Interreg CENTRAL EUROPE

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Rail4Regions

Peer Review process for Rail4Regions Final report

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Contents

1. Introduction

This report provides a detailed overview of the peer-review process carried out within the Interreg Central Europe Rail4Regions project.

Peer review refers to the assessment of work or performance by experts in the same field, with the purpose of ensuring or improving the quality of the outputs. Within this project activity, partners were divided into teams, and each team was assigned to evaluate two Action Plans. In total, eight Action Plans were developed and peer-reviewed prior to their finalisation.

The first section of the report presents a concise overview of the Rail4Regions project, including its activities, methodologies, and expected impacts. This is followed by a general introduction to the peer-review concept. The methodology applied in conducting the peer-review process is described clearly and systematically.

The main section of the report contains short summaries of each Action Plan, followed by brief descriptions of the corresponding peer-review assessments. The report concludes with a concise summary of the overall process.

2. Introduction - Rail4Regions project

To achieve substantial reductions in carbon emissions, a greater share of freight needed to be transported by rail. However, most goods in Central Europe were still moved by road due to gaps in rail infrastructure that limited the competitiveness of rail freight. The Rail4Regions project supported transport planners in integrating regional rail lines into the wider European freight network. Project partners developed solutions to optimise regional rail lines and freight access points and prepared Action Plans to facilitate the integration of these solutions into regional development strategies.

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Under the leadership of the Thuringian Ministry of Infrastructure and Agriculture, an 11-member project consortium - comprising partners from Germany, Poland, the Czech Republic, Slovakia, Slovenia, Croatia, and Italy - was established to successfully participate in the Interreg Central Europe Programme Directorate's call for proposals on the development of the Central European freight transport network. This enabled the consortium to launch project implementation on 1 February 2023.

The three-year project focused on enhancing the accessibility of major transport corridors, supporting regional development, and promoting green mobility in rural and peripheral areas.

To reduce CO_2 emissions, a larger share of freight needed to be shifted to rail transport. However, most goods in Central Europe continued to be moved by road, primarily due to shortcomings in rail infrastructure that undermined the competitiveness of rail transport. The Rail4Regions project assisted transport planners in integrating regional railway lines into European freight transport networks. Project partners developed solutions for optimising regional rail lines and junctions and prepared Action Plans aimed at encouraging the adoption of these solutions within regional development programmes.

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At the time, the distance to the nearest rail freight terminals was too great for many companies, resulting in a considerable volume of goods, otherwise well suited for rail transport, being shipped by road. For this reason, the Rail4Regions partners worked together over the three years of cooperation to develop solutions supporting transport and spatial planners in integrating regional rail routes into freight transport systems. Improving access to rail freight and enhancing its economic viability contributed to the achievement of the European Green Deal objectives in the transport sector.

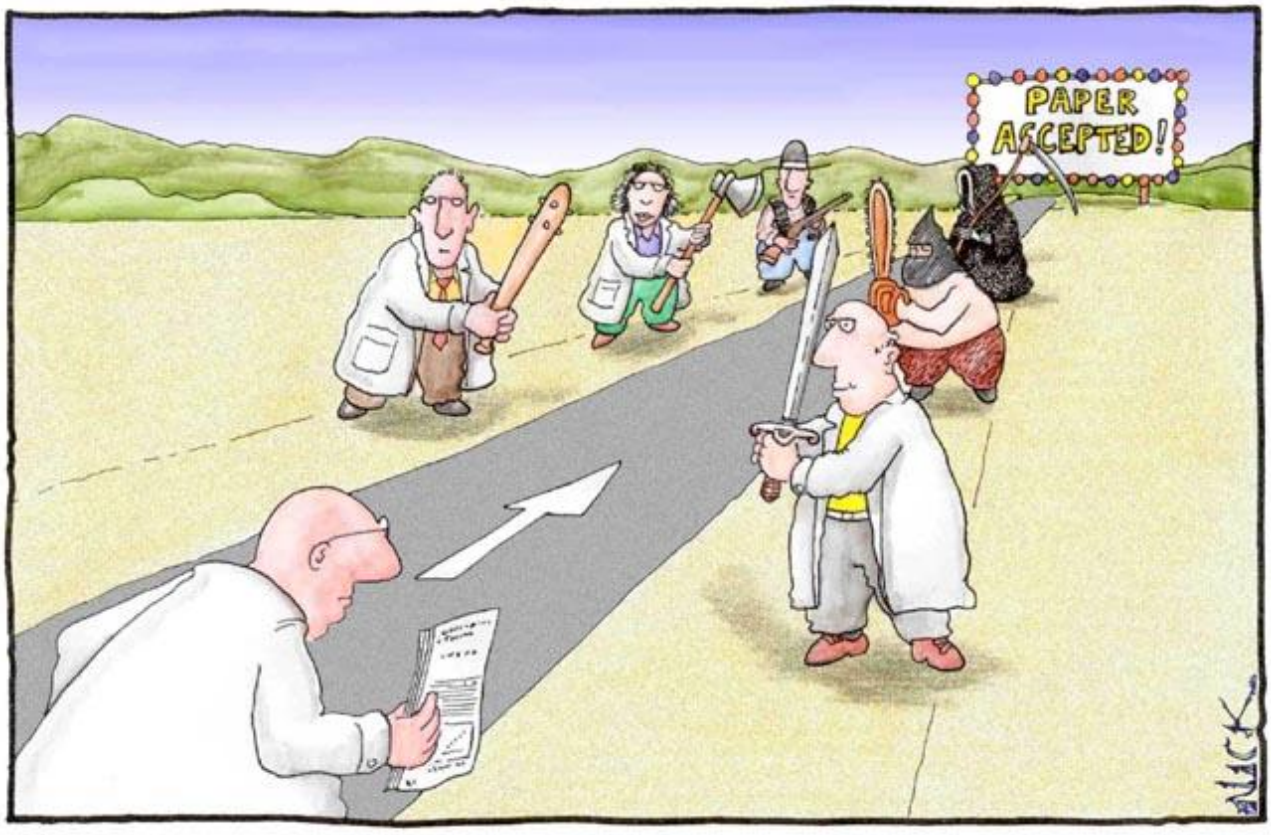
While earlier analyses had provided sufficient information on the general state of rail freight and the bottlenecks hindering a substantial modal shift to rail, little was known about individual cases and, consequently, about how spatial developers and transport planners could intervene at the local and regional levels. The objective of the first project action was therefore to collect micro-level cases (isolated industrial sites) using common methodological approaches. These cases were jointly processed and analysed to produce the White Paper on the accessibility of freight transport in rural areas.

The next project phase focused on developing innovative solutions aimed at increasing the capacity of regional railway infrastructure and loading points. The goal was to raise awareness among transport and spatial planning authorities, public institutions, and infrastructure owners and operators regarding measures that could strengthen rail freight transport in Central Europe. Within four parallel transnational working groups, the topics addressed included the accessibility of loading points, the issue of branch lines, challenges related to industrial tracks, and the maintenance of single-wagonload transport. For the latter topic, our company assumed an important leadership role: under the coordination of Rail Cargo Hungaria, state support systems for single-wagonload transport, as well as other approaches for promoting rail freight, were presented—among other formats through a short film contribution.

The solutions developed by the working groups were presented to stakeholders during the third project phase to enable the design and implementation of pilot actions based on the jointly developed outputs.

3. Peer review in general

Peer review refers to the assessment of work or performance by individuals within the same field, with the objective of maintaining or improving its quality. Although the term peer is often defined as a person of equal standing, within the context of peer review it is used more broadly to denote professionals in the same field who possess an equivalent or higher level of expertise.



Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

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It was based on the principle that a larger and more diverse group of reviewers was generally better equipped to identify weaknesses and errors in a work or performance and to provide a more impartial evaluation than the individual or team responsible for producing it.

Peer review leveraged the independence, and in some cases the anonymity, of reviewers to discourage cronyism (i.e., favouritism toward relatives or friends) and to ensure an unbiased assessment. Reviewers are typically not selected from among the creator's close colleagues, relatives, or friends, and they are required to disclose any potential conflicts of interest.

Peer review supported quality assurance and improvement both directly, by identifying weaknesses and errors in specific works or performances, and indirectly, by informing decisions related to rewards and sanctions that incentivised excellence. These incentives are linked to prestige, publication opportunities, research funding, employment, compensation, promotion, tenure, and disciplinary procedures.

Peer review wa widely used across numerous professional fields, including academic and scientific research, medicine, law, accounting, and software development. Even trial by jury could be considered a form of peer review. In some sectors, particularly law and medicine, it was mandated by legislation, while in others it was required by tradition or administrative regulations, such as in academia. In certain fields, such as software development, peer review emerged naturally without formal structures or requirements.

4. Peer Review Process for Action Plans for Rail4Regions

The peer-review process is a structured and collaborative evaluation method through which project partners assess each other's outputs, in this case, the Action Plans developed under the Interreg Central Europe Rail4Regions project. This approach is grounded in mutual learning, transparency, and continuous improvement, and is widely applied across Interreg initiatives to ensure that all outputs meet high standards of quality, relevance, and transferability.

Within Rail4Regions, the Action Plans constitute key deliverables that define concrete measures and strategies aimed at enhancing the integration of regional rail transport into multimodal mobility systems. Developed on the basis of territorial needs and stakeholder engagement, these plans are intended to generate long-term benefits for the participating regions. Given their strategic significance, it is essential that each Action Plan undergo critical reflection and objective feedback, precisely the purpose of the peer-review process.

4.1. Objectives of the Peer Review

The main objectives of the peer-review process in Rail4Regions are:

- **Quality assurance**: To ensure that the Action Plans are comprehensive, realistic, and aligned with the overall project objectives and territorial contexts.
- **Knowledge exchange**: To foster cross-border learning through the sharing of experiences, challenges, and good practices among partners from different countries and institutional settings.
- **Enhancing impact**: To strengthen the robustness and sustainability of the proposed measures by integrating external perspectives and recommendations.
- **Capacity building**: To reinforce partners' skills in planning, monitoring, and policy development through mutual evaluation and discussion.
- **Learning from research**: To capitalise on the project's extensive research activities, good practices, and collected data.
- **Involving key actors**: To actively engage decision-makers and guide them toward effectively capitalising on improvements in rail transport.
- **Local relevance**: To develop high-quality, targeted measures that clearly address bottlenecks and promote improvements within the local communities and regions involved.
- **Transnational cooperation**: To strengthen collaboration among partners and institutions at a transnational level, ensuring continuity that extends beyond the project's lifetime

4.2. How the Peer Review Is Conducted

Each Action Plan is reviewed by a pair of partner organisations from different countries and institutional backgrounds, ensuring objectivity and a diversity of perspectives. The pairing was intentionally designed to maintain geographical and functional distance, enabling each reviewer to provide an external and impartial viewpoint.

Reviewers use a standardised evaluation form that combines quantitative scoring (on a scale from 1 to 10) with qualitative feedback across several categories, including relevance, feasibility, innovation, stakeholder involvement, and sustainability. The reviewed partner receives constructive input and is able to refine their Action Plan prior to finalisation.

In conclusion, the peer-review process is a vital component of Rail4Regions, contributing to increased transparency, mutual trust, and stronger project outcomes. It ensures that all Action Plans are not only tailored to local needs but also demonstrate clear potential for transferability and replication across Central Europe.

4.3. Training and guidance

University North was responsible for delivering online training sessions designed to prepare all teams to draft texts required for completing the review form. These trainings, together with the present document, supported partners and participants in navigating the Action Plans efficiently and accurately. They strengthened the participants' ability to focus on key details and on the essential elements that a potentially successful Action Plan should contain.

University North also served as the main contact point for all partners and peer-review participants regarding questions, comments, uncertainties, and inconsistencies. This role helped prevent bias and ensured that the peer-review process remained a mechanism for improving quality and fostering cooperation. In addition, it supported the lead partner in mitigating potential conflicts and encouraged partnership, teamwork, and synergy.

University North conducted two online training sessions: the first prepared partners to initiate the process, while the second supported them in finalising it.

The first training session was held in July 2025, and the second in September 2025. The peer-review process was completed by mid-November 2025.

5. Peer-review Teams and providing feedback

The table below presents the four teams and their respective responsibilities, indicating which Action Plans each team was assigned to evaluate.

Team	Team Members	Action Plans that must be Peer-reviewd
Team 1	1. Małopolska RDA 2. Institute of Traffic and Transport Ljubljana 3. University North (UNIN)	1. Thuringia (Germany) 2. Novara (Italy)
Team 2	4. Thuringian Ministry for the Interior, Internal Affairs and Spatial Planning 5. T Bridge 6. Province of Novara	3. Northern Croatia (Croatia) 4. Slovakia
Team 3	7. KORDIS 8. Varaždin County 9. University of Applied Sciences Erfurt	5. Małopolska (Poland) 6. Hungary
Team 4	10. Rail Cargo Hungaria 11. University of Žilina 12. Steiermärkische Landesbahnen	7. Southern Moravia (Czech Republic) 8. Slovenia

Each team received two Action Plans according to the allocation table. Every team was required to prepare two reports, with each report evaluating one Action Plan.

The reports were then sent to the partner or partners responsible for developing the respective Action Plan. The implementation of the recommended improvements was supervised by University North together with the Lead Partner.

6. Action plan Thuringia peer-review

This section of the report provides a brief summary of the Thuringia Action Plan, along with the peer-review report produced during the process. The peer-review was carried out by three partners: Małopolska RDA (MARR) from Poland, the Institute of Traffic and Transport Ljubljana from Slovenia, and University North from Croatia.

6.1. Brief summary of the Thuringia Rail4Regions action plan

The Thuringia Action Plan, titled D 3.2.3 ACTION PLAN Thuringia, was prepared by the Thuringian Ministry of the Interior, Internal Affairs and Spatial Planning (TMIKL) from Thuringia, Germany. TMIKL serves as the Lead Partner of the Interreg CE Rail4Regions project.

Thuringia, a federal state in Germany, aims to promote sustainable spatial and transport planning, with a particular focus on strengthening rail freight connections, revitalising branch lines, and ensuring equal accessibility across its polycentric settlement structure.

One of the key challenges highlighted in the plan concerns coordination and communication among public and private actors and stakeholders in the freight transport sector. Financing infrastructure projects also poses difficulties. Conflicting interests among economic, environmental, and local stakeholders further complicate efforts to improve the freight and rail transport sector. These challenges create obstacles to achieving climate targets and implementing new mobility concepts within the rail transport system. In addition, certain traditional structures and practices within the rail sector remain difficult to overcome and continue to hinder modernisation.

The main target groups addressed in the plan include public institutions, private companies, and sector-related associations involved in the freight transport market. Key public stakeholders are the Thuringian Ministry for Digitalisation and Infrastructure (TMDI), the Thuringian State Office for Construction and Transport (TLBV), as well as regional and municipal councils. Primary private-sector stakeholders include Erfurter Bahn, Raildoxx, Starkenberger Güterlogistik, Werra Eisenbahnverkehrsgesellschaft, among others. Relevant associations include the Verband Deutscher Verkehrsunternehmen (VDV Thuringia) and the Mobilitätsnetzwerk Thüringen (MoNeT). The latter deserves special mention, as it initiated coordination, knowledge transfer, and the evaluation of rail infrastructure measures through dialogue between public authorities, industry representatives, and research partners. MoNeT was established in 2024.

The main solutions addressed in this Action Plan are:

- Online Railhub Finder,
- Reactivation of Branch and Feeder Lines (Ohratalbahn Pilot – Ohratal local railway pilot),
- Industrial Sidings Decision Tool,
- Support for Single-Wagon Load (SWL) Transport.

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The KPIs established to monitor the performance of the actions include: the number of RailHub users, the number of operational loading points, and the number of trains operating on abandoned and reactivated railway lines. The expected impacts of the Action Plan are as follows:

- reduced CO_2 emissions through a modal shift from road to rail,
- improved connectivity within the region and in rural areas,
- enhanced decision-making for spatial planning,
- investments aligned with strengthened local railway connectivity,
- increased attractiveness of rail freight and combined transport.

6.2. Peer-review report on Thuringia Action plan

The Thuringia Action Plan is a well-prepared document that, according to the assigned peer-review team, required no major improvements.

The Action Plan is aligned with the State Development Program 2025 (LEP 2025) of the State of Thuringia and clearly contributes to its objectives.

The Action Plan addressed most key stakeholders, omitting only national spatial planners, NGOs, and the general public. Its structure was logical and coherent, representing one of its strongest qualities.

The peer-review report confirmed that the key measures proposed for implementation were well defined and that the plan was fully aligned with the main goals, outputs, and findings of the Rail4Regions project.

One of the main observations concerned the lack of proposed financing mechanisms for the implementation of actions. The peer-review team suggested that the authors include at least indicative estimates regarding potential implementation costs.

All major risks and challenges were thoroughly analysed and well described. A few technical errors were also noted and should be corrected.

Overall, the document is expected to be easily improved and to serve as a valuable addition to European and regional strategic frameworks.

7. Action plan Region of Novara peer-review

This section of the report provides a brief summary of the Novara Action Plan, along with the peer-review report prepared during the process. The peer review was carried out by the same three partners as in the previous case: Małopolska RDA (MARR) from Poland, the Institute of Traffic and Transport Ljubljana from Slovenia, and University North from Croatia.

7.1. Brief summary of the Novara Rail4Regions action plan

The Action Plan for Novara was developed by the Province of Novara in the Piedmont Region of Italy. The full title of the document was Regional Action Plan. The geographical scope of the plan covers the city of Novara and its surrounding industrial areas within the Piedmont region.

From a regional perspective, the plan identifies that transport and spatial planning in Piedmont are coordinated at the regional level through the Regional Transport Plan (focused on passenger mobility) and the Regional Logistics Plan (focused on freight transport). These are implemented locally through Sustainable Urban Mobility Plans (PUMS).

Novara, strategically positioned between Milan and Turin, serves as a major logistics hub at the intersection of the Rhine–Alpine and Mediterranean TEN-T Corridors. Regional objectives include strengthening freight competitiveness, reducing road congestion, and lowering environmental impacts by shifting freight transport from road to rail.

The plan addressed key stakeholders across three categories: public institutions, private sector actors, and associations or coordinating bodies. Primary public stakeholders include the Piedmont Region, the Province of Novara, Rete Ferroviaria Italiana (RFI – the national state-owned rail infrastructure manager), and local municipalities. Key private stakeholders include Intermodaltrasporti, CargoBeamer, Radici Group, Marazzato Group, Confartigianato Imprese Piemonte Orientale, and the Chamber of Commerce Monte Rosa Laghi Alto Piemonte.

In terms of coordination bodies, the Cabina di regia steering committee (Piedmont–Liguria–Lombardy) was also identified as a significant stakeholder.

The Action Plan highlighted several main challenges:

- complex governance across regional and local levels,
- limited awareness among shippers about available rail freight options nearby,
- bottlenecks and conflicts between passenger and freight traffic within the Novara rail node, leading to congestion and delays,
- the need for more efficient access to industrial areas and intermodal terminals.

The key solutions proposed in the Action Plan are as follows:

1. Loading Points – use of the RailHub Finder

   This GIS-based, open-access tool is designed to support a modal shift from road to rail by enabling planners and logistics operators to visualise and make use of existing and future loading point opportunities. The action is already aligned with Piedmont's Regional Logistics Plan, which promotes the development of freight villages and the shift from road to rail.

2. Reactivation of Branch and Feeder Lines

   The plan focuses on the reactivation of the Novara–Agognate–Biella and Cuneo–Saluzzo–Savigliano railway lines. These lines are expected to be modernised through improved signalling systems, electrification, and upgrades to achieve the appropriate axle load (D4 category, 22.5 tonnes per axle). This will enhance access for local industries and reduce reliance on road transport.

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The plan foresees regular online and in-person meetings with public authorities, RFI, the Chamber of Commerce, industry groups, and operators to ensure that all stakeholders remain actively engaged in the modernisation and modal-shift processes.

The actions proposed in the plan are:

1. Support for Communication and Uptake of the RailHub Finder (2026–2027)

   The RailHub Finder solution is to be promoted to stakeholders through logistics events, conferences, stakeholder training sessions, and similar outreach activities. This low-cost dissemination measure is intended to enhance the visibility of existing and potential new logistics and intermodal services in the region.

2. Reorganisation of the Novara Railway Hub

   The measures under this action include: establishing a new northern access (Vignale–Boschetto link) to bypass urban crossings, extending station tracks to 750 metres (TEN-T standard), electrifying the Novara–Agognate feeder line (scheduled for completion in 2026), and discussing and implementing an additional bypass connection for direct southbound freight traffic.

The completion of both actions requires an estimated investment of around EUR 200 million. The funding is expected to come from national programmes and RFI modernisation schemes and contracts.

The Plan defined the following key indicators: the number of RailHub Finder users, the number of operational freight terminals with an active rail connection, increased freight volumes transported predominantly by rail, reductions in CO_2 emissions related to transport activities, and a lower number of road accidents resulting from a significant modal shift towards rail.

The main expected impacts of the plan are:

- increased rail capacity and operational reliability,
- enhanced intermodality within the Po Valley logistics network,
- improved urban quality of life through the diversion of freight traffic away from residential areas,
- contribution to regional decarbonisation and competitiveness objectives.

7.2. Peer-review report on Novara Action plan

The Novara Action Plan is a well-prepared document that, according to the assigned peer-review team, required no major improvements.

The plan addressed most of the necessary target groups, covering the widest range of stakeholders.

The Action Plan is rooted in two key strategic documents for the Piedmont Region, the Regional Transport Plan and the Regional Logistics Plan, which ensures its strong relevance for practical implementation. Furthermore, the plan was assessed as fully aligned with the goals and outputs of the Rail4Regions project.

The only uncertainty related to the plan and its implementation concerned the financing of Action 2, due to unknown funding sources that RFI is expected to allocate for the modernisation of the Novara hub. This was also identified as the sole risk (financing of Action 2). Nevertheless, the overall risk analysis and mitigation measures were well developed and clearly presented.

The only recommendation for improving the plan was to propose an alternative financing option for Action 2.

8. Action plan Northern Croatia peer-review

This section of the report provides a brief summary of the Northern Croatia Action Plan, along with the peer-review report developed during the process. The peer review was carried out by three partners: the Thuringian Ministry of the Interior, Internal Affairs and Spatial Planning (TMIKL) from Germany, the Province of Novara from Italy, and T Bridge from Italy.

8.1. Brief summary of the Northern Croatia Rail4Regions action plan

The Northern Croatia Action Plan was prepared by Varaždin County in Croatia. Its full title was D 3.2.3 Regional Action Plan for Northern Croatia. The geographical scope of the plan covers the northern Croatian counties, primarily Varaždin County and Koprivnica-Križevci County.

From a regional perspective, Northern Croatia currently lacks an integrated transport and spatial planning framework for freight and intermodal transport. Existing strategies are predominantly focused on passenger mobility, while freight logistics remains insufficiently addressed. Key reference documents include the Croatian Transport Development Strategy (2017-2030) and various county development plans, yet no regional-level multimodal policy exists. Spatial plans often hinder, rather than support, the development of intermodal infrastructure, and institutional fragmentation further complicates coordination. The Action Plan identifies several key actors and stakeholders: Varaždin County, Koprivnica-Križevci County, cities across the region (Varaždin, Koprivnica, Križevci, Ludbreg, Ivanec, etc.) and their spatial planning departments, the Ministry of Maritime Affairs, Transport and Infrastructure, HŽ Infrastruktura (the national rail infrastructure manager), rail and road freight transport companies, University North, and local development agencies such as JURA (Varaždin County) and PORA (Koprivnica-Križevci County).

The main challenges highlighted in the plan include: the absence of a coordinated regional freight transport strategy, insufficient railway and transshipment infrastructure, limited cooperation between ministries, infrastructure managers and local authorities, spatial and legal barriers that delay investment approvals, and weak administrative and financial capacities for complex multimodal projects. The Action Plan proposes three key solutions:

1. Loading Points: Use of the RailHub Finder WebGIS tool to map and visualise loading sites, industrial zones, and multimodal facilities.
2. Industrial Sidings: Development of decision-making and financing tools for new or revitalised sidings in industrial areas.
3. Single Wagon Loads (SWL): Support through stakeholder coordination, regulatory measures, and targeted subsidies.

All proposed solutions are expected to contribute to the objectives of the EU Green Deal and the TEN-T network by promoting a modal shift, reducing emissions, and enhancing logistics competitiveness in the Drava basin region.

Stakeholder engagement was also foreseen, with consultations carried out through an online survey, thematic workshops, and feedback sessions involving municipalities, infrastructure managers, logistics companies, and relevant ministries.

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The Plan proposes four key actions:

1. Action 1 – Integration of Multimodal Points via the RailHub Finder (2026–2027)

   Mapping and incorporating multimodal transshipment points into spatial plans using the RailHub Finder. This is a low-cost, high-impact digital measure that promotes transparency and encourages greater use of rail transport.

2. Action 2 – Construction of Industrial Sidings (2026–2028)

   Development of new industrial sidings serving economic zones (e.g., Ludbreg, Križevci, and the Varaždin gravel extraction sites). This action supports regional industry and enables direct rail access.

3. Action 3 – Multimodal Container Terminals (2026–2029)

   Terminals are planned in Varaždin (Brezje zone) and Koprivnica (Danica zone), co-financed through public–private partnerships. This action establishes new loading points and supports interregional trade.

4. Action 4 – Advisory Board for Smart & Green Logistics (2026–2050)

   A permanent regional platform led by University North and the counties to coordinate policy development, education, and advocacy for rail and TEN-T connections. This action ensures continuity, knowledge transfer, and strengthened policy advocacy.

The plan also defines monitoring activities and KPIs. The expected outcomes of the actions include:

- +15–20% increase in rail freight volumes by 2029,
- 3 or more new or revitalised multimodal points,
- 2 new sidings constructed,
- 5–8% modal shift to rail,
- 10–15% CO_2 reduction,
- active use of the RailHub Finder (more than 20 local users)

The anticipated broader impacts include: higher transport efficiency, new multimodal hubs, reduced road congestion, lower emissions and improved sustainability, strengthened industrial competitiveness, new jobs in the logistics sector, and enhanced coordination between local, regional, and national authorities.

8.2. Peer-review report on Northern Croatia plan

The Northern Croatia Action Plan is a solid document with realistic and achievable targets. All proposed actions are feasible. However, the peer-review report identified several aspects where improvements are recommended. Most key stakeholders are adequately addressed, with the exception of NGOs and the general public.

The Plan is well aligned with major strategic frameworks at both EU and national levels. It contributes to the objectives of the Transport Development Strategy of the Republic of Croatia 2017–2030, regional development strategies, the European Green Deal, the TEN-T Regulation, Integrated Territorial Investments (ITI), and EU Cohesion Policy instruments, as well as funding mechanisms such as the Connecting Europe Facility (CEF) and the European Regional Development Fund (ERDF).

The report also highlights that the Republic of Croatia lacks a unified transport and spatial planning policy framework that ensures coordinated implementation across all levels of government, from the national ministry to regional and local authorities. Regional-level transport and spatial planning policies are still missing.

The Plan addresses several critical bottlenecks, including the absence of multimodal terminals, lack of SWL traffic, the need for local sidings and intermodal terminals, and the insufficient integration of rail freight and intermodal logistics into spatial planning. The Plan is fully aligned with the Rail4Regions solutions and findings.

The report notes that the Plan lacks clear financial components to support the proposed actions.

A central strength of the Plan lies in its structured and inclusive approach, which actively involves relevant decision-makers and institutional actors to ensure effective implementation. Recognising the current absence of a unified regional policy framework, the Plan emphasises the need for coordinated action across all levels of governance. Financial feasibility is a core element, including clear suggestions for potential funding sources and measurable economic benefits. Each proposed measure contains performance indicators to monitor both direct and indirect financial impacts.

The Action Plan is designed to be replicable in other regions, particularly in Central Europe, providing a transferable model for addressing similar challenges. It also promotes long-term partnerships and cross-border cooperation, ensuring continued institutional collaboration beyond the conclusion of the R4R project.

However, the report identifies several weaknesses of the Action Plan, largely stemming from the fragmented policy environment, procedural and planning barriers, and risks related to capacity and investment.

Accordingly, the report recommends the following improvements to the draft Plan, starting with the need to articulate the overarching purpose of the Action Plan. The key recommendations focus on reinforcing the structural and procedural foundations required for successful implementation, especially given Croatia's acknowledged lack of a unified transport and spatial planning framework:

- Mandate Strategic Policy Development,
- Synchronise Planning and Infrastructure Timelines,
- Address Administrative Capacity,
- Formalise Stakeholder Commitment.

A revision is also recommended regarding the timeline for Action 4. Rail freight demand should be clearly assessed before implementation, this could be framed as anticipating changes in rail freight demand.

9. Action plan Slovakia peer-review

This section of the report provides a brief summary of the Northern Croatia Action Plan, along with the peer-review report developed during the process. The peer review was carried out by the same three partners as in the previous case: the Thuringian Ministry of the Interior, Internal Affairs and Spatial Planning (TMIKL) from Germany, the Province of Novara from Italy, and T Bridge from Italy.

9.1. Brief summary of the Slovakia Rail4Regions action plan

The Action Plan for Slovakia was prepared by Žilinská univerzita v Žiline (University of Žilina – UNIZA). The document was titled Common Action Plan, and its geographical scope covers the entire territory of Slovakia, with particular emphasis on the Žilina Self-Governing Region.

With regard to the regional spatial planning context, the plan notes that spatial planning in Slovakia is governed by the Spatial Planning Act (No. 200/2022) and related decrees. The Act establishes a hierarchical planning system, from the national to the municipal level, and aims to promote sustainable territorial and transport development. Rail freight transport is overseen by the Ministry of Transport and the national infrastructure manager, Železnice Slovenskej republiky (ŽSR).

A key point highlighted at the beginning of the plan is that Slovakia's freight sector is currently characterised by a strong dominance of road transport, ageing rail infrastructure, and limited coordination between spatial and transport planning. The main actors and stakeholders were grouped into four categories: public authorities, private-sector entities, academic and research institutions, and associations.

Public authorities include the Ministry of Transport, the Transport Authority, ŽSR (infrastructure manager), Železničná spoločnosť Cargo Slovakia (national freight carrier), the Žilina Self-Governing Region, and municipalities.

Identified private-sector stakeholders include LTE Slovakia, Railtrans International, TIP Žilina (intermodal terminal), and other freight operators. Key academic stakeholders are UNIZA and the Transport Research Institute. The principal association is the Association of Railway Operators of Slovakia, representing around 90% of all market actors.

The plan identifies the following key challenges:

- the low modal share of rail freight and the declining competitiveness of rail freight operators,
- insufficient infrastructure for intermodal transport and Single Wagon Load (SWL) services,
- limited availability of transport data and weak integration between planning and operational processes,

- the absence of regular assessments of regional railway lines,
- fragmented spatial planning responsibilities and low utilisation of branch lines.

The plan focuses on three adopted solutions:

1. Support for Single Wagon Load (SWL), including digital automatic coupling, targeted subsidies where required, and coordinated policy-making,
2. Digitalisation of loading points and industrial sidings, involving the development of an open-data, publicly accessible database,
3. Periodic re-evaluation of regional railways, introducing a structured 10-year review of the economic and spatial relevance of all regional railway lines.

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All measures are aligned with the Strategic Transport Development Plan of Slovakia 2030 (KURS), the EU Green Deal, and TEN-T priorities. Throughout the preparation of the Plan, UNIZA coordinated extensive consultations through conferences, workshops, and bilateral meetings. Key stakeholders involved included the Ministry of Transport, ŽSR, Cargo Slovakia, the Association of Railway Operators, and regional authorities. Their feedback shaped the feasibility and direction of all three proposed actions, particularly the national-level implementation of SWL support.

The Plan proposed the following actions:

1. Action 1 – Support to SWL Services (2024–2025)
    - Establish a state support system for SWL operations (analysis, design, funding mechanism).
    - Implemented by the Ministry of Transport with UNIZA and ŽSR.
    - Publicly funded; expected to stabilise rail freight market share and reduce road externalities.
2. Action 2 – Digitalisation of Sidings and Loading Points (2025–2026)
    - Develop a publicly accessible database of sidings and loading points integrated with ŽSR's online network map.
    - Enhances transparency and investment attractiveness.
    - Requires minor legislative updates to balance private data protection with openness.
3. Action 3 – Periodic Re-evaluation of Regional Lines (from 2026, recurring every 10 years)
    - Develop a national methodology for assessing the socio-economic relevance of regional railway lines.
    - Implemented by ŽSR and regional planning authorities.
    - Low-cost, but requires new planning competencies and cross-level cooperation.

Monitoring of the Plan was defined through several KPIs, including: Single Wagon Load volumes (in tonne-kilometres per year), the number of users of the public digital database for industrial sidings, and periodic evaluation reports for local and regional rail lines (with monitoring linked to standard public funding control mechanisms).

The expected impacts of the Plan are grouped into four categories:

- The first category, "Transport," anticipates a more balanced modal split, improved logistics data, and the reactivation of viable regional rail lines.
- The second category, "Economy," expects strengthened rail competitiveness and the emergence of new business opportunities.
- The third category, "Environment," foresees reduced emissions and traffic congestion, along with alignment with EU climate objectives.
- The fourth category, "Governance," expects enhanced coordination among national, regional, and research institutions.

9.2. Peer-review report on Slovakia plan

The Action Plan for Slovakia, particularly for the Žilina region, is a solid document; however, the peer-review report highlighted several important recommendations for improvement. The Plan successfully addresses most key target groups, yet it does not include NGOs, local and regional industries, road freight operators, or freight forwarders.

The Plan is a response to specific, well-identified challenges within the Slovak rail sector, derived from analytical work including the Strategic Transport Development Plan of the Slovak Republic to 2030 – Phase II. It is aligned with major Slovak and EU strategic documents related to sustainable development, spatial planning, and mobility, and it corresponds fully with the objectives of Rail4Regions.

The Action Plan's proposed solutions, such as support for Single Wagon Load (SWL), digitalisation of loading points, and periodic re-evaluation of regional railways, are consistent with broader national and regional development programmes. These measures directly contribute to improving the safety, efficiency, and sustainability of transport operations while strengthening the role of rail in reducing environmental impact.

However, the Plan currently lacks short-term actions, and the timelines for most activities are not clearly defined. For instance, while it provides clear suggestions for potential funding sources, many of the proposed actions generate direct or indirect economic impacts that require solid financial backing. Delivering the SWL action will be particularly challenging and will require national or EU-level funding. At present, cost estimates and funding commitments for the SWL-related activities remain unclear.

The Plan demonstrates several strengths, including strong strategic alignment and relevance, a systemic and long-term sustainability outlook, clear targeting of bottlenecks, high feasibility supported by stakeholder involvement, and a robust quality assurance process.

Nevertheless, the Plan also presents weaknesses, such as sustainability risks—particularly concerning long-term SWL subsidisation, regulatory and data privacy challenges arising from digitalisation, and institutional engagement issues regarding periodic re-evaluation, where insufficient interest from public and private institutions and unclear long-term data ownership pose risks.

The main potential risks associated with the Action Plan relate to political commitment, financial sustainability, and complex regulatory barriers.

The principal recommendations for improving the Action Plan focus on strengthening financial stability, deepening legislative preparation, and enhancing institutional engagement, particularly for long-term measures.

10. Action plan Małopolska, Poland peer-review

This section of the report provides a brief summary of the Małopolska Action Plan, along with the peer-review report developed during the process. The peer review was carried out by three partners: Varaždin County from Croatia, KORDIS from the Czech Republic, and the University of Applied Sciences Erfurt from Germany.

10.1. Brief summary of the Małopolska Rail4Regions action plan

The Action Plan for the Małopolska region was prepared by the Małopolska Regional Development Agency (MARR) in cooperation with the Cracow University of Technology (CUT). The geographical scope of the plan covers the Małopolska Voivodeship, with the city of Kraków serving as its regional capital.

Photo © - Ante Klečina

Małopolska is one of Poland's most dynamic regions, with 3.43 million inhabitants, €12.5 billion in exports, and more than 480,000 enterprises. It holds the title of European Entrepreneurial Region 2024 and ranks highly in EU regional competitiveness benchmarks.

Its transport network comprises 1,100 kilometres of railway lines, the A4 motorway as part of Corridor III (West Europe – Ukraine), John Paul II Airport Kraków–Balice, as well as other key routes and nodes.

The main stakeholders were categorised into four groups: national, regional and local, research and academia, and the private sector.

Key national actors include the Ministry of Infrastructure, the Centre for EU Transport Projects (CUPT), PKP PLK S.A., the Office of Rail Transport (UTK), and the Central Transport Hub (CPK). At the regional and local levels, the main actors are the Małopolska Regional Government, city authorities, and local municipalities. The Cracow University of Technology was identified as the main research and academic partner. Key private-sector stakeholders include industrial and logistics companies, terminal operators (Brzesko, Włosienica), freight forwarders, insurers, and investment firms.

The plan identified several key challenges. Coordination between local, regional, and national stakeholders is fragmented. Existing railway infrastructure is underused for freight transport, despite the large number of sidings and terminals. There is a low share of Single Wagon Load (SWL) and intermodal transport, as such shipments are predominantly moved by less sustainable road transport. To shift freight from road to rail, Małopolska requires incentives, simplified procedures, and stronger integration with EU markets.

The adopted solutions are structured into three phases:

1. Innovation Stage – Analysis and Design,
2. Investment Stage – Infrastructure Modernisation,
3. Integration Stage – Regional and International Cluster (establishing a regional logistics cluster to connect industries with sustainable transport solutions).

The most important proposed actions are:

- Action #1.1: Establishment of a Council for Supporting the Development of Rail Freight Transport in the Małopolska Voivodeship.
- Activity #1.2: In-depth marketing research of the regional transport and trade market, analysing the export and import potential of regional production.
- Action #1.3: Providing data to the RailHub planner and promoting its use.
- Activity #1.4: Modelling the existing target market and developing a model of the current trade and transport network.
- Action #1.5: Creating an optimal commercial transport network model for delivering goods to consumers, including last-mile transport.

- Activity #1.6: Developing optimisation solutions for production, trade, and distribution of goods in the region among R4R project partners.
- Action #2.1: Assessment of regional transshipment infrastructure, from terminals to loading points.
- Activity #2.2: Analysis of the operation of sidings, loading points, railway stations, and container terminals.
- Action #2.3: Rationalisation of operating technologies at sidings, loading points, railway stations, and container terminals.

The Plan also establishes monitoring mechanisms, identifying the institutions responsible for its implementation. For most monitoring tasks, the newly established Małopolska Rail Freight Council will serve as the lead body.

Economic indicators include investment cost ranges and economic performance metrics such as IRR, NPV, and related measures.

Environmental indicators primarily focus on tracking carbon emissions from the transport sector.

Socio-economic indicators were also defined and will track the number of newly established rail-connected investment zones, new freight centres, and similar developments.

The Plan is expected to generate impacts across the transport sector, economic activity, environmental protection, new social opportunities, and overall governance improvement.

10.2. Peer-review report on Małopolska plan

The Action Plan for Małopolska appears to be a highly comprehensive document. The proposed measures require substantial financial resources, which have not been clearly specified. Nonetheless, the document provides a solid foundation for a robust and effective Action Plan, once the recommended revisions are incorporated.

The Plan successfully addresses all key target audiences, with the exception of NGOs, which were not included.

The background of the document is not clearly articulated, although it is evident that the Plan aims to support the objectives of major EU strategic frameworks. A clear explanation of the purpose and scope of the document is missing and should be introduced concisely at the beginning.

The proposed actions are extensive and cover all critical areas needed to advance green freight mobility. However, the Action Plan should be more concise, focusing more strongly on short-term, actionable measures. The financial aspects of the actions also require clearer definition.

Stakeholders are listed, but no specific responsibilities are assigned. This makes monitoring, evaluation, and the development of long-term partnerships challenging and unlikely.

The establishment of the Council for Supporting the Development of Rail Freight Transport lacks a defined mechanism for appointing its members, making it impossible to assess the Council's competence.

The document's structure should follow the Rail4Regions Action Plan template (regional context, adopted solutions, stakeholder engagement, proposed actions, monitoring, conclusion), with one or two explanatory sentences added for each section.

The overall number of actions should be reduced. It would be preferable to focus on four or five actions that are not overly complex or time-consuming.

Within the evaluation section, clear responsible bodies or institutions should be designated for the implementation and completion of each action or measure.

11. Action plan Hungary, Dél-Alföld Region peer-review

This section of the report provides a brief summary of the Dél-Alföld Region Action Plan, along with the peer-review report developed during the process. The peer review was carried out by three partners: Varaždin County from Croatia, KORDIS from the Czech Republic, and the University of Applied Sciences Erfurt from Germany.

11.1. Brief summary of the Dél-Alföld Region Rail4Regions action plan

The Action Plan for the Dél-Alföld Region, located in southern Hungary, was prepared by Rail Cargo Carrier Hungary. The Plan focuses on the activities required in the region to strengthen rail freight transport on local and regional railway lines.

Its primary emphasis is on the renovation, modernisation, and construction of new industrial sidings across the region.

Photo © - Ante Klečina

The document is clearly written and well prepared. Only minor adjustments to the Plan were suggested by the peer-review team.

The Dél-Alföld Region, located in southeastern Hungary, is a large agricultural area characterised by low population density and uneven economic development. Transport and spatial planning policies are predominantly shaped at the national and county levels, with limited coordination at the NUTS-2 regional level.

Key national frameworks guiding freight and industrial siding development include:

- Hungarian Railway Development Strategy (OVFS) – promoting 740-metre trains, 225 kN axle loads, and TEN-T integration.
- National Logistics Strategy and National Transport Infrastructure Development Strategy – enhancing multimodal freight and strengthening rail competitiveness.
- National Spatial Development Concept (OTK) – providing the overall framework for spatial planning at county level.

Although these policies support rail freight development, the region lacks a unified transport strategy. The Action Plan aims to close this gap through coordinated regional data collection, planning, and investment prioritisation.

Key public-sector stakeholders include the Ministry of Construction and Transport, MÁV Zrt. (infrastructure manager), NIF Zrt. (infrastructure developer), and the county governments of Bács-Kiskun, Békés, and Csongrád-Csanád.

In the private sector, the main actors are Rail Cargo Hungaria Zrt., GYSEV Cargo, CER Hungary, MMV Zrt., industrial siding owners, and logistics companies.

The principal associations involved are HUNGRAIL, MLSZKSZ (Logistics Service Centres Association), VAPE (Track Users Association), and HUPRA.

Local stakeholders include industrial park operators, municipalities, and regional business clusters.

The key challenges highlighted in the Plan include obsolete industrial sidings, regulatory complexity, a lack of funding for renovation and new construction of local rail infrastructure, insufficient regional coordination, limited data availability regarding local sidings, and the continuing dominance of road freight.

The Action Plan focuses strongly on industrial sidings, identifying two primary measures as essential:

- a free-access siding database serving as a digital inventory of sidings and loading points, and
- a decision-support tool for prioritising the refurbishment and construction of sidings.

To prepare the document, workshops and consultations were held with the Ministry of Construction and Transport, MÁV Infrastructure, HUNGRAIL, and regional stakeholders.

Stakeholders agreed to prioritise industrial siding revitalisation as a realistic and high-impact measure, replacing the initially planned SWL subsidy-related actions.

The actions proposed by the Plan are:

- Action 1 – Creation of a Regional Sidings Database

  Objective: Develop a complete inventory of all sidings in the Dél-Alföld region.

  Activities:

  1. Collect technical, operational, and ownership data.
  2. Develop a public digital platform with GIS integration.
  3. Conduct pilot validation and full roll-out.

- Action 2 – Investment Roadmap for Sidings (Refurbishment & New Construction)

  Objective: Identify, prioritise, and prepare investment projects for industrial sidings.

  Activities:

  1. Apply the Rail4Regions decision-support tool to evaluate technical, economic, and environmental impacts.
  2. Develop a regional priority list integrated into county and national development programmes (TOP Plus 2021–2027, OVFS).
  3. Support applications for EU and public co-financing.

Monitoring was based on a set of clear KPIs. The database is expected to be fully operational by the end of 2026, with more than 90% of existing active sidings mapped. A greater number of sidings should be reactivated by 2027, the modal share of rail freight is expected to increase, and the carbon footprint of the transport sector should be reduced.

11.2. Peer-review report on Dél-Alföld Region plan

The actions are clear, detailed, and achievable; risks are well assessed, and stakeholders have been appropriately identified. However, the introductory section is largely missing. It should include the type, purpose, objectives, and scope of the document.

Although the relevant strategic frameworks are listed, the connection between the proposed actions and the strategic goals should be made more explicit. The Plan should clearly state which strategic documents it aims to support.

If feasible, the Plan could incorporate at least one additional solution from the Rail4Regions portfolio, beyond industrial sidings, provided that it is applicable to the regional context.

On the other hand, local partners are the ones most familiar with local conditions, and it should ultimately be their decision whether additional actions can realistically be included.

Several components of the Action Plan are missing, including the monitoring framework and the definition of future steps.

All risks have been well assessed.

The financial scope of the proposed measures should also be described more clearly.

12. Action plan Southern Moravia peer-review

This section of the report provides a brief summary of the South Moravia Region Action Plan, along with the peer-review report developed during the process. The peer review was carried out by three partners: Rail Cargo Hungaria from Hungary, the University of Žilina from Slovakia, and Steiermärkische Landesbahnen from Austria.

12.1. Brief summary of South Moravia action plan

The Action Plan for South Moravia was developed by KORDIS JMK, the transport authority responsible for managing the Integrated Public Transport System of the South Moravian Region in the Czech Republic.

Spatial planning in the Czech Republic follows a structured hierarchy, progressing from the national level to the regional and subsequently to the municipal level. It is governed by the Building Act (No. 183/2006).

Photo © - Ante Klečina

Rail transport policy is defined at the national level by the Ministry of Transport and implemented by Správa železnic (SŽ), which manages the majority of the railway infrastructure.

The South Moravian Region plays a significant role in coordinating spatial policies. It integrates national rail policies into regional strategies, serves as an intermediary between infrastructure managers, municipalities, and private siding owners, and supports the preservation of sidings despite declining freight volumes.

The development of rail freight transport in the Czech Republic is constrained by insufficient rail infrastructure capable of supporting a modal shift from road to rail.

Key public stakeholders in South Moravia include the South Moravian Region, Správa železnic, the Ministry of Transport, JINAG (the regional innovation agency), and municipalities. The main freight operators are ČD Cargo, METRANS Rail, EP Cargo and other private carriers. Important associations include the Regional Chamber of Commerce and ŽESNAD (the freight operators' association).

The key challenges identified in the Action Plan are:

- low utilisation of rail freight and the dominance of road transport,
- lack of a systematic overview of sidings and loading points,
- limited private investor interest in rail transport despite available subsidies,
- risk of siding removal due to declining freight volumes,
- insufficient rail capacity on conventional lines, limiting freight potential.

The solutions adopted by the Plan include:

- a catalogue of loading points and sidings through the creation of a regional GIS-based digital map to support planners and investors,
- dual use of branch and feeder lines for both passenger and freight transport,
- support for high-speed rail development to free up capacity on conventional lines for freight,
- awareness-raising measures to encourage investors to choose rail-connected locations.

To prepare the Plan, workshops and bilateral consultations were conducted with Správa železnic, private siding owners, the Regional Chamber of Commerce, and municipalities. All stakeholders expressed support for the proposed solutions.

The Plan proposes the following actions:

1. Action 1 – Strategic Cooperation on Rail Freight Infrastructure (2026–2036)
    - SMR will advocate for HSR development, modernisation, electrification, and maintenance of regional lines.

- Ensure that freight transport needs are reflected in national and regional strategies.
- Negotiate rail-oriented logistics solutions for major infrastructure projects (e.g., Dukovany nuclear power plant expansion).
- Enhance communication among SŽ, municipalities, carriers, and industrial actors.

2. Action 2 – Development of Logistic Terminal Connections to Rail (2025–2027)
    - Create a GIS-based digital map of sidings (modelled on Thuringia's RailHub Finder).
    - Support the development of intermodal terminals in Brno and Břeclav.
    - Promote rail-connected locations to investors through regional agencies.
3. Action 3 – Preservation and Alternative Use of Sidings (2026–2027)
    - Prevent the unnecessary removal of underused sidings.
    - Enable alternative uses such as passenger transport, rolling stock storage, and servicing.
    - Establish a platform for siding owners to exchange needs and ideas.

The Plan sets KPIs to monitor the impacts of its actions. Indicators include updates to the digital sidings map, feedback received from operators and siding owners, and materialisation of key rail logistics projects, such as biomass transport to the Brno heating plant by 2028 and rail logistics for the Dukovany nuclear plant by 2030. Long-term impacts are expected to translate into increased national rail network capacity for freight.

Expected impacts are grouped into four categories:

- Transport: strengthened freight potential, multimodal development, improved network capacity.
- Economy: a more attractive investment environment, reduced logistics costs, support for major industrial projects.
- Environment: reduced emissions through modal shift and electrification.
- Governance: stronger coordination between public bodies and private operators and long-term infrastructure preservation.

12.2. Peer-review report on South Moravia action plan

The Draft Action Plan for the South Moravian Region presents a well-structured approach to strengthening regional rail freight transport. It demonstrates a solid understanding of the institutional and infrastructural framework in the Czech Republic, particularly the limited influence of regional authorities over privately owned sidings and the centralised system of transport infrastructure planning and funding. Despite these constraints, the Plan identifies realistic and high-impact actions that rely on soft measures, stakeholder cooperation, and strategic lobbying to promote modal shift and safeguard critical infrastructure.

One of the Plan's key strengths is its pragmatic focus on low-cost, high-impact interventions, such as developing a digital map of sidings and promoting dual use of infrastructure for both freight and passenger transport. These measures are well aligned with the objectives of the Rail4Regions project and reflect a thoughtful adaptation of EU-level strategies, including the Green Deal and TEN-T, to the regional context.

Nevertheless, the Plan also presents certain limitations. While stakeholder engagement is strong, the success of several measures depends heavily on voluntary cooperation from private actors, which cannot be fully guaranteed. The monitoring and evaluation framework, although included, would benefit from more robust KPIs and clearer mechanisms for tracking progress over time.

The proposed measures are not isolated actions but are designed for long-term impact. By embedding its objectives into regional policy and establishing permanent collaborative networks, the Plan ensures that its visibility and relevance will extend well beyond the completion of the Rail4Regions project.

Although well written, a number of improvements are recommended. For example, Action 3 should be supplemented with implementation milestones, which will also facilitate KPI development. In addition, further elaboration of the Monitoring Mechanism and KPIs is needed to make the Plan more specific and actionable.

13. Action plan Slovenia peer-review

This section of the report provides a brief summary of the Slovenia Action Plan, together with the peer-review report developed during the process. The peer review was carried out by three partners: Rail Cargo Hungaria from Hungary, the University of Žilina from Slovakia, and Steiermärkische Landesbahnen from Austria.

13.1. Brief summary of Slovenia action plan

The Slovenia Action plan was developed by the Institute for Traffic and Transport Ljubljana (Prometni Institut Ljubljana). The Action Plan was intended to cover the entire territory of Slovenia.

Photo © - Ante Klečina

Slovenia is a highly centralised country without autonomous regional governments. Transport and spatial planning decisions were made at the national level, while regional development agencies and municipalities supported implementation at the local level.

Slovenia's strategic position was underscored by the fact that three TEN-T core corridors pass through this country of two million inhabitants. As a result, Slovenia served as an important European transit and logistics hub, closely connected to the Port of Koper - the key generator of rail freight flows.

Although Slovenia's strategic position was highly favourable, several major challenges still hindered the development of rail freight transport:

- capacity limitations on the main railway lines,
- a large number of abandoned or poorly maintained industrial sidings,
- Single Wagon Load (SWL) services were very weak or entirely absent,
- insufficient inland multimodal terminals and a lack of last-mile rail access,
- a very low or non-existent number of freight trains on local and regional lines, leaving local industries dependent on road transport.

National strategies recognised these issues, but operational tools and regional-level measures were missing - a gap this Action Plan aimed to address.

The main actors in the sector included: the Ministry of Infrastructure, the Ministry of Natural Resources and Spatial Planning, the Infrastructure Directorate (DRSI), Slovenske železnice (the national railway company responsible for infrastructure, passenger and freight transport), regional development agencies, municipalities, the Port of Koper, terminal and logistics operators, industrial companies with sidings, and the Chamber of Commerce and Industry of Slovenia.

The Plan identified several key challenges. A complete national database of industrial sidings was lacking. There was no funding scheme to support siding modernisation. SWL services were limited to only a few possible cases. Relevant data for the sector were fragmented across multiple institutions. Freight operations relied heavily on TEN-T corridors, while regional and local railway lines remained underused.

The solutions adopted in the Plan were fully aligned with the Rail4Regions goals and findings and focused on industrial sidings and Single Wagon Load services.

The proposed actions were the following:

1. Action 1 – National Register of Industrial Sidings (0–12 months)

   Development of a comprehensive database containing technical, ownership, and operational information.

2. Action 2 – Prioritisation for Reactivation / Modernisation (6–18 months)

   A decision-support tool to identify 10–15 priority sidings, accompanied by the preparation of pre-feasibility studies.

3. Action 3 – Financial Support Scheme for Sidings (12–24 months)

   Design of a co-funding mechanism combining national resources with CEF, CF, and ERDF funds.

4. Action 4 – Assessment of the SWL System and Market Potential (0–12 months)

   Analysis of infrastructure, costs, terminals, and demand, including benchmarking against Austria.

5. Action 5 – Pilot SWL Incentive Scheme (12–24 months)

   Launch of subsidised SWL services on selected corridors and terminals.

A national steering group (Ministry of Infrastructure, DRSI, SŽ, Regional Development Agencies, Chamber of Commerce) was planned to meet every six months.

An online dashboard was established to track key performance indicators (KPIs), including:

1. Industrial sidings:
   - number of sidings included in the register,
   - share with updated technical data,
   - number prioritised or reactivated,
   - freight volumes handled via sidings.
2. Single Wagon Load (SWL) shipments:
   - number of operational SWL services,
   - annual SWL volume,
   - number of terminals and users,
   - estimated modal shift.

The expected impacts of the plan included improved last-mile connectivity, revitalised local railway lines, the reintroduction of Single Wagon Load services, enhanced accessibility and competitiveness for industry, increased opportunities for EU funding, reduced transport-related carbon emissions, lower road congestion, and stronger governance for sustainable rail development.

13.2. Peer-review report on Slovenia action plan

The Action Plan was a highly focused and well-structured document designed to bridge the gap between high-level national and EU strategies and practical, on-the-ground implementation. It successfully identified key structural barriers to rail freight development in Slovenia and proposed a systematic, multi-faceted approach to address them.

The Plan was explicitly aligned with major national strategies, such as the Resolution on the National Railway Development Programme and the Transport Development Strategy of the Republic of Slovenia, as well as with EU policies including the European Green Deal and the Sustainable and Smart Mobility Strategy (SSMS). This strong alignment increased the likelihood of securing political commitment and funding.

Long-term vision: The Plan was not conceived as a stand-alone project but as a foundation for establishing a "sustainable system for the long-term development of industrial sidings and SWL services." By seeking integration into national planning and financing frameworks, it aimed to create a lasting structural shift in Slovenia's rail freight sector.

However, the Plan did not specify the budget required for the proposed measures. It also relied on close coordination and strong stakeholder commitment across multiple levels of government and industry - ministries, national railway operators, regional development agencies, and private companies. Although a steering group was proposed, the administrative and political complexities inherent in a centralised system could pose challenges.

While the Plan identified financing sources, it did not include total cost estimates or financial projections for the register, pre-feasibility studies, or rehabilitation projects. A more detailed financial framework would strengthen the Plan and improve its competitiveness for funding.

The document identified several risks, but a more explicit risk mitigation strategy would have reinforced the Plan. For example, it could have outlined specific procedures in case of limited private-sector interest in pilot initiatives.

Slovenia already possesses a system supporting SWL services. Therefore, Actions 4 and 5 would benefit from a more thorough analysis of the existing system and propose improvements or redesign options.

The Plan was fully aligned with the main goals and outputs of the Rail4Regions project, stating that it "contributes to the objectives of the Rail4Regions partnership" and the broader European transport policy framework.

In conclusion, the Plan was well structured, but required improvements in the areas of financing, further elaboration of Actions 4 and 5, and stronger measures to mitigate governance-related risks.

14. Short comparison of the plans

This section provides a brief comparative summary table of all the Action Plans.

Region / Country	Main Focus Areas	Key Challenges	Proposed Actions (Short Summary)	Primary Actors	Aligned with Rail4Regions	Level of improvements needed
Thuringia (DE)	RailHub Finder, branch lines, sidings, SWL	Coordination, funding gaps, data issues, rural access	GIS tool; feeder line reactivation; siding priority tool; SWL/DAC support	TMDI, TLBV, MoNeT, DB Cargo	Yes	Minor
Novara / Piedmont (IT)	RailHub Finder, feeder lines, hub upgrade	Governance complexity, bottlenecks, awareness	Promote RailHub; Novara hub restructure; electrification; 750m trains	Piedmont Region, Province of Novara, RFI	Yes	Minor
Northern Croatia (HR)	Multimodal terminals, sidings, RailHub	No freight strategy, poor terminals, weak coordination	Map multimodal points; new sidings; new terminals; logistics advisory	Counties, University North, HŽ Infra	Yes	Medium
Slovakia – Žilina (SK)	SWL support, sidings database, regional evaluation	Low rail share, poor intermodality, data gaps	SWL support; siding database; 10-year evaluation	UNIZA, Ministry of Transport, ŽSR	Yes	Minor
Małopolska (PL)	Terminals, sidings, RailHub Planner, logistics cluster	Governance fragmentation, underused terminals	Freight council; RailHub data; terminal/siding upgrades; SWL model	MARR, CUT, PKP PLK, UTK	Yes	Medium
Dél-Alföld (HU)	Sidings database, investment roadmap	Obsolete sidings, funding gaps, weak regional role	Database; prioritisation roadmap; modernisation support	Rail Cargo Hungaria, Ministry, MÁV	Yes	Minor
South Moravia (CZ)	Sidings map, HSR for freight capacity, siding preservation	Low freight use, siding loss risk	Rail freight cooperation; digital map; preserve sidings; support terminals	KORDIS JMK, SŽ, municipalities	Yes	Medium
Slovenia (SI)	National sidings register, SWL revival	Inactive sidings, no SWL, no funding scheme	National siding register; priority list; funding scheme; SWL system; pilot SWL	Prometni institut, Ministry, SŽ	Yes	Minor

The comparative table highlights several differences between the Action Plans. Each territory focused on its own specific challenges. Most regions lacked concrete solutions for maintaining existing railway sidings and developing new ones. In addition, many regions expressed a need to reintroduce Single Wagon Load services.

15. Conclusion

Rail4Regions aimed to support the modal shift from road to rail in freight transport, with a particular focus on regional and local railway lines. These lines have been neglected not only in many EU Member States but across the wider European rail freight sector. Rail4Regions addressed this challenge by developing a set of practical tools to help reintroduce and strengthen rail freight operations on regional and local lines throughout Europe.

One of the key achievements of the project was the development of eight Action Plans for eight European regions, enabling the practical implementation of the project's solutions at territorial level. An important added value of Rail4Regions is that its solutions are applicable to nearly all EU regions with regional and local railway lines in operation.

The peer-review process proved highly successful. It ensured that all Action Plans were thoroughly examined by partner organisations, resulting in clear conclusions and improvements. Most importantly, the overall quality of the Action Plans increased significantly. This will support regions and institutions in adopting high-quality strategic documents capable of strengthening rail freight transport on regional and local lines. As the plans are fully aligned with relevant national and European strategic frameworks, they will contribute to more sustainable regional and European transport policies.

The final comparison of all Action Plans showed that many regions can successfully plan to implement most of the solutions developed through Rail4Regions. The solution that emerged as the most widely applicable concerns the maintenance, modernisation, and development of industrial sidings. The comparison also revealed that most Action Plans require only minor adjustments to be finalised, while a few require moderate improvements. The recommendations prepared by the peer-review teams will significantly support this improvement process.

Beyond the direct outcomes of the Action Plans, Rail4Regions has demonstrated the substantial added value of transnational cooperation. The partners jointly analysed diverse territorial contexts, exchanged practical experience, and developed comparable methodologies that can be replicated across Europe. This collaborative process strengthened institutional capacities within the participating regions and established a basis for long-term cooperation that will extend beyond the project's lifetime. The tools and procedures developed, particularly the peer-review model, the decision-support instruments, and the approaches to managing industrial sidings and Single Wagon Load services, represent transferable outputs that other EU regions can readily adopt. Looking ahead, the partnership is well positioned to build on these achievements through future funding opportunities, additional pilot activities, and continued stakeholder engagement.

Rail4Regions has therefore laid a solid foundation for a more resilient, efficient, and sustainable European rail freight system.

A. Annex - Rail4Regions Peer-Review Form

Action Plan Basic Information

Field	Description
Name of the Action Plan	
Implementation period	
Responsible Project Partner	
Total Budget	
Location	
Strategic plan(s) that Action Plan refers to (or it relates to) (Short bullet points)	
Target Audiences	☐ Decision makers ☐ Stakeholders ☐ Local authorities ☐ Regional authorities ☐ National authorities ☐ Local spatial planners ☐ Regional spatial planners ☐ National spatial planners ☐ NGOs ☐ General public ☐ Railway infrastructure managers ☐ Railway freight operators ☐ Local and regional industry ☐ Road freight operators ☐ Road freight forwarders ☐ Logistic operators ☐ Other (please write) _____ _____ _____

Background of the plan (2000 characters - explain short background of the strategic plans that this Action plan refers to)	
Main objectives of the plan and expected results (Short bullet points, at least two bullets and no more than 15 bullets)	
Key Measures to be Implemented (Short bullet points)	
Alignment with Rail4Regions main goals and outputs (Yes, No, Partly) (Comment if necessary - up to 1500 characters)	

Main Evaluation Criteria

Category	Yes No Partly	Comments / Justification
1. Relevance of the Action Plan		How well does the action plan address identified problems and objectives in the local/regional/national context?
2. Alignment with the relevant strategies		How well does the action plan contributes to relevant strategies, both on the EU and local/regional level?

3. Feasibility of Implementation		Are the proposed measures realistic, technically and administratively feasible within the defined timeframe and budget?
4. Innovation and Added Value		Does the action plan introduce innovative approaches or tools? What added value does it bring compared to existing initiatives or practices?
5. Stakeholder Involvement		How well have relevant stakeholders (e.g., local authorities, NGOs, community) been involved or considered in the action planning and implementation?
6. Contribution to (Rail4Regions) Project Objectives		How well does the action plan contribute to the overall objectives of the Rail4Regions project and Interreg programme goals?
7. Using the (Rail4Regions) Project Solutions		Does the Action Plan addresses the solutions produced and elaborated by the (R4R) project and are these solutions used or even taken to an upper level in the Plan?
8. Resolving detected bottlenecks		Does the Action Plan addresses the bottlenecks detected in a specific region (territory)? Does the Action Plan offers measures to overcome or resolve the bottlenecks?
9. Offer of short-term actions		Does the Action Plan offers at least some actions that may implemented in a short-term timeframe with some effects to address the strategic goals and/or detected bottlenecks?
10. Involvement of the decision-makers		Does the Action Plan offers actions and ways to involve proper decision-makers in order for the measures to be implemented?
11. Financing of the proposed actions		Does the Action Plan offers clear suggestions on the possible sources of financing the proposed measures? Do proposed measures offer direct or indirect impact that can be financially measured?

12. Sustainability		Are the results and impacts of the action plan likely to be sustainable? How long will impacts from the proposed measure last?
13. Transferability		Can the approach be transferred to other regions or projects? Is the action plan approach easy to transfer to similar regions?
14. Longevity of the results		Will the Action Plan be a lasting one? Will the measures from the Action Plan be lasting and visible even long after the project (R4R) ends?
15. Longterm cooperation and partnerships		Does the Action Plan reflects the aspiration that the institution will continue to cooperate after the project is over? Do the activities of the Action Plan reflect the possibility of a long-term cooperation of partners and institution, especially cross border cooperation?
16. Monitoring and Evaluation Mechanisms		Are appropriate indicators, tools, and methods in place for assessing the progress and effectiveness of the action plan over time?
General comments for the B section (up to 5.000 characters). Short comments are mandatory if some of the parts were answered with "No" or "Partly".		

Reviewer Information

Field	Input
Partners involved in this peer-review	
Country	
Date of Review (completed)	
Signatures (team leaders)	

Conclusions / Recommendations / Additional comments

Field	Input
General Observations Comments (up to 3000 characters)	
Key Strengths Comments (up to 2000 characters)	
Main Weaknesses Comments (up to 2000 characters)	
Main Potential Risks Comments (up to 2000 characters)	
Suggestions for Improvement Comments (up to 4000 characters)	