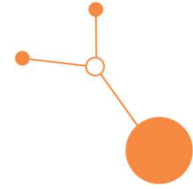


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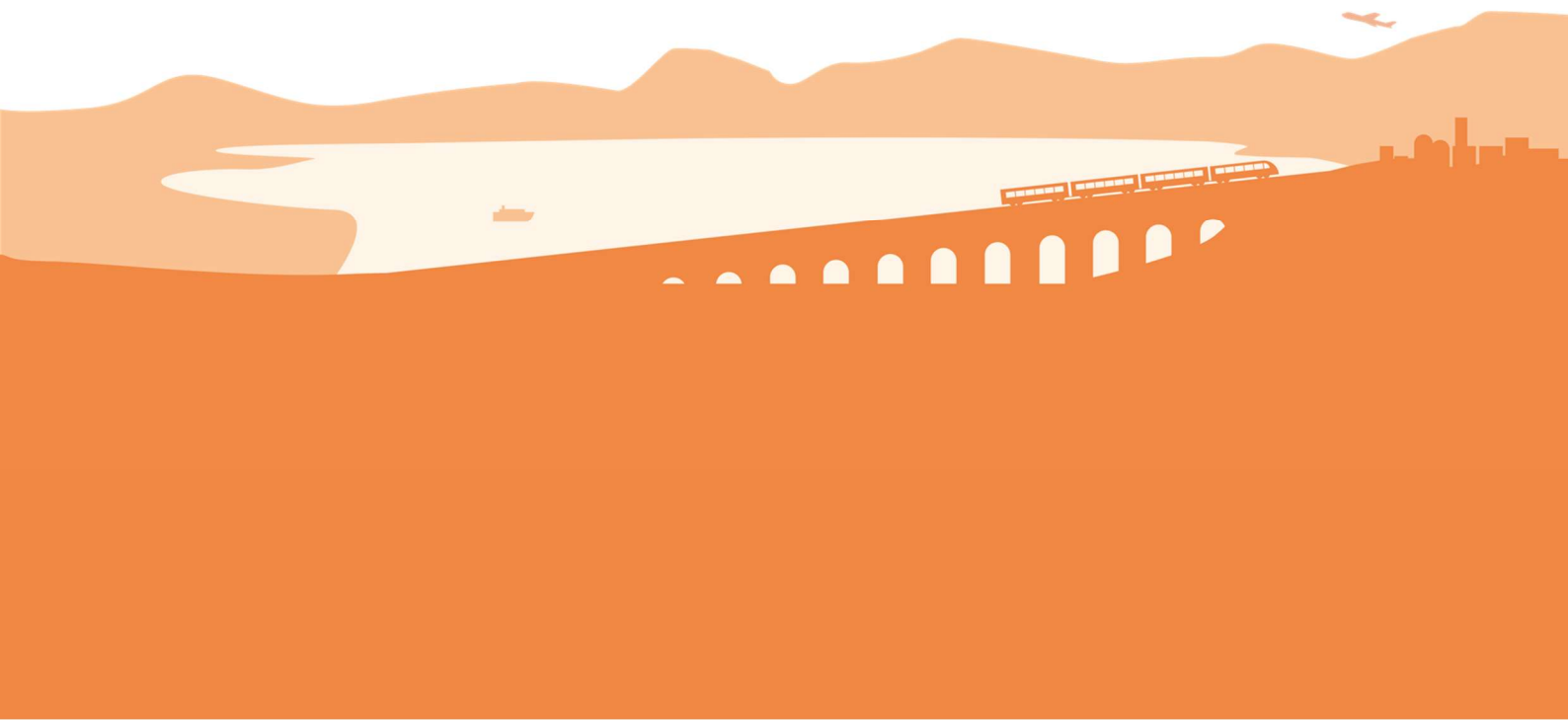
Rail4Regions

# ACTION PLAN

Northern Croatia



Final version  
January 2026





## A. General information

### Partner Organization

- **Name of Partner Organization:** Varaždin County, University North
- **Region Covered:** Northern Croatia

## B. Regional context

### Policy Application Processes

As confirmed during previous stakeholder workshops, 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.

As a result, strategic documents focused on rail freight transport, intermodality and logistics in general are not being developed. Instead, only sustainable mobility plans with a focus on passenger transport (such as those in Koprivnica and Križevci) have been adopted. Consequently, there is no comprehensive transport policy in place to define or promote development measures.

This action plan refers to the following strategic documents:

- Strategija prometnog razvoja Republike Hrvatske 2017. - 2030. (Transport development strategy of the Republic of Croatia 2017-2030)
- Plan razvoja Varaždinske županije 2021. - 2027. (Development plan for the Varaždin County 2021-2027)
- Plan razvoja Koprivničko-križevačke županije za razdoblje 2021.-2027. (Development plan for the Koprivnica-križevci County 2021-2027)
- Prostorni plan Varaždinske županije (Spatial plan of the Varaždin County)
- Prostorni plan Koprivničko-križevačke županije (Spatial plan of the Koprivnica-križevci County)
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This strategic plan also refers to the strategic document at the regional level that addresses intermodal freight transport (albeit only briefly) from 2017, and that is “**Projekt razvoja integriranog prijevoza putnika i intermodalnog prijevoza tereta na području regije sjeverne Hrvatske**“ or “**Project for the Development of Integrated Passenger Transport and Intermodal Freight Transport in the Northern Croatia Region.**“ However, due to its strong emphasis on passenger transport, the document was not operationally adopted as a basis for defining a policy aimed at improving intermodal freight transport.

**In the context of spatial planning**, existing plans more often represent an obstacle to the development of intermodal freight transport and multimodal centers, rather than supporting their implementation.

To sum up, regional-level transport and spatial planning policies are still lacking. At this point, the only option is to refer to national or EU-level policies concerning rail freight and intermodality, or to use existing strategic documents such as “**Nacionalni plan upravljanja željezničkom infrastrukturom i uslužnim objektima i razvoja usluga željezničkog prijevoza za razdoblje do 2030. godine**“ or “**National Plan for**



the management of railway infrastructure and service facilities and the development of railway transport services for the period up to 2030“, Rail freight action plan and so on.

## Main objective of the Regional Action Plan

The Regional Action Plan for Northern Croatia has been established to provide a structured and implementable response to the identified lack of an integrated transport and spatial planning policy framework, particularly in the field of rail freight and multimodal logistics.

While national-level strategies define general transport development objectives, their implementation at regional and local levels remains fragmented and insufficiently coordinated. This Action Plan therefore aims to bridge the gap between strategic policy objectives and concrete regional implementation by defining a coherent set of actions, governance mechanisms, and stakeholder responsibilities.

The Action Plan serves as a practical instrument to:

- strengthen coordination between transport planning, spatial planning, and infrastructure development,
- support the development of rail freight and multimodal logistics solutions aligned with EU and national priorities,
- improve administrative readiness and stakeholder cooperation at regional and local levels,
- and create the necessary preconditions for informed, demand-driven investment decisions.

By focusing on realistic, regionally grounded measures, the Action Plan contributes to the gradual establishment of a more integrated, resilient, and sustainable freight transport system in Northern Croatia.

## Transport and spatial planning actors

### 1. Public authorities - regional - county lever

- Institute for spatial planning of the Varaždin County,
- Koprivnica-Križevci County...

The main administrative body responsible for issuing location and building permits, coordinating spatial plans at county and municipal levels, and providing inputs for strategic infrastructure projects.

- Institute for spatial planning of the Varaždin County,
- Institute for spatial planning of the Koprivnica-križevci County

Develops spatial planning documentation (county, city, and municipal level), conducts analytical studies, and provides expert support in preparing the new generation spatial plan.

- JURA - Javna Ustanova za Regionalni razvoj (Public Institute for Regional Development) - Varaždin County
- PORA - Regionalna razvojna agencija Koprivničko-križevačke županije - Regional Development Agency for Regional Development, Koprivnica-križevci County)



Prepares and monitors the implementation of the County Development Plan and strategic documents which includes strategic goals for infrastructure, mobility, economic and other key development.

## 2. Public authorities - local level

- **Cities (e.g., Varaždin, Ivanec, Lepoglava, Ludbreg, Novi Marof, Varaždinske Toplice, Koprivnica, Križevci, Đurđevac...)**
- **Municipalities (e.g., Martijanec, Sveti Đurđ, Veliki Bukovec, Mali Bukovec, Kalnik, Molve, Virje, Ferdinandovac...)**

**Local self-government units responsible for developing and implementing detailed spatial plans and addressing local transport issues**

## 3. National level Institutions and Companies

- **Hrvatske ceste d.o.o. (Croatian roads limited liability company)**
- **HŽ Putnički prijevoz d.o.o. (Croatian railways limited liability company for passenger transport)**
- **HŽ Infrastruktura d.o.o. (HŽ Infrastructure limited liability lompany for lanagement, laintenance and luilding of lailway lnfrastructure)**

**These institutions participate in infrastructure development, submit project proposals for inclusion in spatial plans, and invest in the modernization of regional road and rail infrastructure.**

## 4. Academic and private sector partners

- **University North - Department of Logistics and Sustainable Mobility Engaged in preparing transport studies for counties, cities, municipalities and supporting them in addressing logistics and freight transport challenges.**

County authorities develop and manage strategic spatial documents and ensure their alignment with national and regional development policies.

Local governments handle detailed implementation and planning on the ground, reflecting local priorities.

The spatial planning institute and the development agency provide analytical, strategic, and coordination support to align spatial and development policies.

Academic and consulting partners contribute expertise in transport, logistics, urban mobility, and land-use planning.

State-owned infrastructure companies initiate and co-fund large-scale transport infrastructure projects, often coordinating with both county and local authorities.

Public consultations and hearings during the adoption or amendment of spatial and transport planning documents (e.g., the new-generation County Spatial Plan currently under development).



Working meetings and thematic roundtables with mayors, municipal heads, and infrastructure companies to align local needs with national priorities.

Calls for proposals and feedback from local governments, citizens, and institutions (e.g., open call for plan inputs).

Collaborative research and transport studies conducted jointly with universities (e.g., studies on freight traffic in eastern Varaždin County).

Lack of synchronization between infrastructure project timelines and spatial planning procedures.

Absence of an integrated regional transport strategy, especially in the field of intermodal logistics and freight transport.

Unequal influence of local stakeholders, where smaller municipalities often have reduced capacity or visibility.

Limited administrative and financial capacity to implement complex spatial and transport projects effectively.



## C. Adopted solutions

Based on local and regional priorities, **three feasible and strategically aligned solutions** have been identified, each with **real potential for implementation** across the broader **northern Croatian economic area**. This area encompasses multiple industrial centres that are **interconnected by a shared logistics and transport infrastructure**.

### 1. Topic - Loading points

**Solution** - Free-access online portal that visualize existing loading points and display existing rail networks, business locations, and industrial areas

### 2. Topic - Industrial Sidings

**Solution** - Adopting specific decision-making tools for existing industrial sidings and areas without them

### 3. Topic - Single Wagon Loads (SWL)

**Solutions** - Involve stakeholders such as policymakers, infrastructure managers, railway undertakings, and customers in workshops to present and discuss solutions to promote Single Wagon Load (SWL):

- Policy and Regulatory Support
- Financial issues, subsidies

These solutions were selected by both counties with high relevance given to cost-effectiveness, operational impact, and potential socio-economic returns.

The selected solutions are in line with national and regional strategic objectives defined by Croatia's transport and spatial planning policies, particularly:

- National Transport Strategy 2017-2030, which supports modal shift from road to rail through enhanced intermodality and digitalisation.
- Integrated Territorial Investments (ITI) and EU Cohesion Policy instruments, which can support digital tools, rail infrastructure upgrades, and public-private partnerships.
- County Development Strategies, which emphasize industrial zone development, smart specialisation, and green logistics.

The Loading Points portal supports digital transformation and smart logistics—key priorities in Croatia's digital and green agenda.

The SWL support mechanisms are compatible with EU funding under the Connecting Europe Facility (CEF) and European Regional Development Fund (ERDF), particularly for rail competitiveness. Industrial sidings and branch line revitalisation are aligned with RFI and HŽ Infrastruktura modernization efforts.

The adopted solutions directly respond to the North Croatia Region's specific transport challenges, including:

- **Environmental sustainability**
  - Reduced road freight results in lower greenhouse gas emissions, particularly significant in the highly industrialised but environmentally sensitive Drava basin region.



- SWL and digital rail logistics contribute to the EU Green Deal goals and national decarbonisation strategies.
- **Socio-economic development**
  - Improving rail freight infrastructure boosts the competitiveness of the region's industrial zones (e.g., Ludbreg, Varaždin, Križevci).
  - Better loading point access and sidings encourage private investments and job creation in logistics and manufacturing sectors.
- **Operational efficiency & safety**
  - Digital tools and SWL subsidies improve freight planning, reducing road congestion and related accidents.
  - Strengthening rail corridors and feeder lines improves system redundancy and long-term transport resilience.



## D. Stakeholder Engagement

Stakeholders were consulted through a structured and participatory approach. The consultation process included the following key elements:

### 1. Online Stakeholder Survey

An online survey was conducted to identify the key challenges and obstacles in developing a quality multimodal transport system in Northern Croatia (Varaždin County/Koprivnica-Križevci County).

- The survey results revealed that the most significant challenges include:
  - Inadequate infrastructure,
  - Lack of political will/strategic planning
  - Organizational and legislative issues

### 2. Thematic Workshop - Goals and Potentials

A thematic workshop session was held with key stakeholders from:

- Local and regional government,
- Private transport operators,
- Infrastructure managers (e.g., HŽ Infrastruktura),
- Relevant ministries and institutions.

The session focused on:

- Identifying the **multimodal development potential** of the region,
- Defining **strategic needs** and **key project priorities**,
- Improving **cooperation and coordination** at the national and regional levels.

### 3. Stakeholder Opinions - Visualized Assessment

A group of participants provided feedback on:

- The **complexity** of developing a quality multimodal system,
- The **importance** of including Varaždin County/Koprivnica-Križevci County/Northern Croatia in the European freight network,
- The **potential** for multimodal development,
- The **importance of their involvement** in the Rail4Regions project

Results showed:

- A very high level of perceived importance for inclusion in the EU freight network
- Strong agreement on the region's high multimodal potential.

### Identification of Needs and Proposals

The workshop led to the identification of specific actions and needs to be included in the Action Plan:

- Construction of **multimodal logistics centers** and **new transshipment points**,
- Stronger involvement of **local government** and **private operators**,
- Better integration with the **European rail and terminal network**,



- Need for **data collection** and **external investment possibilities**,
- Continuous **lobbying at national level** (Ministry, infrastructure operator).
- Local government:
  - City of Ivanec
  - City of Lepoglava
  - City of Križevci
  - City of Koprivnica
  - City of Ludbreg
  - City of Đurđevac
  - Municipality of Mali Bukovec
  - Municipality of Vinica
  - Municipality of Koprivnički Bregi
  - Other municipalities
- Scientific community:
  - University North
  - Faculty of Informatics and Organization (University of Zagreb)
- Road cargo operators
  - Kos Transporti d.o.o.
  - Organization of road freight operators (in Varaždin)
- Railway cargo operators
  - HŽ Cargo
  - ENNA Transport
  - Rail Cargo Carrier Croatia
  - Train Croatia
  - Rail&Sea
  - Transagent Rail
  - Slovenske železnice
- Public authorities - county level
  - Varaždin County
  - Koprivnica - Križevci County
  - JURA - Regional development agency of the Varaždin County
  - PORA - Regional development agency of the Koprivnica-križevci County
- Public authorities - national level
  - Ministry of Maritime Affairs, Transport and Infrastructure



Stakeholders played a crucial role in shaping the proposed solutions and actions outlined in the Action Plan. Their input was gathered through targeted consultation activities, including surveys, workshops, and group discussions, as part of the Rail4Regions initiative. This input directly influenced both the identification of key issues and the development of tailored responses to address those challenges.

### Key Stakeholder Inputs

#### 1. Infrastructural Gaps

- **Input:** Stakeholders highlighted the **inadequacy of existing railway infrastructure**, particularly transloading facilities and access points for freight.
- **Influence:** This directly led to the recommendation for **investments in transshipment infrastructure and modernization of railway stations**.

#### 2. Spatial and Land-Use Limitations

- **Input:** Stakeholders raised concerns about the **lack of available land** near industrial zones for the development of multimodal terminals.
- **Influence:** The Action Plan includes the need for **revised spatial planning** at the local level and **cross-jurisdictional coordination** to facilitate land access.

#### 3. Lack of Strategic Planning and Coordination

- **Input:** Feedback emphasized the **absence of strategic direction** and **insufficient collaboration** between the national ministry, HŽ Infrastructure, and local authorities.
- **Influence:** The plan proposes the creation of a **national coordination body or working group** to align all relevant actors and support the development of multimodal systems.

#### 4. Legislative and Procedural Barriers

- **Input:** Stakeholders pointed out delays and inefficiencies in obtaining approvals for infrastructure projects due to **complex spatial planning procedures**.
- **Influence:** Recommendations include **streamlining permitting processes** and **updating legal frameworks** to speed up implementation.

#### 5. Economic and Investment Challenges

- **Input:** While finance was not seen as the primary obstacle, stakeholders noted the **imbalance in investment priorities**, with greater funding directed toward tourism infrastructure.
- **Influence:** The plan promotes **stronger advocacy and lobbying** for **multimodal transport funding**, leveraging the EU's commitment to sustainable logistics.

#### 6. High Multimodal Potential

- **Input:** Stakeholders recognized the **strategic position of Northern Croatia** in the European freight network.
- **Influence:** This reinforced the proposal for the **development of multimodal logistics centres and integration with EU transport corridors**.

### How Stakeholder Input Shaped the Action Plan

Stakeholder feedback was instrumental in:

- **Prioritizing actions** that address the most pressing infrastructural, spatial, and procedural barriers.



- **Defining strategic goals**, such as improved national coordination, infrastructure development, and EU-level integration.
- **Identifying concrete measures**, including the need for:
  - Construction of new logistics and transshipment facilities,
  - Improved local and national governance alignment,
  - Engagement of private operators and external investors,
  - Continued advocacy at the national level.



## E. Cross-cutting Governance and Implementation Principles

The successful implementation of the Regional Action Plan depends not only on individual investment measures, but also on reinforcing the structural and procedural foundations that enable coordinated action across governance levels. This is particularly relevant in the context of Croatia's currently fragmented transport and spatial planning framework.

### 1. Mandating Strategic Policy Development

The Action Plan supports the gradual development of a more coherent regional approach to rail freight and multimodal logistics by promoting coordination mechanisms and advisory structures (notably Action 4) that can inform future strategic policy development at national and regional levels.

### 2. Synchronization of Planning and Infrastructure Timelines

A key principle of the Action Plan is the alignment of spatial planning procedures with infrastructure development timelines. Actions related to multimodal points, industrial sidings, and terminals explicitly require early integration into county and local spatial plans in order to reduce implementation delays and regulatory bottlenecks.

### 3. Addressing Administrative Capacity

The Action Plan acknowledges varying administrative capacities among regional and local authorities. It therefore relies on existing regional development agencies, public spatial planning institutes, and academic partners (University North) to provide analytical support, technical expertise, and coordination capacity throughout the implementation process.

### 4. Formalisation of Stakeholder Commitment

Stakeholder involvement under this Action Plan goes beyond consultation. The implementation framework foresees the formalisation of cooperation through written agreements, memoranda of understanding, and structured working groups, ensuring continuity, accountability, and long-term engagement of public and private actors.



## F. Proposed actions

The defined measures and adopted project solutions primarily focus on several key areas:

### Group I - “Loading Points”

- construction of multimodal centres
- revitalization of smaller multimodal points
- establishment of a regional fund for the construction and renovation of multimodal points
- integration of multimodal points and zones into regional and local spatial plans
- promotion of “mapping” multimodal transshipment points using the online WebGIS tool RailhubFinder.

### Group II - “Industrial Sidings”

- construction of industrial tracks for economic zones near railway lines
- construction of an industrial railway for gravel pits in Varaždin County (based on a study prepared by the University of the North)
- establishment of a regional fund for co-financing the construction and renovation of industrial tracks
- integration of multimodal zones into spatial plans at both regional and local levels.

### Group III - “Single Wagon Loads”

- regional co-financing of single wagon loads, primarily for multimodal freight transport
- national co-financing of single wagon loads, primarily for multimodal freight transport

### Group IV - “Revitalization of Branch Lines”

- introduction and contracting of public shunting services on local lines, as well as servicing terminals and industrial tracks with such services

### Other Measures

- Additional important measures include organizing workshops for key stakeholders to promote sustainable freight transport,
- conducting consultations for decision-makers on the further development of freight multimodality,
- establishing a university-based scientific centre to support both the development of multimodal freight transport and local rail freight services.



## Action #1: Integration of Multimodal Points into Spatial Planning using RailHub Finder

- Objective: To promote the development and revitalization of multimodal transshipment points in Northern Croatia by mapping and integrating them into regional and local spatial plans using the online RailHubFinder WebGIS tool.
- Description: The action aims to identify, map, and promote potential and existing multimodal loading points through RailHubFinder. These points will be made visible on an interactive WebGIS platform, helping local and regional authorities incorporate them into spatial and development plans. This aligns with the regional challenge of limited visibility and strategic positioning of multimodal points, identified through stakeholder consultations.
- The multi-level public planning framework relevant to this action, covering:
  - European Level:
    - European Green Deal: Encourages modal shift to rail for decarbonization
    - TEN-T Regulation: Supports development of strategic multimodal logistics platforms
  - National Level:
    - Croatian Transport Development Strategy
    - National Spatial Planning Guidelines
  - Regional Level:
    - Spatial Plans of Varaždin County, Koprivnica-Križevci County, cities and municipalities
    - Regional Development Plans focused on sustainable transport infrastructure
- The private planning framework relevant to this action, covering:

Private logistics companies and infrastructure managers (e.g., terminals, freight operators) can register on the RailHubFinder, enhancing collaboration and visibility of their facilities. By making transshipment points publicly accessible and connected to spatial plans, the private sector can advocate for infrastructure improvements and engage in joint investment projects.
- Activities:
  - Stakeholder workshop on mapping multimodal points
  - Data collection of potential loading sites
  - Integration of metadata (location, infrastructure status, services)
  - GIS data entry into RailHubFinder
  - Coordination with local spatial planning authorities
  - Promotion campaign targeting operators and planners
  - Regular updates and feedback loop from users
- Responsible Actors:
  - Varaždin County
  - Koprivnica-Križevci County



- Public Institution for the Regional Development of the Varaždin County,
- Public Institution for the Regional Development of the Koprivnica-Križevci County
- Institute for spatial planning of the Varaždin County,
- Department for spatial planning of Koprivnica-Križevci County
- Local spatial planning departments
- Private terminal operators' cargo and logistics companies
- Rail4Regions technical team
- University North
- Transport planning companies
- ...
- Challenges and Requirements
  - Political:  
Need for alignment between planning departments and transport stakeholders to adopt RailHubFinder outputs into official spatial plans.
    - Mitigation: Continuous engagement through working groups and workshops
  - Environmental:  
No direct environmental impact from digital mapping but supports environmental goals by encouraging rail use over road.
  - Financial:  
Low implementation cost. Funding primarily needed for technical integration and training of planners.
  - Regulatory:  
Must comply with GDPR and local spatial planning legislation for data usage and publication
- Financing Resources:
  - EU Interreg Central Europe Program
  - National Development Fund (Croatia)
  - Regional Development Fund (Croatia)
  - Local government planning budgets
- Timeframe:
  - Start Date: [01/2026]
  - End Date: [01/2027]
- Risks and Mitigation:  
Risk: Low adoption by local governments
  - Mitigation: Direct involvement through regional workshops  
Risk: Incomplete data on existing infrastructure
  - Mitigation: Partnership with universities and private operators for data sourcing



## Action #2: Construction of Industrial Sidings for Economic Zones Near Railway Lines

- **Objective:** To improve the direct connection between industrial zones and the rail network in Northern Croatia by constructing new industrial sidings, enabling more efficient freight transport and supporting modal shift from road to rail.
- **Description:** This action proposes the construction of dedicated industrial railway sidings for existing and planned economic zones located near the rail network in Varaždin and Koprivnica-Križevci counties. The goal is to provide logistics efficiency, reduce road freight dependency, and stimulate regional economic growth through rail accessibility. This action responds directly to stakeholder-identified challenges such as poor rail connectivity of production areas and underutilized railway potential.

The initiative is based in part on the **University of the North's study** for gravel pits in Varaždin County and is to be expanded to include other priority zones such as Ludbreg, Križevci, and surrounding industrial clusters.

- The multi-level public planning framework relevant to this action, covering:
  - **European Level:**
    - European Green Deal: Supports modal shift for freight to reduce emissions.
    - TEN-T Regulation: Aims to integrate last-mile infrastructure with main corridors.
  - **National Level:**
    - National Rail Infrastructure Development Plan
    - Croatian Smart Specialisation Strategy (S3), promoting logistics and green mobility
  - **Regional Level:**
    - Spatial Plans of Varaždin County, Koprivnica-Križevci County, cities and municipalities
    - County Economic Development Plans, emphasizing industrial growth and infrastructure access
- The private planning framework relevant to this action, covering:

Private logistics operators, industrial zone developers, and large manufacturing firms are key actors in planning and funding siding connections. Several companies have expressed interest in co-financing infrastructure that would lower their logistics costs and improve competitiveness.

Synergies are possible with:

  - Freight operators (e.g., HŽ Cargo, private hauliers)
  - Local investors in production zones
  - Real estate developers managing industrial zones

Aligning these interests with county-level public investment can create PPP models for rail siding development.
- **Activities:**
  - Selection of target industrial zones (based on spatial proximity and freight potential)
  - Technical and feasibility studies for each siding location
  - Coordination with HŽ Infrastruktura and Ministry of Maritime,
  - Spatial plan amendments (if needed)



- Securing co-financing from regional fund and private sector
- Construction permitting process
- Construction and commissioning of sidings
- Integration into national rail operations
- Responsible Actors:
  - Varaždin County
  - Koprivnica-Križevci County
  - Public Institution for the Regional Development of the Varaždin County
  - Public Institution for the Regional Development of the Koprivnica-Križevci County
  - Institute for spatial planning of the Varaždin County
  - Department for spatial planning of Koprivnica-Križevci County
  - Ministry of Maritime Affairs, Transport and Infrastructure
  - Cities and municipalities (Varaždin, Križevci, Ludbreg...)
  - Local spatial planning departments
  - Private terminal operators' cargo and logistics companies
  - University North
  - Transport planning companies
  - HŽ Infrastruktura (HŽ Infrastructure, limited liability company for management, maintenance and building of railway infrastructure)
  - Private sector stakeholders in industrial zones
  - ...
- Challenges and Requirements
  - Political: *Need for consensus across public agencies and private investors.*
    - Mitigation: *Early-stage working group formation and MoUs for cooperation*
  - Environmental:  
Compliance with EU EIA (Environmental Impact Assessment) requirements.
    - Mitigation: *Early environmental screening and use of existing brownfield rail corridors*
  - Financial:  
High initial capital costs for construction and signalling.
    - Mitigation: *Use of blended financing (regional fund, EU funds, and private contributions).*
  - Regulatory:  
Must follow Croatian railway law and construction permitting processes.
    - Mitigation: *Engage legal experts early and maintain strong coordination with HŽ Infrastruktura.*
- Financing Resources:
  - EU Funds (e.g., Connecting Europe Facility, ERDF, Interreg)
  - Regional Fund for Industrial Sidings (potentially be established)



- **Private sector investment** (PPP or co-financing models)
- National rail infrastructure budget allocations
- **Timeframe:**
  - Start Date: [01/2026]
  - End Date: [01/2028]
- **Risks and Mitigation:**
  - Risk:** Lack of investor interest in co-financing
    - Mitigation: Offer incentives or cost-sharing models through the regional fund
  - Risk:** Delay in spatial plan updates
    - Mitigation: Early coordination with planning departments
  - Risk:** Low rail freight demand post-construction
    - Mitigation: Secure usage contracts or service agreements with freight operators before investment

## Action #3: Construction of a multimodal container terminal in the region

- **Objective:** To improve shift of multimodal units (goods) from road to rail by allowing the possibility to transload container and other multimodal units from trucks to trains and vice-versa.
- **Description:** This action proposes the construction of a multimodal container terminal in the region of Varaždin and also in the region of Koprivnica. In Varaždin there are several freight operators and forwarders interested in building and running a multimodal container terminal. This action should help develop already existing plans to help to develop and built a multimodal container terminal in the industrial zone of Brezje in Varaždin. Also, this action will help to plan and built a multimodal container terminal in the Danica industrial zone in Koprivnica, at the area around an existing industrial siding. This action will help to develop new loading point in two micro-regions, Varaždin and Koprivnica, and both actions can use the knowledge gained from Rail4Regions project regarding the operations, machines and other facilities needed to successfully run a multimodal container center as a loading point for rail transport.
- The multi-level public planning framework relevant to this action, covering:
  - **European Level:**
    - European Green Deal: Supports modal shift for freight to reduce emissions.
    - TEN-T Regulation: Aims to integrate last-mile infrastructure with main corridors.
  - **National Level:**
    - Transport development strategy of the Republic of Croatia 2017-2030
  - **Regional Level:**
    - Spatial Plans of Varaždin County, Koprivnica-Križevci County, cities and municipalities
    - County Economic Development Plans, emphasizing industrial growth and infrastructure access
    - Plan razvoja Varaždinske županije za razdoblje 2021.-27.
    - Plan razvoja Koprivničko-križevačke županije za razdoblje 2021.-27.
- The private planning framework relevant to this action, covering:



Private logistics operators, industrial zone developers, and large manufacturing firms are key actors in planning and funding siding connections. Several companies have expressed interest in co-financing infrastructure that would lower their logistics costs and improve competitiveness.

Synergies are possible with:

- Freight operators (e.g., HŽ Cargo, other rail freight and road freight operators)
- Real estate developers managing industrial zones

Aligning these interests with county-level public investment can create PPP models for rail siding development.

■ Activities:

- Selection of target industrial zones (based on spatial proximity and freight potential)
- Technical and feasibility studies for each siding location
- Coordination with HŽ Infrastruktura and Ministry of Maritime,
- Spatial plan amendments (if needed)
- Securing co-financing from regional fund and private sector
- Construction permitting process
- Construction and commissioning of sidings
- Integration into national rail operations

■ Responsible Actors:

- Varaždin County
- Koprivnica-Križevci County
- Public Institution for the Regional Development of the Varaždin County
- Public Institution for the Regional Development of the Koprivnica-Križevci County
- Institute for spatial planning of the Varaždin County
- Department for spatial planning of Koprivnica-Križevci County
- Ministry of Maritime Affairs, Transport and Infrastructure
- Cities and municipalities (Varaždin, Križevci, Ludbreg...)
- Local spatial planning departments
- Private terminal operators' cargo and logistics companies
- University North
- Transport planning companies
- HŽ Infrastruktura (**HŽ Infrastructure, limited liability company for management, maintenance and building of railway infrastructure**)
- Private sector stakeholders in industrial zones
- ...



- Challenges and Requirements
  - Political:  
*Need for consensus across public agencies and private investors.*  
- Mitigation: *Early-stage working group formation and MoUs for cooperation*
  - Environmental:  
Compliance with EU EIA (Environmental Impact Assessment) requirements.  
- Mitigation: Early environmental screening
  - Financial:  
High initial capital costs for construction and signalling.  
- Mitigation: Use of blended financing (regional fund, EU funds, and private contributions).
  - Regulatory:  
Must follow Croatian railway law and construction permitting processes.  
- Mitigation: Engage legal experts early and maintain strong coordination with HŽ Infrastruktura.
- Financing Resources:
  - EU Funds (e.g., Connecting Europe Facility, ERDF, Interreg)
  - Regional Fund for Industrial Sidings (potentially be established)
  - Private sector investment (PPP or co-financing models)
  - National rail infrastructure budget allocations
- Timeframe:
  - Start Date: [06/2026]
  - End Date: [06/2029]
- Risks and Mitigation:  
**Risk:** Delay in spatial plan updates  
- Mitigation: Early coordination with planning departments  
  
**Risk:** Low rail freight demand post-construction  
- Mitigation: Secure usage contracts or service agreements with freight operators before investment

## Action #4: Establishing an Advisory board for Smart and Green Multimodal Regional Logistics and rail freight connections to TEN-T corridors

- Objective: To establish a permanent advisory and coordination body that supports smart and green multimodal logistics development in Northern Croatia, with a specific focus on assessing, monitoring, and adapting to changing rail freight demand prior to and during the implementation of infrastructure and policy measures.
- Description: This action is intended as a preparatory and enabling measure, ensuring that decisions related to rail freight infrastructure and services are based on professional and scientific approach, clear demand assessment, stakeholder input, long-term sustainability and long-term market trends.



- The multi-level public planning framework relevant to this action, covering:
  - European Level:
    - European Green Deal: Supports modal shift for freight to reduce emissions.
  - National Level:
    - Transport development strategy of the Republic of Croatia 2017-2030
  - Regional Level:
    - Spatial Plans of Varaždin County, Koprivnica-Križevci County, cities and municipalities
    - County Economic Development Plans, emphasizing industrial growth and infrastructure access
    - Plan razvoja Varaždinske županije za razdoblje 2021.-27.
    - Plan razvoja Koprivničko-križevačke županije za razdoblje 2021.-27.
- The private planning framework relevant to this action, covering:

Establish cooperation private and public freight operators and shippers and include their representatives into this body
- Activities:
  - Lobbying for implementation of this action plan
  - Lobbying for the development and implementation of all smart and green initiatives for Smart and Green Multimodal Logistics
  - Lobbying for establishing operational and infrastructure connections of local regions to TEN-T corridors by rail,
  - Including specific and modern knowledge into University Curriculums (especially for the Department of Logistics and Sustainable Mobility at University North)
  - Including Rail4Regions knowledge base into University Curriculums (especially for the Department of Logistics and Sustainable Mobility at University North)
  - Advising students and other people in pursuing the career in logistics and rail freight transport
  - Writing yearly reports on the development of Smart and Green Multimodal Regional Logistics and rail freight connections to TEN-T corridors
- Responsible Actors:
  - University North
  - Varaždin County
  - Koprivnica-Križevci County
  - Institute for spatial planning of the Varaždin County
  - Department for spatial planning of Koprivnica-Križevci County
  - Ministry of Maritime Affairs, Transport and Infrastructure
  - Cities and municipalities (Varaždin, Križevci, Ludbreg...)
  - Local spatial planning departments
  - Private terminal operators' cargo and logistics companies
  - Transport planning companies



- HŽ Infrastruktura (**HŽ Infrastructure, limited liability company for management, maintenance and building of railway infrastructure**)
- Private sector stakeholders in industrial zones
- ...
- Challenges and Requirements
  - Political:  
*Need to keep the body when political stakeholder change (EG elections).*  
- *Mitigation: Secure written agreements to secure the body's longevity*
  - Environmental:  
Compliance with EU EIA (Environmental Impact Assessment) requirements.  
- *Mitigation: Early environmental for positive development of the body's work.*
  - Financial:  
Secure long term financial support for the body.  
- *Mitigation: Secure written agreements to secure the body's longevity*
  - Regulatory:  
None
- Financing Resources:
  - **EU Funds**
- Timeframe:
  - **Phase 1** - Rail Freight Demand Assessment and Strategic Alignment [01/2026 - 12/2028]
    - > Analysis of current and projected rail freight demand
    - > Monitoring of market trends and logistics needs
    - > Structured dialogue with freight operators, shippers, and infrastructure managers
    - > Alignment of planned actions with identified demand
  - **Phase 2** - Advisory Support and Long-term Coordination [01/2029 - 06/2050]
    - > Continuous advisory role during implementation of infrastructure and policy measures
    - > Periodic updates of demand assessments
    - > Support to regional and national authorities in adapting measures to evolving freight patterns
- Risks and Mitigation:  
**Risk:** Low interest of stakeholders to work with the body  
- *Mitigation: Secure the support from local authorities and provide incentives to work in the body*
- Formalisation of stakeholder cooperation through memoranda of understanding, letters of intent, or written cooperation agreements.
- Establishment of a formally mandated working group with defined roles, responsibilities, and reporting obligations.



## G. Monitoring and Evaluation

### Monitoring Mechanism

□ **Monitoring Authority:**

The implementation of the Action Plan will be monitored by a designated working group comprising representatives from:

- County of Varaždin
- County of Koprivnica-Križevci
- Public Institution for the Regional Development of the Varaždin County
- Public Institution for the Regional Development of the Koprivnica-Križevci County
- Institute for spatial planning of the Varaždin County
- Department for spatial planning of Koprivnica-Križevci County
- Ministry of Maritime Affairs, Transport and Infrastructure
- HŽ Infrastruktura
- University of the North (for technical and research support)
- Private sector stakeholders (logistics and industrial operators)
- Transport planning private sector
- ...

□ **Monitoring Approach:**

A two-tiered monitoring system will be established:

1. **Project-Level Monitoring** - Focused on individual actions (e.g., completion of industrial sidings, integration into spatial plans).
2. **Plan-Level Monitoring** - Assessing overall progress in shifting freight from road to rail and enhancing multimodal connectivity.

Particular attention will be given to the alignment between identified rail freight demand, spatial planning decisions, and the timing of infrastructure implementation.

**Review Schedule:**

- Quarterly Progress Reports during active project phases
- Mid-Term Evaluation: ~24 months after launch
- Final Assessment: At the end of the Action Plan implementation period
- Post-implementation Review: ~2 years after completion to assess long-term impacts



## Performance Indicators (KPIs)

Indicator	Target / Measurement
Increase in rail freight tonnage	+15-20% by 2029 in comparison to 2024 baseline
Number of operational multimodal points	At least 3 new/revitalized sites integrated
Number of industrial sidings constructed	Minimum 2 new sidings connected to rail network
Use of RailHubFinder (regional level)	> 20 local users registered and active
Emission reduction in freight corridors	10-15% CO <sub>2</sub> reduction (estimated, 2029)
Modal shift (road to rail freight share)	5-8% increase in railway share of total freight transported in tonne-kilometres (TKM)
Private sector participation in co-financing	≥ 3 industrial partners engaged in investments
Integration into regional spatial plans	100% of relevant counties by 2027

## H. Conclusion and Next Steps

The implementation of the Action Plan is expected to:

- Improve connectivity of industrial zones to the rail network
- Reduce dependency on road freight and associated externalities
- Enhance regional attractiveness for logistics and manufacturing investment
- Modernize regional and local spatial plans with integrated multimodal strategies

Area	Benefit
Social	Less road congestion, improved road safety, reduced noise in urban areas
Transportation	Increased efficiency and reliability of freight transport
Environmental	Reduced emissions, promotion of rail as a sustainable transport mode



Area	Benefit
Business	Lower logistics costs, better access to European markets
Industry	Enhanced supply chain integration, better positioning of production centers

### Follow-up Activities

- **Institutionalization of Monitoring Group**  
Permanent working group to oversee implementation, align public-private goals, and manage updates.
- **Integration with National and EU Frameworks**
  - Link with TEN-T corridor developments and national investment strategies
  - Apply for further funding via CEF, ERDF, and new EU Green Deal calls
- **Capacity Building and Training**
  - Workshops and educational programs in cooperation with the University of the North
  - Knowledge transfer to planning departments and municipalities
- **Sustainability Measures**
  - Update RailHubFinder with new data regularly
  - Secure long-term maintenance budgets for sidings and multimodal points
  - Evaluate potential for scaling to other Croatian counties