



FINAL ROADMAP "NEW RAIL INFRASTRUCTURE/SERVICES 2030" - D.T3.2.7

ITL FOUNDATION (PP8) AND EMILIA-ROMAGNA REGION (PP10)

Work paper

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1. Introduction

This document represents the "Final Roadmap for the launch of new rail infrastructures and services" (D.T3.2.7) drawn up by the ITL Foundation (PP8) and the Emilia-Romagna Region (PP10). The roadmap constitutes the operation plan which illustrates the main actions needed for the future development of the regional intermodal transport system. The preparation phase of the roadmap starts from the main findings of WP.1 and WP.2, where various aspects of regional intermodal system were deepened, as described in the chapter 2.

Almost all the activities carried out within the WP.T1 and WP.T2 and the preparation phase of the roadmap coincided with an extraordinary situation where the social and economic systems of the entire world have been completely overwhelmed by the crisis related to the COVID-19 pandemic.

In the last year the concept of resilient has been revalued as a key-characteristic of any planning instruments. The roadmap of Emilia-Region will be built taking into account the lesson learned from this crisis.

2. Lessons learned from WP.T1 and WP.T2

The findings highlighted from the researches carried out in the WP.T1 and from the pilot action of the WP.T2 activities are deeply affecting the elaboration of the roadmap.

As can be derived from the results of WP.T1 and WP.T2 activities, the Emilia Romagna region has an important and extensive integrated intermodal platform and the main logistic nodes are widespread throughout the territory. The collaboration initiatives between institutional players and public and private operators have been well established since the foundation of ER.I.C. (Emilia-Romagna Intermodal Cluster), whose main aim is to support the intermodal transport sector through collaborative initiatives in strategic areas, namely: education&training and internationalization. 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).





Despite these results, the regional intermodal transport sector does not realise its full potential. This is due to several concomitant factors. The use and potential of intermodal platforms are often limited by suboptimal accessibility, particularly in terms of the quantity and quality of the connections offered, if compared with those one offered in the northern Italy's intermodal platforms. 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. As mentioned before, the freight transport network is extensive but it is still affected by infrastructural bottlenecks that limit its potential, especially in the Ravenna Port, one of the key nodes of the regional logistic platform.

In order to support the increase of rail freight modal share, several regional policies and programmes have been targeted to this goal. The foundation of ER.I.C cluster and the funding of its activities, the establishment of regional laws on incentives for rail freight transport (RL 30/2019, RL 10/2014 and RL 15/2009), the financing of training activities for new professional figures in the logistic ad intermodal system and the establishment of the Simplified Logistic Zone (SLZ) can be mentioned as the main policy measure taken in the last years.

The Emilia-Romagna region had also put in place a collaborative approach for the improvement of infrastructures (i.e. freight railway system of Ravenna Port), through the participation in the complex interinstitutional cooperation processes and agreements. Furthermore, it regulates the management of the regional infrastructure network (FER network) through specific service and program contracts.

Activities that were carried out during the pilot activities (WP.T2) of REIF project have led to these results:

Pilot action #2:

- o A network framework agreement of cluster ER.I.C. (public administrations and entrepreneurs) was approved from the regional government
- o An internal regulation of ER.I.C. cluster was defined to allow more efficiency in the action of the cluster, the internal rules and the power of the representative of the cluster
- A network agreement (contratto di rete) was written to allow closer contacts and coordinated actions on the market only for the entrepreneurs

Pilot action #5 and #8:

- The updating of the regional freight transport model of Emilia-Romagna region, by the implementation of new model capabilities (freight rail transport model) and the use of innovative data (open data related to industrial clusters and Floating Car Data). The upgraded model was tested in order to:
 - estimate the effects of the solution of infrastructural bottlenecks
 - to identify freight traffic volumes related to regional intermodal nodes and their catchment areas that can be attracted to rail

The results achieved in the piloting activities will strengthen and extend 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. Pilot action results are illustrated in the Pilot evaluation reports (Pilot #2 - D.T2.1.6, Pilot #5 - D.T2.2.7, Pilot #8 - D.T2.3.7).

3. Main challenges for the implementation of roadmap

The roadmap for the launch of new rail infrastructures and services for the future development of the intermodal transport regional system of Emilia-Romagna region is focused particularly in the policy action field. As mentioned in the previous chapters and in other deliverables of REIF project, the Region can boast





a remarkable experience in the policy implementation process. Furthermore, policy is a field where the Region has more impact, compared to the other priority areas (i.e. the infrastructure ones).

An issue that the Region has to deal with regards the rigidity of the incentive scheme foreseen by the regional laws on incentives for rail freight transport. 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 to avoid to cut the grants. A resilient incentive scheme had to be developed in order to handle any future shock caused by economic crisis o by simple market changes. This activity started from the analysis of the total cost of freight road and rail transport modes.

The Regional advisory boards are networking activities established at local level with relevant private and public stakeholders involved, in a direct and indirect way, in the regional intermodal freight chain coordinated by ITL and RER, partners that were in charge for the development of REIF's road map.

The involvement of stakeholders and a deeply understanding of their potential roles and positions in the process are fundamental actions to reach the overall goals of planning new rail infrastructures and services for the future development of the intermodal transport.

Working with stakeholder, in the different development phase of road map, ensured that interests, needs and requirements of the different actors were duly taken into account and this helps to legitimise road map and enhance its quality.

The regional advisory board, that discussed and validated the roadmap, is composed by public and private stakeholders. The latter are in competition with each other and the prevalence of the needs of one of them over the others is to be avoided. Thanks to ER.I.C. experience, Emilia-Romagna region can boast a great experience in the management of working groups. The goals pursued by the regional advisory board will be balanced between the needs of the individual components and they will aim to strengthen the overall intermodal platform, through a collaborative approach.

4. Identification of the actions

ACTION/MEASURE	ESTIMATED COSTS	TIME HORIZON	
A. TRANSPORT INFRASTRUC	A. TRANSPORT INFRASTRUCTURE		
A.1 Upgrading of the left shunting track of Ravenna Port	EUR 21.000.000	2025	
A.2 Ugrade of the right shunting track of Ravenna Port	EUR 26.700.000	2025	
A.3 Doubling of railway line between Parma and Vicofertile stations and upgrading of Parma station	EUR 247.000.000	Beyond 2030	
A.4 Upgrade of Reggio Emilia- Sassuolo railway line	EUR 10.000.000 (electrification of railway line)	2025	
A.5 Construction of the new freight railway line between Dinazzano and Marzaglia freight station	To be defined	Beyond 2030	





B. LEGISLATION		
B.1 Regional law on incentive for regional rail transport	EUR 3.000.000	2025
B.2 Establishment of Simplified Logistic Zone (ZLS)	EUR 7.000.000	2029
C. ADMINISTRATION		
C.1 Financing training activities	EUR 20.000	2025
C.2 Financing support activities to ERIC's members	EUR 130.000	2025

5. Detail description of priority actions/measures

Number and name of intervention: A.3 Doubling of railway line between Parma and Vicofertile stations and upgrading of Parma station	
Priority area Indicate the priority area of the intervention	Transport infrastructure
Description of action/measure Describe the action foreseen and the expected results from its implementation	As described in the deliverable D.T1.3.3 "Identification of bottlenecks in infrastructures and service in the Emilia-Romagna region", 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. Specifically, this priority action refers to the doubling of the railway line between Parma-Vicofertile-Osteriazza which includes the station of Fornovo, the resolution of the slope stability issues along the railway line and the upgrading of the existing tracks in the Parma railway station.
Description of the main steps for its implementation List and describe in detail the main steps for the implementation of the action (i.e. planning phase, tender procedures, etc)	The partial funding for the realisation of this priority cost was already foreseen by the 2020 investment plan of the network manager (RFI) and it has received a considerable boost by the adoption of the so-called "Decreto Rilancio" decree. Thanks to these investments, the design phase can be started. A protocol of understading between the Emilia-Romagna Region, Rete Ferroviaria Italiana (RFI) and the Minister of Infrastructures and Sustainable Mobilities (MISM) will be signed shortly.
Stakeholders involved	The main stakeholders involved are Rete Ferroviaria Italiana (RFI) and the Emilia-Romagna Region. RFI is the national





List the stakeholders involved. What is their role in the action? Will they be the direct beneficiaries?	network manager and it manages the Pontremolese railway line. The actions that may be taken by the Emilia-Romagna region (supervisory role) are: request of funding availability; consultation with local authorities and Liguria Region; participation to possibly design working group; verification of phases and timing of the project and coordination of transitional and/or compensatory works.
Timeline Indicate the time horizon for the implementation of the action	The time horizon foreseen for the realisation of this priority action may extend beyond 2030.
Investment cost How much will cost the construction/realization of the future initiative/action/technology?	The total investment cost for the upgrading of the Pontremolese railway line between Parma-Vicofertile-Osteriazza is equal to EUR 247 million.
Sources of financing What are the sources of financing? Private capital, public capital, CEF, etc How much is the share covered by each of them?	National Funds RFI investment plan
Impact of the initiative Describe the expected future economic, social, environmental impacts of this initiative	As described previously, this initiative can foster the growth of the rail freight modal share along the well-stablished relationship between manufacturing sector of Emilia-Romagna (Tiles and Ceramics district in particular) and the ports of Ligurian Sea. Today, all the freight moved from this district and the Tyrrhenian Ports is moved by truck, increasing the environmental pollution and decreasing the safety condition of the road networks.
	Furthermore, the pursuit of this objectives does not represent a disadvantage for the development plan of Ravenna port, because it plays a fundamental road mainly in the importation of dry bulk. Today the freight flows from the Emilia-Romagna enterprises are already mainly exported from the Tyrrhenian Ports.
Compliance with the overall objectives of REIF project Describe the expected contribution of the action/measure to the achievement of REIF project (e.g. connection to TEN-T corridor,)	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 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 "to be upgraded" 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.
Compliance with guidelines of national and regional planning instruments Describe the compliance with the aim of national and regional planning instruments	The current infrastructural status quo of the Pontremolese railway line is identified as a bottleneck in the Integrated Regional Transport Plan and its development is considered as a priority action in order to strengthen the regional logistic platform.





Even in the national planning instruments the upgrading of
Pontremolese and the accessibility to the Tyrrhenian ports are
considered as priority actions. They are included in those
interventions to be evaluated through feasibility studies
(source: Allegato al DEF 2020 - L'Italia resiliente progetta il
future: nuove strategie per trasporti, logistica e
infrastrutture). Minimum requirements for those
infrastructures are: train length of 650 meters and loading
gauge P/C 45.

Priority area Indicate the priority area of the intervention	LEGISLATION
	The aim of the Regional Law "Incentives to the freight rail transport" (L.R. 30/2019) is to support the growth of the rail freight modal share, incentivizing new freight traffic along existing or new relation. These measures will contribute to divert new freight traffic from road to rail transport system, reducing the number of heavy vehicles on the road network. This reduction offers a two-fold benefits: on the one hand the reduction of environmental pollution, on the other the increasing of road safety. The measure is similar to the previous Regional Law 10/2014 and it pursues the objective of rebalance the modal share of freight transport in the Region, promoting rail freight transport.
Description of action/measure Describe the action foreseen and the expected results from its implementation	The earmarked amount of support for rail freight transport by the RL 30/2019 is equal to EUR 1.000.000 per year over three-year period (2020-2021-2022). The rail freight services that are going to be incentivised have to maintain the service for a period of two years following the three-years funding period. The preliminary activities have shown that, due to the current economic crisis related to the COVID-19 pandemic, MTO and logistic operators were unable to meet the traffic forecast projected in the submission of the aid application (in the 2020). In order to avoid to cut the contribution to the beneficiaries, the contribution scheme was modified. Indeed, the budget earmarked for the first year of the financing period (three years) is lower than forecast (€ 395.051 vs € 1.000.000)
	The RL 30/2019 provides that it is possible to foreseen another three-year period of contribution, submitting a prior notification to the European Commission
Description of the main steps for its implementation List and describe in detail the main steps	The main steps for the implementation of this aid measure can be summarised as:
for the implementation of the action (i.e. planning phase, tender procedures, etc)	Notification of an aid scheme in support of rail freight transport to the European Commission





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	As required by the Article 108(3) of the Treaty on the Functioning of the European Union (TFUE), European Commission keeps under constant review all systems of aid existing in each Member States.
	Decision of the European commission about the notification
	If European Commission decided that there is compatible with the internal market pursuant to Article 93 of the TFUE, the aid scheme can be applied
	Promulgation of Regional Law (RL)
	 Approval of funding scheme by the Regional Council of Emilia-Romagna region
	Regional Council makes an economic commitment to support the rail freight transport for the entire period. Every year it has to earmarked the expected amount
	Publication of the Regional Law on the Official Journal of the Emilia-Romagna region
	 Approval of the ranking of the logistics companies and multimodal transport operators that have submitted the grant application
	 Preliminary activities on the annual results achieved by the subsidised companies
	Due to the COVID-19 crisis, as an exception measure, the final ranking was published on the 12th of May 2020 and later on the 29 of October 2020, after an extension of the deadline due to the early months of the pandemic. Furthermore, as said before, the contribution scheme was revised in order to avoid to cut the grants for companies.
Stakeholders involved List the stakeholders involved. What is their role in the action? Will they be the direct beneficiaries?	Logistic companies and multimodal transport operators (MTOs) fall within the categories of direct beneficiaries financed by the Law. The number of supported companies is equal to 11 and the number of new freight rail services performed is 27. Indirect beneficiaries are represented by the rail enterprises that enjoy lower costs.
Timeline Indicate the time horizon for the implementation of the action	The three-year period that is financed by the law will be concluded by the 2023. Financed services have to be maintained for the two following years.
Investment cost How much will cost the construction/realization of the future initiative/action/technology?	The total investment cost foreseen by the law is equal to EUR 3.000.000 (1 million per year)
Sources of financing What are the sources of financing? Private capital, public capital, CEF, etc How much is the share covered by each of them?	Regional funds (bilancio regionale)





Impact of the initiative Describe the expected future economic, social, environmental impacts of this initiative	The expected benefit is a modal shift, namely the removal from the Region's road networks, over a three-year period, of approximately 110,000 28-tonne diesel heavy goods vehicles (HGVs), corresponding to approximately 3,075,000 tonnes of goods over 13,200,000 kilometres. The measure proposed by the law will decrease the level of environmental pollutants and will meet the objectives stated in the Air Integrated Regional Plan (PAIR2020).
Compliance with the overall objectives of REIF project Describe the expected contribution of the action/measure to the achievement of REIF project (e.g. connection to TEN-T corridor,)	The three-year period foreseen by the RL 30/2019 was started in January 2020 and it is going to be concluded by December 2023. Starting from the REIF project activities, Emilia-Romagna region has begun a critical review of the RL 30/2019 and the previous ones (RL 10/2014 and RL 15/2009) in order to apply potential changes to the incentive scheme for a possible new law. The aim is to build an incentive scheme that seems best tailored the needs of logistic companies and meets the demands of the market.
Compliance with guidelines of national and regional planning instruments Describe the compliance with the aim of national and regional planning instruments	From the point-of-view of the regional planning, the support of the freight rail transport is a primary objective of the Integrated Regional Transport Plan (PRIT2025). The RL 30/2019 and the previous ones are in line with similar others valid in the national territory. The so-called "Ferrobonus" is a national law for the promoting of the combined and transhipped freight rail transport. According to the new extension, budget have been devoted by 2026. The beneficiaries are the railway undertakings and the MTOs.

Number and name of intervention: B.2 Establishment of Simplified Logistic Zone (SLZ)	
Priority area Indicate the priority area of the intervention	LEGISLATION
Description of action/measure Describe the action foreseen and the expected results from its implementation	In compliance with the Italian law (Law 205/2017, DPMC n.12 del 25.01.2018), in December 2018 the Emilia-Romagna region decided to set the way forward for the establishment of the Simplified Logistic Zone (SLZ, "Zona Logistica Semplificata") of the region. SLZ is a precise geographical area, even formed by separate areas, which includes at least one port area that meets the characteristics laid down in Regulation (EC) No 1315. Selected areas shall be industrial and logistics site and they may not be adjacent each other but they must have a functional or economic connection with the port area.
	Ravenna port is the core port of Emilia-Romagna region and it plays the key role in the regional SLZ.
	The final aim of SLZ is to improve condition in terms of mobilising new investment in the selected areas to be





deployed by local companies as well as attract additional foreign direct investment (FDI). Investors and local companies that will invest in those areas will be supported by a number of economic incentives and by simplified administrative procedures. The duration of SLZ and of its benefits and incentives is 7 years and may be extended by 7 additional years. The main steps for the establishment of the SLZ of Emilia-Romagna region can summarised as: • Drafting and elaboration of the Strategic Development Plan (SDP) The establishment of SLZ shall be accompanied a strategic development plan that describes: the involved areas, the current and future transport infrastructure system between areas and Ravenna Port, social and economic impacts due to the SLZ establishment, economic incentives and simplified administrative procedures assigned to the investors and report on the consultation stage Phase of consultation: The law provides that the local authorities will be involved in the selection of the areas. During this stage they also should commit to provide local incentives to the SLZ potential investors. Description of the main steps for Approval by regional government bodies its implementation List and describe in detail the main steps The design of ZLS and the Strategic Development Plan have to for the implementation of the action (i.e. planning phase, tender procedures, etc...) be approved by the Regional Council and by the Legislative Assembly of Emilia-Romagna Establishment of Simplified Logistic Zone Once that the documentation will be evaluated by Italian Government. the SLZ is established decree of the President of the Council of Ministers. Establishment of Steering Committee The Steering Committee (SC) of SLZ shall be chaired by a special commissioner of the Italian Government and it is composed by the president of Ravenna Port Authority and by a representative of: Emilia-Romagna region, Presidency of the Council of Ministers, Ministry of Infrastructures and Sustainable Mobility. The role of the SC is to monitor the proper implementation of the SLZ and to monitor its performance according a number of KPIs established in the SPD. In September 2021 the Strategic Development Plan of SLZ was drafted and it is in the approval phase by the Legislative Assembly of Emilia-Romagna region Stakeholders involved Once that the first selection of the areas to be included in the List the stakeholders involved. What is their SLZ, the consultation stage has been started. From October role in the action? Will they be the direct beneficiaries? 2020, more than 30 municipalities and local authorities and





	more than 10 business and trade associations, together with the Ravenna Port Authority, have been involved by the regional officials in order to deepen the understanding of the industrial and logistic areas of the territory to include into the ZLS.
Timeline Indicate the time horizon for the implementation of the action	With regards of the steps described above, the ongoing implementation process is under the approval the Legislative Assembly of Emilia-Romagna. The Regional Council approved it in October 2021. It is foreseen that the SDP will be approved by the national government bodies in the early months of the 2022. The first period of SLZ is foreseen from 2022 to 2029.
Investment cost How much will cost the construction/realization of the future initiative/action/technology?	The investment by Emilia-Romagna region to the implementation of SLZ is estimated at EUR 7.000.000
Sources of financing What are the sources of financing? Private capital, public capital, CEF, etc How much is the share covered by each of them?	Regional funds (bilancio regionale)
	The benefits and the incentives provided from the national, regional and local authorities will support the investments in the industrial and logistic areas of the Simplified Logistic Zone.
Impact of the initiative Describe the expected future economic, social, environmental impacts of this initiative	 The outcomes coming from these investments will results in: an increase in the productivity of the main regional manufacturing industries (agro-food, meachanical engineering, chemicals, housing and construction)
	an increase in jobs in the main regional manufacturing industries
	an increase of good flows moved by Ravenna Port by road and by rail
	an increase of the relationship between Ravenna Port and the regional hinterland manufacturing areas
	The SLZ of Emilia-Romagna region is being designed according two-level priority.
Compliance with the overall objectives of REIF project Describe the expected contribution of the action/measure to the achievement of REIF project (e.g. connection to TEN-T corridor,)	The first one regards the inclusion in the SLZ of Ravenna port areas and of the main regional intermodal nodes (see D.T1.1.5). The involvement of these nodes, together with the regional railway network, meet the overall objectives of REIF projects. Indeed, the potential investments in these nodes will upgrade the regional intermodal networks, removing infrastructural bottlenecks and supporting the increase of the freight rail modal share. Furthermore, the Port of Ravenna is a Core Port of the TEN-T network and is located along the MED and the BAC TEN-T corridor.
	The second level of priority regards the inclusion of industrial areas that meet the functional or economic connection with the Ravenna Port. One of the criteria set out in the Strategic Development Plan regards the inclusion of areas with a high





	level of accessibility to the regional railway network. Even each this selection criterion meets the REIF project objectives.
Compliance with guidelines of national and regional planning instruments Describe the compliance with the aim of national and regional planning instruments	The regional integrated transport plan (PRIT2025) supports the establishment of SLZ, as a means of increasing the role of the Ravenna Port along the national and international logistic networks. Furthermore, as mentioned before, one of the aims of SLZ is to increase the goods moved by rail from Ravenna Port that is one of the objectives of regional planning. The establishment of SLZ reflects also the objectives of the Regional Law 14/14 "Promotion of the investment in Emilia-Romagna region", which means pushing innovation, sustainability and internationalisation of the regional economic system. The main object of the Law is to promote measures and actions able to make more attractive and competitive the economic system of the Emilia-Romagna Region.

6. Conclusion

The final aim of the roadmap is to support the development of the regional intermodal logistic platform, in line with the policy objectives stated in the Integrated Transport Regional Plan. In accordance to the goals of REIF project, the roadmap is based mainly on policy measures that the Emilia-Romagna region, along with the other stakeholder involved in the Regional Advisory Board, will implement in order to strengthen the freight rail transport.

Three main action have been deeply analysed: the doubling of railway line between Parma and Vicofertile stations and upgrading of Parma station, the regional law on incentive for regional rail transport and the establishment of Simplified Logistic Zone (ZLS). Starting from different point of views, all these actions 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%.

Keywords:

Resilience, development regional intermodal platform, policy measures