

LESSONS LEARNED FOR REPLICATION TO CE TERRITORY

D.T3.4.2

WORKING PAPER - DELIVERABLES ANALYSIS

Version 1.0

01.2022



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01_CROATIA

Name of the document	D.T1.4.1- Benchmarking analysis
Main findings	<ul style="list-style-type: none"> - Modal split. Croatia's freight transport relies mostly on Road transport with over 70% of all goods being transported by road since 2011 and has remained very similar percentage-wise since 2008. Railways are the second most used transport mode, averaging around 20% of all freight transport in Croatia since 2008. Inland waterways are the least represented mode of transport for freight. - Railway lines. There are 2.617 kilometres of railway network across the country, 19 border stations (9 with Slovenia, 3 with Hungary, 2 with Serbia, and 5 with Bosnia and Herzegovina). 2.363 km of 2.617 are single track railways, and 254 of double track railways. 980 km of the 2.617 km are electric rails. The railway infrastructure is also connected with the railways in ports. - Terminals and ports. Port of Rijeka is the biggest port in Croatia; it is a primarily cargo port with 15 terminals. Intermodal facilities which include rail are located in three ports: Port of Rijeka, Port of Ploče and Port of Šibenik. - Freight transport demand. The port of Rijeka, as previously mentioned, is primarily a cargo port. It is the largest Croatian port, and in 2018, a total turnover of 13.4 million tonnes of cargo was achieved, and in the same period approximately 150,000 passengers were transported. Railway freight corridors from the port of Rijeka to the markets with the greatest potential for the port (Hungary, BiH, Slovakia, Italy, southern Poland and Serbia). - Policy and legislation. <i>Transport Development Strategy of the Republic of Croatia 2017 - 2030</i>, developed by the Croatian Ministry of Sea, Transport and Infrastructure, is considered the starting point in the process of planning the transport development in Croatia. This strategy evaluates and defines future infrastructural, operational and organizational measures in the transport sector, taking into account European strategies and requirements such as TEN-T, ERTMS, TSI etc.



		<p><i>National Railway Infrastructure Program 2016-2020</i> is the base document setting out development priorities, construction, modernization, renovation and maintenance of the functionality of the railway infrastructure system.</p>
	<p>SWOT</p>	<p>TRANSPORT INFRASTRUCTURE</p> <p>Strengths</p> <ul style="list-style-type: none"> • Three ports which connect the coast to the hinterland (Rijeka, Ploče, Šibenik). • Croatian railway network serves as a link from Italy and Slovenia to Hungary and north-eastern European countries <p>Weaknesses</p> <ul style="list-style-type: none"> • Single track railway lines are less efficient in achieving a successful rail freight transport economy. • Poor railway infrastructure. • Level of interoperability on Croatian corridor railway network is low. • Unsatisfactory maintenance level of infrastructure which causes limitations in operation. <p>Opportunities</p> <ul style="list-style-type: none"> • Increase the amount of electric rail in Croatia. • Availability of funds for strengthening the railway infrastructure. <p>Threats</p> <ul style="list-style-type: none"> • Modern highway network in Croatia. • Lack of compatibility between fleet and rail infrastructure. • The drainage system along the corridor is insufficient and/or out of service. <p>Bottlenecks</p> <ul style="list-style-type: none"> • Old infrastructure <p>OPERATORS AND STAKEHOLDERS</p> <p>Strengths</p> <ul style="list-style-type: none"> • Market liberalisation. <p>Weaknesses</p> <ul style="list-style-type: none"> • Often train delays and inaccurate timetables. • Insufficient train speed on some lines. • Relatively old rolling stock in comparison to other EU countries.



		<ul style="list-style-type: none"> • The old rolling stock is deteriorating the infrastructure and therefore the noise levels during operations are high. <p>Opportunities</p> <ul style="list-style-type: none"> • Increase of the amount of freight transport in the following years. • Congestion of road network might be used as an opportunity for the usage of railways. • Modernization of fleet." <p>Threats</p> <ul style="list-style-type: none"> • Dominant road transport competition. • Punctual, fast and reliable road transport service. <p>Bottlenecks</p> <ul style="list-style-type: none"> • Old rolling stock <p>POLICY AND LEGISLATION</p> <p>Strengths</p> <ul style="list-style-type: none"> • Sustainable and environmentally friendly mode of transport. <p>Opportunities</p> <ul style="list-style-type: none"> • Policy on combined transport encourages modal shift and wider use of railways. • Raised awareness about the necessity of the usage of more environmentally friendly modes of transport. <p>Threats</p> <ul style="list-style-type: none"> • Current operations of all three major companies in Croatian railway system are not sustainable without government support. <p>Bottlenecks</p> <ul style="list-style-type: none"> • Change of locomotives in the border area
	Main lessons learned	<p>Deficiencies have to do with: Old, less efficient infrastructure (single-track lines); Poor maintenance, poor level of interoperability; Less favorable services (replacement of locomotives at the border), old vehicles.</p> <p>Advantages concern: Lively market, wide range of production; 3 major freight, logistics ports connected to the hinterland; Favorable strategic plans.</p>



	Main areas of intervention	<ul style="list-style-type: none"> - Improvement of railway infrastructures Unsatisfactory maintenance level of infrastructure which causes limitations in operation. Single track railway lines are less efficient in achieving a successful rail freight transport economy. The investments in rail transport (both infrastructure and fleet) will make using rail freight options more attractive, increasing its share in the modal split. - Modernization of the rolling stock This would increase competitiveness of rail passenger and freight transport in relation to other modes of transport, starting with a comprehensive analysis of the existing organizational and operational structure and then of an operational and maintenance plan. - Resolution of administrative bottlenecks The main administrative bottleneck in railway transportation is the change of locomotives in the border area, especially at the border with Bosnia and Herzegovina, but at the other borders too. This can be solved also with rail feet (rolling stock) modernization.
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Name of the document		D.T.1.4.2 Priority list of actions and cost estimates
Highlights	Main actions proposed and benefits	<ul style="list-style-type: none"> - Reconstruction and renewal of the railway line on the section Dugo Selo - Novska → Capacity increase and shorter travel time. - Reconstruction of the existing and construction of the second track on the section Hrvatsi Leskovac-Karlovac on the railway line M202 Zagreb GK - Rijeka → Capacity increase and shorter travel time. - Modernization of the railway line M202 Zagreb GK-Rijeka, on the part Oštarije-Škrljevo → Capacity increase and shorter travel time.
	Main constraints and challenges	<ul style="list-style-type: none"> - Possible delays with the technical documentation which can cause delays in the implementation. - Possible funding problems.
	Main lessons learned	Due to the insufficient investments in the past period, the state of railway infrastructure in Croatia is not the best. The technical condition of the system as a whole is in a bad shape. The renewal of the system prescribed every eight to ten years has not been carried out due to lack of funds in the past 35 years. Due to all this, it is necessary to thoroughly revitalize the entire system to preserve the functionality and safety of traffic.



	Opportunities related to TEN-T and macroregional strategies	<p>Croatia is a part of the TEN-T core network, belonging to the Mediterranean corridor with its two main railway points of Rijeka and Zagreb. The TEN-T Mediterranean corridor combines components of all transport modes - road, rail and maritime modes (Through Rijeka), and connects them to major traffic hubs. Part of that network also belongs to the Mediterranean railway freight corridor 6 (RFC6) connecting Spain, France, Italy, Slovenia, Croatia and Hungary. RFC6 connects around 90 terminals and 9 seaports across a line distance of over 7000 kilometres.</p> <p>The priority list includes the main actions needed to revitalise the regional freight rail transport sector and to strengthen the connection with TEN-t corridor that passes through Croatia. These actions will support the modal shift from road to rail of the freight transport.</p>
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Name of the document		D.T.1.4.3 Definition of potential policy measures
Highlights	Main policy documents to be addressed	<ul style="list-style-type: none"> - Transport Development Strategy of the Republic of Croatia 2017 -2030 - Territorial Development Strategy of the Republic of Croatia - Croatian Railway Law
	Main policy measures proposed	<ul style="list-style-type: none"> - Update of both the transport development and territorial development strategies with plans for infrastructural upgrades, in accordance with the Croatian railway law foresees the development of the railway infrastructure
	Main lessons learned	A large percentage of Croatia's rail network requires repairs and modernisation, and requires them soon, more exactly - in the next 5 to 8 years according to recent data. A large percentage of the rail network hasn't been updated since it was first built in the 19th and 20th century, and has become very outdated by today's standards, causing rail transport to be slow and infrequent. All of these issues cause a drop in the willingness to use railways as a main mode of transport for both passengers and cargo in the country.
	Main constraints and challenges	High costs of constructing and renovating multiple railway lines that weren't updated since they were built.

Name of the document	D.T3.1.2 Regional capacity building workshops 1 - 2 - 3
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	Main stakeholders involved	<p>Workshop 1. The main Croatian ports, some of which handle a consistent amount of cargo.</p> <p>Workshop 2. A mix of stakeholders including the University of Zadar, some ports and private companies in the cruise sector.</p> <p>Workshop 3. More or less the same mixed group of stakeholders of workshop 2, also including the Croatian chamber of economy, Zadar County division.</p>
Highlights	Main findings	<p>Workshop 1. The main topic discussed was the potential for Croatian ports to handle a much higher quantity of freight, in order to increase the share of railway transportation of goods, which is a mode highly more sustainable than road transport. It was discussed which results and outputs will have the most meaningful impact on the overall usage of rail to transport cargo from the ports, and whether these results will differentiate depending on the different type of rail infrastructure (electrified, non-electrified, main line, branch line or freight only line) available to each port.</p> <p>Workshop 2. The participants agreed that a lot of work needs to be done to ensure the railway infrastructure in Croatia is modernized, and that identifying and selecting frequently used lines located on important domestic and international railway corridors as the first lines to be modified is of utmost importance.</p> <p>Workshop 3. The three proposed priority actions were explained in depth and discussed by participants. Stakeholders gave credit to the good work done in cooperation with the Advisory board and they hope that more work will be done to improve the existing railway infrastructure even outside the three selected actions.</p>
	Main lessons learned	The three selected infrastructure projects are essential for the railway system in Croatia, as all three help solve the identified bottleneck - old railway infrastructure. This is being done by preparing projects that will construct new railway tracks or modernize existing ones.
	Opportunities related to TEN-T network and macroregional strategies	<ul style="list-style-type: none"> - The realisation of all three project would largely contribute to the quality of infrastructure on the Croatian part of the TEN-T Mediterranean corridor, and the reconstruction and modernisation would result in this part of the railway network reaching international standards in the long-term. - Modernizing the railway lines which belong to the TEN-T corridor is of utmost importance for development of international rail services with Slovenia and Hungary as direct neighbouring countries.



Name of the document		D.T3.2.4 Annual Meeting of regional advisory board 2020 - 2021
Highlights	Main stakeholders involved	Participants included stakeholders from the Ministry of the Sea, Transport and Infrastructure, the Port of Ploče and the Faculty of maritime studies of the University of Rijeka.
	Main findings	<ul style="list-style-type: none"> - It emerged that the chosen priority actions were highlighted in one of HZ Infrastructure's annual reports as important for the future development of rail freight transport in Croatia. - Concerning the area of Ploče, the railway line is modernised but only 20 km long, which is the distance from the border with Bosnia and Herzegovina. The main issues result from the need to cooperate with a large number of transport operators and to change locomotives at the border to adapt to different conditions (administrative and legislative bottlenecks). As for the container terminal, this is not connected by rail at all. In addition, not being part of any of the TEN-T corridors hold back investments on the port of Ploče; this is partly due also to the lack of efficient communication with the Ministry of Transport. - A large percentage of the railways in Croatia and neighboring countries are not compatible with international standards either not being electrified or not being able to carry enough of a load. - Looking towards the east, the railway leads all the way to Vinkovci but is not connected to Vukovar which would enable a better connection with inland waterways. Creating rail connections to Vukovar and then using inland waterways to Budapest would make a lot of sense as an intermodal solution to the issues faced with rail infrastructure in both countries.
	Main lessons learned	<ul style="list-style-type: none"> - The three priority actions included in the roadmap are of huge importance to improve the current rail infrastructure situation in Croatia. However, a larger number of smaller infrastructure projects would help Croatian regions and would be required for the complete modernisation of railways in the country.
	Opportunities related to TEN-T network and macroregional strategies	The target of the Port of Ploče is to connect their railway with Budapest through Bosnia and Herzegovina and through the eastern continental parts of Croatia such as Osijek. This potentially represent a development for the TEN-T network, as Budapest is part of the Core network. Despite Bosnia and Herzegovina not being part of the EU, transnational cooperation programs include it among IPA countries, and thus there is the opportunity of engaging Bosnian authorities in a fruitful cooperation through these instruments.
Name of the document		D.T3.2.5 - Coping with funding needs



Highlights	Main findings	<ul style="list-style-type: none"> - The state of financing, meaning the percentage of the cost already financed, for the three proposed actions is between 0,89% and 2,25%. - For all the actions, the remaining funding needed are expected to be allocated by EU funds (more specifically by CEF Programme) and by HZ Infrastructure.
	Possible constraints and challenges	Project is currently in the process of preparing project documentation. It has not yet been confirmed that the reconstruction project will be funded and therefore performed.

Name of the document		D.T3.2.7 - Final Roadmap
Highlights	Objectives in a nutshell	<ul style="list-style-type: none"> - The main objective lays in the resolution of specific infrastructural bottlenecks (electrification, two-tracks segments) that currently hamper the capacity for cargo transport of the railway network of Croatia, whose percentage of freight transport in the country has the potential to significantly increase, especially on those segments that are part of the TEN-T network. - The main challenge for the resolution of bottlenecks hampering the exploitation of Croatian railway network's full potential is definitely the need of large investments and an accurate plan that prioritizes the actions that are most needed. - Despite the high amount of investments planned for the railway network, the realization of planned works will depend on the amount of financial resources allocated by the Republic of Croatia each year from the state budget and on other sources of financing.
	Main actions proposed	<p>A total of three actions have been proposed, namely:</p> <p>A.1 Reconstruction and renewal of the railway line on the section Dugo Selo - Novska;</p> <p>A.2 Reconstruction of the existing and construction of the second track on the section Hrvatski Leskovac - Karlovac on the railway line M202 Zagreb GK - Rijeka;</p> <p>A.3 Modernization of the railway line M202 Zagreb GK - Rijeka, on the part Oštarije - Škrljevo.</p>
	Main constraints and challenges	High costs of constructing and renovating multiple railway lines that weren't updated since they were built.
	Main lessons learned	<ul style="list-style-type: none"> - The railway network in Croatia is still under-exploited, especially for freight transport that is mainly carried out by trucks. - To release its full potential, the network is highly in need of infrastructural works to solve bottlenecks and enhance its capacity, especially on those segment that are part of the TEN-T



		network and that connect the Croatian core nodes of Zagreb and Rijeka to neighbouring countries and the whole EU.	
	Opportunities related to TEN-T network development and macroregional strategies	<div> <input type="checkbox"/> Baltic Adriatic Corridor <input type="checkbox"/> North-Sea Baltic Corridor <input checked="" type="checkbox"/> Mediterranean Corridor <input type="checkbox"/> Orient/ East-Med Corridor <input type="checkbox"/> Scandinavian-Mediterranean Corridor <input checked="" type="checkbox"/> Western Balkans Corridor <input checked="" type="checkbox"/> Adriatic-Ionian Region <input type="checkbox"/> Alpine Region <input type="checkbox"/> Baltic Sea Region <input checked="" type="checkbox"/> Danube Region </div>	<p>Part of the Croatian railway system belong to the Mediterranean corridor with two core networks: Zagreb and Rijeka. However, despite the good connection of the railway to Croatian ports, the infrastructure could be enhanced with a second track and electrification, which are still limited to a small segment of the railway network. Road transport in freight handling is still very dominant: the railway option shall be enhanced as a more sustainable mode to transport freight. As a matter of fact, the Transport Development Strategy of the Republic of Croatia 2017-2030 states that there is considerable potential for increasing freight transport on the Zagreb -Rijeka railway line, also thanks to the cooperation.</p> <p>More specifically, the selected priority actions would largely contribute to the quality of infrastructure on the Croatian part of the TEN-T Mediterranean corridor, and the reconstruction and modernisation would result in this part of the railway network reaching international standards in the long-term.</p>

02_EMILIA ROMAGNA

Name of the document	D.T1.4.1- Benchmarking analysis
Main findings	<ul style="list-style-type: none"> - Modal split. The freight rail modal share in Emilia-Romagna is equal to 11% (express as tons, 2016 data). The rail/road modal split for regional freight transport is about 11%-89%, for domestic traffic, while for traffic originating in the region it is 14%-86%. - Railway lines. The overall length of regional tracks is 2,119 km, 1,609 km of which for the conventional lines, and 510 km for the high-speed lines (AV). All the lines managed by Emilia Romagna Railway (FER), which equal to 364 km, have single tracks. The portion of network managed by RFI is 1,315 km long. The two main lines of the regional infrastructure managed by FER are currently the Reggio Emilia-Dinazzano and the Ferrara-Poggio Rusco-Suzzara, electrified until Poggio Rusco. More in general, only 138 km on a total of 364 of the FER lines are electrified. - Terminals and ports. Main regional intermodal nodes (terminals) are Villa Selva, Terminal Piacenza, Bologna freight village, Dinazzano Po, Rubiera, Lugo, Ravenna, Faenza. The main regional rail freight connections are Reggio Emilia-Dinazzano Po (6,300 trains) and the Port of Ravenna (5,800 trains). - Freight transport demand An analysis of the quantities handled by the individual regional intermodal nodes shows the following: <ul style="list-style-type: none"> o a strong relationship between the port of Ravenna and the Lombardia regional system; o the significant function of the ports of Liguria in the export of the ceramics from the Reggio-Emilia Modena area; o the connection role of the Bologna freight village both with the ports of Liguria and with the Lombardia Region; o the node of Piacenza, in addition to its consolidated connections with the northern Italian regions, handles a significant number of tons towards the south of the country, in particular towards Puglia and Campania. - Policy and legislation.



		<p><i>The Regional Integrated Transport Plan (PRIT2025)</i> aims at rebalancing towards new forms of collective and non-motorized mobility both in urban and extra-urban areas for increasing the accessibility of the territory. More efficient systems of modal integration and co-modality for passengers and for goods will be promoted, innovating and empowering the local public transport and acting on the rules of the system governance.</p> <p>The document defines the main objective for the regional freight mobility to 2025 which is, for the REIF project prospective, to increase the modal share of rail freight transport by +30%, with a minimum modal share of 13%.</p> <ul style="list-style-type: none"> - The Region approved a new law (Regional Law 30/2019) on incentives for regional rail transport.
	SWOT	<p>TRANSPORT INFRASTRUCTURE</p> <p>Strengths</p> <ul style="list-style-type: none"> • Quality and quantity of rail and inter-modal infrastructures. <p>Weaknesses</p> <ul style="list-style-type: none"> • Road accessibility to intermodal nodes. • Competitiveness of rail/road intermodal transport strictly dependent on public incentives. <p>Threats</p> <ul style="list-style-type: none"> • Delays in infrastructure upgrading projects. <p>Bottlenecks</p> <ul style="list-style-type: none"> • Rail access to the Ravenna port rail terminals (lack of capacity and traction system). • Low capacity of existing railway network direct to Ceramics and Tiles district (Emilia-Sassuolo: Missing links, Low capacity of existing railway lines, Speed restrictions, train length, missing links, lack of capacity, Bologna-Prato: Loading gauge). • Lack of capacity on Parma-La Spezia railway line. <p>OPERATORS AND STAKEHOLDERS</p> <p>Strengths</p> <ul style="list-style-type: none"> • Good level of cooperation among institutional players and private operators. • Territory in which prestigious companies and brands are present, as well as a vast and productive agri-food sector, a potential basin of attraction/generation of large flows of goods. <p>Weaknesses</p>



		<ul style="list-style-type: none"> Difficulties of integration between different modes of transport and different involved stakeholders. <p>Threats</p> <ul style="list-style-type: none"> Difficulties in reducing the perceived and actual road/rail performance and cost gap. <p>POLICY AND LEGISLATION</p> <p>There were no bottlenecks recorded regarding legislation and policy in REIF analyses.</p>
	Main lessons learned	<p>Deficiencies have to do with: Poorer access to intermodal hubs, poorer accessibility of the port of Ravenna; Limited line capacity; High costs, dependence on subsidies.</p> <p>Advantages concern: Developed trade, economy; Extensive transport (export); Good infrastructure; Many intermodal hubs, connections; Good cooperation; Favorable transport policy.</p>
	Main areas of intervention	<ul style="list-style-type: none"> Improvement and upgrade of infrastructures <ul style="list-style-type: none"> Upgrade of Reggio Emilia-Sassuolo railway line Construction of the new freight railway line between Dinazzano and Marzaglia freight station Regional law on incentive for regional rail transport Upgrade of the shunting tracks of Ravenna Port Doubling of railway line between Parma and Vicofertile stations and upgrading of Parma station Improvement of services to increase rail freight transport <p>In order to make rail freight transport attractive to a larger market catchment area, it is necessary to reduce the dependence of attractiveness on the incentive system and make the system more competitive by acting on the accessibility of intermodal nodes and on costs reduction.</p>

Name of the document		D.T.1.4.2 Priority list of actions and cost estimates
Highlights	Main actions proposed and benefits	<p>Transport infrastructures</p> <ul style="list-style-type: none"> Upgrade of the left shunting track of Ravenna Port → Improvement of rail accessibility to the rail terminal located on the left bank of Ravenna Port Upgrade of the right shunting track of Ravenna Port → Improvement of rail accessibility to the rail terminal located on the right bank of Ravenna Port

- Doubling of railway line between Parma and Vicofertile stations and upgrading of Parma station → Increase of the capacity of Parma-La Spezia railway line.
- Upgrade of Reggio Emilia- Sassuolo railway line → Increase of the capacity of Reggio Emilia-Sassuolo railway line.
- Construction of the new freight railway line between Dinazzano and Marzaglia freight station → Improvement of the capacity of freight rail network of Emilia-Romagna region.

Legislation

- Drafting of the regional law on incentive for regional rail transport → Supporting the rise of rail freight transport

Administration

- Financing training activities → Supporting the improvement of professional figures in the logistic sector
- Financing support activities to ERIC's members → Supporting the activities of ERIC's members (studies and research, internationalization activities).
- Establishment of Simplified Logistic Zone (ZLS) → Supporting the development of industrial and logistic activities connected to Ravenna Port.

All the included actions are going to supports the objective stated in the main regional transport planning instruments (PRIT), that is to increase to 2025 the modal share of rail freight transport by +30%, with a minimum modal share of 13%.

Emilia-Romagna has adopted policies measures focus on the improvement of rail transport infrastructure, which still confirmed as a priority for Emilia-Romagna Region, together with the overcoming of the existing bottlenecks, referred to lack of capacity in the main railway lines. In addition, key elements in the regional strategy are: improving the railway connection between ports and hinterlands to foster the creation of an integrated networks of ports and intermodal hubs in Region and to foster connections among rail-road terminals

Through the establishment of a Simplified Logistics Zone (SLZ), Emilia-Romagna Region wants to strengthen the connections and the accessibility between Ravenna port of and the main production districts in the region. Intermodality is a key element of Emilia-Romagna's SLZ, in fact, all the main intermodal platforms are included in this plan and could benefit for the incentives foreseen.



	Main constraints and challenges	<ul style="list-style-type: none"> - The main constraints expected in the realisation of priority actions, the infrastructural ones in particular, concern mainly delay in the public tender and construction phases, often due to unforeseeable/unexpected factors. - Difficulty in the division between individual/private needs and collective needs to be included in the roadmap.
	Main lessons learned	<ul style="list-style-type: none"> - From the analysis of the industrial structure and clusters of the region, it emerges that one of the main regional manufacturing sectors (ceramic industries) has a high rail freight suitability and other industries show a partial rail freight suitability (i.e. food industry, packaging and mechanic industry, furniture and wooden products). - An issue that came up during the selection of priority actions concerns the inclusion of those actions suggested by stakeholders aimed at their individual needs. Public responsible entity, e.g. Emilia-Romagna region, cannot foster the development of a private node at the expense of other stakeholders. For this reason, actions focusing one individual need were not included in the list.
	Opportunities related to TEN-T and macroregional strategies	The priority list includes the main actions needed to revitalise the regional freight rail transport sector and to strengthen the connection of the regional railway network to the TEN-T and its corridors.

Name of the document		D.T.1.4.3 Definition of potential policy measures
Highlights	Main policy documents to be addressed	<ul style="list-style-type: none"> - “PRIT2025” - Integrated Regional Transport Plan. This document defines the main objective for the regional freight mobility to 2025 which is, for the REIF project prospective, to increase the modal share of rail freight transport by +30%, with a minimum modal share of 13%. - RFI business Plan, drawn up in accordance with “Railway infrastructure development strategy” defined by the Italian Ministry of Infrastructure and Transport. - FER Business plan.
	Main policy measures proposed	<ul style="list-style-type: none"> - Upgrading and improvement of railway regional network, including tracks managed both by RFI and FER. - Drawing up of a regional law on incentives for regional rail transport. - Implementation of activities to support to the ERIC cluster and its member



		- Establishment of Simplified Logistic Zone (ZLS)
	Main lessons learned	<ul style="list-style-type: none"> - Currently, only rail offers a mature and readily available solution for widespread use in zero-emissions transport and Emilia-Romagna government acts to support this transport modality. A combination of measures (infrastructural, administrative and soft policies) is required to tackle this issue for Emilia-Romagna. - The policy measures selected are perceived as priorities among regional stakeholders in a common understanding for the future development of regional intermodal system.
	Main constraints and challenges	The main constraints expected in the realisation of the policies measures, are related to the implementation of infrastructural ones, in particular, the timing for the public tender procedure and construction phases, often due to unforeseeable/unexpected factors.

Name of the document		D.T3.1.2 Regional capacity building workshops 1 - 2 - 3
	Main stakeholders involved	<p>Workshop 1. 30 participants belonging to: Emilia-Romagna' departments, ITL, Intermodal infrastructure managers, MTO, port terminal managers, Ravenna Port Authorities; one national expert in the field of mobility and logistic.</p> <p>Workshop 2. 25 participants belonging to: Emilia-Romagna' departments, ITL, Intermodal infrastructure managers, MTO, port terminal managers, Ravenna Port Authorities. One external expert in the field of mobility and logistic.</p> <p>Workshop 3. 10 participants belonging to: Emilia-Romagna' departments, ITL, Intermodal infrastructure managers and regional MTO; one external expert in the field of mobility and logistic.</p>
Highlights	Main findings	<p>Workshop 1. The discussed topics were Emilia-Romagna's status quo and future trends of the regional rail freight sector and collection of good practices, the identification of bottlenecks in infrastructures and services and finally the definitions of new supporting policy measures. The discussion was enriched by the participation of Professor Oliviero Baccelli, national expert and policy advisor in the freight transport field. The professor analysed a few transport topics: the first one focused on the scenarios for the international and national freight rail services to 2030 and the second was related to the role of infrastructures develop planning and the Italian PNRR.</p> <p>Workshop 2. The second Regional Capacity building workshop focused on merger and acquisition processes in the transport and intermodal sector. A second part of the workshop was dedicated to illustrating the sector growth operations through acquisition of innovative startups.</p>



		<p>Workshop 3. The third Regional Capacity building workshop focused on Incentive policies for rail freight transport.</p> <p>Emilia-Romagna's status quo and future trends of the regional rail freight sector have been illustrated, together with the main regional bottlenecks in infrastructures and services and finally a description about the draft Emilia-Romagna's Roadmap was provided. Furthermore, the main characteristics of ITL Pilot Actions #2, #5 and #8 have been illustrated.</p>
	Main lessons learned	<ul style="list-style-type: none"> - A whole industrial policy to support the transition to freight rail transport in a scenario a low carbon, low impact and digitalized freight transport sector is much needed to be able to meet EU and regional goals in terms of modal split and sustainability. - Emilia-Romagna government is very interested to support rail freight transport, as already did in the last decade, by allocating new resources on incentive scheme for the sector.

Name of the document		D.T3.2.4 Annual Meeting of regional advisory board 2020 - 2021
Highlights	Main stakeholders involved	Participants included stakeholders from Emilia Romagna Region, ITL, Intermodal infrastructure managers, regional MTO, University of Modena and Reggio Emilia, innovation agencies and the regional intermodal cluster (ERIC).
	Main findings	<ul style="list-style-type: none"> - During the first annual meeting, the discussion focused on the definition of operational plan to support new infrastructures to launch new service to 2030 in Emilia-Romagna's area. - During a discussion about sustainable logistics, it emerged that digital services for logistic will bring efficiency and sustainability to Logistics. It cannot fully solve the "Decarbonization Challenge", but it will make it less onerous to meet the targets and can deliver results in the critical next 10 years. - During the second annual meeting, the discussion focused on the Carbon Footprint of the intermodal sector and included the presentation of the main methods to calculate the current GHG emissions attributable to an intermodal platform. - In addition, reduction strategies (environmental and economic aspects) and compensation strategies to mitigate CHG emission for the intermodal companies were also discussed by participants.



	Main lessons learned	<ul style="list-style-type: none"> - Energy transport transition will be the focal point for the logistic sector in the near future, as the reduction of CO₂ emissions that can be achieved through rail electric transport is extremely significant when compared to transport by truck. - It is extremely useful to focus and support freight railway transport, also through the development of intermodal platforms and of digital services making logistics more efficient. - Many different strategies are available for the reduction and compensation of emissions, each with specific advantages and disadvantages.
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Name of the document		D.T3.2.5 - Coping with funding needs
Highlights	Main findings	<ul style="list-style-type: none"> - The state of financing, meaning the percentage of the cost already financed, is very different for each of the three actions, going from 0% of the establishment of the SLZ to the 100% of the Doubling of railway line between Parma and Vicofertile stations and upgrading of Parma station. - The remaining funding needed are expected to be allocated by national funds and through the RFI investment plan for the infrastructural works, while the legislation actions are supposed to be funded by regional sources. - The financial sustainability of the action should be ensured because all the actions proposed have already totally or partially been funded.
	Possible constraints and challenges	<ul style="list-style-type: none"> - Design and construction phase may represent obstacles that slow down the realisation of the action. - Looking at the regional incentive law, as noted during the COVID-19 pandemic, a rigid scheme incentive scheme may not allow the beneficiaries of the law to meet the traffic forecast projected in the submission and it will probably lead to a cut of the grants. - For the establishment of the SLZ, the plan has to be approved by the regional government bodies; if major changes will be requested, then the establishment of the SLZ may be delayed.

Name of the document		D.T3.2.7 - Final Roadmap
Highlights	Objectives in a nutshell	<ul style="list-style-type: none"> - Despite the presence of already established collaborative procedures and governance structures such as ERIC, as well as specific regional Programmes to incentivize rail freight transport, the regional intermodal transport sector does not realize its full potential yet. This is due to several concomitant factors. The use and potential of intermodal platforms are often limited by sub-



		<p>optimal accessibility, particularly in terms of the quantity and quality of the connections offered. Average cost of road transport is still lower than the cost of the rail freight transport. Furthermore, the average size of firms within Emilia Romagna is not a booster of railway intermodal freight transport.</p> <ul style="list-style-type: none"> - In addition, the results achieved through piloting activities, including the adoption of a network agreement and internal regulation for ERIC cluster, as well as the updating of the regional freight transport model, all contributed to strengthening and extending the knowledge and the instruments exploited by the regions' departments and offices in order to refine the policies targeted to support the freight intermodal sector. - Therefore, the main objective lays in the full optimization of the existing freight transport network through multiple actions, including the resolution of specific infrastructural bottlenecks (especially affecting the Port of Ravenna) and the implementation of specific legislative tools and administrative procedures. - The main challenge for the resolution of bottlenecks hampering the exploitation of - Despite the high amount of investments planned for the railway network,
	Main actions proposed	<p>A total of nine actions have been proposed, namely:</p> <p>A.1 Upgrading of the left shunting track of Ravenna Port</p> <p>A.2 Upgrade of the right shunting track of Ravenna Port</p> <p>A.3 Doubling of railway line between Parma and Vicofertile stations and upgrading of Parma station</p> <p>A.4 Upgrade of Reggio Emilia- Sassuolo railway line (electrification)</p> <p>A.5 Construction of the new freight railway line between Dinazzano and Marzaglia freight station</p> <p>B.1 Regional law on incentive for regional rail transport</p> <p>B.2 Establishment of Simplified Logistic Zone (ZLS)</p> <p>C.1 Financing training activities</p> <p>C.2 Financing support activities to ERIC's members</p>
	Main constraints and challenges	<ul style="list-style-type: none"> - A constraint related to the Regional law on incentive for regional rail transport has to do with the rigidity of the regional incentive scheme. As is well known, economic crisis related to the COVID- 19 pandemic caused a very serious shock for the global economy and for the industrial production. The beneficiaries of the law were unable to meet the traffic forecast projected in the submission of the aid application and the Region had to apply corrective measures in order



		<p>to avoid the cut of the grants. A resilient incentive scheme had to be developed in order to handle any future shock caused by economic crisis or by simple market changes.</p> <ul style="list-style-type: none">- Another challenge regards the need to balance the needs of individual stakeholders and components of the regional network, in order to strengthen the overall intermodal platform through a collaborative approach.		
	Main lessons learned	<ul style="list-style-type: none">- The manufacturing sector of ceramic is highly suitable for the implementation of a higher share of freight transported by railway due to its position with respect to the main regional nodes and railway network.- Starting from different point of views, all the main actions analyzed have as an objective the increasing of the freight rail modal share. All the actions are in line with Integrated Regional Transport Plan of Emilia-Romagna region (PRIT2025) that aims to increase by 2025 the modal share of rail freight transport by +30%, with a minimum modal share of 13%.- The particular focus of the roadmap on policy action field is due to the great experience of the ER region in this field, where the Region has more impact, compared to the other priority areas (i.e. the infrastructure ones).- A deep analysis of previous incentive regional programmes is needed in order to build a scheme that is best tailored to the needs of logistic companies and meets the demands of the market, with the ultimate aim of decreasing the level of environmental pollutants and meet the objectives stated in the Air Integrated Regional Plan (PAIR2020).- Policy actions are as much important as infrastructural works for the strengthening of the regional intermodal platform.		
	Opportunities related to TEN-T network development and macroregional strategies	<table><tr><td><input checked="" type="checkbox"/> Baltic Adriatic Corridor <input type="checkbox"/> North-Sea Baltic Corridor <input checked="" type="checkbox"/> Mediterranean Corridor <input type="checkbox"/> Orient/East-Med Corridor <input checked="" type="checkbox"/> Scandinavian-Mediterranean Corridor <input type="checkbox"/> Western Balkans Corridor</td><td>The infrastructural development of the Pontremolese railway line is a crucial action to improve the railway connection between La Spezia port and the intermodal nodes of Emilia-Romagna and the nodes of the northern Italy. In particular, it may support the diversion from road to rail of the freight coming from the Ceramics and Tiles District of Emilia-Romagna to the export market through the ports of the Tyrrhenian Sea. The upgrading of Pontremolese railway line has a key role in the strengthening the regional logistic platform. In particular, it brings closer one of the main industrial regional cluster to the La Spezia Port</td></tr></table>	<input checked="" type="checkbox"/> Baltic Adriatic Corridor <input type="checkbox"/> North-Sea Baltic Corridor <input checked="" type="checkbox"/> Mediterranean Corridor <input type="checkbox"/> Orient/East-Med Corridor <input checked="" type="checkbox"/> Scandinavian-Mediterranean Corridor <input type="checkbox"/> Western Balkans Corridor	The infrastructural development of the Pontremolese railway line is a crucial action to improve the railway connection between La Spezia port and the intermodal nodes of Emilia-Romagna and the nodes of the northern Italy. In particular, it may support the diversion from road to rail of the freight coming from the Ceramics and Tiles District of Emilia-Romagna to the export market through the ports of the Tyrrhenian Sea. The upgrading of Pontremolese railway line has a key role in the strengthening the regional logistic platform. In particular, it brings closer one of the main industrial regional cluster to the La Spezia Port
<input checked="" type="checkbox"/> Baltic Adriatic Corridor <input type="checkbox"/> North-Sea Baltic Corridor <input checked="" type="checkbox"/> Mediterranean Corridor <input type="checkbox"/> Orient/East-Med Corridor <input checked="" type="checkbox"/> Scandinavian-Mediterranean Corridor <input type="checkbox"/> Western Balkans Corridor	The infrastructural development of the Pontremolese railway line is a crucial action to improve the railway connection between La Spezia port and the intermodal nodes of Emilia-Romagna and the nodes of the northern Italy. In particular, it may support the diversion from road to rail of the freight coming from the Ceramics and Tiles District of Emilia-Romagna to the export market through the ports of the Tyrrhenian Sea. The upgrading of Pontremolese railway line has a key role in the strengthening the regional logistic platform. In particular, it brings closer one of the main industrial regional cluster to the La Spezia Port			



		<input checked="" type="checkbox"/> Adriatic-Ionian Region <input type="checkbox"/> Alpine Region <input type="checkbox"/> Baltic Sea Region <input type="checkbox"/> Danube Region	<p>that is a Core Port of Scan-Med Corridor. According to the TEN-T classification, today the railway line is belonging to Comprehensive network with the status of “<i>to be upgraded</i>” and it links the Bologna-Milano railway line to the Genova-Pisa railway line (which belong to the Core Network). The inclusion of the Pontremolese railway line in the Core Network and in the ScanMed TEN-T corridor may represent an important opportunity to enhance its role within the freight transport national and international scenarios.</p>
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03_FRIULI VENEZIA-GIULIA

Name of the document	D.T1.4.1- Benchmarking analysis
Main findings	<ul style="list-style-type: none"> - Modal split. The modal share of freight transport (hinterland transport, 2018) is developed as follows: TEUs: road: 45%; rail: 55%. Semi-trailers: road: 77%; rail: 23%. - Railway lines. The regional railway network in Friuli-Venezia Giulia currently comprises 670 km of tracks, 480 km of which are electrified and 190 km are non-electrified, including also freight lines and sidings to ports and industrial areas. Port of Trieste has rail tracks with length of 70 km. As far as the railway accessibility from the Port of Trieste to the main connections towards current and potential Italian and foreign hinterland markets, it can be described as “highly qualified”. All tracks are characterized by the maximum possible loading gauge (“gabarit”) available for all types of intermodal transport, which is the “P/C 80” loading gauge. - Terminals and ports. Ports in Friuli-Venezia Giulia are Trieste, Monfalcone, Porto Nogaro. The Port of Trieste represents a core network node of the Mediterranean and Baltic-Adriatic Corridors crossing the Region Friuli Venezia Giulia. In addition, there are four railroad terminals (RRTs) in Friuli-Venezia Giulia: Trieste, Cervignano, Gorizia and Pordenone. - Freight transport demand. Having managed almost 62 million tons in 2019, the Port of Trieste has been representing for a few years the main Italian sea port for the total amount of handled freight (also thanks to its strategic role played in the liquid bulk sector), and in 15 years (since 2004 to 2019) it has more than doubled the managed volume of general cargo (from 8,3 to 16,9 million tons with an average annual rate of 4,5%). A huge increase in intermodal traffic (+62.74% over the last four years) has been recorded, confirming the Port of Trieste as the first Italian port in terms of number of trains. - Unlike other Italian ports, the Port of Trieste serves only in minimal part the regional and national territory focusing rather on markets in Central and Eastern Europe. The Port Network Authority of the Eastern Adriatic Sea and the terminal operators of the Port of Trieste have realized that the most suitable mean of transport to reach those markets is by train. Germany



		<p>is the first country reached by rail freight flows. Only 28.5% of the trains are to/from Italy, while the remaining 71.5% are to/from foreign countries.</p> <ul style="list-style-type: none"> - Policy and legislation. <i>“Connettere l’Italia” (i.e. Connecting Italy)</i> is a document adopted in 2016 by the Italian Ministry of Transport defining goals, strategies and guidelines for a structural reform of the transport sector. Overall, its main strategic goals are the following: accessibility to territories, Europe and Mediterranean Sea; competitiveness and quality of life in urban areas; support to the industrial policies related to the supply chain; sustainable and safe mobility. Within this framework, the modal shift from road to rail is highly promoted through ad hoc measures that aim at increasing the offer and the quality of the services. - At regional level, the <i>Piano regionale delle infrastrutture di trasporto, della mobilità delle merci e della logistica</i> (i.e. Regional Strategy for transport infrastructure, mobility of goods and logistics), adopted in 2011, defines the transport policy of Friuli Venezia Giulia Autonomous Region according to the goals and strategies set by the EU White Paper on transport.
	SWOT	<p>TRANSPORT INFRASTRUCTURE</p> <p>Strengths</p> <ul style="list-style-type: none"> • FVG Region boasts the presence of several multimodal logistics platforms (3 ports and 4 RRTs), a consistent infrastructural endowment for a region of only 1,2 people. • Overall, the level of the infrastructure is good without criticalities in terms of operation and maintenance. <p>Opportunities</p> <ul style="list-style-type: none"> • Strong interest expressed major international investors interested in investing in the infrastructure of the Port of Trieste. • Availability of European and national funds for the strengthening of port and inland port infrastructure. <p>Bottlenecks</p> <ul style="list-style-type: none"> • Lack of capacities port/terminals/railway lines (Investments to increase railway capacity, which include technological improvements (ERTMS) and new infrastructures. Moreover interventions to reduce the impact of border controls are on-going). <p>OPERATORS AND STAKEHOLDERS</p>



		<p>Strengths</p> <ul style="list-style-type: none"> The level of cooperation among institutional players and private operators is generally good with a constant exchange and sharing of opinions and experience. <p>Weaknesses</p> <ul style="list-style-type: none"> The last mile connection (linking to the national railway network) must be strengthened due to the increasing volumes of traffic. High costs for last mile connections among nodes." <p>Opportunities</p> <ul style="list-style-type: none"> Increase of the volumes in the next fifteen years. <p>Threats</p> <ul style="list-style-type: none"> Strong competition at national and international level in the field of maritime and intermodal transport - e.g. RFC Alpine-Western Balkan. Weak awareness of the possibility of using intermodal transport units (ITU) and considering intermodality as a possible alternative, essential for modal shift. <p>Bottlenecks</p> <ul style="list-style-type: none"> Diesel traction, changes of locomotives (Investments to extend electrified tracks, IT improvements to increase efficiency of shunting). <p>POLICY AND LEGISLATION</p> <p>Weaknesses</p> <ul style="list-style-type: none"> The governance of the regional logistics infrastructure is still fragmented. <p>Bottlenecks</p> <p>Border crossing procedures: Long stopping times - Police and customs procedures - EU member state - EU non-member state: Trieste is a Free Port in EU, therefore specific controls are required while entering/exiting from/to landside. Some controls and actions are needed on railway on border crossing in case of international services.</p>
	Main lessons learned	<p>Deficiencies have to do with: Poor "last mile" connections; Diesel traction; Locomotive replacement; Delayed border procedures.</p> <p>Advantages concern: Developed trade, Cargo port of Trieste; Good rail line infrastructure; Developed logistics centers; Good cooperation; Favorable policy and strategies; Extensive transport.</p>

		Intermodality plays an important role in the medium and long-term development strategies carried out by the Port Network Authority of the Eastern Adriatic Sea and the private terminal operators of the Port of Trieste. Moreover, it is essential for implementing the catchment area of the Port of Trieste in order to reach the Central and Eastern European markets.
	Main areas of intervention	<ul style="list-style-type: none"> - Improvement of the intermodal network through the resolution of infrastructural bottlenecks hindering intermodality related, in particular, to the shunting yard of Campo Marzio in the Port of Trieste. - Resolution of administrative bottlenecks - Optimization of the regional infrastructure through the implementation of innovative technologies and ICT tools - Extension of the subsidy regime for intermodal transport to short distances, in order to allow a better connection between regional logistics nodes and support the modal shift.

Name of the document		D.T.1.4.2 Priority list of actions and cost estimates
Highlights	Main actions proposed and benefits	Transport infrastructures <ul style="list-style-type: none"> - Upgrade of the Campo Marzio station → The action will upgrade the main railway station serving the port of Trieste, allowing 750m-long trains and a capacity increase of 20%. - Reactivation of the railway siding linking the Aquilinia station with the “ex- Wartsila” and “ex- Aquila” areas → The action will allow the reopening of a railway track serving free port areas and a capacity increase of 100% (the line has not been active for a long period). - Reactivation of the railway siding linking Aquilinia and Muggia stations → The action will allow the reopening of a railway track serving the port area on the “industrial channel” and a capacity increase of 100% (the line has not been active for a long period). - Construction of new railway gates → This action will be able to monitor and streamline entry/exit of trains to/from the national railway line and have a shorter travel time by 10%.
	Main constraints and challenges	<ul style="list-style-type: none"> - The interventions included have already been approved and most of them are fully financed, however the timeframe related to public tenders might be problematic and lead to delays.
	Main lessons learned	<ul style="list-style-type: none"> - To have a bigger picture of the railway infrastructures, including those that had been inactive for a long time, instead of the construction of new ones.



		<ul style="list-style-type: none"> - These actions will greatly support the modal shift from road to rail of the traffic flows originated in / directed to the Port of Trieste, which aims to reach 25,000 trains in the next few years.
	Opportunities related to TEN-T and macroregional strategies	<p>Trieste is located at the intersection between shipping routes and the Baltic-Adriatic and Mediterranean TEN-T core network corridors. The Port of Trieste represents a core network node of the Mediterranean and Baltic-Adriatic Corridors crossing the Region Friuli Venezia Giulia. It is a key node of the EU's TEN-T. Trieste plays a decisive role in two separate supply chains: long-distance intercontinental maritime transportation and short/medium-distance intra-Mediterranean trade. The TEN-T strategic axes of the "East Mediterranean Motorways of the Sea" converge with the "Baltic-Adriatic and Mediterranean Corridors".</p>

Name of the document		D.T.1.4.3 Definition of potential policy measures
Highlights	Main policy documents to be addressed	<ul style="list-style-type: none"> - D.Lgs. 50/2016 (law on public tenders) The D.Lgs. 50/2016 includes the rules for public tenders. The current system is too complicated and needs simplifying.
	Main policy measures proposed	The main need refers to the simplification of the Italian procurement rules in order to streamline the implementation of the works included in the priority list of actions.
	Main lessons learned	<ul style="list-style-type: none"> - It was not necessary to involve stakeholders in the identification of more specific policy measures, since there is wide consensus on what needs to be done.
	Main constraints and challenges	The main constraints expected in the realisation of the policies measures, are related to the implementation of infrastructural ones, in particular, the timing for the public tender procedure and construction phases, often due to unforeseeable/unexpected factors.

Name of the document		D.T3.1.2 Regional capacity building workshops 1 - 2 - 3
	Main stakeholders involved	<p>Workshop 1. 15 participants belonging to: PNAEAS, subcontractor, Adriafer S.r.l. (shunting company), AlpeAdria S.r.l. (MTO), Association of terminal operators, Association of freight forwarders, RFI S.p.A., Customs Agency</p> <p>Workshop 2. 10 participants belonging to: PNAEAS, Adriafer S.r.l. (shunting company), Terminal operators, RFI S.p.A.</p>

		Workshop 3. 10 participants belonging to: PNAEAS, Adriafer S.r.l. (shunting company), Terminal operators, RFI S.p.A.
Highlights	Main findings	<p>Workshop 1. All stakeholders expressed their interest in the project activities and praised the synergic use of EU funds to upgrade the port's digital infrastructure and railway services. More specifically, participants highlighted the importance of the new operational model, as a powerful tool to assess the port's railway capacity in a dynamic way, through the simulation of different scenarios, at the same time also identifying the current and future bottlenecks.</p> <p>Workshop 2. The draft roadmap and the proposed list of actions were discussed by stakeholders, who approved the actions, underlining that the implementation of all of them would entail a drastic enhancement of the port railway infrastructures, supporting modal shift from road to rail, using most of the existing infrastructures and not building new ones.</p> <p>Workshop 3. The stakeholders discussed the final roadmap, whose list of proposed action did not change from the draft version. Moreover, they were also informed of the availability of national funds offered by the Italian government to finance most of the interventions proposed. All stakeholders expressed the appreciation for the excellent timing between the activities implemented within the REIF project, and particularly the roadmap, and the funds received by the national government.</p>
	Main lessons learned	<ul style="list-style-type: none"> - Stakeholders confirmed the need to upgrade the port railway infrastructures in order to accommodate the growing trend of intermodal transport, despite the impact of COVID19. - At the same time, ICT tools are as much important as infrastructural works to optimise the use of the existing infrastructure, as demonstrated by the increase in efficiency since the activation of the Port Community System. - While the actions proposed were described by stakeholders as highly necessary and coherent, they also noticed the strict deadlines which could hardly be met with the current national public tender rules, hoping that the Italian government would simplify them. - The interventions and the synergy between national and EU funds will pave the way for the port development of the next decades.

Name of the document		D.T3.2.4 Annual Meeting of regional advisory board 2020 - 2021
Hi	Main stakeholders involved	Participants included stakeholders from PNAEAS, Adriafer S.r.l. (shunting company), Terminal operators, RFI S.p.A.



	Main findings	<ul style="list-style-type: none"> - All stakeholders approved the proposed list of actions, underlining their importance for the future development of the Port of Trieste and of the whole region of FVG. - Possible constraints will be represented by the difficulty of the public procurement procedures, which could take longer than expected and lead to delays.
	Main lessons learned	<ul style="list-style-type: none"> - The Port of Trieste needs both infrastructural works to solve specific bottlenecks that, at the moment, hamper its capacity as an intermodal terminal. In addition, the development of innovative technologies and ICT tool is also crucial for an efficient and sustainable evolution of the Port's activities. - Over the last few years, the railway traffic of the port of Trieste has increased significantly. The existing railway infrastructures are able to support such an increase, with bottlenecks hindering greater traffic capacity and efficiency.

Name of the document		D.T3.2.5 - Coping with funding needs
Highlights	Main findings	<ul style="list-style-type: none"> - The state of financing, meaning the percentage of the cost already financed, is 100% for all the actions proposed, thanks to the synergy between EU funds (mainly coming from the CEF Programme) and national funds (mainly the so-called "complementary fund" to the RRF). In some cases, other sources of financing include regional government and EIB loans. - The financial sustainability of the action should be ensured because all the actions proposed have already totally or partially been funded.
	Possible constraints and challenges	<ul style="list-style-type: none"> - Administrative bottlenecks due to national legislation on public procurements.

Name of the document		D.T3.2.7 - Final Roadmap
Highlights	Objectives in a nutshell	<ul style="list-style-type: none"> - The Port of Trieste has already achieved the EU goal of 50% of rail freight transport by 2050. Yet, the increase in railway transport occurred over the last few years showed that the existing port railway infrastructures are not sufficient to meet the current and future demand. This is why the Port of Trieste has identified railways as a key component of its development needing specific priority and actions. - The approach followed by the Port of Trieste is to reconstruct, reactivate and enhance the existing railway infrastructures wherever this is possible, instead of building new ones.



		<ul style="list-style-type: none">- Over the next few years, the Port of Trieste will redesign the whole railway infrastructures serving the port of Trieste, paving the way for the port and industrial development of the City of Trieste for the next decades, contributing to the decarbonization of the freight transport.
	Main actions proposed	A total of six actions have been proposed, namely: A.1 New layout of the Campo Marzio Station (2025) A.2 Upgrade of the Aquilinia- Wartsila railway line (2022) A.3 Upgrade of the Aquilinia-ex- Aquila railway line (2023) A.4 Reactivation of the Aquilinia- Muggia railway line (2025) A.5 Installation of new IT railway gates and pre-gates of the Port of Trieste (2025) A.6 construction of the new Servola railway station. (2026)
	Main constraints and challenges	<ul style="list-style-type: none">- The most relevant challenge is time: all the proposed actions need to be completed by the end of 2026. The public tenders will need to follow the national and EU rules, implying procedures above the EU threshold.
	Main lessons learned	<ul style="list-style-type: none">- The governance of the main regional nodes is still fragmented, the ports of Trieste and Monfalcone as well as the RRTs of Trieste and Cervignano del Friuli being controlled by the Port Network Authority of the Eastern Adriatic Sea, while the others are managed by individual public entities whose main shareholders are municipalities / chambers of commerce.- Despite the strong growth in total throughput in the port of Trieste over the pre-COVID19 years and the more than proportionate increase in rail transport, the physical infrastructures remained the same, proving to be an obstacle in the port and railway cargo growth.
	Opportunities related to TEN-T network development and macroregional strategies	<div><input checked="" type="checkbox"/> Baltic Adriatic Corridor <input type="checkbox"/> North-Sea Baltic Corridor <input checked="" type="checkbox"/> Mediterranean Corridor <input type="checkbox"/> Orient/East-Med Corridor <input type="checkbox"/> Scandinavian-Mediterranean Corridor <input type="checkbox"/> Western Balkans Corridor</div> <div>The project will remove a bottleneck in the further development of railway connections to/from the Port of Trieste and increase the cargo total handling capacity of the Port of Trieste by streamlining cargo flows by train, overcoming the lack of space dedicated to storage, due to the proximity with the city of Trieste. This will benefit also the whole TEN-T network, being the port of Trieste a core node of the Baltic-Adriatic Corridor and a portal to access Central and Eastern Europe.</div>



		<input checked="" type="checkbox"/> Adriatic-Ionian Region <input checked="" type="checkbox"/> Alpine Region <input type="checkbox"/> Baltic Sea Region <input type="checkbox"/> Danube Region	
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04_SLOVENIA

Name of the document	D.T1.4.1- Benchmarking analysis
Main findings	<ul style="list-style-type: none"> - Modal split. Modal split for freight transport in Slovenia (2018): 80% or. 85,4 mio tons on roads and 20 % or. 21,3 mio tons on rail. Modal share of rail transport has grown one third and modal share of road transport is two thirds. Modal split in port of Koper is reversed, in 2019 59% corresponded to rail transport, while 41% to road transport. Railway lines. Public railway infrastructure in Slovenia contains 1,207.7 km of lines. Length of the main lines is 607.0 km (50%) and the regional lines 600.7 km (50%). Only the main railway lines are double tracked. Length of the double track lines is 333.6 km (28%), length of single track lines is 874.1 km (72%). Only the main railway lines are electrified. Length of the electrified lines is 605.5 km (50%), length of none-electrified lines is 602.3 km (50%). Maximal gradient on the railway lines is 27‰. Axle load category 22,5 tons is presented at 46% of the railway network. - Terminals and ports. The biggest freight terminals with most amount of loaded and unloaded freight from/to rail/road in Slovenia are Port of Koper, Sežana, Ljubljana, Celje, Maribor. In Koper there is a maritime transport as well. The Port of Koper, managed by Luka Koper d.d., is the only commercial cargo port of Slovenia and a core node in two EU TEN-T Corridors: Mediterranean and Baltic-Adriatic. - Freight transport demand. Main goods on rail in 2018 were: coal, gas, oil and derivatives (19,1%), ore (17,1%), metal and metal products (8,6%), manufacturing products (5,7%) etc. The strongest transport flows are between Port of Koper via Ljubljana, Jesenice and Maribor to Austria and Hungary. Most important hinterland markets are markets of Austria, Hungary, Slovakia, the Czech Republic, Italy, as well as Croatia, Serbia and Romania, Germany and Poland. The road transport is more flexible than the rail transport and the increase of the volumes of cargo in last years has brought the railway in Slovenia to its natural limits, pushing for an increase of road transport to satisfy the market's demand. - Policy and legislation.



		<p>The Ministry of Infrastructure is responsible for transport in the Republic of Slovenia, in the field of rail, air, road transport and maritime transport. The most important national document regarding transport is “Resolution on the National Programme for the Development of Transport of the Republic of Slovenia until 2030”. Furthermore, Railway Transport Act regulates railway transport.</p> <ul style="list-style-type: none"> - In 2011 The Government of the Republic of Slovenia endorsed the National Spatial Plan (NSP) for a comprehensive spatial arrangement of the Port of Koper. The NSP is the principal document that will facilitate the port's development as well as enhance its competitive edge.
	SWOT	<p>TRANSPORT INFRASTRUCTURE</p> <p>Weaknesses</p> <ul style="list-style-type: none"> • Bottlenecks on the section Divača-Koper. • Well-developed highway network in Slovenia. • A lot of parts of railway network are old/still non-modernized. • High occupancy of storage facilities and railway lines • Relatively small port for global actors <p>Opportunities</p> <ul style="list-style-type: none"> • Construction of second railway line on the section Divača-Koper; second railway track Koper-Divača • Modernization of railway lines in Slovenia: many infrastructure projects are in progress with an aim to upgrade the existing railway infrastructure." <p>Threats</p> <ul style="list-style-type: none"> • A lot of parallel railway freight routes (Italy, Austria, Croatia). <p>Bottlenecks</p> <ul style="list-style-type: none"> • Railway hub Ljubljana. • Single railway track Koper-Divača. <p>OPERATORS AND STAKEHOLDERS</p> <p>Strengths</p> <ul style="list-style-type: none"> • High railway modal share • Multipurpose port (for all kinds of goods) <p>Opportunities</p>

		<ul style="list-style-type: none"> • Potential of strengthening of Adriatic route (diversion of goods from northern ports) <p>Bottlenecks</p> <ul style="list-style-type: none"> • Rolling stock of the national rail carrier in Slovenia • Stopping (dwell) times at border crossings • Process of delivering & dispatching the wagons between Koper train freight station “Koper tovarna” and the Port of Koper • Reading/registering the numbers on wagons going to Iron ore and coal terminal <p>POLICY AND LEGISLATION</p> <p>Strengths</p> <ul style="list-style-type: none"> • EU and national policy which promote railway freight transport. • Railway transport is an important factor in sustainable development. • Rail freight transport is considered to be the most environmentally friendly mode of transport of goods. • Geographical position <p>Opportunities</p> <ul style="list-style-type: none"> • A lot of EU projects in terms of railway interoperability among EU countries (ETCS). <p>Threats</p> <ul style="list-style-type: none"> • New environmental, safety and institutional requirements • Non-supporting municipalities Delays in infrastructure investments <p>Bottlenecks</p> <p>There were no bottlenecks recorded regarding legislation and policy in REIF analyses.</p>
	Main lessons learned	<p>Deficiencies have to do with: Poor condition of infrastructure and vehicles; Bottlenecks on the line Divača-Koper; Delayed services; Long-term border procedures.</p> <p>Advantages concern: Port of Köper with a high share of railway transport; Freight terminals; Favorable transport policy.</p> <p>In general, Slovenian railway infrastructure is not in a good condition due to low investments in last decades. The main bottleneck represents a single-track railway line Koper-Divača, connecting also hinterland with the biggest and the only Slovenian port - The Port of Koper.</p>



		The second track construction aims to eliminate traffic congestion on the core Trans-European Transport Network (TEN-T) corridors in Slovenia - Baltic-Adriatic and the Mediterranean.
	Main areas of intervention	<ul style="list-style-type: none"> - Resolution of the main infrastructural bottlenecks, namely: <ul style="list-style-type: none"> o Construction of the second track for the railway line Koper-Divača, connecting also hinterland with the biggest and the only Slovenian port - The Port of Koper. o Modernization of the railway line Ljubljana-Kočevje - Improvement of the network capacity through the construction of a new railway hub in Ljubljana to improve the capacities of the main railway station in Slovenia for freight and passenger trains - Resolution of administrative bottlenecks hampering Rail border crossings through simplification and harmonization of legal, technical and operational requirements

Name of the document		D.T.1.4.2 Priority list of actions and cost estimates
Highlights	Main actions proposed and benefits	<p>Transport infrastructures</p> <ul style="list-style-type: none"> - Rolling stock replacement of the national rail carrier in Slovenia → Capacity increase for 30 %; 20% Lower maintenance costs; Reduction of Operational costs for 20%. - Railway hub Ljubljana → Capacity increase, transport volume, running times decreased etc - Rail industrial sidings → <i>Capacity increase, running times decreased etc.</i> <p>Administration</p> <ul style="list-style-type: none"> - Stopping (dwell) times at border crossings → New volume of freight on the railway. <p>IT system</p> <ul style="list-style-type: none"> - Integration module for railways upgrade → Use of modern and commonly used standard, flexibility, Improved data quality. - Implementation of the new Railways system → Additional functionalities to simplify rail process, real time overview of the operations, usability, identification of problems and bottlenecks. - Mobile APP → Paper digitalisation, real time information, better data quality. - Visualization → Better overview of the operations, real time overview
	Main constraints and challenges	<ul style="list-style-type: none"> - Budgeting on each stakeholders' side - Human resources availability.

		<ul style="list-style-type: none"> - Lack of the formal validity of all documents in electronic form, which is needed to accelerate the computerization of the railway transport process.
	Main lessons learned	<ul style="list-style-type: none"> - Over the last ten years, the railway freight traffic on the public railway infrastructure in Slovenia has increased significantly. The railway sector and its stakeholders in Slovenia have many problems to satisfy all the needs in the freight railway market because of the different types of bottlenecks, capacities and efficiency. - With the growth of cargo in the Port of Koper and the rapid growth of competitiveness in Slovenia and the world, the current information system in use is not adequate to support an efficient development of port activities and improve capacity availability. - The highest priority is to achieve a better data quality with the upgrade of the current data exchange. Another point is the data timeliness. During the operational process, a lot of information is exchanged too late without being inputted in the system. With the introduction of mobile support this will be easily tackled. The third point is the visualization of the data facilitating faster responsive times of the operations within the Luka Koper's terminals and Slovenian Railway shunting station of Luka Koper. - Priority list is the reflection of the operational issues all involved Stakeholders have due to the missing data/information. Data is the key for a better performance that must be achieved to follow the cargo throughput growth and assuring the quality our business partners are used to when using rail facilities in Port of Koper. - In summary all stakeholders need more and improved railway network for better access to customers and more flexibility. - Cost estimations without detailed study in preparation of an infrastructure investment have a great inaccuracy in most cases.
	Opportunities related to TEN-T and macroregional strategies	<p>The Port of Koper, managed by Luka Koper d.d., is the only commercial cargo port of Slovenia and a core node in two EU TEN-T Corridors: Mediterranean and Baltic-Adriatic. 7 main railway lines belong to core TEN-T network, other 3 main railway lines belong to comprehensive TEN-T network.</p> <p>The second track construction is planned in next years (preparatory works are already in progress) and it is aimed to eliminate traffic congestion on the core Trans-European Transport Network (TEN-T) corridors in Slovenia - Baltic-Adriatic and the Mediterranean. The track will allow a capacity of 231</p>

trains per day (today less than 100) or 43.4 million net tonnes of cargo per year (including the new and the existing track).

Name of the document		D.T.1.4.3 Definition of potential policy measures
Highlights	Main policy documents to be addressed	<ul style="list-style-type: none"> - National transport strategy. - National spatial strategy - International transport strategy, as well as bilateral and multilateral agreements - General conditions of Luka Koper - EU regulation for Railways related electronic data exchange
	Main policy measures proposed	<ul style="list-style-type: none"> - Financial policy and plans for supporting replacement of rolling stock (incentives), long term planning/strategy of rolling stock through a proposal submitted to the ministry of infrastructure. - Simplify procedures for large investments in public interest (environmental approval, building permit). - Promoting cooperation between rail carriers and corridor states (agreements between rail carriers and corridor states). - Prepare national strategy of industrial areas where sidings are necessary, financial incentives in case of public interest (e.g. large shift from road to rail). - Update financial policy and plans for IT system upgrade and assuring funds - Update and improve the document management policy - Update and improve the data Exchange policy
	Main lessons learned	<ul style="list-style-type: none"> - Existing transport policy could be significantly improved and boost sustainable transport measures, including investments in rail and intermodal infrastructure, fleet renewal, and measures for simplification of transport and logistics procedures, to increase the modal share of rail transport, improve quality and make transport seamless, regardless to state borders. - Different stakeholders might have different priorities. Priority of the ministry is more sustainable transport and increase of railway modal share. Priorities of carriers are increase of rail transport, including shifting of goods from road to rail. Infrastructure manager wants to have smooth railway operations and rail infrastructure in a good condition. Interests of all parties (especially those with the decision power) have to be considered in order to avoid later problems and delays.



		<ul style="list-style-type: none"> - The policy measures in the future must support the rail transport with adequate legislation. Heavy investments to the railway transport need many financial sources, which could be collected by different taxes from different non-sustainable transport systems (roads, air). On the other hand, “non-infrastructure” measures, such as cooperation between rail carriers and corridor states regarding border crossings; rolling stock renewal, and other, can also improve rail transport quality and make entire transport system more sustainable. - The Port of Koper is the most important station for all freight traffic on Slovenian railways. As much as 70% of the freight transport business by rail goes through Koper. That is why the need to optimize processes is necessary, as it is only possible to maintain long-term competitiveness to maintain the core business of the Port of Koper. - Priority list is the reflection of the operational issues all involved Stakeholders have due to the missing data/information. Data is the key of better performance that must be achieved to follow the cargo throughput growth and assuring the quality our business partners are used to when using rail facilities in Port of Koper.
	Main constraints and challenges	<ul style="list-style-type: none"> - Some measures will be under state aid procedures and subject to EU decisions and the process need to be started early enough. - The transport policy is not changing very often, so a lot of efforts needs to be done to include proposals within next revision of the document. - Budgeting on each stakeholders’ side and human resources availability.

Name of the document		D.T3.1.2 Regional capacity building workshops 1 - 2 - 3
	Main stakeholders involved	<p>Workshop 1. 7 participants belonging to: the port of Koper (company Luka Koper, d.d.), Slovenian railways (company Slovenske železnice d.o.o.) and Actual (IT company closely connected to IT services in the port of Koper).</p> <p>Workshop 2. 15 participants belonging to: Luka koper, Slovenian railways, Avto Kastelec (representative of the logistics centre), Grosuplje (local municipality), development institutions at local level (Joint municipal administration of 5 municipalities: Grosuplje, Ivančna Gorica, Skofljica, Ig and Dobropolje), Ministry of Infrastructure: Slovenian Infrastructure Agency, the Local Chamber of Craft and Small Business Grosuplje.</p>

		<p>Workshop 3. 17 participants belonging to: port of Koper (company Luka Koper, d.d.), Slovenian railways (company Slovenske železnice d.o.o.), Actual (IT company closely connected to IT services in the port of Koper) and two other railways operator in Slovenia - Metrans Adria and Adria Kombi.</p>
Highlights	Main findings	<p>Workshop 1. The discussed topics were the REIF project in general, including its pilot activities and expected results. In the discussion, participants debated on purpose and goals of the workshop, current activities and future activities that have to be planned and carried out to optimize traffic flows of railway between the port of Koper and Slovenian railway network.</p> <p>Workshop 2. After project presentation the pilot project was presented by Prometni institut Ljubljana, including preparation/design of rail siding documentation for constructing of track, missing link between private area (car logistics centre) and public part of rail infrastructure.</p> <p>Workshop 3. The third Regional Capacity building workshop focused on the presentation of project activities, with special focus on the presentation of implemented pilot action. In the discussion, participants debated on purpose and goals of the workshop, current activities and future activities that have to be planned and carried out to optimize traffic flows of railway between the port of Koper and Slovenian railway network, focusing mostly on the need of port of Koper to modernize IT interface among Luka Koper and railway undertakings. Other needs underlined by participants included the importance of correct announcement of incoming containers on wagons, for smooth planning of stacking / storing of containers, and the need for the insight into the unrealized announcements.</p>
	Main lessons learned	<ul style="list-style-type: none"> - Participants agreed that the IT interface among Luka Koper and railway undertakings and operators must be redesigned, and the visualization of Koper hub (Koper Tovarna and Luka Koper) has to be prepared. Several other necessary improvements were identified, such as: <ul style="list-style-type: none"> ○ The need of graphical presentation of track occupancy and ongoing operations (from start-to end); ○ Monitoring of rail transport flows (of shunting locomotives) in the port; ○ Optical character recognition of wagons and containers. - Rail sidings are also important in other places in regions, and it should be promoted by the Ministry more consistently. - It should be taken into account also public financing (national, local, EU funds) for such rail investments - the benefits are also on national level (environmental benefits).



		<ul style="list-style-type: none"> - Beside the improvement of the rail infrastructure there is a lot of room for improving the services (optimization of transport, better quality of rolling stocks, etc).
	Opportunities related to TEN-T network and macroregional strategies	<p>The selected infrastructure projects are essential for the railway system in Central Slovenia Region and also in Slovenia. Ljubljana Railway hub which is a part of TEN-T will have an important role for connected regional rail network. Industrial sidings will increase transport on regional lines where rail traffic has declined recently. The quality of freight transport will be improved with modernized rolling stock and also smoother border operation which were proposed within REIF.</p>

Name of the document		D.T3.2.4 Annual Meeting of regional advisory board 2020 - 2021
Highlights	Main stakeholders involved	Participants included stakeholders from PIL, local municipalities, Ministry of Infrastructure, Slovenian Railways, Local Chamber of Craft and Small Business, Avto Kastelec (representative of the logistics centre), Grosuplje (local municipality), development institutions at local level (Joint municipal administration of 5 municipalities: Grosuplje, Ivancna Gorica, Škofljica, Ig and Dobrepolje).
	Main findings	<ul style="list-style-type: none"> - During the first annual meeting, the discussion focused on the REIF project and its activities. During further discussion participants expressed ideas for the road map and new infrastructure and services. - Participants agreed that REIF project is a right step forward to improve rail infrastructure and services in region
	Main lessons learned	<ul style="list-style-type: none"> - The financing of measures is the biggest problem and it should be taken in to account also public financing (national, local, EU funds) for such rail investments - the benefits are also on national level (environmental benefits) - Beside the rail infrastructure there is a lot of room for improving the services, such as: optimization of transport, better quality of rolling stocks, etc. - The measures discussed are important and it should be promoted also by the Ministry.

Name of the document		D.T3.2.5 - Coping with funding needs
Highlights	Main findings	<ul style="list-style-type: none"> - The state of financing, meaning the percentage of the cost already financed, is not provided for most of the interventions foreseen, while in one case only the initial project documentation has been financed.



		<ul style="list-style-type: none"> - The remaining funding needed are expected to be ensured by a combination of public and private funds (public private partnership - PPP, with majority of public funds). Possible public funds: national, local, European funds.
	Possible constraints and challenges	<ul style="list-style-type: none"> - Delays due to slow bureaucratic and administration procedures, confirming funding schemes, providing funds for project. - Lack of political will could delay the process.

Name of the document		D.T3.2.7 - Final Roadmap
Highlights	Objectives in a nutshell	<ul style="list-style-type: none"> - Rail transport is one of the important opportunities in the future to slow down the climate changes and increase sustainability of transport system. Improvement of rail infrastructure and services are top priorities national and regional planning instruments. - To reach these goals, the railway transport system should be heavily modernised from the railway infrastructure perspective on one side, to the rolling stock renewal and improvement of transport organization and services on the other side. - The proposed actions will greatly support the modal shift from road to rail of the freight transport, optimize rail traffic flows, foster cooperation among key stakeholders in rail sector, improve intermodality, and connectivity and will due to lower external costs of rail transport comparing to road significant have positive environmental impacts. - Heavy investments to the railway infrastructure need many financial sources, which could be collected by also by taxes from other less sustainable transport modes (roads, air).
	Main actions proposed	<p>A total of five actions have been proposed, namely:</p> <p>A.1 Construction of Railway hub in Ljubljana</p> <p>A.2 Rail industrial sidings</p> <p>B.1 Rolling stock replacement of the national rail carrier in Slovenia</p> <p>D.1 Modernization of IT connections/interface between stakeholders in railway transport (port of Koper and Koper railway station)</p> <p>D.2 Stopping (dwell) times at border crossings</p>
	Main constraints and challenges	<ul style="list-style-type: none"> - Main challenges related to the implementation of actions included in the roadmap are improvement in rail infrastructure and services which quality declined in last decades in Slovenia due to low investments.



	Main lessons learned	<ul style="list-style-type: none">- The analyses developed in the framework of WP.T1 have led to the following main findings<ul style="list-style-type: none">o Intermodal points need improvements for ensuring further demand of rail transport (e.g. Ljubljana railway hub)o Bad connectivity /intermodality on regional lines with rail transport (the freight transport declined on regional lines in last years)o Bottlenecks on borders due to different power supplies, information system and border procedures in freight transporto Bad data exchange in IT connectivity between key rail stakeholder (e.g. Port of Koper and Slovenian Railways).o Low quality of rolling stock (freight transport is less competitive towards rail transport)o Bad connectivity of local economy with regional rail infrastructure.- The REIF pilot project in Central Slovenia that includes planning of industrial rail siding is a good solution for future improving intramodality in connectivity in regional lines.	
	Opportunities related to TEN-T network development and macroregional strategies	<div><div><input checked="" type="checkbox"/> Baltic Adriatic Corridor</div><div><input type="checkbox"/> North-Sea Baltic Corridor</div><div><input checked="" type="checkbox"/> Mediterranean Corridor</div><div><input type="checkbox"/> Orient/East-Med Corridor</div><div><input type="checkbox"/> Scandinavian-Mediterranean Corridor</div><div><input checked="" type="checkbox"/> Western Balkans Corridor</div><div><input checked="" type="checkbox"/> Adriatic-Ionian Region</div><div><input checked="" type="checkbox"/> Alpine Region</div><div><input type="checkbox"/> Baltic Sea Region</div><div><input checked="" type="checkbox"/> Danube Region</div></div>	<p>The selected infrastructure projects are essential for the railway system in Central Slovenia Region and also in Slovenia. Ljubljana Railway hub which is a part of TEN-T will have an important role for connected regional rail network. Industrial sidings will increase transport on regional lines where rail traffic has declined recently. The quality of freight transport will be improved with modernized rolling stock and also smoother border operation which were proposed within REIF.</p> <p>In relation with intervention A.1, Ljubljana is lying on the crossroads of 2 TEN-T corridors: Baltic- Adriatic and Mediterranean. The infrastructure is not sufficient for the increased freight transport in last years and is one of the biggest bottlenecks in the country.</p> <p>The action will include increasing capacities in TEN-T hub Ljubljana which will include upgrade of existing infrastructure and also construction of new infrastructure facilities. The results will be better quality of rail transport: smoother and faster rail transport, better intermodality of transport, shifting goods from road to rail, and other.</p>



			<p>The intervention related to dwell times at border crossing has the potential to foster bilateral and multilateral agreements that would enhance the connection within the macro-region, as well as the efficiency of the TEN-T network due to a smoother and faster cross-border rail transport and a better connection between different corridors.</p>
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05_STYRIA

Name of the document	D.T1.4.1- Benchmarking analysis
Main findings	<ul style="list-style-type: none"> - Modal split. Comparing the development from 1999 to 2018, the Modal Split regarding to road transport volumes (tons) at the Styrian border rose at all crossings, from +10% points at the Schoberpass to +5% points at Semmering. In 2018, the total share of road transport was of 72%. - Railway lines. The Styrian rail network currently consists of around 1,000 kilometres of railway lines. The railway network for passenger and freight traffic comprises the network of the Austrian Federal Railways (ÖBB) with approx. 550 km on main lines and 140 km on secondary lines, the lines of the Styrian Provincial Railways (Steiermärkische Landesbahnen) with approx. 100 km and the lines of the Graz-Köflacher Railway (GKB) with approx. 90 km (see following map and annex). The other lines are feeder lines with private freight traffic as well as lines that were closed down, but are still used for excursions, nostalgic trips, etc. by private associations. - Terminals and ports. There are three publicly accessible freight terminals in Styria: the “Cargo Center Graz” terminal is located 15 km south of Graz, the Montan Terminal Kapfenberg and the Terminal St. Michael. There are no ports in Styria. - Freight transport demand. Significant export amounts from Styria are transported by rail to <ul style="list-style-type: none"> o Germany (1,4 Mio. tons, thereof 740.000 tons of wood, 380.000 tons of basic metals and transport equipment (e.g. empty containers) o Italy (317.000 tons, thereof mainly wood) and o Slovenia (308.000 tons, thereof mainly wood). - Germany is clearly the most important economic partner. Due to Styria’s location in the Alps, import and export flows from Northern and North Eastern Europe pass the Alpine crossings Schober (Pyhrn-Schober axis), Semmering and Wechsel (Baltic-Adriatic Corridor). - Policy and legislation. <i>Steirisches Gesamtverkehrskonzept 2008 (StGVK):</i> The strategic document on the development of mobility in Styria is already 12 years old, but is still up to date with regard to the goals in freight transport and international connections. The aim is to increase the share of



		<p>rail transport in supra-regional and international freight traffic by upgrading the Styrian rail infrastructure to international standards and to reduce transport costs by rail.</p> <ul style="list-style-type: none"> - ÖBB Target Network 2025+ (2011): Target Network 2025+ is an expansion strategy for developing the rail infrastructure and is part of the "Overall Transport Scheme" for Austria. It contains investment in expansion and modernisation beyond the year 2025.
	SWOT	<p>TRANSPORT INFRASTRUCTURE</p> <p>Strengths</p> <ul style="list-style-type: none"> • All main transport axes are part of the TEN-T Networks (the southern railway corridor with Koralm railway and Semmering base tunnel as well as the railway line Graz - Spielfeld - Maribor). • The main Styrian rail network is electrified, and double-tracked, suitable for freight transports and in line with the requirements of the TEN-T. • The Styrian railway network serves as an important link between Austria and South Eastern Europe (the Pyhrn/Schober axis - in combination with the Tauern axis). • Three publicly accessible freight terminals in Styria - all are suitable for bimodal rail-road transshipment (the Cargo Center Graz (CCG) terminal is the most important logistic node). <p>Weaknesses</p> <ul style="list-style-type: none"> • Missing a high capacity rail connection from the economic centres in central and the Northwest of Europe to Southeast Europe particularly to the Harbours of Koper and Rijeka as well as to the eastern Adriatic and Western Balkan region (the single-tracked bottleneck between Selzthal and Linz and further North as well as to the steep southern ramp to the Bosruck tunnel). • The single track regional railway lines are not very suitable for economically successful freight transport. • With the commissioning of the Koralm railway (2025) the section Bruck and der Mur - Graz will be at the limit of capacity, as several transport corridors pass along this track. • Because of missing loading stations and companies' feeder lines away from the terminals the accessibility for rail freight transport is very poor. Single wagonload transport is not supported by the railway undertakings. <p>Threats</p> <ul style="list-style-type: none"> • Lack of money for investments in railway infrastructure, further closing of railway lines, private feeder lines or loading points.



Bottlenecks

- Missing Link - Bosruck Tunnel (high-level rail link);
- Missing Capacity - Railway Line Bruck/Mur-Graz-Spielfeld-Maribor (double-track railway line);
- Missing Capacity - Cargo Center Graz-Werndorf (CCG) Terminal (An expansion of the terminal is essential to increase the freight loading capacity for rail transport.);
- Missing Link - Railway Connection Koralmbahn to Steirische Ostbahn (A new railway line connecting the future Koralm Railway line and the Steirische Ostbahn).

OPERATORS AND STAKEHOLDERS

Opportunities

- Increase of the freight transport volumes in the next years.

Threats

- Strong competition from road transport.
- The development of the railway network cannot keep up with the development of freight transport.

Bottlenecks

There were no bottlenecks recorded regarding infrastructure in REIF analyses.

POLICY AND LEGISLATION

Opportunities

- In the course of the next TEN-T revision in 2023, the federal states of Styria, Carinthia, Upper Austria and Salzburg are aiming to include the Pyhrn-Schober axis and the Tauern axis into the TEN-T core network.
- According to the Austrian government's programme 2020 - 2024 and the Styrian government's programme (2019) freight transport is to be carried out in an energy-efficient, environmentally and climate-friendly manner. This should increase the competitive opportunities for rail transport in the future.
- Availability of European, national and regional funds for the strengthening of railway infrastructure.

Threats

- The political will for true cost and restrictions in road transport to reach equal conditions in the freight transport market is undermined by the lorry lobby.



		Bottlenecks There were no bottlenecks recorded regarding legislation and policy in REIF analyses.
	Main lessons learned	Deficiencies have to do with: Missing connections between areas; Missing capacities of terminals, rail lines. Advantages concern: Developed economy, industry; Good condition and capacity of infrastructure and services; 3 terminals; Favorable strategy, plans and allocated funds. The main railway lines and international corridor lines are very well suitable for high-quality freight transport but not yet developed for the general increasing freight transport. The weakness in rail freight transport lies apart the central region and industrial region in Upper Styria. Missing loading stations and companies' feeder lines as well as missing of support for single wagonload transport by the railway undertakings push freight transport on the road
	Main areas of intervention	<ul style="list-style-type: none"> - Improvement of the capacity of the railway regional network through <ul style="list-style-type: none"> o the expansion of the rail-road terminal CCG as main logistic node. o the development of new and attractive railway paths on the basis of industrial needs of the regional stakeholders o the expansion of regional logistic with access to regional railway lines to concentrate regional freight transport - Further development of multi-modal services with customer focus. - Improvement of the attractiveness of rail transport through the allocation of external costs to road transport (accident costs, climate costs, road maintenance costs, etc.)

Name of the document		D.T.1.4.2 Priority list of actions and cost estimates
Highlights	Main actions proposed and benefits	Transport infrastructures <ul style="list-style-type: none"> - Construction of the new Bosruck tunnel → Increases loading capacity of freight trains by 50% and operation speed up to 100 km/h, shortens transport times and reduces operational costs - Upgrading of the Railway Line Bruck/Mur-Graz- Spielfeld-Maribor → Improves timetable stability, increases capacity for commuter trains, passenger trains and freight trains.



		<ul style="list-style-type: none"> - Expansion of the Cargo Center Graz-Werndorf (CCG) Terminal → Increases the freight loading capacity of the terminal from 230.000 TEU/a up to 500.000 TEU/a. - New railway line connecting the future Koralm Railway line and the Steirische Ostbahn → Increases capacity for commuter trains and freight trains, shortens transport times and reduces operational costs.
	Main constraints and challenges	<ul style="list-style-type: none"> - Main constraint is the lack of money for investments in railway infrastructure. It is anticipated that most rail infrastructure measures will be postponed, because of lack of funding. - Current developments, more concretely the operational start of the Koralmbahn at the end of 2025, however, accentuate the need for taking actions and eliminating the Styrian bottlenecks in the near future.
	Main lessons learned	<ul style="list-style-type: none"> - Thanks to extensive harmonization of the transport infrastructure and mostly good opportunities for shipping companies, freight forwarders and rail operators, main challenges arise from the existing rail infrastructure. - As such, the biggest bottlenecks in Styrian rail freight transport are missing connections and lack of capacity in the main rail network. By closing these gaps and eliminating capacity bottlenecks on the main rail network, freight transport on the subordinate network will also benefit. - For the Styrian government and the stakeholders in Styria, the priorities of the projects in Styria are clearly the same. From the negotiations with the Ministry and OBB-Infrastruktur AG it is noticeable that the priorities of the projects mentioned basically coincide. As far as the wishes from Styria regarding the implementation periods are concerned, these are seen as much longer-term from the point of view of the Ministry and OBB. For this reason, there is 100% agreement only on the terminal project, as responsibility for this lies solely with Styria. - By closing the gaps and eliminating capacity bottlenecks on the main rail network, freight transport on the subordinate network will also benefit. The improvement of the high-level rail network and the provision of related services thus directly contributes to preventing the further closing of railway lines in the subordinate network.
	Opportunities related to TEN-T	<p>All main transport axes of the Styrian railway network are part of the Trans-European Transport Networks (TEN-T). The future southern railway corridor with Koralm railway and Semmering base tunnel as well as the railway line Graz - Spielfeld - Maribor are part of the Baltic-Adriatic Corridor and</p>



	and macroregional strategies	<p>thus part of the TEN-T core network. The other main transport axes in the Styrian railway network are part of the TEN-T comprehensive network:</p> <ul style="list-style-type: none"> • TEN-T Baltic-Adriatic core network corridor: from Vienna via Semmering - Mürzzuschlag - Bruck/Mur - Graz - Koralmbahn - towards Klagenfurt and Graz - Spielfeld - towards Maribor (SI) • TEN-T comprehensive network: <ul style="list-style-type: none"> - Pyhrn-Schober railway line: from Leoben via Selzthal - towards Linz - Ennstal railway line: from Selzthal via Liezen - Schladming towards Bischofshofen - Styrian East railway line: from Graz via Gleisdorf - Fehring towards Szentgotthard (HU)
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Name of the document		D.T.1.4.3 Definition of potential policy measures
Highlights	Main policy documents to be addressed	<ul style="list-style-type: none"> - Regulation (EU) on Union guidelines for the development of the TEN-T network. - OBB framework plan, OBB target network - Styrian Mobility Masterplan
	Main policy measures proposed	<ul style="list-style-type: none"> - Including the two axes via Tauern and Pyhrn-Schober into the TEN-T core network; including the new Bosruck tunnel into the OBB 2040 target network and the OBB framework plan; - Concrete planning mandate of the Federal Ministry (BMK) to OBB-Infrastruktur AG for the step-by-step implementation of the measure. - Including the project into the OBB 2040 target network and the OBB framework plan; concrete planning mandate of the Federal Ministry (BMK) to OBB-Infrastruktur AG for the step-by-step implementation of the measures; negotiations on the financing of the Planning. - Negotiations on the financing and the corporate structure; negotiations on extensions and adaptations at the Wundschuh transfer station; the aim is to separate OBB from Graz-Werndorf Projekt GmbH (GWP) to establish a PPP shareholder structure with the participation of the province of Styria; planning of the terminal infrastructure; application for a subsidy by the Federal Ministry (BMK). - Including the project into the OBB 2040 target network; rapid start of the permitting process and EIA planning to obtain a route permit for the railway line to keep areas free from other uses, as housing and business development.



	Main lessons learned	<ul style="list-style-type: none"> - All actions described in the section above contribute to connect the Styrian economic regions with the main economic European centers. They are linked to shift road transport to rail and thus needed in the light of climate change and need to reduce CO2-emissions from freight transport.
	Main constraints and challenges	<ul style="list-style-type: none"> - Main constraint is the lack of money for investments in railway infrastructure. It is anticipated that most rail infrastructure measures will be postponed, because of lack of funding. - Current developments, more concretely the operational start of the Koralmbahn at the end of 2025, however, accentuate the need for taking actions and eliminating the Styrian bottlenecks in the near future.

Name of the document		D.T3.1.2 Regional capacity building workshops 1 - 2 - 3
	Main stakeholders involved	Workshop 1. 4 participants belonging to the relevant infrastructure companies (StLB and CCG).
Highlights	Main findings	Workshop 1. The first regional Capacity workshop focused on the first analyses developed in the framework of the REIF project. It emerged that in the presentation of the results to date on the basis of the reports already available, the role of the terminals and its necessary expansion for the substantial improvement of regional freight transport is emphasized in particular.
	Main lessons learned	<ul style="list-style-type: none"> - In the discussion, the need to improve the connection of the terminal was addressed. On the one hand, this concerns local requirements such as the direct connection via the Wundschuh transfer station to the Koralm railway and the road connection to the higher-level road network. On the other hand, the necessary capacity expansions on the feeder lines were addressed. The new construction of the Bosruck tunnel and the double-track expansion in the direction of Slovenia play a major role here.

Name of the document		D.T3.2.4 Annual Meeting of regional advisory board 2020 - 2021
Highlights	Main stakeholders involved	Participants included stakeholders from the relevant infrastructure companies (StLB and CCG).
	Main findings	<ul style="list-style-type: none"> - In the presentation of the results on the basis of the reports already available, the importance of the expansion of the Styrian rail axes for the substantial improvement of regional freight transport is emphasized.



		<ul style="list-style-type: none"> - In the discussion, the necessity of an immediate start of planning for the Bosruck Tunnel was emphasized. The extension of the Bruck - Graz line and the double-track extension in the direction of Slovenia also play a major role. - A concept is presented for long-term cooperation to improve the Styrian rail infrastructure between social partners, politics and administration. In the short term, a separate area will be created on the transport server, which will function as a digital platform for the internal exchange of information, but also for information to the outside. In the medium term, an independent homepage for the "Styrian Railway Infrastructure Initiative" will be considered. - The Styrian cooperation established through the capacity workshops will certainly be supported and continued by the regional stakeholders in the further pursuit of the concrete measures and the regular exchange on the further development of the Styrian railway infrastructure.
	Main lessons learned	<ul style="list-style-type: none"> - These trainings have led into the cooperation of following two concrete actions: <ul style="list-style-type: none"> o The project of the expanding of the RRT Cargo Center Graz Terminal came into action. Concrete negotiations between CCG, StLB, State Government and the current owner OBB about the setup of the new form of company and financing o The cooperation with the members of the advisory board lead into a concrete action to elaborate a factsheet to the planning of the Bosruck tunnel for communication with the federal ministry of transport and other stakeholders.

Name of the document		D.T3.2.5 - Coping with funding needs
Highlights	Main findings	<ul style="list-style-type: none"> - The state of financing, meaning the percentage of the cost already financed, goes from 0% of three of the measures proposed, to 10% of Expansion of the Cargo Centre Graz-Werndorf (CCG). - The remaining funding needed are expected to be allocated by national funds (public subsidies to OBB-Infrastruktur AG), European funds (CEF) and regional funds (subsidies by Styrian State Government, based on promoting of regional rail transport).
	Possible constraints and challenges	<ul style="list-style-type: none"> - The main constraint for realizing the infrastructure projects mentioned above is the lack of money for investments in railway infrastructure, with of the expansion of the Cargo Centre Graz-Werndorf (CCG) being the only exception. For this reason, these measures will probably be postponed due to the lack of funding.



		<ul style="list-style-type: none"> - The Styrian government and the stakeholders in Styria share an equal opinion on the priorities of the projects in Styria. The negotiations with the Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) and OBB Infrastructure AG reveal basic consensus about the project priorities. However, the implementation periods claimed by Styria are seen as much more long-term oriented from the point of view of the Ministry and OBB. For this reason, there is 100% agreement only on the terminal project, as the responsibility for the implementation lies solely with Styria.
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Name of the document		D.T3.2.7 - Final Roadmap
Highlights	Objectives in a nutshell	<ul style="list-style-type: none"> - Styria is an exporting industrial federal state having strong economic ties with Central Europe and Northern Europe, with Germany being the most important trade partner. Further, Styria is economically strongly related to the Adriatic Ports, which are essential gates for its imports. - The main challenges in Styrian rail freight transport arise from bottlenecks in the existing rail infrastructure. The biggest bottlenecks in Styria are missing high-capacity rail freight connections and the lack of capacity in the main rail network compared to the expected and intended rise of rail freight transports in the future. Supporting rail freight transport is not only needed in order to meet climate objectives, but also to ensure cost- and time-efficient transport connections of economic regions in Europe. - The implementation of the infrastructure measures described in the following roadmap intend to achieve the following goals: <ul style="list-style-type: none"> o connecting Styria's industries sites to their export markets in Central and Northern Europe o improving the connection of Styria to the Adriatic ports of Trieste, Koper and Rijeka o adapting the capacity of the transshipment terminal Cargo Centre Graz to the expected raise in rail freight volumes related to the operation of the Koralm Railway line o ensuring a high-level connection of the Styrian East Railway and the industry sites located along the track with the Koralm Railway line o consequently, shifting road freight transport to rail and thus improving the ecological footprint of freight transport.
	Main actions proposed	<p>A total of four actions have been proposed, namely:</p> <p>A.1 Construction of the new Bosruck tunnel</p>



		<p>A.2 Upgrading of the Railway Line Bruck/Mur-Graz-Spielfeld- Maribor</p> <p>A.3 Expansion of the Cargo Centre Graz-Werndorf (CCG) Terminal</p> <p>A.4 New railway line connecting the future Koralm Railway line and the Steirische Ostbahn</p>
	Main constraints and challenges	<ul style="list-style-type: none"> - The operational start of the Koralm Railway line at the end of 2025, accentuates the need for taking actions and eliminating the Styrian bottlenecks in the near future. - Main challenge is the lack of money for investments in railway infrastructure. It is anticipated that most rail infrastructure measures will be postponed, because of lack of funding. - The implementation of the other priority projects can only be ensured by the national ministry. It is the main decision maker in ranking the railway projects in Austria.
	Main lessons learned	<ul style="list-style-type: none"> - The biggest bottlenecks in Styrian rail freight transport are missing high-capacity connections and the lack of capacity in the main rail network. By closing these gaps and eliminating capacity bottlenecks on the main rail network, freight transport on the subordinate network will benefit subsequently. - Currently, the rail connection between the industrial region of Upper Styria and the Central region of Upper Austria is for long stretches only available via single-track lines and the mountain route to the Bosruck tunnel. The upgrading of the Pyhrn-Schober axis and in particular the construction of the new Bosruck tunnel with flat ramps can solve this problem, which has an essential impact to the whole corridor reaching from North and Central Europe out up to Southeast Europe and the H harbors of Koper and Rijeka. - The upgrading of the railway sections Bruck an der Mur - Graz as well as between Werndorf and Spielfeld and respectively further to Maribor will improve the connection of the Styrian economic areas to the Adriatic ports of Trieste, Koper and Rijeka. At the same time, it also strengthens the connection of the three ports to Styria and Central Europe. - The Cargo Centre Graz-Werndorf rail-road-terminal (CCG) is Styria's most important logistic node for national and international freight transport and the most up-to-date cargo transport center south of the Alps. An expansion of the Cargo Centre Graz Terminal (CCG) up to about 500.000 TEU/a is essential to increase the freight handling capacity for rail transports linked to the expected raise in freight volumes related to the operation of the Koralm railway.



		<ul style="list-style-type: none">- The Styrian East Railway (“Steirische Ostbahn”) is a single-track railway line with diesel operation from Graz to the national border at Szentgotthárd (HU) and continues on the Hungarian state side. It connects a number of important industrial sites of the Graz central region to the main railway network. Nonetheless, this connection is presently not sufficient. A new railway line connecting the future Koralm Railway line with the Steirische Ostbahn solves capacity problems and establishes a sufficient railway connection between important co-working automotive cluster industries.- For Styria there is a potential of a transport increase of more than 30 per cent possible due to an upgrading of the Pyhrn-Schoberpass railway judging from the transport volumes of road freight transport of rail-affine goods in the year 2015 (according to cross-alpine-freight transport statistics). This potential originates mainly from imports and exports of Styria to Western European Countries and transports to Upper Austria.
Opportunities related to TEN-T network development and macroregional strategies	<div><div><input checked="" type="checkbox"/> Baltic Adriatic Corridor</div><div><input type="checkbox"/> North-Sea Baltic Corridor</div><div><input type="checkbox"/> Mediterranean Corridor</div><div><input type="checkbox"/> Orient/East-Med Corridor</div><div><input type="checkbox"/> Scandinavian-Mediterranean Corridor</div><div><input checked="" type="checkbox"/> Western Balkans Corridor</div></div> <div><div><input type="checkbox"/> Adriatic-Ionian Region</div><div><input checked="" type="checkbox"/> Alpine Region</div><div><input type="checkbox"/> Baltic Sea Region</div><div><input checked="" type="checkbox"/> Danube Region</div></div> <td><ul style="list-style-type: none">- The Pyhrn-Schober railway line is part of the TEN-T comprehensive network. At present, the rail connection between the Upper Styrian industrial region and the central region of Upper Austria is largely available via single-track lines only and the mountain route to the Bosruck tunnel, which is relatively steep for railways. In the course of the next TEN-T revision in 2023, the federal states of Styria, Carinthia, Upper Austria and Salzburg are aiming to include the two axes via Tauern and Pyhrn-Schober into the TEN-T core network.- The railway line Graz - Spielfeld - Maribor is part of the Baltic-Adriatic-Corridor and thus part of the TEN-T core network. With the operational start of the Koralm Railway line, more than 400 trains per day are predicted on the section between Bruck/Mur and Graz.- Cargo Centre Graz-Werndorf (CCG) is part of the TEN-T core network on the alignment of the Baltic- Adriatic-CNC and the RFC 10 “Alpine-Western Balkan”. The expansion allows to shift</td>	<ul style="list-style-type: none">- The Pyhrn-Schober railway line is part of the TEN-T comprehensive network. At present, the rail connection between the Upper Styrian industrial region and the central region of Upper Austria is largely available via single-track lines only and the mountain route to the Bosruck tunnel, which is relatively steep for railways. In the course of the next TEN-T revision in 2023, the federal states of Styria, Carinthia, Upper Austria and Salzburg are aiming to include the two axes via Tauern and Pyhrn-Schober into the TEN-T core network.- The railway line Graz - Spielfeld - Maribor is part of the Baltic-Adriatic-Corridor and thus part of the TEN-T core network. With the operational start of the Koralm Railway line, more than 400 trains per day are predicted on the section between Bruck/Mur and Graz.- Cargo Centre Graz-Werndorf (CCG) is part of the TEN-T core network on the alignment of the Baltic- Adriatic-CNC and the RFC 10 “Alpine-Western Balkan”. The expansion allows to shift



			<p>transports from road to rail, respectively to handle the expected additional transport flows via rail transports.</p> <ul style="list-style-type: none"> - Steirische Ostbahn is part of the TEN-T comprehensive network. It runs as a single-track railway line with diesel operation from Graz to the state border at Szentgotthárd and continues on the Hungarian state side. A new railway line connecting the future Koralm Railway line with the Steirische Ostbahn solves capacity problems and establishes a sufficient railway connection between important co-working automotive cluster industries.
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06_THURINGIA

Name of the document	D.T1.4.1- Benchmarking analysis
Main findings	<ul style="list-style-type: none"> - Modal split. The modal share for freight transport in Thuringia stagnates in the last years or even decreases to the disadvantage of rail. Road transport is the strongest mode of transport in terms of tonnage transported with a share in modal split of 95.2 % in 2008 and 96.2 % in 2013. The share of rail cargo traffic in the total tonnage transported amounts to 4.8 % in 2008 and 3.8 % in 2017. - Railway lines. The regional railway network in Thuringia has an overall length of lines of 1.521 km and almost 10,000 km of road network. The regional railway network in Thuringia has an overall length of tracks of 2.352 km, of which 1.339 km are single tracks (including sidings) and 1.013 km are multi-tracks . The regional railway network of Thuringia currently comprises 1.521 km of lines, of which 452 km are electrified and 1.069 km are non-electrified. Hence, only 30 % of all tracks in Thuringia are electrified. - Terminals and ports. Main regional intermodal terminals are DUSS Terminal Erfurt-Vieselbach (EV) and Captrain-Terminal Eisenach. In Thuringia there is no sea ports. - Freight transport demand. Shipping and receiving within the region increased from 317,000 tons in 2001 to more than 428,000 tons in 2017. The inland transport nationwide increased in shipping (1.6 Mio tons to 2.8 Mio tons) but decreased in receiving (3.6 Mio tons to 2.9 Mio tons). The transnational transported goods from Thuringia decreased from 948,000 tons to 865,000 tons in the same period while goods from abroad to Thuringia increased a little bit (620,000 tons to 652,000 tons). Since 2015, the freight transport market in Poland has been systematically growing. Freight transport on the railways is growing at a slower rate to the total market, so the share of rail transport in total transport is decreasing. - Policy and legislation. On national level <i>The Master Plan Rail Freight Transport</i> is the central strategic paper for the future of rail freight transport in Germany. It was introduced in 2017 with the aim to



		<p>strengthen rail freight transport permanently and make it economically more attractive in comparison to other modes of transport.</p> <p>The Action Plan Freight Transport and Logistics pursues the strengthening of the logistics location of Germany, the preservation and modernisation of an efficient transport infrastructure, improved cross-linking of all modes of transport as well as the promotion of environmentally friendly and energy-efficient freight transport.</p> <ul style="list-style-type: none"> - The Regional Development Program Thuringia 2025 is an informal document and instrument with goals and guidelines to develop the regional and spatial potentials of Thuringia. It was declared as obligatory by the federal state government in 2014, based on the Thüringer Landesplanungsgesetz ThürLPlG (State Planning Act Thuringia) from 2012.
	SWOT	<p>TRANSPORT INFRASTRUCTURE</p> <p>Strengths</p> <ul style="list-style-type: none"> • Sufficient rail freight infrastructure. <p>Weaknesses</p> <ul style="list-style-type: none"> • The share of only 30 % of electrified railway tracks. • Terminal is not electrified. <p>Opportunities</p> <ul style="list-style-type: none"> • Location in the “heart of Europe” in-between RFCs and TEN-T network. • Maintenance and construction of track connections. • Maintenance and reactivation of secondary lines. • Implementation of a network of loading platforms designed for flexible use. <p>Threats</p> <ul style="list-style-type: none"> • Further closing or even dismantling of tracks should be prevented. • New highways (Autobahn projects). <p>Bottlenecks</p> <ul style="list-style-type: none"> • Missing terminals for shipment. • Infrastructural deficits • Missing links in railway-network (a number of disused railway lines or sections) <p>OPERATORS AND STAKEHOLDERS</p> <p>Strengths</p>

		<ul style="list-style-type: none"> • Location of Thuringian Industries concerning markets. • Low utilization rates of many lines. • Wide range of goods. <p>Weaknesses</p> <ul style="list-style-type: none"> • Amount of closed railway lines. • 2 combined terminals: <ul style="list-style-type: none"> - One is specialized for car-transport (Opel production site). - The biggest one at Erfurt freight village works at capacity limit. • Low freight volume. • 50% transit traffic on lines. <p>Opportunities</p> <ul style="list-style-type: none"> • Facilitate, support and promote the establishment of additional offers for rail transportation. • Establish a central institution which pools the potentially suitable volumes for rail traffic at an administrative level (practical example TCU). • Research cluster. <p>Threats</p> <ul style="list-style-type: none"> • Skilled staff missing. <p>Bottlenecks</p> <ul style="list-style-type: none"> • Rail freight transport is only profitable on routes with rail passenger transport. <p>POLICY AND LEGISLATION</p> <p>Bottlenecks</p> <ul style="list-style-type: none"> • Rail freight transport is only profitable on routes with rail passenger transport.
	Main lessons learned	<p>Deficiencies have to do with: Insufficient electrification of lines and terminals; Missing (closed) lines and connections; Missing terminals; Unprofitable freight traffic.</p> <p>Advantages concern: Developed economy and market; Many loading points; Satisfactory infrastructure; Diversity of cargo types; Good strategies, plans and logistics policy; Many operators.</p> <p>Thuringia has a lot of potential in terms of rail infrastructure development and services. Thuringia has very dense rail network comparing to other regions and the densest rail network (per capita) in</p>



		Germany. A small share are electrified railway tracks. At the same time Thuringia has a small modal share in favour of rail (below-average of Germany) which is a vast potential to change modal share patterns.
	Main areas of intervention	<ul style="list-style-type: none"> - Improvement and upgrade of railway infrastructure through several actions, namely: <ul style="list-style-type: none"> o Reactivation of »Max-und-Moritz-Bahn« line o Reactivation of »Werra-Bahn« line o Reactivation and upgrading of the »Rennsteig-bahn« line o Reactivation of terminal »Sonneberg« o Expansion of the Erfurt -Vieselbach container terminal o Reactivation of the »Ohratal-bahn«-line for rail freight transport o Reactivation, modernization and expansion of the railport Nordhausen o Reactivation and extension of private sidings - Development of intermodal services through digitalization and automatization

Name of the document		D.T.1.4.2 Priority list of actions and cost estimates
Highlights	Main actions proposed and benefits	<p>Transport infrastructures</p> <ul style="list-style-type: none"> - Reactivation of »Höllental« line → Shift of freight from road to rail 2.700.000 t p.a. - 70 % increased capacity; Shorter travel time. - Reactivation of the »Ohratal- bahn«-line for rail freight transport → 30 % increased capacity (freight); 100 % increased capacity (passenger); Additional loading points for wood. - Reactivation of »Max- und-Moritz- Bahn« line → 100 % increased capacity. - Reactivation of »Werra- Bahn« line → Shift of freight from road to rail. - Reactivation and upgrading of the »Rennsteig- bahn« line → Shift of freight from road to rail. - Reactivation, modernization and expansion of the railport Nordhausen → Shift of freight from road to rail 600.000 t p.a. as basic transport 100 % increased capacity - Expansion of the Erfurt -Vieselbach container terminal → Additional capacity for loading of containers: 15.000 TEU - Reactivation of terminal »Sonneberg« → Additional loading capacity of goods.



		<p>The projects in the priority list include an expansion of the existing rail network and the available loading points in Thuringia. This will expand the previously inadequate capacities for freight transport by rail. The existing container terminals e.g. are now working at their capacity limit. In future it will be possible to shift more containers from road to rail.</p> <p>Industrial areas have a long distance to the next railway line and the next loading point. With the reactivating of closed branch lines they will get better access to rail transport and many companies are ready to use this opportunity.</p>
	Main constraints and challenges	<ul style="list-style-type: none"> - In the project "Reactivation of »Höllental« line" could come a conflict with nature reserve areas. And there are contrary interests of different responsibilities because two federal states are involved. - The reactivation of closed railway lines for freight transport needs a parallel running public transport for cost-efficient operation. - High costs because of infrastructural projects.
	Main lessons learned	<ul style="list-style-type: none"> - The region of Thuringia presents different bottlenecks for the extension of rail freight transport, including missing terminals for shipment, rail freight transport is only profitable on routes with rail passenger transport, infrastructural deficits and missing links in railway network - In summary all the stakeholders consulted need more and improved loading terminals and reactivated branch lines for better access to customers and more flexibility. - Cost estimations without detailed study in preparation of an infrastructure investment have a great inaccuracy in most cases. - Most actions have a medium to long term time scale for implementation because of large infrastructural measures and investments.
	Opportunities related to TEN-T and macroregional strategies	<p>The Free State of Thuringia is located close to the Scandinavian - Mediterranean TEN-T Corridor as well as to the Orient/East-Med Corridor and the North Sea-Baltic Corridor. As the railway network has good connections to Saxony and Saxony-Anhalt, there is an indirect, peripheric connection to those corridors.</p>

Name of the document	D.T.1.4.3 Definition of potential policy measures
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Highlights	Main policy documents to be addressed	<ul style="list-style-type: none"> - Thuringia, federal and EU budget. These are documents dealing with the allocation of funds and expenses at the federal, national and European level. - State development Programme 2025 /2040 for Thuringia - Federal transport route plan, - Regional Transport Plan Thuringia 2023 -28. - Thuringian Transport Programme - Masterplan Rail Freight Transport Thuringia - Sustainable Development Strategy Thuringia - European green deal
	Main policy measures proposed	<ul style="list-style-type: none"> - Maintain and expand state subsidies for rail freight transport in order to increase its modal share. - Revitalization of disused railway lines. In order to expand the usable rail infrastructure and further to fulfil the goals set for climate protection, closed secondary lines must be revitalized. This requirement must be included in the documents for future state planning, as this is where the direction of infrastructure development is defined. - Reactivation, modernization and expansion of railports and loading points.
	Main lessons learned	<ul style="list-style-type: none"> - The politics of the past years and decades have led to the fact that in Thuringia, Germany and Europe the regional access conditions for freight transport to the rail network have deteriorated overall. In Thuringia in particular, this is primarily due to the fact that numerous branch lines with an overall length of 467 km have been closed since 1994. In order to bring the railway as a means of transport back into the regions and to bring it back to its former strength and beyond, the framework conditions that are in responsibility of politics must be improved. An increase in the share of rail freight transport in total freight transport requires the availability of efficient access points to the rail network. This requirement must be included in the documents for future state planning, as this is where the direction of infrastructure development is defined. - The expansion of existing and the development of new loading points turned out to be the top priority requirement for Thuringia. This requires the reactivation of disused routes and state funding for routes, connections and investments. - The policy measures represent a summary of numerous individual projects that were discussed by the stakeholders. It has proven to be useful to cluster these individual projects and



		summarize them in a few policy measures. In this way, the profile of the measures is sharpened and more easily enforceable.
	Main constraints and challenges	<ul style="list-style-type: none"> - The biggest problem with the implementation of these policy measures will be the financing, because transport always has to deal with building and maintaining infrastructure. This will require high start-up funding. And as long as cost fairness between the modes of transport is not established, the necessity of these investments can be questioned again and again. If climate protection is seen only as a cost factor and not as a necessary investment in securing the future, the implementation of the measures described remains at risk. - In order to finance the associated investments and to support ongoing operations, considerable public subsidies are required now and in the future

Name of the document		D.T3.1.2 Regional capacity building workshops 1 - 2 - 3
	Main stakeholders involved	<p>Workshop 1. 18 participants (including the 4 REIF hosts) belonging to: administrative district offices, state administration, office for economic development, regional planning offices, staff of TMIL, students of FHE.</p> <p>Workshop 2. 21 participants (including the 4 REIF hosts) belonging to: administrative district offices, Standing Conference of Local Planning Authorities, district offices Gotha and Wartburgkreis, regional development company (LEG), traffic department city of Jena, Chamber of Industry and Commerce Ostthüringen, Association of German Transport Companies (VDV Sachsen/Thüringen), railway infrastructure company ZossenRail GmbH, Railport Chemnitz, LUB consulting GmbH, staff of TMIL, student of FHE.</p> <p>Workshop 3. 16 participants (including the 4 REIF hosts) belonging to: Standing Conference of Local Planning Authorities, district offices Altenburger Land and Kyffhäuserkreis, regional development company (LEG), Office for economic development city of Erfurt, Chamber of Industry and Commerce Ostthüringen and Südthüringen (IHK), Association of German Transport Companies (VDV Sachsen/Thüringen), staff of TMIL (transport department), student of FHE.</p>
Highlight	Main findings	Workshop 1. The discussed topics were Thuringia's situation in terms of rail freight transport and railway access. The main results from REIF analyses were presented. Participants agreed that both freight and passenger transport have to be taken into account. The permanent problem of the lack of



		<p>loading points for wood/damaged timber, which are defined in regional plans, also emerged. Currently 50 trucks of wood per week departs from and arrive in Ohrdruf, equal to the capacity of 1 train.</p> <p>Workshop 2. During the second Regional Capacity building workshop the best practice of Railport Chemnitz was presented, as well as REIF pilot action “Development of a roadmap for the revitalization of disused routes for rail freight traffic using the example of the “Ohratal line” between Gotha and Graefenroda”. In general, all stakeholders agree on the need to reactivate disused railway lines in order to support railway transport, especially for the industries of timber and wood.</p> <p>Workshop 3. During the third Regional Capacity building workshop, a presentation about the Comparison of loading points and storage yards for wood in the Thuringian Forest for rail freight transport was held. Stakeholders remarked their interest in the initiative and their will to contribute to future meetings even beyond the REIF project.</p>
	Main lessons learned	<ul style="list-style-type: none"> - The roadmap serves as a basis for other reactivations of railway lines. - Timber represents the biggest bulk cargo to transport on rail in Thuringia. - There are still many obstacles in regulation and administrative burdens; some changes are needed, such as: <ul style="list-style-type: none"> o Adjustment of the permissible total weight for trucks in pre-carriage and onward carriage of railports (44 tons) o Reduction of CO2 tax for trucks in pre-carriage and onward carriage of railports o Exemption from toll for trucks in pre-carriage and onward carriage of railports o Promoting of automatic middle buffer coupling and digitalization in general; electrification

Name of the document		D.T3.2.4 Annual Meeting of regional advisory board 2020 - 2021
Highlights	Main stakeholders involved	Participants included stakeholders and representatives of infrastructure provider, railroad logistic company, logistic company, interest group, staff of TMIL, DB Netze, TFG Transfracht, IHK Ostthüringen (Chamber of Commerce and Industry).
	Main findings	<ul style="list-style-type: none"> - During the first annual meeting, the discussion focused on the results of the REIF project, including the draft roadmap. The main points emerged were the lack of qualified employees in rail sector, the lack of an information platform for customers and providers in freight transport and the need for further potential analyses and feasibility studies.



		<ul style="list-style-type: none"> - During the second annual meeting, the discussion focused on the list of proposed actions for the roadmap, namely: <ul style="list-style-type: none"> o Infrastructure projects: reactivation of lines and gap closures of the railway network (Ohratalbahn, Höllentalbahn, Werratalbahn, Werrabahn) o Expansion of network access points: freight terminals/handling facilities (Erfurt- Vieselbach and Sonneberg), also railports (Nordhausen), loading points and sidings (network access) - In addition, stakeholders discussed the potential presence of conflict with environmental protection, as well as the possibility to combine freight and passenger transport on rail and the financing possibilities and cost estimations.
	Main lessons learned	<ul style="list-style-type: none"> - Possibilities for network access are important. - Terminal Erfurt-Vieselbach has to be expanded (also potential other terminals in Thuringia) - Potential analyses and feasibility studies are required for further potential measures and actions as well as better cost estimations. - Funding guidelines and financial incentives are needed to reach potential customers. - Cooperation and talks between actors are important to reach an agreement.

Name of the document		D.T3.2.5 - Coping with funding needs
Highlights	Main findings	<ul style="list-style-type: none"> - The state of financing, meaning the percentage of the cost already financed, is very different for each of the three actions, going from 0% of five actions proposed to 20%, 50% and 80% of the Expansion of the Erfurt -Vieselbach container terminal. - The funding needed are expected to be allocated by regional (federal) funds, national funds and private investments.
	Possible constraints and challenges	<ul style="list-style-type: none"> - For some of the actions, national funding has not been approved yet. - For one specific action, there are some disagreements with Bavaria on the effect of the action on a nature reserve; this could slow down the works foreseen and overall implementation. - For some actions, there is an uncertain cost-benefit ratio due to insufficient rail transport. - Reduction of federal and national budget funds, in particular due to financial burdens as a result of the recent pandemic

Name of the document	D.T3.2.7 - Final Roadmap
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Highlights	Objectives in a nutshell	<ul style="list-style-type: none"> - Climate change and emissions in the transport sector are a big threat to the world in the long-term. Shifting transport from road to rail is an important contribution to reduce these effects. In order to make this contribution, the regional conditions in Thuringia for access to rail freight transport must be improved and rail freight transport needs to be put in focus on the political agenda. The roadmap constitutes the operation plan which illustrates the main actions needed for the future development of the regional rail freight transport system in Thuringia. - Thuringia has the densest rail network in terms of population and size in Germany, and there are sufficient network capacities even if usage is doubled. However, the two existing container terminals have no longer any spare capacity. - The following points were identified as the main bottlenecks: the lack of loading points, the fact that freight traffic is generally only profitable on routes that also include passenger traffic, the missing connections in and to the route network and the lack of electrification. To this end, digitization and automation strengthen combined transport and single wagon transport and thus the demand structure in Thuringia. - One way of eliminating these bottlenecks is to reactivate disused railway lines, which is at the basis of the drafted roadmap. - The strengthening and expansion of rail freight transport requires the maintenance and expansion of existing funding programs as well as the creation of additional financing instruments, especially at national and European level. - The creation of new and the modernisation and expansion of existing access points for rail freight transport was defined as a priority task by the members of the Regional Advisory Board Thuringia in order to strengthen and expand regional rail freight transport.
	Main actions proposed	<p>A total of eight actions have been proposed, namely:</p> <p>A.1 Reactivation of the “Ohratal Railway”- for rail freight transport</p> <p>A.2 “Werra Railway” - Closing the gap between Coburg (Bavaria) and southern Thuringia</p> <p>A.3 Reactivation of “Höllental Railway”.</p> <p>A.4 Reactivation of “Werratal Railway” Bad Salzungen - Philippsthal</p> <p>C.1 Maintenance and expansion of state subsidies</p> <p>D.1 Expansion of the Erfurt-Vieselbach container terminal</p> <p>D.2 Construction of a new loading point / railport in Sonneberg</p>



		D.3 Reactivation, modernization and expansion of the railport Nordhausen	
	Main constraints and challenges	<p>In Thuringia, there are a number of proposals to reactivate disused branch lines and loading points for rail freight traffic. There are also good ideas for new freight-terminals and improvements for the existing infrastructure.</p> <p>Unfortunately, it is not possible in the short and medium term to finance and implement all of these actions in order to create a better supply in infrastructure and service.</p> <p>The greatest challenge is therefore to set the right priorities in order to achieve the greatest possible impact with the available funds.</p>	
	Main lessons learned	<ul style="list-style-type: none"> - It is difficult to choose a prioritization approach based on a single criterion. Prioritizing the projects should not be based on the amount of expenses, but on the effects that the projects will have on rail freight transport in Thuringia. - While those projects with the greatest effects, such as the expansion of the Erfurt - Vieselbach container terminal, should be taken top priority, it is also important that the projects can be effectively financed. That is why projects with largely secured funding, such as the reactivation of the "Ohratal" line for rail freight transport, should also have high priority. - If routes are used for the transport of people and goods, the route usage charges are distributed over significantly more trains and thus reduce the costs for each individual train and consequently the cost disadvantages of rail compared to road. 	
	Opportunities related to TEN-T network development and macroregional strategies	<input type="checkbox"/> Baltic Adriatic Corridor <input type="checkbox"/> North-Sea Baltic Corridor <input type="checkbox"/> Mediterranean Corridor <input type="checkbox"/> Orient/East-Med Corridor <input checked="" type="checkbox"/> Scandinavian-Mediterranean Corridor <input type="checkbox"/> Western Balkans Corridor <input type="checkbox"/> Adriatic-Ionian Region <input type="checkbox"/> Alpine Region <input type="checkbox"/> Baltic Sea Region <input type="checkbox"/> Danube Region	<p>Thuringia is outside (but surrounded by) the major European transport corridors.</p>

07_WESTPOMERANIA

Name of the document	D.T1.4.1- Benchmarking analysis
Main findings	<ul style="list-style-type: none"> - Modal split. Freight transport on the railways is growing at a slower rate to the total market, so the share of rail transport in total transport is decreasing. Share of rail transport in total transport in 2018 was 11,37%. <p>Railway lines. There are 1173 km of railway lines running through the area of Westpomerania, with a railway network density of 5.1 km per 100 km². In addition to the lines which are part of the E-59 and CE-59 lines, the 202 railway line in the Szczecin - Koszalin - Gdańsk rail route is of great significance, since it is part of the corridor and Rail Baltica development strategy. All lines included in the European corridors are electrified and adapted to carry freight. The least adapted section is line no. 273, whose comprehensive modernisation would be planned only after 2023. In most cases these lines are single-track and electrified. In the voivodeship 141 sidings are adjacent to railway lines passing through the voivodeship.</p> <p>A total of 912 km of tracks with a network density of 6.5 km per 100 km² runs through Lubusz. Some lines passing through the region are of supra-regional or even international importance, being part of TEN-T corridors. Interconnections between the centres within the region are also provided by lines of lower categories, including numerous non-electrified single-track sections. The largest labour markets are connected with two-track non-electrified lines</p> <p>A total of 1763 km of tracks run through Lower Silesia, not all lines are allowed for freight transport. The technical condition of the lines can be described as sufficient and significant improvements have been seen in recent years. The total length of electrified railway lines in the Lower Silesian Region is 1053 km, which constitutes almost 60% of all operating railway lines. The vast majority of freight railway lines are electrified.</p> <ul style="list-style-type: none"> - Terminals and ports. Main regional intermodal nodes (terminals) are Villa Selva, Terminal Piacenza, Bologna freight village, Dinazzano Po, Rubiera, Lugo, Ravenna, Faenza. The main regional rail freight connections are Reggio Emilia-Dinazzano Po (6,300 trains) and the Port of Ravenna (5,800 trains).



SWOT		<ul style="list-style-type: none"> - Freight transport demand. Many different goods can be transported in the region or have high suitability for rail freight transport. The main transported goods are wood products, agricultural products, steel products, coal and mining aggregates. Due to the fact that companies from the Automotiv sector are mainly present in the Lubuskie region, the development of intermodal transport in this sector should be expected as well. <p>Regional clusters of companies are potential customers for rail freight transport. Data about cluster are available for the West Pomeranian Region, Lubusz Region and Lower Silesian Region. The clusters operate in various industries, some of them are not directly related to rail freight transport or transport at all. With freight transport demand are related the following clusters in the three regions.</p> <ul style="list-style-type: none"> - Policy and legislation. <p>The supreme national law, strictly applicable to rail transport, is the Act of 23 March 2003 on rail transport (Journal of Laws Dz. U. 2003, No. 86, item 789).</p> <p>In addition to the Act on rail transport, the national legal acts regulating the issue of transport of goods by rail include five acts: on public collective transport; on the transport of dangerous goods; on the Railway Fund; on financing of land transport infrastructure; on the commercialization, restructuring and privatization of a state-owned enterprise „Polskie Koleje Państwowe”.</p>
		<p>TRANSPORT INFRASTRUCTURE</p> <p>Strengths</p> <ul style="list-style-type: none"> • Well-developed rail network, good national and international connections • Good rail connections with major cities in Poland • Lines E 59 and CE 59 are covered by the AGC and AGTC agreements and their modernization is a priority of the state's transport policy • Inclusion of lines E 59 and CE 59 <p>Weaknesses</p> <ul style="list-style-type: none"> • Poor condition of station infrastructure and railroad infrastructure on local lines. • Poor technical condition of railway transport facilities • Insufficient capacity of railway station nodes <p>Opportunities</p>

- Electrification of railway lines and the inclusion of certain sections of the lines into the system of railway lines of national importance
- Increasing financial resources allocated for repairs/modernizations/construction of railway lines
- Reducing construction and modernization times of railway lines

Threats

- Deteriorating condition of linear infrastructure
- Insufficient funds allocated for the modernization of rail transport

Bottlenecks

- Cargo road/rail/sea/river terminals: Missing terminals (Taking into account the growth trend, assuming the growth rates and investments of railway carriers in intermodal platforms, the number of terminals and their total annual transshipment capacity will be insufficient.)

OPERATORS AND STAKEHOLDERS

Strengths

- Increased safety of rail traffic as compared to other means of transport
- Large diversity of rail transport
- Attractive location - on the state border
- West Pomeranian Region - the access to the Baltic Sea - ports

Weaknesses

- Obsolete and worn out rolling stock
- Low standard and relatively low speed of trains
- Insufficient transport offer and frequency of trains

Opportunities

- Liberalization of the transport market, development of new entities and marketization of rail transport activities
- Developing the market offer of rail operators by optimizing the communication of transport systems
- Introducing modern technologies based on the use of the latest solutions in the field of telecommunications and IT

Threats

		<ul style="list-style-type: none"> • A drop in demand for rail freight transport to and from ports • Liberalization and displacement of carriers from the railway market • Experienced staff leaving railway transport and the insufficient training system for new staff • Increase in operating expenses and rising electricity costs • Much faster development of the road network than the railway network <p>Bottlenecks Lack of the labour force; lack of knowledge (difficulties in attracting qualified staff for these professions are expected in the coming years; main reason is that only few schools teach these professions; this situation is caused by the restructuring of the railway sector in Poland at the beginning of the century).</p> <p>POLICY AND LEGISLATION</p> <p>Strengths</p> <ul style="list-style-type: none"> • Low external costs and low environmental impact • Integrating the development of rail transport into the Regional Operational Program <p>Weaknesses</p> <ul style="list-style-type: none"> • Limited level of financing of rail transport from the state budget <p>Opportunities</p> <ul style="list-style-type: none"> • European integration policy and the development of international transport corridors • Changes in the state transport policy towards greater support for rail transport • Increased state involvement in financing the development of lines of state importance • Effective use of EU funds <p>Threats</p> <ul style="list-style-type: none"> • Incorrect course of the state transport policy in relation to railways. <p>Bottlenecks</p> <ul style="list-style-type: none"> • Legislation for labour force: Labour certifications (the complex process of training and certification)
	Main lessons learned	<p>Deficiencies have to do with: Poor technical condition of lines, vehicles, stations; Poor regional connections; Missing terminals; Insufficient workforce, knowledge; Limited funding; Slow development of transport.</p> <p>Advantages concern:</p>



		Well-developed railway network, good railway connections; Ports by the Baltic Sea, individual legal acts. The development of the region's economy depends to a large extent on properly functioning transport, especially on the transport crossing land-sea borders. The region is seriously affected by poor intra-regional and interregional transport accessibility.
	Main areas of intervention	<ul style="list-style-type: none"> - Increasing the significance of rail transport within port terminals by improving rail infrastructure in ports - Support for investments in intermodal terminals that will enable rail freight transport for companies that do not have railway sidings in their area; - Using new sources and tools for financing infrastructure and rolling stock investments (e.g. investment loans, public-private partnerships); - Improvement of the network through the resolution of infrastructural bottlenecks (construction of new lines, reconstruction of current lines, electrification) and through innovative ICT tools such as transport traffic management systems.

Name of the document		D.T.1.4.2 Priority list of actions and cost estimates
Highlights	Main actions proposed and benefits	<p>Transport infrastructures</p> <ul style="list-style-type: none"> - Construction of the Szczecin Podjuchy Most - Dziewoklicz link → improvement of the capacity, shortening the transit time, relieving the load - Reconstruction of the railway line No. 411 on the Stargard - Pyrzyce section → enabling the implementation of rail shipments by nearby plants, enabling the handling of loose materials, creating a new transport corridor Kostrzyn - Myślibórz - Stargard - Reconstruction of the railway line No. 422 on the Pyrzyce - Głazów section and the railway line No. 410 on the Barnówko - Myślibórz - Głazów section → enabling the implementation of rail shipments by nearby plants, enabling the handling of loose materials, creating a new transport corridor Kostrzyn - Myślibórz - Stargard - Reconstruction of the railway line No. 410 on the Głazów - Barlinek - Pełczyce - Choszczno section, alternative variant - Głazów - Barlinek - Pełczyce - Krzęcin - Rębusz (Pełczyce - Rębusz)



in a new route) → enabling the implementation of rail shipments by nearby plants, enabling the handling of loose materials.

- Construction of the Western Bypass of Szczecin, section Dołuje - Police Chemia with the construction of new linkages Dołuje - Kościno (429/408) and Stobno Szczecińskie - Warzymice (408/409). Electrification of the above-mentioned sections. → introduction of traffic segregation, improvement of rail shipments
- Reconstruction of the railway line No. 429 on the section Stobno Szczecińskie Dołuje - Dobra Szczecińska → enabling the implementation of rail shipments by nearby plants, enabling the handling of loose materials
- Construction of the second track on line 273, section Szczecin Podjuchy - Szczecin Port Centralny SPA, including the widening of the bridge over the Regalica River → improving the capacity, facilitating the segregation of traffic in the Szczecin Junction
- Electrification of line 408 on the section Szczecin Gumieńce - state border and line 409 on the sect. Szczecin Gumieńce - the state border → improving the competitiveness of rail transport on cross-border routes, reduction of greenhouse gas emissions.
- Electrification of railway lines 210 (Runowo Pomorskie - Szczecinek - (Chojnice) and 402 (Goleniów - Kołobrzeg) --< improving the competitiveness of rail transport on cross-border routes, reduction of greenhouse gas emissions.
- Improvement of operational parameters to the D3 standard (221 kN, min.600m) on lines: 202, 210, 402, 403, 404, 405, 406, 407, 408, 409, 418, 430, 431 → improving the competitiveness of rail transport on cross-border routes
- Construction or reconstruction of the Service Infrastructure Facilities within the following stations: Łobez, Chociwel, Trąbki, Stargard Kluczewo, Złocieniec, Chojna, Krzywín Gryfiński, Gryfino, Bierzwnik, Dolice, Kolin, Reptowo, Ustronie Morskie, Płoty, Dalecino, Grzmiąca, Karlino, Dygowo, Szczecin Niebuszewo, Trzebież Szczeciński, Kamień Pomorski, Szczecin Gumieńce, Dębno Lubuskie, Dołuje, Pyrzyce, Mysłibórz, Barlinek, Pelczyce → improving the accessibility of rail freight transport to nearby plants, increasing the competitiveness of rail transport.



		<ul style="list-style-type: none"> - Improvement of the operational parameters of the remaining the Service Infrastructure Facilities in accordance with the class of adjacent lines (D3 - 221 kN) → increasing the competitiveness of rail transport. - Construction of new stations on lines 351 and 401 enabling the crossing and overtaking of trains (at least two additional main tracks): Szczecin Zdunowo, Szczecin Załom, Łoźnica, Mokrzyca → improvement of capacity for access to the ports of Szczecin and Świnoujście, reduction of travel time to the above- mentioned ports. - Modernization and expansion of port infrastructure in Szczecin and Świnoujście → enabling the use of economies of scale and the development of intermodal transport (modal shift), reduce operational costs, reduce the environmental impact. - Implementing innovative transport traffic management systems → Elimination of bottlenecks, improving the fluidity/capacity of transport infrastructure and reducing the environmental pressure generated by transport. <p>Organizational and legal activities</p> <ul style="list-style-type: none"> - Undertaking actions aimed at a better integration of rail transport with other branches of transport → improve timetable stability, interoperability, reduce operational costs, reduce the environmental impact. - Further implementation of up-to-date IT and telecommunications systems (transport telematics) - European Railway Traffic Management System (ERTMS) → mprove timetable stability, interoperability, reduce operational costs, reduce the environmental impact. <p>Promotion activities</p> <ul style="list-style-type: none"> - Promotion of intermodal and combined transport, application of preferential fees for the use of railway infrastructure for intermodal transport → improve timetable stability, interoperability, reduce operational costs, reduce the environmental impact.
	Main constraints and challenges	<ul style="list-style-type: none"> - The implementation of activities in the field of rail transport is possible with obtaining external funds, both European and national. If funds are not provided, investments will not be realized.
	Main lessons learned	<ul style="list-style-type: none"> - The popularity of railway cargo transport has significantly decreased over the last years, and despite the access to loading infrastructure, in most of the cases the railway is not competitive against cheaper and faster road transport.



		<ul style="list-style-type: none"> - In order to increase popularity of railway transport, it is vital not only to invest in improving the parameters of railway lines, but also to rebuild sidings, invest in increasing the density of unloading points and changes in transport offers of the operators, which may require the support of local authorities. - Most actions have a medium to long term time scale for implementation because of large infrastructural measures and investments. - It is essential to provide an attractive transport offer to cargo consignors e.g. by creation of intermodal line trains along the transport corridors in Westpomeranian Region. - It is essential to promote of freight transport e.g. requiring or favouring of railway transport in public transport orders connected with supply of building materials to infrastructure construction.
	Opportunities related to TEN-T and macroregional strategies	<ul style="list-style-type: none"> - The Central European Transport Corridor is the implementation of the interregional agreement which has been signed by: Skåne Region (Sweden), West Pomeranian Region, Lubusz Region, Lower Silesian Region, Opole Region (Poland), Komitat Vas and Zala, representing West Transdanubian Region (Hungary), Primorje-Gorski Kotar and Varazdin County (Croatia). - The corridors that most closely follows the route of the Central European Transport Corridor (CETC) are the Baltic Sea-Adriatic Sea and part of Mediterranean Sea corridors. The Baltic-Adriatic corridor runs through six Member States (Poland, the Czech Republic, Slovakia, Austria, Italy and Slovenia) and it connects the Baltic ports in Gdynia/Gdańsk and Szczecin/Świnoujście with the Adriatic ports in Trieste, Venice, Ravenna and Koper. - The area of the Baltic-Adriatic corridor has high business development potential. It is home to many companies from the Automotiv industry, companies using metallurgical products, logistics centres of large food concerns, also mines and quarries. This potential is compounded by the wide access to railway sidings connected to modernised railway lines, which give access to seaports. An opportunity for rail freight transport is an attractive offer of operator connections. Increasing the attractiveness of intermodal rail transport is particularly important in view of the difficult disadvantages of this type of transport, such as additional intermodal transport operations extending the service time of rail in the logistics chain and the low flexibility of rail services.



		<ul style="list-style-type: none"> - The TEN-T core network in the West Pomerania includes lines No. 401 and 351 - components of the Baltic- Adriatic Corridor, forming the Świnoujście - Szczecin - Poznań route. The network is complemented by the railway lines included in the TEN-T Comprehensive Network. It is line no. 273 Wrocław - Zielona Góra - Szczecin (the so-called “Nadodrzanka”) and lines no. 408 and 409 Szczecin Główny - Szczecin Gumieńce - the border of the Republic of Poland, providing connection between West Pomerania and Brandenburg, Berlin and the rest of the German railway network. The priority list includes the main actions needed to revitalise the regional freight rail transport sector and to strengthen the connection with two TEN-T corridors.
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Name of the document		D.T.1.4.3 Definition of potential policy measures
Highlights	Main policy documents to be addressed	<ul style="list-style-type: none"> - <i>Transport Development Policy of the West Pomeranian Voivodeship until 2030</i> - <i>National Railway Programme until 2023</i> - <i>Kolej Plus Programme</i> - <i>The Odra-Vistula Flood Management Project</i>
	Main policy measures proposed	<ul style="list-style-type: none"> - Regional infrastructure policy that supports in planning, financing and frame-conditions - National program for supplementing local and regional railway infrastructure - Adaptation to the requirements of the TEN -T network. - Placing the investments on the list of investment projects.
	Main lessons learned	<ul style="list-style-type: none"> - The voivodship provides rolling stock to handle regional passenger traffic, however, it has no competence in the construction and modernization of infrastructure and the provision of freight transport. - The challenge for the Region is not only to restore and modernize railway connections, but also not to close down some of them, as it happens in the case of the lack of financing of investments from national or EU funds. - In order to ensure the development of rail transport and make it competitive with road transport, the framework conditions that are in responsibility of national and partly regional administration must be improved. A key challenge is to ensure long-term sustainable rail transport development by leveraging national and UE resources. - The policy measures represent a summary of numerous individual projects that were discussed by the stakeholders. The analysis of investment priorities is effective when it is carried out with



		<p>a smaller group of stakeholders who are interested in a given area. However, the projects / investments themselves should find a place in several political measures. at the local, regional and national level, in order to ensure the support of decision-makers at different levels.</p> <ul style="list-style-type: none"> - Activities for rail transport can be implemented at various levels, however, it is up to the national institutions to ensure financing of infrastructure investments and to implement plans developed together with local and regional stakeholders. Ensuring the sustainable development of railway infrastructure and appropriate prioritization of investments affects the competitiveness of Polish regions and the competitiveness of rail transport.
	Main constraints and challenges	<p>The biggest problem with the implementation of these policy measures will be the financing, The implementation of activities in the field of rail cargo transport are possible with obtaining external funds, both European and national. If funds are not provided, investments will not be realized or will be suspended / partially completed.</p>

Name of the document		D.T3.1.2 Regional capacity building workshops 1 - 2 - 3
	Main stakeholders involved	<p>Workshop 1. 14 participants belonging to: CETC-EGTC, Szczecin and Świnoujście Seaports Authority, Marshal Office of the Westpomeranian Region, University of Szczecin, Maritime University of Szczecin, TOR Consultants Group Ltd. (subcontractor)</p> <p>Workshop 2. 27 participants belonging to: CETC-EGTC and Maritime University of Szczecin.</p> <p>Workshop 3. 23 participants belonging to: CETC-EGTC, TOR Consultants Group Ltd. and University of Szczecin.</p>
Highlights	Main findings	<p>Workshop 1. In the first part of the presentation, the representative of the EGTC, Krzysztof Zarna, presented the aims and results of the completed activities. In the second part of the meeting representatives of the TOR Consultants Group Ltd. - hub of experts that has been developing studies and analyses with the intention of starting a public debate on the changes that should occur in the transport sector - presented a preliminary list of railway investments necessary for implementation in the Westpomeranian Region.</p> <p>Workshop 2. The second Regional Capacity building workshop focused on the broader issue of railway transport development. Poland has huge railway potential (it is the fourth country in Europe in terms of the length of the railway network - just behind Germany, France and Italy). There is a clear need for a new state policy to support intermodal transport. Regions must also support the development of</p>



		<p>intermodal transport at local level through the creation of complementary services, support for companies in the transport and logistics sector, or rail vocational training. It is extremely important to increase capacity and speed on lines important for freight transport, e.g. the Nadodrzanka/ Railway line no. 273. However, the development of rail freight transport on a regional level should not have a negative impact on passenger transport, which often happens because of the use of the same railway lines for freight and passenger transport.</p> <p>Railway investments are not only the domain of large operational Programmes, but also regional ones. Investments co-financed from them are distributed across the country. This is due, among other things, to the fact that since the 1970s the railways have been insufficiently capitalized, which has led to partial degradation of the lines.</p> <p>Workshop 3. During the third Regional Capacity building workshop, the final version of the Roadmap was discussed, with particular emphasis on the sources of financing for individual investments and the actions that can be taken by stakeholders at the regional level.</p> <p>Another issue that arose during the discussion was the document prepared by the Ministry of Infrastructure entitled "Directions for the development of intermodal transport until 2030 with a perspective until 2040". This is a situation in which more lobbying is needed for investments in the Baltic-Adriatic Corridor (Western and Central Poland). However, lobbying activities cannot remain solely on the part of the regions and should involve all stakeholders.</p>
	Main lessons learned	<ul style="list-style-type: none"> - Surprisingly, stakeholder do not list the poor condition of line infrastructure among the reasons for lack of competitiveness of the railway, rather pointing at insufficient density of unloading sidings which would allow for shipping the product to the geographically dispersed market, and the necessity of forming block trains which is not in accordance with the implemented business strategy. It means that to encourage railway transport, there is a need for both projects improving the parameters of railway lines and investments in increasing density of unloading points (including restoration of former sidings) and changes in the operators' transport offer. - The list of infrastructure investments in the rail transport sector include: <ul style="list-style-type: none"> o 64 km of new railway lines o 220 km railway lines requiring electrification o 662 km railway requiring improvement of operational parameters o 4 new stations



		<ul style="list-style-type: none"> ○ 28 loading tracks - The list of operational objectives to be achieved include: <ul style="list-style-type: none"> ○ Enabling (after completion of modernization) driving long trains, ○ Improving throughput on entrances / exits to / from the agglomeration and ports, ○ Splitting the freight trains and local passenger trains, ○ Enabling rail shipments to be carried out by large industrial plants (e.g. Bridgestone, Kluczewo Sugar Factory, Backer OBR, Agro-Pełcz, BORNE FURNITURE, Chemical Works Police).
	Opportunities related to TEN-T network and macroregional strategies	<ul style="list-style-type: none"> - It is important both to make investments on the main north-south rail routes in order to boost trade from Scandinavia (via Baltic-Adriatic Corridor or Via Carpatia Corridor). - A topic of discussion was the revision of the TEN-T regulation, which affects the development of rail and intermodal transport in the regions. Investments indicated in the Roadmap, directly related to two changes introduced to the TEN-T network in the Region. Investments related to the development of rail transport at the Port of Szczecin - Swinoujście and its hinterland will affect the development of the Szczecin-Berlin connection, which was created in 2019, when the North Sea Corridor was extended under the amendment to the Regulation of the European Parliament and of the Council on the Connecting Europe Facility. The second change, even more important for the development of rail and intermodal transport, is the placement of the railroad line called "Nadodrzanaka" (C-E 59) in the extended core network.

Name of the document		D.T3.2.4 Annual Meeting of regional advisory board 2020 - 2021
Highlights	Main stakeholders involved	Participants included stakeholders from CETC-EGTC, Szczecin and Swinoujście Seaports Authority, University of Szczecin, Maritime University of Szczecin
	Main findings	<ul style="list-style-type: none"> - During the first annual meeting, the discussion focused on the objectives of the implementation of the Roadmap and the objectives of the Westpomeranian Region in the area of transport consisting in sustainable development of the transport corridor connecting the Baltic Sea Region with Central and South-Eastern Europe using more environmentally friendly forms of transport. Improving the effectiveness and efficiency of rail freight transport to the port of Szczecin and reducing the negative externalities generated by the transport of the Szczecin port hinterland remain the most important issues.



		<ul style="list-style-type: none"> - Among the reasons for the lack of competitiveness of the railway transport, the members of the advisory board did not mention the poor condition of the line infrastructure. They rather pointed to the insufficient density of unloading sidings to deliver the product to the geographically dispersed market and to the need to form block trains, which does not correspond to the implemented business strategy. This means that in order to increase the popularity of rail transport, it is necessary not only to improve the parameters of railway lines, but also to invest in the density of unloading points and changes in the offer of operators. - During the second annual meeting, the discussion focused on the final roadmap, which was presented to participants. During the meeting, the document was discussed entitled "Directions of Intermodal Transport Development to 2030 with a prospect up to 2040". The document contains a long-term action plan to create optimal conditions for inter-ages integration in the Polish transport system and to increase the use of environmentally friendly transport, especially rail transport. However, this is a very general action plan and not indicating the needs of individual regions, but only subregions / macroregions. - Once again, the members of the Advisory Board stressed the need to promote the project results during large events in Poland to use the opportunity to lobby for the construction of intermodal terminals for rail and inland shipping transport.
	Main lessons learned	<ul style="list-style-type: none"> - According to the participants of the meeting, the transport of cargo by rail has significantly decreased in popularity over the past several years, and despite access to loading facilities, in most cases rail is not competitive with cheaper and faster road transport. Regional research allows concluding that problems with insufficient capacity and inadequate technical standard are most common on the existing railway network. - The development of intermodal transport in the Szczecin-Świnoujście hub is an important part of the region's development. West Pomerania has rich traditions in running business in this specialization and intermodal transport is counted among the smart specializations of the Region. It results from the significant level of development of transport and logistics in the Westpomeranian Region. In connection with the above, the investments indicated in the road map should be looked at not only in terms of transport investments, but also investments in the economic potential of the region.



	Opportunities related to TEN-T network and macroregional strategies	<ul style="list-style-type: none"> - Insufficient capacity and inadequate technical standards also apply to sections in the TEN-T core network of the Baltic - Adriatic corridor, e.g. 01/E59. In the section Świnoujście Prztytór - Świnoujście Port the lack of electric traction on one of the tracks causes high capacity restrictions. This is particularly important for freight transport in the holiday season, when the line is also used by long-distance passenger trains. - Participants mentioned the agreements signed between the Szczecin and Świnoujście Port Authority with the ports of Rijeka (2017) and Trieste (2019), which will influence the development of rail transport between the Baltic and Adriatic Sea Region.
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Name of the document		D.T3.2.5 - Coping with funding needs
Highlights	Main findings	<ul style="list-style-type: none"> - The state of financing, meaning the percentage of the cost already financed, goes from 0% of three of the four actions analyzed, to 10% of one action. - In case of most of investments covered by this study, the entity implementing, supervising and responsible for obtaining financing will be the national infrastructure manager - PKP PLK S.A. - In terms of covering the costs of PKP PLK's investments by external sources in the new EU financial perspective, funding needed are supposed to be allocated by the following options: <ul style="list-style-type: none"> o Fundusze Europejskie na Infrastrukture, Klimat i Środowisko (FEnIKS) o Krajowy Program Odbudowy (KPO) o European Regional Development Fund (ERDF) o Connecting Europe Facility (CEF2) o Program Uzupełniania Lokalnej i Regionalnej Infrastruktury Kolejowej - Kolej+ do 2028 roku - In the scope of the above-mentioned programs, private entities may also apply for co-financing of projects, primarily in the field of intermodal transport under the CEF2 and FEnIKS instruments
	Possible constraints and challenges	<ul style="list-style-type: none"> - Due to the fact that the infrastructure of the Baltic Sea-Adriatic Sea Corridor is part of the TEN-T core network, the financing of projects along the main communication routes will be significantly facilitated. For other projects on lines outside the TEN-T network and of secondary importance, it will be necessary to use alternative sources of financing. - The presented action plan is comprehensive - from the construction of new and modernization of existing railway lines, through the reconstruction of neglected infrastructure, increasing the availability of reloading points, to feasibility studies determining the shape of further



		<p>development activities. The goal is to achieve sufficiently high standards of infrastructure, both in terms of its operational parameters and accessibility for all entities interested in the implementation of rail shipments. A well-developed and generally accessible railway infrastructure in the region will certainly influence the individual decisions of economic entities in the field of shaping their supply chains.</p> <ul style="list-style-type: none"> - Reluctance of PKP PLK to carry out the construction works at proposed scale, mostly driven by the need to maintain the rebuilt infrastructure properly in the future, which is both cost and staff-consuming. - Impeded cooperation between the Region and PKP PLK due to the latter having already established investment priorities until 2030. A biggest hurdle that will be faced during roadmap implementation would be cooperation between the Westpomeranian Region (REIF partner) and PKP PLK S.A., main beneficiary and entity responsible for completion and further maintenance of projects. A divergence of objectives and interests between the two entities is almost certain, therefore a further dialogue aimed at establishing common objectives is necessary. In this sense, the Westpomeranian Region can act as an intermediary between the Infrastructure Manager (PKP PLK) and final senders/recipients of goods carried by rail to ensure mutual understanding of each party's needs.
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Name of the document		D.T3.2.7 - Final Roadmap
Highlights	Objectives in a nutshell	<ul style="list-style-type: none"> - The investment plans presented above, together with measures implemented in the neighbouring regions, will significantly contribute to the enhancement of rail traffic within the two corridors of the TEN-T core network and will attract new senders and recipients of cargo. Apart from the economic effect in the form of increasing the region's competitiveness and attracting new investors, the activities will also have positive externalities related to the increased role of rail transport. - The main investment priorities for implementation of objectives were identified as follows: <ul style="list-style-type: none"> o Construction and reconstruction of railway lines - new lines/connections provided for businesses showing the potential to shift loads from road to rail, new lines aimed at improving the capacity of existing lines or better traffic segregation.



		<ul style="list-style-type: none"> ○ Improvement of lines' operational standards - bringing main lines and selected secondary freight corridors to the D3 standard (axle load 221 kN, permissible train length 600-740m), electrification or construction of a second track on sections with high traffic potential. ○ Local investments - reconstruction and improvement of loading tracks and ramps (the main point of railway infrastructure access for entities without their own sidings), construction of new railway stations (allowing for train crossing and overtaking) to increase the capacity. ○ Feasibility studies - conducting additional, detailed analyses aimed at defining the directions of development of the railway infrastructure in the region. <p>- In the infrastructural dimension, the region's strengths are the seaports acting as elements of multimodal transport networks, good communication with Western and Northern Europe, great potential for locating new enterprises, in particular related to the development of the blue and green economy, as well as good conditions for the development of renewable energy.</p>
	Main actions proposed	<p>A total of sixteen actions have been proposed, namely:</p> <p><u>A. Construction and reconstruction of railway lines</u></p> <p>A.1. Construction of railway link Szczecin Podjuchy Most - Dziewoklicz</p> <p>A.2 Reconstruction of railway line no. 411 (Stargard - Pyrzyce)</p> <p>A.3 Reconstruction of railway line no. 422 (Pyrzyce - Głazów) and 410 (Barnówko - Myślibórz - Głazów)</p> <p>A.4 Reconstruction of railway line no. 410 (Głazów - Barlinek - Pełczyce - Choszczno), alternatively Głazów - Barlinek - Pełczyce - Krzęcin - Rębusz</p> <p>A.5 Construction of the western rail bypass of Szczecin, section Stobno Szczecińskie - Dołuje - Police Chemia with the construction of new linkages Dołuje - Kościno (429/408) and Stobno Szczecińskie - Warzymice (408/409). Full electrification.</p> <p><u>B. Improvement of track parameters</u></p> <p>B.1 Construction of the second track on line 273, section Szczecin Podjuchy - Szczecin Port Centralny SPA, including the widening of the bridge over the Regalica River</p> <p>B.2 Construction of second track on line 428 (Szczecin Podjuchy - Szczecin Zdroje)</p> <p>B.3 Construction of the second track on line 406, section Szczecin Turzyn - Police (investment in progress)</p> <p>B.4 Electrification of line 408 on section Szczecin Gumieńce - PL/DE border and line 409 on section Szczecin Gumieńce - PL/DE border</p>



Main constraints and challenges	<p>B.5 Electrification of railway lines 210 (Runowo Pomorskie - Szczecinek - Chojnice) and 402 (Goleniów - Kołobrzeg)</p> <p>B.6 Improvement of operational parameters to the D3 standard (221 kN, min.600m) on lines: 202, 210, 402, 403, 404, 405, 406, 407, 408, 409, 418, 430, 431</p> <p>B.7 Program for the elimination of local speed limits on lines managed by PKP PLK</p> <p><u>C. Local investments</u></p> <p>C.1 Construction or reconstruction of loading tracks (OIU) within 30 different stations.</p> <p>C.2 Improvement of the operational parameters of the remaining OIU "Loading tracks" in accordance with the class of adjacent lines (D3 - 221 kN)</p> <p>C.3 Construction of new stations on lines 351 and 401 enabling the crossing and overtaking of trains (at least two additional main tracks): Szczecin Zdunowo, Szczecin Załom, Łoźnica, Mokrzyca</p> <p><u>D. Feasibility studies</u></p> <p>D.1. Feasibility study for the extension of the Szczecin Railway Junction</p>
	<ul style="list-style-type: none"> - Potential difficulties relate primarily to the financing of individual projects, intersectoral cooperation (sea ports, road infrastructure managers, PKP PLK) and cooperation between the public and private sector in terms of increasing access to railway infrastructure (i.e. construction and expansion of private sidings). - Due to the fact that the infrastructure of the Baltic Sea-Adriatic Sea Corridor is part of the TEN-T core network, the financing of projects along the main communication routes will be significantly facilitated. For other projects on lines outside the TEN-T network and of secondary importance, it will be necessary to use alternative sources of financing. - As for cross-sector cooperation, it is essential because each construction or reconstruction of wharfs and other reloading infrastructure in ports must be matched by the adequate development of railway terminals along with their convenient location. Currently, it is not uncommon that the transshipment infrastructure in ports is constructed in a way that promotes the use of road transport. - A significant challenge is also the cooperation of the main stakeholders with projects' manager and executor, i.e. PKP PLK S.A. Feasibility studies and construction projects carried out for the needs of the national railway network manager often give absolute priority to passenger transport, ignoring the current and potential flows of goods.



		<ul style="list-style-type: none">- The main beneficiaries of the projects proposed under this study will be private entities - industrial plants, operators of port and railway terminals, freight forwarders and railway carriers. Without their will and cooperation, the investment works may not bring about positive effects in terms of shifting the modal split (need to adjust private sidings to new parameters of modernized lines.	
	Main lessons learned	<ul style="list-style-type: none">- Within the seaports of Szczecin and Świnoujście, two large-scale investments are being carried out, which will have a significant impact on supply chains, and thus on the use of railway and road infrastructure complementary to sea routes. When formulating an action plan to improve the accessibility and quality of railway infrastructure, particular attention should be paid to the wide impact of these investments, also on freight train traffic. The combined effect of both investments is expected to lead to an increase in the number of freight trains running from / to the ports of Szczecin and Świnoujście by 15-25 a day. In view of such a significant increase in transport performance, the existing railway infrastructure may turn out to be insufficient	
	Opportunities related to TEN-T network development and macroregional strategies	<table><tr><td><ul style="list-style-type: none"><input type="checkbox"/> Baltic Adriatic Corridor<input checked="" type="checkbox"/> North-Sea Baltic Corridor<input type="checkbox"/> Mediterranean Corridor<input checked="" type="checkbox"/> Orient/East-Med Corridor<input checked="" type="checkbox"/> Scandinavian-Mediterranean Corridor<input type="checkbox"/> Western Balkans Corridor<input type="checkbox"/> Adriatic-Ionian Region<input type="checkbox"/> Alpine Region<input checked="" type="checkbox"/> Baltic Sea Region<input type="checkbox"/> Danube Region</td><td><ul style="list-style-type: none">- The area of the Baltic-Adriatic corridor has high business development potential. It is home to many companies from the Automotiv industry, companies using metallurgical products, logistics centres of large food concerns, also mines and quarries.- Insufficient capacity and inadequate technical standards also apply to sections in the TEN-T core network of the Baltic - Adriatic corridor, e.g. 01/E59.- Greater deficiencies in compliance with the requirements for the TEN-T network concern the maximum possible speed for freight trains, in the case of the West Pomeranian Voivodeship the problem concerns a large part of the railway line no. 273. The proposed actions will increase the regional accessibility of corridors included in the TEN-T network.</td></tr></table>	<ul style="list-style-type: none"><input type="checkbox"/> Baltic Adriatic Corridor<input checked="" type="checkbox"/> North-Sea Baltic Corridor<input type="checkbox"/> Mediterranean Corridor<input checked="" type="checkbox"/> Orient/East-Med Corridor<input checked="" type="checkbox"/> Scandinavian-Mediterranean Corridor<input type="checkbox"/> Western Balkans Corridor<input type="checkbox"/> Adriatic-Ionian Region<input type="checkbox"/> Alpine Region<input checked="" type="checkbox"/> Baltic Sea Region<input type="checkbox"/> Danube Region
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