

# Integrated Freight Services and TEN-T Corridors

Connecting transport networks for efficient freight movement

## **Overview of Integrated Freight Services**

#### **Multimodal Transport Integration**

Combining rail, road, and maritime transport creates efficient and seamless logistics chains across Europe.

#### Slovenia's Strategic Role

Slovenia aims to become a smart, sustainable, intermodal, and globally competitive logistics hub. Positioned at the crossroads of European transport corridors, the country will leverage its geostrategic location to drive innovation, resilience, and green transition.

#### **TEN-T Corridors Importance**

Slovenia lies at the intersection of key European corridors, historically serving as a vital link between North-South and East-West trade flows. Despite recent setbacks in TEN-T corridor inclusion, Slovenia must reclaim its role by creating a favorable environment for logistics, which contributes 8% to national GDP.

#### **Financial Support Instruments**

Collaboration between government, industry associations, and universities is essential. Public investments and EU funds (e.g., Cohesion Fund, CEF) will support infrastructure and innovation.



# **Strategic Importance of TEN-T Corridors**

CORRIDOR	KEY ROUTE	PURPOSE
Baltic-Adriatic	Gdansk – Vienna – Ljubljana – Koper	Connects northern Europe to Adriatic ports
Mediterranean	Spain – France – Italy – Slovenia – Hungary	Facilitates east-west trade and multimodal integration

### **Growth Trends and Market Share**

#### **Robust Market Growth**

Combined Transport expanded by 59% from 2010 to 2023, outperforming conventional rail freight.

#### **Dominant Market Share**

By 2023, Combined Transport accounted for about 50% of Europe's total rail freight market.

#### **Resilience Amid Challenges**

CT grew 8.7% between 2018-2023 despite pandemic and energy crisis, while overall rail freight declined.

#### **Continental CT Expansion**

Continental CT focusing on swap bodies and semitrailers grew 88% since 2013, leading freight innovations.



### **Forecast and Growth Drivers**

#### **Market Growth Outlook**

Combined Transport in Europe is forecasted to grow about 3% annually until 2040, nearly doubling continental CT volume.

#### **TEN-T Corridor Expansion**

Expansion of TEN-T corridors will standardize infrastructure like train length and electrification, enabling efficient crossborder operations.

#### Digitalization and eFTI Regulation

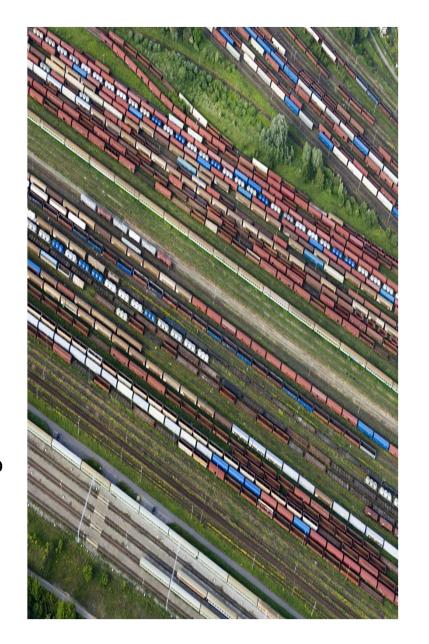
Digital initiatives such as the eFTI Regulation improve data exchange and transparency in freight transport operations.

#### **Stakeholder Collaboration**

Policymakers, operators, and shippers must work together to address challenges like capacity and energy costs.

#### **Sustainability and Driver Shortage**

Environmental commitments and lorry driver shortages drive modal shift from road to rail, boosting CT growth.



### Role of Port of Koper in Intermodal Transport

#### **Strategic Location**

Port of Koper is located at the crossroads of Baltic-Adriatic and Mediterranean corridors, enabling key European trade routes.

#### **Improved Hinterland Connectivity**

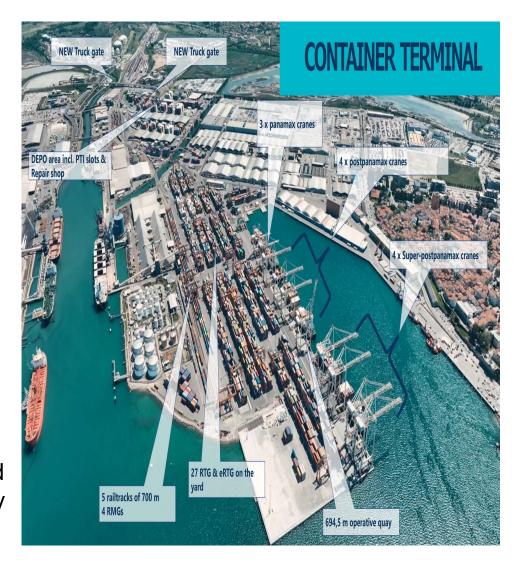
Second rail track between Divača and Koper enhances hinterland connections, cutting transit times and boosting reliability.

#### **Intermodal Operations**

Integration with rail networks supports efficient intermodal transport, encouraging modal shift and reducing emissions.

#### **Digitalization and Efficiency**

Digital initiatives like Port Community Systems and electronic freight information improve transparency and operational efficiency.



### **Key Infrastructure Projects**

#### Divača-Koper Second Rail Track

This project doubles rail capacity to the port, reducing congestion and improving freight transport reliability.

#### **Rail Line Modernization**

Upgrades to Maribor–Šentilj and Pragersko rail lines align with TEN-T standards for speed and interoperability.

#### **Cross-Border Data Interoperability**

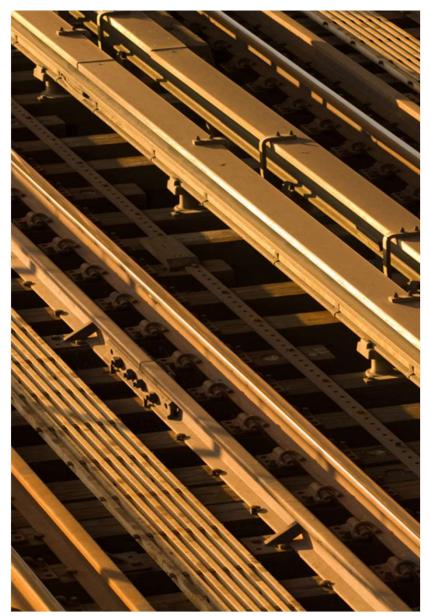
Linking Danube project promotes integrated multimodal information systems for seamless transport information exchange.

#### **Support for Sustainable Growth**

Projects aim to eliminate bottlenecks, increase throughput, and foster sustainable economic growth in line with EU goals.

#### **Targets**

Rail freight share +20%, CO<sub>2</sub> emissions -30% by 2035, export of logistics services +25%, and 80% digitalization of processes.



## **Role in Sustainable Logistics**

#### **Environmental Impact Reduction**

Combined Transport reduces energy use by up to 70% compared to road-only freight, supporting climate goals.

#### **Greenhouse Gas Emissions Cut**

CT cuts greenhouse gas emissions by up to 90%, supporting EU climate goals and the Green Deal.

#### **Traffic Congestion and Safety**

Shifting heavy freight from roads to rail reduces congestion, improves safety by reducing accidents and reduces cargo theft risks on European highways.

#### **Supply Chain Resilience**

Multimodal networks in CT increase supply chain resilience by reducing vulnerability to disruptions and fosters job creation in terminal and rail services, boosting regional economies.



Infrastructure, Technology, and Market Dynamics

#### Infrastructure Bottlenecks

Closures and maintenance on key rail corridors limit capacity and reliability in combined transport networks.

#### **Driver Shortage and Opportunities**

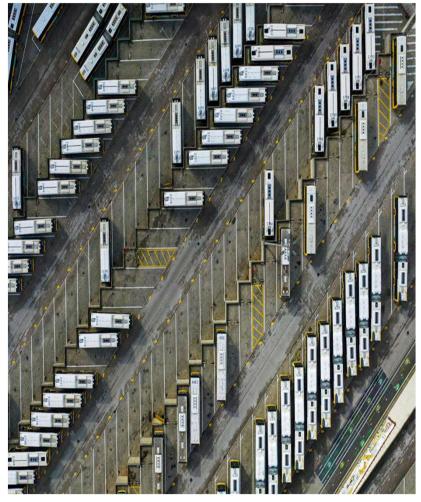
With over 233,000 lorry driver vacancies, shifting freight to rail can reduce road transport pressure.

#### **Operational Costs and Risks**

Rising energy costs and geopolitical issues disrupt supply chains and increase transport expenses.

#### **Need for Transhipment Technologies**

90% of semi-trailers are non-craneable, requiring investment in horizontal transhipment solutions.



### **EU Targets and Legislative Framework**

#### **Ambitious Rail Freight Target**

EU aims to increase rail freight modal share to 30% by 2030 from the current 17%.

#### Legislative Initiatives

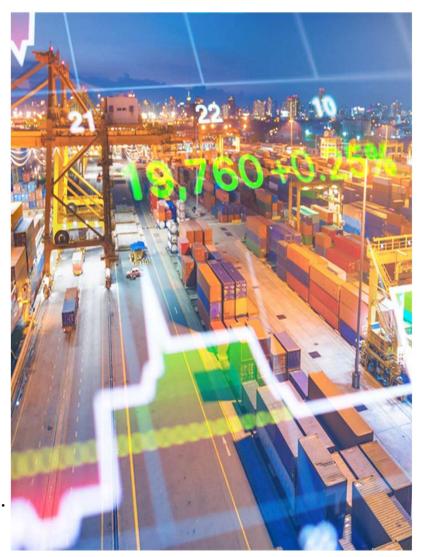
Key laws include Combined Transport Directive revision and Rail Infrastructure Capacity Management Regulation to optimize operations.

#### **TEN-T Standards**

TEN-T standards harmonize infrastructure with 740m train lengths, 22.5t axle loads, full electrification, and ERTMS deployment.

#### **Digitalization and Sustainability**

Regulations like eFTI and CountEmissionsEU promote digital freight management and environmental accountability.



### **Future Trends and Developments**

#### **Digitalization and Data Use**

ICT and logistics data enable dynamic transport management, real-time cargo tracking, and better capacity utilization.

#### **Multimodal Connectivity**

TEN-T core network corridors boost efficient freight movement by enhancing multimodal transport across Europe.

#### Infrastructure and Investment

Achieving Transport White Paper goals requires coordinated stakeholder action and significant infrastructure investment.

#### **Sustainable Innovations**

New propulsion technologies and alternative fuels are vital to meet logistics sustainability targets. Policy and research efforts emphasize efficiency, emission reduction, and innovation through technology and partnerships.

#### **Emerging Logistics Concepts**

Nearshore production and 3D printing reshape transport demand, requiring adaptive logistics systems. Smart and sustainable logistics maintain EU competitiveness and address environmental and societal challenges effectively.



### Conclusion

Slovenia's unique geostrategic position offers an opportunity to become a leading logistics hub in Central Europe. By leveraging digitalization, sustainability, and intermodal connectivity, Slovenia can secure its place on the European logistics map.

#### The strategy focuses:

- 1. Digital Transformation: Implement AI, IoT, and blockchain platforms for real-time cargo tracking and automated warehouses.
- 2. Sustainability: Promote Combined Transport and electric, hydrogen fleets, rail transport, and compliance with EU emission targets.
- 3. Intermodality: Strengthen links between Port of Koper, rail, and highways; build multimodal hubs in Ljubljana, Maribor, and Celje.
- 4. Workforce Development: Enhance education programs, digital skills, and attract talent.
- 5. Resilience: Develop local supply chains and crisis logistics scenarios.



# Thank You Very Much for Your Attention

