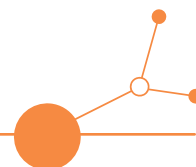


SUSTANCE

D.2.5.1. Long term sustainability guidelines for solution n. 3 (PA3) Feasibility analysis on train connections along the route Divača- Buzet-Pula



Version 1
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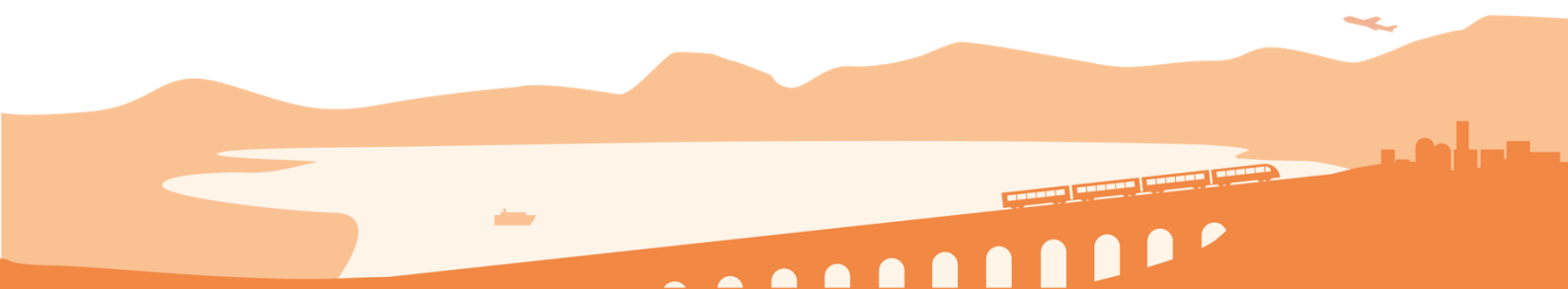




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Abbreviations

AF	Application Form
WP	Work Package
PT	Public Transport



1 Overview

The present Solution provides an integrated planning and implementation approach for the revitalisation and sustainable development of underutilised cross-border railway corridors across Central Europe. Building on the evidence and experience generated through Pilot Action 3, which tested the feasibility of revitalising the Divača-Buzet-Pula (SI-HR) railway corridor, the solution transforms the pilot results into a structured methodology that can support public authorities, infrastructure managers and railway operators in planning and implementing similar investments beyond the pilot territory.

The main lesson learned derives from the implementation of feasibility study that was conceived as a strategic planning tool to evaluate infrastructural, operational, financial, and environmental parameters of potential investments. The results present a clear roadmap for the modernisation of railway services, highlight the importance of cross-border policy harmonisation, and identify concrete steps for enhancing regional accessibility and sustainable mobility.

The approach combines strategic infrastructure planning, phased investment programming, sustainable financing mechanisms, cross-border governance arrangements, multimodal integration and low-emission rolling stock solutions within a coherent implementation pathway aligned with the European Green Deal, TEN-T policy and Sustainable Urban Mobility Planning principles.

The solution complements Solution 1 tested in PA1, which focuses on the governance, institutional coordination and operational implementation of cross-border passenger rail services, and Solution 2 tested in PA2, which provides a model for the long-term operation and financing of regional cross-border railway services through Public Service Contracts (PSOs/PSCs) and phased investment strategies.

Together, the three railway solutions form an integrated SUSTANCE framework covering the full lifecycle of cross-border rail development—from strategic corridor planning and infrastructure revitalisation (Solution 3), to service planning and institutional cooperation (Solution 1), and finally to long-term operational, governance and financial sustainability (Solution 2). As such, Solution here presented provides a replicable approach for peripheral and cross-border regions seeking to transform underutilised railway assets into sustainable, multimodal and climate-resilient transport corridors through coordinated technical, financial and institutional planning

2 The Sustance solution based on pilot SWOT analysis and technical measures adopted to overcome the main threats

This section applies a SWOT analysis to assess the jointly developed SUSTANCE Solution 3, building on the evidence and experience generated through Pilot Action 3. The analysis identifies the key strengths, weaknesses, opportunities and threats associated with the implementation, long-term sustainability and transferability of the solution for the revitalisation of underutilised cross-border railway corridors. Particular attention is given to the critical technical, organisational, financial and governance challenges that may affect the uptake and long-term sustainability of the solution, as well as to the measures already validated through the pilot and the additional actions recommended for short-medium- and long-term implementation in other cross-border contexts

Strengths	Weaknesses
Analysis conducted through the pilot confirms that the existing railway infrastructure offers a valuable strategic	The railway is non-electrified, composed of single-track sections with low speeds and outdated signaling. Passenger numbers are



asset, particularly due to its cross-border potential and proximity to growing tourist destinations. Its direct connection between Croatia and Slovenia positions it as a possible extension of the wider European rail network, especially with the nearby Divača junction offering access to central European corridors.

limited, partly due to irregular service and lack of intermodal integration. Moreover, discrepancies in operational and regulatory frameworks between Croatia and Slovenia pose additional coordination challenges.

Opportunities

- Opportunities lie in the growing environmental awareness among policymakers and travelers, the increasing demand for low-emission mobility solutions, and the availability of EU and national funding for green infrastructure projects. The alignment with regional tourism development strategies further strengthens the relevance of this initiative, especially as eco-tourism and active mobility become more prevalent.

Threats

- Infrastructure upgrades entail high upfront investment costs and long implementation periods. Sustained political support is required at multiple governance levels to drive the process forward. Furthermore, competition from road transport, especially private cars and intercity buses—remains strong due to perceived convenience and better service frequency.

3 The solution long-term sustainability goals and strategies

Ensuring the long-term sustainability of the solution requires more than a static analysis, it demands a dynamic and structured transition from a diagnostic exercise to a fully operational investment and policy implementation pathway. The feasibility study conducted under Pilot Action 3 has laid a robust technical, economic, and policy foundation. However, real impact will only materialise if its recommendations are translated into concrete political commitments, funding allocations, and regulatory action.

The foremost prerequisite for this transition is the establishment of clear political and institutional ownership. Regional authorities, national transport ministries, and public railway companies by endorsing study's findings - have now the opportunity to jointly recognise the strategic value of the Divača-Buzet-Pula corridor. This endorsement could be the basis for supporting the proposed railway modernisation and intermodal investments into national and regional transport masterplans, budgetary frameworks, and operational programmes under relevant EU funding instruments.

A series of concrete steps should follow.

First, the development of **detailed technical documentation**, including design blueprints, phasing strategies, and environmental impact assessments is essential. These technical deliverables must be accompanied by comprehensive cost-benefit analyses (CBA) that quantify the economic, social, and environmental returns of the proposed upgrades. Priority should be given to those interventions that yield the highest return per invested euro, particularly where they contribute simultaneously to improved service quality, operational efficiency, and decarbonisation.



In parallel, the solution derived from the pilot recommends the **early procurement of hybrid and battery-electric rolling stock**. These trains, combined with strategically located charging infrastructure at terminal or mid-line stations, offer a cost-effective alternative to full line electrification particularly suitable for low-density or geographically challenging corridors. This approach enhances service reliability, reduces long-term energy and maintenance costs, and provides visible, tangible benefits to end-users and policymakers alike, thereby helping to build momentum for broader implementation.

The realisation of this vision depends on effective coordination between a broad spectrum of stakeholders. These include, but are not limited to, the Istrian County, the Croatian Ministry of the Sea, Transport and Infrastructure, the Slovenian Ministry of Infrastructure, HŽ Infrastruktura, HŽ Putnički prijevoz, Slovenske železnice, and municipalities along the route. Each actor brings specific competences: from infrastructure ownership and network management to regulatory oversight and regional development planning. Equally important are the European Union institutions, particularly the European Commission, CINEA, and managing authorities of programmes such as CEF and Interreg whose strategic alignment and financial support are critical to advancing implementation.

The solution's approach based on the pilot and methodology possess a high degree of transferability. Across Europe, many regions still rely on ageing and underutilised railway assets which, if revitalised, could play a key role in achieving modal shift, reducing greenhouse gas emissions, and improving territorial cohesion. The model developed under this pilot combining infrastructure rehabilitation, low-emission technologies, intermodal service integration, and cross-border governance is adaptable to both densely populated corridors and rural or peripheral areas. Its success hinges on strong local leadership, credible technical planning, and access to co-financing mechanisms.

The objectives originally set for the pilot have been met with a high level of precision and professionalism. As the feasibility study not only maps out investment options, the solution implies a coherent strategic framework and operational roadmap addresses both short-term tactical actions and long-term systemic transformation, balancing ambition with pragmatism.

The solution in this context promotes a participatory planning approach as a core element of the planning and implementation process for cross-border railway revitalisation. In addition to institutional and technical coordination, it recommends the early and systematic involvement of civil society organisations, end-users, vulnerable groups and local stakeholders throughout the planning cycle. Integrating user needs, daily mobility patterns and accessibility requirements into the technical and financial assessment enhances the quality, legitimacy and long-term acceptance of proposed investments, while enabling public authorities to better anticipate future mobility demand and ensure that infrastructure and service improvements effectively respond to local and regional needs.

Importantly, the initial alignment of key stakeholders has already been established through the pilot's activities. This soft coordination now needs to evolve into formalised inter-institutional agreements, potentially through memorandum of understanding or integrated planning procedures. These agreements should define shared responsibilities, timelines, and financing commitments, thereby laying the groundwork for successful implementation within the framework of regional, national, and European planning cycles.

The solution promotes an integrated approach to first- and last-mile connectivity through the deployment of scalable micromobility hubs that complement cross-border rail services and strengthen multimodal mobility.

As part of the validation of this approach under Pilot Action 3, two intermodal micromobility stations were installed in the City of Vodnjan and the Municipality of Svetvinčenat to demonstrate how shared bicycles, electric scooters and secure parking infrastructure can improve accessibility to regional transport nodes and encourage modal shift towards sustainable transport. The Vodnjan station includes two bicycles, four electric scooters (minimum 250 W) and six weather-resistant parking stands, while the Svetvinčenat station comprises four bicycles, two electric scooters and six parking stands. The



equipment remains the property of IDA d.o.o., which has committed to maintaining the infrastructure for at least five years following the project's completion, in accordance with the durability requirements of the Grant Agreement. This long-term maintenance commitment demonstrates the operational sustainability of the solution and provides a replicable model for integrating micromobility infrastructure into regional and cross-border railway development strategies.

This investment directly supports long-term environmental and mobility goals by promoting low-emission transport and improving accessibility in underserved areas. The modular and weather-resistant infrastructure ensures durability and ease of maintenance. Digital tracking allows for efficient fleet management, user safety, and future service expansion. Furthermore, the replicable model strengthens the potential for regional scale-up, contributing to greater modal integration and long-term behavioural change among residents and visitors. By addressing last-mile connectivity, the stations also reinforce the viability of the Divaca-Buzet-Pula rail corridor, supporting wider adoption of sustainable transport solutions.

In conclusion, the solution provides a strategic and operational approach for transforming underutilised cross-border railway corridors into integrated, sustainable and multimodal transport systems. Building on the evidence generated through Pilot Action 3, it combines technical planning, governance arrangements, sustainable financing, intermodal integration and stakeholder cooperation into a coherent implementation pathway that supports the transition from feasibility assessment to long-term investment and operation. By promoting coordinated cross-border planning and phased implementation, the solution contributes to strengthening regional accessibility, territorial cohesion and climate-resilient mobility, while offering a replicable model for other Central European regions seeking to modernise their railway networks in line with EU sustainable transport policies.

4 Financial indications related to the long-term sustainability of the solution

The successful implementation of the proposed railway upgrade strategy is heavily reliant on the establishment of a robust, diversified, and realistically structured financial model. The feasibility study developed under Pilot Action 3 identifies a multi-source financing framework that reflects both the complexity of the investment and the strategic importance of the Divača-Buzet-Pula corridor in contributing to sustainable and integrated European transport networks.

This financing model rests on the coordinated mobilisation of several complementary instruments. At the national level, public infrastructure investment should be channeled through sectoral transport budgets and national recovery or resilience plans, reflecting the corridor's alignment with broader policy objectives such as decarbonisation, modal shift, and rural connectivity. In parallel, the study strongly recommends leveraging EU funding programmes, particularly the Connecting Europe Facility (CEF), Interreg cross-border cooperation schemes, and relevant thematic strands under the EU Green Deal, which prioritise sustainable mobility infrastructure and cross-border integration.

Furthermore, concessional financing tools such as loans from the European Investment Bank (EIB) offer attractive terms for projects with strong environmental and social impact. Given that the proposed upgrade contributes directly to climate goals, reduces reliance on fossil fuels, and improves accessibility in a peripheral region, the project would be well positioned to benefit from EIB products such as the Green Mobility Facility or InvestEU-supported guarantees.

A key pillar of the cost-effectiveness of this financial model lies in the selection of modern, energy-efficient rolling stock specifically hybrid or battery-electric trains. By opting for these technologies, the project can bypass the need for full electrification of the line, which is often technically and financially prohibitive in



low-density corridors. Battery-electric trains can operate flexibly on non-electrified sections, while charging infrastructure can be concentrated at key nodes, significantly reducing capital expenditure. In addition to lowering carbon emissions and energy consumption, these trains also offer lower maintenance and operating costs, leading to improved lifecycle efficiency.

To further support the financial viability of service operation, the feasibility study recommends the application of Public Service Obligation (PSO) contracts. These contracts, widely used across the EU, provide a structured framework through which public authorities can compensate operators for maintaining socially necessary services that may not yet be commercially viable. PSO schemes would guarantee minimum frequency and service coverage, particularly in the early years of operation when ridership is still developing. By securing a predictable revenue stream for operators, PSO contracts enhance the bankability and financial sustainability of the entire corridor.

Complementing the already implemented investment in two intermodal micro-mobility stations in Vodnjan and Svetvinčenat—featuring bicycles, electric scooters, and secure parking infrastructure moderate co-financing from regional and local governments is proposed to further enhance intermodality and user experience. This co-financing would support additional infrastructure such as improved station access (e.g., expanded bike parking and pedestrian pathways), park & ride facilities, and digital information systems. While these components represent a relatively small portion of the overall investment, they significantly boost the functionality and appeal of the transport network. In particular, they complement the micro-mobility hubs by facilitating seamless transitions between modes, increasing ridership, and strengthening the long-term financial sustainability of the railway and broader public transport systems.

Finally, the study suggests exploring opportunities for public-private partnerships (PPPs) for specific components such as station modernisation, real estate development near transport hubs, or even joint operation of mobility services in coordination with local tourism actors. Such models could unlock additional capital, increase efficiency, and foster local economic development.

In conclusion, the proposed financial strategy does not rely on a single funding source but reflects a layered and resilient approach, combining grants, loans, public co-financing, and operational support mechanisms. This diversification not only increases the likelihood of implementation but also ensures flexibility and risk mitigation throughout the project lifecycle. By integrating modern technology, institutional support tools, and co-financing from multiple tiers of governance, the railway upgrade becomes a financially sound and policy-aligned investment in the long-term transformation of regional mobility.

5 Recommended solution governance schemes

The long-term governance of the upgraded Divača-Buzet-Pula railway corridor has the potential to be formalised and institutionalised through a dedicated multilevel and cross-border governance model. Given the transnational nature of the corridor, as well as the multiplicity of actors involved in infrastructure ownership, service provision, and territorial planning, a structured and legally recognised governance framework would be essential to ensure coherent, efficient, and sustainable implementation of the investment and its subsequent operations.

To this end, it is recommended that a Joint Railway Corridor Committee be formally established. This committee would function as a permanent coordination body comprising representatives of the Croatian and Slovenian transport ministries, national railway infrastructure managers (HŽ Infrastruktura and Slovenske železnice Infrastruktura), passenger service operators (HŽPP and Slovenske železnice), regional authorities (notably the Istrian County), local governments along the corridor, and relevant EU programme managing bodies. Where appropriate, the participation of cross-border institutions such as the EGTC



(European Grouping of Territorial Cooperation) may also be explored to provide a legal vehicle for cooperation.



The core responsibilities of the Joint Committee would include **strategic project oversight**, monitoring of investment implementation progress, coordination of funding applications, and technical harmonisation of infrastructure and service parameters across both national systems. Beyond the investment phase, the Committee should play a central role in operational governance, encompassing timetable coordination, ticketing system interoperability, rolling stock compatibility, and alignment of service quality standards across the entire corridor.

Furthermore, the governance body should **support marketing and communication strategies** aimed at building a unified brand for the corridor, promoting modal shift, and engaging users through integrated travel information, mobile applications, and joint customer service protocols. These efforts are particularly important in a cross-border context, where service fragmentation and information asymmetries often discourage public transport use.

Active involvement of local and regional authorities is crucial to ensure that broader territorial development goals are aligned with rail infrastructure planning. Their participation should focus on facilitating land use planning around stations, improving local access infrastructure (walking, cycling, bus connections), and embedding the railway service within integrated regional mobility plans. Local governments also serve as essential partners in community outreach, stakeholder engagement, and ensuring that services reflect the needs of both residents and visitors.



To provide legal and financial clarity, the creation of **Memorandum of Understanding (MoUs)** or bilateral intergovernmental agreements is recommended. These instruments should define the scope of cooperation, specify institutional responsibilities, establish financing and cost-sharing arrangements, and set out mechanisms for conflict resolution and performance monitoring. Where cross-border public procurement or joint service delivery is foreseen, such agreements should also address regulatory compatibility and administrative procedures.

In the medium to long term, this governance framework could evolve into a formal **cross-border transport consortium** or joint undertaking, with the capacity to manage shared infrastructure, jointly operate services, and directly contract with service providers. This evolution would reflect growing institutional maturity and would support integrated service delivery models that transcend national administrative boundaries—an essential requirement for delivering seamless, user-centred transport experiences in the EU single market.

Such a governance model not only strengthens accountability and operational effectiveness, but also enhances the credibility of the project in the eyes of international financing institutions and EU funding bodies. Institutional clarity, cross-border cohesion, and transparent decision-making processes are widely recognised as key enablers for the successful mobilisation of structural funds and strategic investments.

In conclusion, the long-term success of the upgraded corridor will depend not only on technical and financial readiness, but equally on the ability to build and maintain a functional and responsive governance architecture one that reflects the shared interests of all parties, supports cross-border integration, and delivers value to users and communities across the region.

6 Recommendations and suggestions for the mainstreaming of pilot lessons learned with solution for territories beyond the pilot action areas

The Solution represents an integrated planning and implementation model/approach for the revitalisation and sustainable development of underutilised cross-border railway corridors. Building on the experience gained through the Divača-Buzet-Pula (SI-HR) feasibility analysis, the solution provides a structured methodology that combines infrastructure modernisation, intermodal integration, low-emission rolling stock, sustainable financing mechanisms and cross-border governance into a coherent implementation approach.

It offers practical guidance for developing evidence-based investment plans, prioritising infrastructure interventions, integrating micromobility solutions for first- and last-mile connectivity, establishing permanent cooperation mechanisms between transport authorities and railway operators, and mobilising national and EU funding instruments, including PSO schemes, CEF, InvestEU and Interreg programmes.

The solution further promotes a phased implementation process supported by technical documentation, cost-benefit analysis, stakeholder engagement and formal institutional agreements, enabling the transition from feasibility planning to operational implementation. As such, it provides a replicable blueprint for peripheral and cross-border regions across Central Europe seeking to modernise underutilised rail assets, strengthen territorial cohesion, accelerate modal shift and align regional mobility investments with the objectives of the European Green Deal and the TEN-T policy.

The lesson learned through the Pilot Action 3 provided a transferable and context-sensitive framework for the revitalisation of underutilised railway corridors, offering a comprehensive, scalable, and



environmentally responsible methodology that can be adapted to a variety of territorial settings. The combination of analytical rigour, stakeholder inclusion, cross-border orientation, and attention to multimodal integration positions this solution as a best-practice model for regions seeking to modernise their transport systems in line with EU sustainability and cohesion goals.

For other European regions considering similar initiatives, several key recommendations emerge from the process which brought to the solution:

First, any revitalisation effort should begin with the development of a robust, evidence-based feasibility study. This study must include detailed demand forecasting, infrastructure diagnostics, rolling stock assessments, environmental impact evaluations, and long-term financial modelling. It should also consider socio-economic scenarios and seasonal variations in mobility demand, particularly in tourism-driven regions. A sound study not only ensures realistic investment planning but also strengthens the credibility of funding applications and policy advocacy.

Second, it is essential to align early with relevant strategic policy frameworks at national and EU levels. Projects that are explicitly anchored in priorities such as the EU Green Deal, the TEN-T network, Sustainable Urban Mobility Plans (SUMPs), or National Transport Strategies are more likely to receive political support and be deemed eligible for EU co-financing instruments such as the Connecting Europe Facility (CEF), Interreg, InvestEU, or the Recovery and Resilience Facility (RRF).

Third, the project design phase must involve broad stakeholder engagement across multiple sectors, including transport, tourism, environmental management, spatial planning, and economic development. Engaging diverse actors from the outset particularly at the regional and local levels builds shared ownership, ensures political buy-in, and enhances the long-term sustainability and relevance of proposed interventions.

Fourth, the revitalisation approach should avoid overambitious, resource-intensive full-system overhauls in favour of phased, modular infrastructure improvements. This strategy not only allows for better risk management and investment scaling, but also enables early demonstration of impact and adaptability. Targeted upgrades such as passing loops, station modernisation, or selective electrification can deliver substantial performance gains without requiring full network transformation.

Fifth, digitalisation should be embedded in the service offering from the outset. Digital tools for ticketing, journey planning, real-time information, and user feedback increase transparency, reduce barriers to entry, and improve user satisfaction. In particular, mobile-friendly interfaces and integrated ticketing systems facilitate multimodal and cross-border travel, fostering a seamless user experience.

Sixth, intermodality should be promoted through light but high-visibility investments. Examples include the installation of bike-sharing stations, micro-mobility hubs, park & ride facilities, pedestrian and cycling access infrastructure, and smart signage systems. These components serve as both enablers of sustainable last-mile connectivity and tangible symbols of innovation that generate public interest and user engagement.

Seventh, where applicable, cross-border cooperation should be actively pursued, especially in regions situated along international corridors or with latent transnational travel demand. Legal and institutional frameworks for cooperation should be explored early, and EU instruments supporting interoperability, harmonisation, and joint infrastructure management should be leveraged to their full extent.

Finally, communication and branding must not be underestimated. The success of a revitalised rail corridor hinges not only on its technical and operational performance but also on its public visibility and perceived value. Marketing campaigns, user engagement strategies, and cross-sector storytelling (e.g. linking rail with regional identity, green tourism, or cultural routes) can significantly enhance ridership and stakeholder support.

By internalising and applying these lessons, regional authorities and their partners across Europe can effectively transform dormant or underperforming railway corridors into engines of sustainable economic



growth, social inclusion, territorial cohesion, and climate resilience. The model developed through Pilot Action 3 demonstrates that even modest, targeted investments when guided by a coherent vision and implemented through a strategic, participatory, and modular approach can yield lasting and systemic benefits for regions and their communities.

Building on the experience gained through Pilot Action 3, the following solution elements can be transferred and applied in territories beyond the pilot action area:

Pilot-specific lessons learned

Pilot Action should be fostered as they generate valuable experience through the feasibility assessment of the Divača-Buzet-Pula railway corridor and the implementation of two intermodal micromobility hubs. In fact, the pilot demonstrated that the combination of evidence-based planning, cross-border institutional cooperation and targeted intermodal investments provides a realistic pathway towards the revitalisation of underused railway corridors. Pilot Action 3 demonstrated that successful revitalisation of cross-border railway corridors depends on evidence-based planning, close institutional cooperation, phased infrastructure development, digitalisation, intermodal integration and continuous stakeholder engagement. These lessons provide the foundation for the transferable solution presented below.

Transferable SUSTANCE Solution

The experience gained has been synthesised into a transferable planning solution for cross-border railway services that can be applied in territories beyond the pilot action area. Rather than describing a location-specific investment, the solution provides a methodology that can support planning, implementation and long-term sustainability of cross-border railway services across Central Europe. The solution represents a planning methodology rather than a location-specific investment package and can therefore be adapted to other cross-border railway corridors across Central Europe.

7 Conclusion: Sustance jointly developed solution to be taken up and/or to be up-scaled

The SUSTANCE Solution here presented provides an integrated planning and implementation approach for the revitalisation of underutilised cross-border railway corridors, transforming the experience gained through the pilot into a replicable methodology for sustainable rail development. By combining evidence-based planning, phased infrastructure investments, innovative low-emission technologies, multimodal integration, coordinated governance and diversified financing, the solution supports public authorities and railway stakeholders in designing and implementing resilient cross-border rail services. Through its mainstreaming and upscaling strategies, the solution contributes to the long-term integration of sustainable mobility into regional and national transport policies, offering a practical blueprint for strengthening territorial cohesion and accelerating the transition towards low-carbon transport systems across Central Europe.

Tipology;

integrated planning and implementation model/approach for the revitalisation and sustainable development of underutilised cross-border railway corridors

Core elements of the solution

The transferable solution is based on seven complementary elements:

- evidence-based feasibility analysis
- integrated infrastructure and service planning



- phased implementation of railway upgrades
- deployment of hybrid or battery-electric rolling stock where full electrification is not economically justified
- integration of micromobility and last-mile solutions
- coordinated governance between infrastructure managers, operators and public authorities
- diversified financing combining EU funds, national resources and PSO mechanisms

Target users

Regional and national transport authorities, railway infrastructure managers, railway operators, municipalities, regional development agencies, ministries responsible for transport, EU programme authorities and organisations involved in sustainable mobility planning.

User needs addressed

Improved cross-border rail connectivity; sustainable low-emission mobility; better intermodal integration; improved last-mile accessibility; modal shift from road to rail; reduction of greenhouse-gas emissions.

Co-design process

The transferable solution was jointly developed through cooperation between IDA, Croatian and Slovenian railway stakeholders and partner organisations from Croatia, Slovenia, Italy and Hungary during the peer review activities and thematic exchanges implemented within SUSTANCE. The resulting methodology therefore combines practical pilot experience with transnational knowledge and can be transferred to territories beyond the pilot area.

Mainstreaming strategy

The solution should be mainstreamed by integrating feasibility study outcomes into national and regional transport plans, embedding cross-border cooperation through Memorandum of Understanding and other institutional agreements, ensuring long-term operation of intermodal facilities and using Public Service Obligation contracts where socially necessary rail services require public support. These actions enable the solution to become part of regular transport planning processes rather than remaining a project specific outcome.

Upscaling strategy

The planning methodology can be replicated on other underutilised cross-border railway corridors. Upscaling should include wider deployment of intermodal infrastructure, adoption of hybrid and battery-electric rolling stock, coordinated use of EU funding instruments such as CEF, Interreg and InvestEU, and establishment of long-term cross-border governance mechanisms.