for the further development of public transport in Thuringia, including the rail infrastructure master plan.

In order to ensure equal living conditions in all regions of Thuringia, an efficient transport infrastructure is essential. The polycentric settlement structure in Thuringia and the diversity of the differently sub-regions are taken into account accordingly.

The LEP (Landesentwicklungsprogramm, engl: state development program) 2025 sets out the development of infrastructure in general and the infrastructure for rail transport in particular, as well as the opportunities for economic development in relation to an efficient transport system. The development corridors as areas with particular and central locations are accorded particular importance in context of transport policy. In addition, railroad infrastructure should be developed where it serves to sustainably strengthen economic locations and where it makes economic sense.

Despite a dense rail network in Central Europe, the distance to the nearest intermodal terminal is often too great, to make rail transportation a competitive alternative. Regional planning and transport planning are therefore needed to improve access to the rail network along secondary and feeder lines, the establishment and use of loading points and industrial tracks as subnodes for freight transport and to increase the attractiveness of single wagonload traffic. This is the only way to make the transportation of smaller quantities by rail and thus intermodal freight transport from door to door more competitive.

DB InfraGO is responsible for the construction and maintenance of the rail infrastructure in Thuringia as far as publicly owned lines are concerned. Local rail passenger transport is the responsibility of the Thuringian Ministry for Digital and Infrastructure. Rail freight transport is managed by the Federal

Ministry of Transport and DB InfraGO. The Thuringian Ministry of the Interior, Internal Affairs and Spatial Planning is responsible for regional planning.

Transport and spatial planning actors

- Please Identify the main actors involved in transport and spatial planning in your region (e.g., public authorities, private companies, regional development agencies).

Public authorities:

- TMDI (Thuringian Ministry of digitalisation and Infrastructure), Unit 45 Rail infrastructure; freight transport; air transport and inland waterway transport)
- Thüringer Landesamt für Bau und Verkehr (TLBV): Responsible for the implementation of projects in the area of the transport network, road construction and public transport.
- County and city councils: At regional level, these authorities are responsible for the local planning and implementation of public road transport solutions.

Private Companies:

- Erfurter Bahn (Local railway company in passenger and freight transport)
- Raildoxx Local railway company in freight transport
- Starkenberger Güterlogistik GmbH
- Heavy Haul Power International GmbH
- Werra Eisenbahnverkehrsgesellschaft mbH
- ,,,

Associations and interest groups:

- Verband Deutscher Verkehrsunternehmer (VDV) Thuringia, Regional association for transport companies
- Mobilitätsnetzwerk Thüringen, Association of various private actors, local authorities and transport companies for a better rail infrastructure

Reactivating and closing gaps in rail routes in freight and passenger transport are measures of particular importance in terms of structural and economic policy as well as transport policy, which also have a considerable impact on the environment and nature conservation and are accompanied by major investment requirements. They are therefore of great regional and national importance. In order to do justice to this regional and national importance in the decision-making process, joint coordination, support and participation of all relevant decision-makers and stakeholders is therefore required.
A Mobility Network Thuringia (MoNeT) was founded in 2024. Its members include experts from leading municipal associations, transport and driving guest associations, business and science.
Its primary task is networking, exchange and knowledge transfer between Thuringian stakeholders. In this context, a dialog forum with transport experts and industry and interest representatives is to be established for the rail infrastructure master plan in order to evaluate rail infrastructure measures in Thuringia in a holistic and regional context.
In addition to the measures required to maintain and expand the existing infrastructure, the

recommendations of the report Reactivation of railway lines in Thuringia will be explored in greater depth and options for action for the respective region and Thuringia as a whole.

Mention key challenges

Mechanisms of co-operation:

Governance models: Thuringia has several governance models that promote collaboration between public and private stakeholders. For example, there are often inter-ministerial working groups that bring together different ministries, including infrastructure, environment and economy, to discuss coordinated planning and projects. This ensures a comprehensive view of transport and spatial planning and prevents isolated solutions.

Management committees and working groups: Steering committees or project advisory boards are often set up for larger infrastructure projects.

Partnerships and public-private partnerships (PPP): Public-private partnerships can develop, particularly for larger infrastructure projects (e.g. expansion of transport networks).

Key Challenges:

- Coordination and communication
- Financing
- Conflicting interests
- Sustainability and environmental aspects
- Future mobility concepts

C. Adopted solutions

Based on the outcomes of two intensive stakeholder workshops at the beginning of the Rail4Regions Project two feasible and strategically aligned solutions (Solution 1 and Solution 2 phase 1 and 2) have been identified, each with the highest potential for implementation in Thuringia. All solutions are discussed in more detail below.

Solution 1: Develop a free-access online portal featuring an interactive GIS-based map for Central Europe

This tool is designed to:

- ❑ visualize existing loading points, marked with pins, providing detailed information in various formats (images and text), including:
  - capacity, location, operating hours, operator information, and available equipment

- freight options

❑ Display existing rail networks, business locations, and industrial areas

Purpose of the Tool:

✓ **Support logistics and transport stakeholders:** The tool offers a comprehensive network overview of all loading points, complete with metadata. This supports forwarders, rail transport companies, combined transport operators, and other logistics service providers in optimizing their operations and shifting more goods to railways.

✓ **Assist regional spatial planners:** The tool identifies infrastructure gaps and aids in planning new loading points or revitalizing underutilized ones.

Solution 2: Revitalization of branch and feeder lines for rail freight transports

The solution for revitalizing branch and feeder lines in rural areas is structured into a **three-phase** approach:

Phase 1: Minimal Repair Measures

The first phase focuses on minimal repairs and investment to support occasional freight traffic with reduced operational quality, maintaining a low line speed of at least **30 km/h**. The main goal is to ensure **safety**, regain the **operating license**, and to achieve continuous drivability to loading points. Key actions include:

☐ **Track clearance maintenance:**

☐ Remove vegetation and obstructions to maintain safe and unobstructed train passage.

☐ **Structural inspections and repairs:**

☐ Inspect tracks, bridges, and tunnels for wear and damage.

☐ Perform necessary repairs and replacements to maintain structural stability.

☐ Conduct **corrosion prevention** measures.

Phase 2: Extended Route Upgrading

The second phase begins once **traffic demand** for occasional rail freight has stabilized, with potential for growth. This is achieved by expanding existing freight services and incorporating new goods from nearby companies. This phase involves more extensive route upgrading to meet the operational quality and efficiency of the line, increasing the average line speed to a level of **50 km/h**, needed to support **consistent and reliable** freight services. Key actions in this phase include:

❑ Implement **automated control systems** to improve traffic management.

❑ **Renovate (modernize)** substructure and track superstructure (consists in electrification of existing siding line that can become feeder line in **Pilot Project**)

❑ Conduct **corrosion prevention** measures.

Phase 3: Reactivation for Combined Passenger and Freight Traffic

The final phase aims to upgrade the railway lines to accommodate both **passenger and freight traffic**, meeting higher operational standards. This phase requires **significant investment** to create dual-purpose corridors that efficiently manage **mixed transport services**.

- ❑ Integration of **advanced signaling and control systems** for mixed-traffic operations (Pilot project)
- ❑ **Reopening or relocation** of stations to improve accessibility.
- ❑ **Construction** of new stops (Pilot project)
- ❑ **Expansion of reloading stations** to enhance freight transport efficiency.
- ❑ Purchasing of **rolling stock** for line operators

Solution 3: Industrial sidings to connect industrial areas to the rail freight network

Adopting specific decision-making tools for existing industrial sidings and areas without them, which provide a ranking of industrial sidings based on total weights assigned to them, identifying priority areas for investment.

To apply this tool, it is necessary to first identify the following information:

1. The industrial areas in the region
2. If they have or not sidings
3. The closest railway stations to the industrial areas
4. Necessary information regarding the parameters considered in the tool
5. Determine weights for each of the parameters together with stakeholders

- ❑ **Parameters for Existing Industrial Sidings:**
  - Use of siding (every working day, once a week, once a month, few times a year (less than 12)).
  - Number of wagons per year (Over 5000, between 5000 and 2500, between 2500 and 1000, between 1000 and 500, between 500 and 250, less than 250).
  - Rail axle load category (25, 22, 20, 18 tones/axle).
    - Electrification (Line and siding electrification, only line electrification, without electrification).
    - All sidings length in total (over 1000 m, between 500 m and 10000 m, less than 500m).
    - Shunting traction vehicles (In-house shunting capabilities, outsourced shunting capabilities, without possibility for shunting).
    - Direct connection to rail freight corridor (yes/not).
    - Required investments (Nothing required, up to 250.000, between 250.000 and 500.000, between 500.000 and 1.000.000, over 1.000.000).
- ❑ **Parameters for Areas Without Industrial Sidings:**
  - Potential volume of wagons per year (Over 5000, between 5000 and 2500, between 2500 and1000, between 1000 and 500, between 500 and 250, less than 250).

- Distance to nearest railway station (Less than 500 m, between 500 m and 1000 m, between 1000 m and 2000 m, over 2000 m).
- Line electrification (Line electrification, without electrification).
- Direct connection to rail freight corridor (yes/not).
- Required infrastructure investments (Less than 250.000, between 250.000 and 500.000, between 500.000 and 1.000.000, over 1.000.000).

Solution 4: Financial and technical solutions to increase the attractiveness of single-waggon transport

Several solutions to promote Single Wagon Load (SWL) transport are summarized as follows:

1) Technical solutions (Digital Automatic Coupling (DAC))

- Automate coupling to reduce labor and time for shunting operations.
- Lower maintenance costs and increase efficiency with predictive maintenance.
- Enhance safety by reducing derailment risks and noise pollution.

Increase the availability of wagons through digital monitoring

2) Policy and Regulatory Support

- Engage policy makers at various levels (local, regional, national) to address regulatory barriers.
- Leverage directives like the Energy Efficiency Directive and Corporate Sustainability Reporting Directive to encourage businesses to shift to SWL for environmental compliance and reporting standards.

3) Addressing Financial Challenges, subsidies

- Explore funding mechanisms for the implementation of DAC and other innovations.
- Coordinate actions to align SWL improvements with non-EU countries, where applicable.
- Multiannual predictable funding for rail network development and maintenance + public support for the development of the SWL transport system.

D. Describe how these solutions coordinate with broader development and investment programsExplain how these solutions address the region's specific transport

challenges, such as environmental sustainability, socio-economic development, or improved safety, etc.Stakeholder Engagement

- Please detail **how** stakeholders were consulted during the development of the Action Plan Please list **key stakeholders** consulted (e.g., regional development agencies, transport operators, private companies).
    - The stakeholders of Thuringia were consulted in stakeholder meetings the project partners of Thuringia hosted in Erfurt. Additionally, an online access was provided to decrease the barriers of participation. The following stakeholders participated:Erfurter Bahn (Local railway company in passenger and freight transport)
    - Raildoxx Local railway company in freight transport
    - Deutsche Umschlaggesellschaft Schiene - Straße (DUSS)
    - Thüringer Landesamt für Bodenmanagment und Geoinformation, Thuringian State Office for Land Management and Geoinformation
    - DB Cargo AG
    - Zellstoff- und Papierfabrik Rosenthal GmbH
    - Landesentwicklungsgesellschaft Thüringen mbH
    - Thüringen Forst
    - Regionale Planungsgemeinschaft Mittelthüringen
    - Regionale Planungsgemeinschaft Südwestthüringen
    - Regionale Planungsgemeinschaft Ostthüringen
    - IHK Westthüringen Erfurt
    - IHK Ostthüringen Gera
    - Wirtschaftsförderung Ilmenau
    - Stadt Ohrdruf
- Highlight their input and how it influenced the proposed solutions and actions

The stakeholders have given extensive feedback which problems they have to face. One of the main problems was the missing access to the rail network.

In some of these cases it was just a matter of missing information about the next access, so the first action would be a fitting opportunity to overcome this lack of information and therefore the development of the Railhub Finder met with great interest.

In other cases, the access to the rail network could only achieved by infrastructural solutions like the construction of new or the revitalization of abandoned sidings or feeder lines. Since infrastructural measures always involve a financial outlay, private freight transport service providers or the associated manufacturing industry may shrink from potentially unprofitable investments, the decision-making tool for private sidings can be very helpful here. Similarly, a gradual reactivation may be the right approach for branch lines in order to keep the initial hurdles low. This approach is planned for the Ohratalbahn in Thuringia. As a first step, timber transportation by rail is to be resumed without major investment.

Beyond multiple examples the stakeholders have given about the difficulties for rail freight transport, a very important input for the development of the Railhub Finder is the location data of companies based in Thuringia provided by the chambers of industry and commerce. These could be integrated with the help of geo-information systems, so that the Railhub Finder can not only be used by companies with a transport requirement, but also possible freight potentials can be identified. In this way, carriers can identify potential customers or a combination of different requirements in one area can be detected. The agglomeration of information combining the loading points and the freight potentials could also make a contribution to an improved regional and spatial planning.

E. Proposed actions

Action #1: RailHub Finder Integration into Thuringian Geo Data base

Objective:

The RailHub Finder is an interactive viewer that provides a quick and informative overview of loading points and companies that have potential for rail freight.

Description:

The RailHub *Finder* records various types of loading facilities, e.g. open loading tracks, combined transport terminals and RailPorts. The *RailHub Finder* is intended to provide better and clearer access to rail freight logistics and facilitate the climate-friendly transportation of goods. In order to give logistics companies a simple overview of potential loading points, the RailHub *Finder* will display loading points with metadata on equipment features and infrastructure on an interactive map. Since the collection of data during the pilot phase worked quite well in the development environment now the data has to be integrated into the Thuringian Geodatabase.

The multi-level public planning framework relevant to this action, covering:

- European Level: EU policies and directives (e.g., Green Deal, TEN-T regulation) relevant to the region.
- National Level: National strategies and laws affecting transport and spatial planning.
- Regional Level: Regional policies, plans, and programs that guide transport and spatial development.

The private planning framework relevant to this action, covering:

The action aims to support public and private operators of loading points as well as general companies that benefit from an efficient rail system. With the RailHub Finder, loading point operators receive a free platform to advertise their infrastructure, including all metadata. For example, how the loading station is equipped, what opening hours it has, what type of goods are to be shipped and much more. It is also a good way for companies to get a quick overview of existing loading infrastructure. In addition, companies can also register in the RailHub Finder and are thus located on the map and can form synergies with other companies. For example, if several companies with similar logistics needs have come together, they can exert greater pressure to build new loading infrastructure, reactivate disused infrastructure or optimize existing infrastructure.

Activities:

- Coordination with stakeholders on the benefits of the activity
- Coordination on the type of data required
- Search for and find a suitable service provider who can implement the technical components of the activity
- Search for data on loading points and companies
- Set up a development environment to test the viewer and the editor
- Enter the data, visualize it
- Integrate the development into the Thuringian geodata model
- Roll out the test environment to Europe
- Fill with additional data from other European member states
- tions

Responsible Actors:

The RailHub Finder does not require any official support or approval to be used. The tool is an open access tool that benefits from being used by as many loading point operators and companies as possible. Participation is recommended but on voluntary basis. The only issue is that participants have to register if they want to edit data.

Challenges and Requirements

Political:

- Identification of relevant stakeholders (e.g. central loading points, transport companies, industry representatives, regional planners) and close cooperation with them in order to gain their support for the project.

- Early involvement and regular communication to highlight the benefits of the platform for various stakeholders (e.g. transport planning, industry, politics).

- Lobbying for the need for better infrastructure for rail freight transport, especially in rural and peripheral regions.

Environmental:

Climate protection: Promoting the shift of freight transport from road to rail in order to reduce CO_2 emissions and establish a more environmentally friendly transport solution.

- For Action 1 no environmental measures are needed because the environment is not affected by the tool.

Financial:

The RailHub Finder is a cost-effective tool once development is complete. The only costs incurred are for hosting the website and the editorial work. Costs may be incurred for maintenance work on the website. The costs can be covered by the public sector.

Regulatory:

In order to promote European harmonization in the rail infrastructure structure, the multi-lingual RailHub Finder website is intended to provide easy access and give as much as possible information on national and international framework condition on railfreight transport. In addition, European unified metadata categories should also provide a uniform data basis.

The developed platform and homepage complies with the provisions of the European General Data Protection Regulation.

Financing Resources:

The Railhub Finder requires hardly any financial support; on the opposite, it offers its users an overview of existing subsidies.

Indicate potential funding sources at national, regional, and local levels.

n.a.

Timeframe:

Start Date: [10/2024]

End Date: [ongoing]

Risks and Mitigation:

Risk: Lack of Data for loading points

Mitigation: Involvement of DB Cargo, private operators and Research for data sourcing

Risk: Low adoption by regional governments
Mitigation: Direct involvement through endorsement of Action Plan and publicity activities

Action #2: Phase 1 and 2 of Reactivation of Branch and Feeder Line (Ohratalbahn)

Objective: What does this action aim to achieve?

The aim is to support the upgrading of existing railroad infrastructure, some of which is no longer in operation , particularly in the secondary railroad network, in order to improve the development and connection of European freight transport corridors. By using the infrastructure for both freight and passenger transport, the aim is to achieve greater economic efficiency and thus meet the climate policy objective of supporting the more environmentally friendly transportation of goods by rail in a more sustainable manner.
The roadmap developed using the Ohratalbahn pilot project as an example is intended to provide a basis for action, on the basis of which the feasibility of revitalizing disused railroad lines for freight transport can be examined in a practical manner and corresponding instructions for action can be drawn up.

Description: Please explain the action, including its alignment with identified solutions and its relevance to regional challenges

This is action in line with the solution Guideline for the Revitalisation of branch an feeder lines and it will implement the developed approach at the Ohratal Line in Thuringia.

The process of revitalizing branch and feeder lines is complex, since it depends on the existing operational quality of the feeder lines, and the level and type of traffic that need to be accommodated. As a result, the solution developed is divided into three distinct phases, each addressing specific measures, to ensure a certain operational level of feeder lines. These three phases are as follows:

Phase 1: Minimal Repair Measures

The first phase involves minimal repair measures and investment to facilitate occasional freight traffic with reduced operational quality, which is expressed in a low line speed (at least 30 km/h). The main objective is intended to ensure safety to regain the operating license and to achieve continuous drivability up to the loading points.

The approximated amount of costs for this first phase measure is 210.000€ which is paid by private and public sources.

Phase 2: Extended Route Upgrading

The second phase should be activated when the traffic demand for occasional rail freight has stabilized and there is potential for further growth. This can be achieved by expanding the existing freight services and by incorporating new goods from existing or additional companies located near the loading point.

This phase involves more extensive route upgrading to meet the operational quality and efficiency of the line, increasing the average line speed to a level of 50 km/h, needed to support consistent and reliable freight services

The approximated amount of costs for this first phase measure is further 450.000 to 500.000€. Financing at the moment is unclear.

The multi-level public planning framework relevant to this action, covering:

European Level: EU policies and directives (e.g., Green Deal, TEN-T regulation) relevant to the region.

n.a.

National Level: National strategies and laws affecting transport and spatial planning.

Rail Freight Master Plan - Objectives and guiding principles for efficient and sustainable rail freight transport

The industry and politicians are determined to tap into the as yet untapped performance and development potential of rail freight transport, which can make a significant contribution to overcoming the challenges posed by transport and climate policy.

They have therefore agreed a comprehensive package of measures in the form of the Rail Freight Transport Master Plan with the aim of strengthening rail freight transport in the long term and offering the shipping industry more competitively priced and higher quality transport services by rail

The focus here is on

- ensuring an efficient infrastructure,
- making full use of innovation potential and
- improving the transport policy framework.

The Rail Freight Master Plan therefore aims to achieve a lasting, demonstrable improvement in the competitiveness and logistics capability of rail freight transport. Entrepreneurial and political action are required to strengthen the profitability and innovative power of rail freight transport in the long term.

The measure described here primarily addresses field of action 5 "Strengthen multimodality and secure and expand access to rail" of the master plan.

Rail should play a central role in a sustainable freight transport system. In addition to end-to-end transport on the rail, the focus will be on multimodal transport chains with the main route by rail. High-volume industrial and logistical locations should have a rail connection. Where this is not the case pre-carriage and on-carriage to both combined and conventional wagonload transport must function more reliably and economically.

The volume of goods corresponding to the classic block train will lose importance in absolute and relative terms in the coming years (freight structure and logistics effect). In contrast, the “smaller-scale” freight volume (less bundling of transport, greater spatial differentiation of sources and destinations) will increase at an above-average rate.

Due to its track-based nature, rail freight transport does not have direct access to the sources and destinations of this volume. However, the share of rail freight transport in the modal split can only be increased if it can serve the growing submarkets at competitive conditions. To do this, rail freight transport needs access to this transport volume of the future either through rail connections with (automated if possible) loading options directly at the sources and destinations of the logistics chains or through pre-carriage and onward carriage to intermodal terminals as part of multimodal transport chains.

Regional Level: Regional policies, plans, and programs that guide transport and spatial development.

At regional level the Master plan „Prospects for the development of the rail infrastructure in Thuringia“ ist he basis for the action.In terms of transport policy, the Free State of Thuringia is therefore aiming to de- carbonize transport and double the number of public transport users in the modal split from 8 to 16 percent by 2030; this is an ambitious goal for a small and largely sparsely populated state. The shift of traffic to rail plays a central role in this, both in freight and passenger transport. It is therefore the declared aim of the Thuringian state government to strengthen passenger rail transport in Thuringia and freight transport by rail.Against this backdrop, the aim and task of the master plan rail infrastructure is to provide recommendations for the further development of the rail infrastructure in Thuringia. A particular focus is placed on rail freight transport and also the evaluation of a possible reopening of decommissioned rail infrastructure. The Rail Infrastructure Master Plan thus provides guidance for investment decisions in the rail infra- structure in the Free State of Thuringia and the necessary in-depth studies and measures in a time horizon up to the year 2030.

The private planning framework relevant to this action, covering:

Identify private sector strategies or standards that influence regional transport or spatial planning (e.g., logistics companies, freight operators), relevant to the identified solutions.

n.a.

Explain how private frameworks could be adopted or aligned with public strategies to support the Action Plan.

Activities:

List the main tasks required for implementation, including milestones

Phase 1

Example actions in this phase include:

- Track clearance maintenance:
  - Remove any vegetation or obstructions within the designated clearance zones to maintain safe and unobstructed passage for trains
- Structural inspections and repairs:
  - Inspect tracks, bridges, tunnels, and other structures for wear, damage, and stability.
  - Conduct necessary repairs and replacements to maintain optimal condition.

Phase 2

Key actions in this phase include:

- Implementing automated control systems for better traffic management.
- Renovation measures for the substructure and track superstructure

- Conducting corrosion prevention measures

- Expansion of reloading stations to enhance the efficiency of freight transport operations.

Responsible Actors: List stakeholders responsible for implementing the action (e.g., local authorities, private companies, public transport operators).

The key authorities and stakeholders to be involved in revitalizing feeder lines, along with their responsibilities, are outlined below. Their involvement is essential to ensure regulatory compliance, secure support, and address the concerns of all affected parties:

- **Ministry (Council of Ministers)**
  - Planning, management and regulation of transport and infrastructure
  - Development of financing and environmental Protection strategies
- **Infrastructure Owner/Provider**
  - Investment in infrastructure
  - Coordination with other stakeholders
- **Transport Operator**
  - Development of logistics services
  - Coordination with infrastructure and regulatory bodies
- **Federal or National Railway Authority**
  - Granting the operating licenses
- **Regional/Local Administration**
  - Financial and political support
  - Development and implementation of suitable concepts for local public transport
- **Industrial producers**
  - Conversion of logistics chains
  - Commitments to use
- **Population and business activities owners**
  - Support for improved accessibility
  - Participation in environmental and climate protection efforts promoted by the project

For the reactivaton of the Ohratalbahn following stakeholders are involved:

- **Ministry**
  - Ministry of Infratsructure
  - Ministry of Spatial Planning
- **Infrastructure Owner/Provider**
  - Zossen Rail
- **Transport Operator**
  - DB Cargo
  - Erfurter Bahn
  - RailSystems GmbH
  - Regionalbahn Thüringen GmbH

- **Federal or National Railway Authority**
    - Federal Railway Authority (Eisenbahnbundesamt)
- **Regional/Local Administration**
    - County Gotha
    - City Ohrdruf
    - Chambers of Commerce
    - Regional Planning Authorities
- **Industrial producers**
    - Mercer Timber Producs
    - Thüringen Forst
- **Population and business activities owners**
    - Support for improved accessibility
    - Participation in environmental and climate protection efforts promoted by the project

Challenges and Requirements

Political: Strategies for securing stakeholder support and addressing planning delays.

The main strategy to secure stakeholder support is to keep them updated and involve them in decisions concerning the planned actions during the lifetime of the project and beyond.

Therefore representatives of companies and stakeholders related to rail transport were invited to several workshops. The invited stakeholders could be divided into three main categories:
1. Primary stakeholders: Stakeholders who are ultimately affected by the new rail transport solution and who have the highest interest in the outcome of a project because they are directly affected by the outcome. They actively contribute to a project (e.g. infrastructure owners (terminal, railway line), companies, transport and spatial planning authorities).
2. Key actors: These types of actors help with administrative, financial and legal issues. They have political responsibility (regional and national authorities, ministries); financial resources (public and private funds); skills and expertise (public administrations, universities, private sector) in rail transport and related areas (land use, environment, education, climate change).
3. Intermediaries: are those who have an interest in the success of a project and are concerned with the final outcome of the project rather than the process of completing it. Who implements transport policy (infrastructure operators, logistics operators, freight forwarders, public administrations, etc.).
Who carries out important transport activities (operators). Who represents the relevant stakeholders (associations, chambers, cooperatives, networks, NGOs). Who informs and reports on transport (authorities, operators, local media).

Financial: Approaches to cost estimation and securing funding (public, private, or mixed).

For the first phase of reactivation, funds totaling approximately €300,000–400,000 were required for clearing the route, for expert reports on the superstructure and engineering structures, and for signage along the route.

The dedicated Ohratalbahn railway line still exists, but the dismantling that has taken place in the meantime means that the safety technology for railway operations and level crossings will require complex recommissioning, depending on the expansion phase.

According to the infrastructure operator, ZossenRail, there are currently no significant defects known on the route. This also applies to the bridges. However, a concrete assessment would only be possible after an expert evaluation.

Based on this information, experts assume that reactivating the railway infrastructure beyond Ohrdruf for the approximately 18.5 km long section between Emleben and Crawinkel would require an investment of approximately 500 TEUR/km per kilometer of track. For the approximately 18.5 km long route, this would amount to a total of approximately EUR 9.5 million.

The infrastructure company ZossenRail can only apply for the line to be put back into operation (even in sections) if there is a prospect of secure funding . The gradual revival of freight transport, which must initially be supported by state funding, plays a decisive role in this. Only when evidence of corresponding freight transport services has been provided is it possible to apply for additional funding for further investment measures in railway infrastructure from federal funding.

Regulatory: Compliance with safety regulations, environmental permits, and operational standards

The reactivation of railway lines is a complex process that requires thorough analysis and planning. There is no fixed standard, but rather a multi-stage process that is individually adapted to the respective route. Of course, reactivation must be carried out in accordance with the safety, environmental, and technical standards of the respective region, nation state, or the EU.

Timeframe phase 1:

Start Date: [03/2022]

End Date: [12/2025]

Risks and Mitigation: List potential risks and how you plan to address them

Risk: Lack of owner/investor interest in co-financing
Mitigation: Offer incentives or cost-sharing models through using state money

Risk: Low rail freight demand post-construction
Mitigation: Conducting a transport potential analysis, Updating potential users regarding the status of the reactivation, setting up a round table railfreight transport, Negotiate usage contracts or service agreements with freight operators before/during investment

Timeframe phase 2:

Start Date: [01/2026]

End Date: [12/2027]

Risks and Mitigation: List potential risks and how you plan to address them

Risk: Lack of owner/investor interest in co-financing
Mitigation: Offer incentives or cost-sharing models through using state money

Risk: Low rail freight demand post-construction
Mitigation: Conducting a transport potential analysis, Updating potential users regarding the status of the reactivation, setting up a round table railfreight transport, Negotiate usage contracts or service agreements with freight operators before/during investment

F. Monitoring and Evaluation

Monitoring Mechanism

Action #1: RailHub Finder Integration into Thuringian Geo Data base:

The implementation of the Railhub Finder will be monitored in two ways: The first one is the technical analysis of the website itself. The number of visitors will be tracked and it is planned to establish surveys about how the users became aware of the users. There will be different opportunities to give feedback to improve the functionality of the Railhub Finder. The input about the loading points to keep the data up to date adding data will be retained.

The second way is to monitor the number of loading points and their utilization. With the establishment of the Railhub Finder there will be an easily accessible opportunity to collect data about the access to the rail network. A regular report about the loading points indicates the development of the current situation in Thuringia.

Action #2: Phase 1 and 2 of Reactivation of Branch and Feeder Line (Ohratalbahn):

As the reactivation of the Ohratalbahn could last an extended period and depends on multiple stakeholders, the schedule of the monitoring has to keep flexible. Nevertheless, the current status and the enacted plans of the local governance will be supervised and the reactivation will be tried to implement in the regional development plans and strategies.

Performance Indicators (KPIs)

Action #1: RailHub Finder Integration into Thuringian Geo Data base:

- Numbers of visitors of the website of the Railhub Finder
- Number of the amendments and changes submitted by the users
- Statistics about the dissemination of the Railhub Finder in other regions
- Number of loading points in Thuringia complemented by (if available):
    - Tons of goods
    - Number of trains/wagons loaded/unloaded

Action #2: Phase 1 and 2 of Reactivation of Branch and Feeder Line (Ohratalbahn):

- Number of trains using the reactivated track
- Status of infrastructure indicated by track limitations:
    - max. speed
    - max. axle weight
    - max. length of the train
    - max. capacity (number of trains)

G.Conclusion and Next Steps

In the context of creating equal living conditions in Germany, connecting rural areas to passenger and freight rail transport is an important factor influencing the quality of life of citizens and the attractiveness of locations for businesses. Over three million people could benefit from better connections to the nearest regional centers through the reactivation of rail lines.

At the same time, rail transport, as an environmentally friendly mode of transport, makes an important contribution to achieving the Paris climate targets and the necessary mobility transition. Since 1994, more than 5,000 kilometers of track have been decommissioned in Germany, while only slightly more than 1,000 kilometers of track have been reactivated. In recent years, however, a rethink has begun. For example, Deutsche Bahn AG, by far the largest rail infrastructure operator in Germany, announced in 2019 that it would no longer close any lines and would set up a task force for line reactivation.

Potetial positive effects:

Positive influence on the population development of a region

Increase in Urbanisation

Relief for housing markets and the expansion of new residential areas and settlement structures

Space savings due to declining motorized individual traffic volumes

Rise in poperty prices

Tourist development and enhancement of leisure activities

Strengthening regional marketing

Savings in motorized individual transport provision and operating costs

Increase in tax revenue

Savings in accident costs

Relieving traffic congestion on busy roads and avoiding overloading existing transport systems

Reduced fragmentation of the landscape

Reduced land consumption, sealing

Based on the findings of the project, the following actions are generally recommended for the planning, implementation, and support of reactivation projects:

- Formation of a strong and cooperative network of actors and direct involvement of political decision-makers as advocates, as well as early public relations work Formation of a strong and cooperative network of stakeholders and direct involvement of political decision-makers as advocates, as well as early public relations work
- Early and detailed infrastructure planning (HOAI 1–4)
- Adaptation or expansion of the standardized assessment with regard to the effects to be included of the rail line reactivation (e.g., to include spatial development potential)
- Consideration of possible future capacity expansion requirements already in infrastructure planning
- Tendering for high-quality transport services within the framework of competitive tendering for regional rail transport
- Design of new or reactivated stops as intermodal/multimodal mobility stations for seamless mobility chains as part of attractive and sustainable mobility
- Spatial planning and actual protection of the infrastructure against premature and cost-related misuse and/or dismantling
- Expanding the collection of statistical data at the municipal level in order to measure the spatial effects of reactivation projects and thus better assess their success
- Removing the legal hurdles associated with a reactivation project and limiting the bureaucratic administrative burden

The authors of the Action Plan for Thuringia – The Thuringian Ministry for the Interior, Internal Affairs and Spatial Planing, together with University of Applied Sciences Erfurt – are primarily counting on the impact of the study on decision-making bodies – both regionally (regional and local authorities) and nationally (rail operators, relevant ministries). Regardless of the scope of impact (local, supra-local, national, international), the Action Plan and studies developed during the Rail 4 Regions project should focus on the positive effects of the development of rail transport on a regional scale mentioned above.

A follow up activity could be to establish a kind of steering committee which **considers and checks rail transport development i**n all regional investment projects related to transport infrastructure, settlement development and the creation and development of investment areas

H. Annexes (optional)