

POTENTIAL OF THE BALTIC LOOP CONNECTIONS AND SOLUTIONS FOR INLAND AND CROSS-BORDER MOBILITY OF THE RIGA METROPOLITAN AREA

WP2 – Non-technical solutions for cross-border corridors

Corridors: Southern corridor (sections Ventspils – Riga, Riga bypass, Riga – Valka)

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European Union European Regional Development Fund

Summary

By AC Konsultācijas, Ltd

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Potential of the Baltic loop connections and solutions for inland and cross-border mobility of the Riga metropolitan area

List of abbreviations

- BSR Baltic Sea Region
- **CIS** Commonwealth of Independent States
- **CSB** Central Statistical Bureau
- EU European Union
- **GIS** Geographical Information System
- JSC joint stock company
- LSR Latvian State Roads
- PV Pasažieru vilciens, JSC (latvian 'Passenger Train')
- Res. residents
- RMA Riga Metropolitan Area
- **RPR** Riga Planning Region
- RTA Road Transport Administration
- **TEN-T** Trans-European Transport Network
- VASAB Vision and Strategies around the Baltic Sea
- VPR Vidzeme Planning Region





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Glossary

Intermodality, intermodal – possibility to change modes of transport (ships, railway transport and vehicles) without having to unload / load the contents of containers (Vinculum, n.d.).

Mobility points – transport hubs of different levels with the basic task of providing each user with convenient connections between different modes of transport together, offering alternative modes of transport (including shared transport) and reducing the need to use private road transport. The purpose of the mobility point is to facilitate transition from one mode of transport to another, ensuring a convenient connection between the destinations and providing a diverse support infrastructure for the "last kilometer" (Riga Planning Region (carried out by *Grupa93, Ltd*), 2018). There are several types of mobility points:

- International multimodal traffic hubs that provide international traffic including road and rail, as well as international air and/or water traffic such as Riga International Airport, Riga Central Railway Station and Riga Passenger Port;
- Regional mobility points, which provide intercity traffic by connecting the existing intercity bus destinations and terminals, as well as major railway stations in the region or city. Parking lots and parking lots with electric charging infrastructure;
- City mobility points based on the city's public transport network;
- Micro-mobility points enabling access to the nearest public transport, including the nearest mobility point, and providing support infrastructure for the "first" and the "last" kilometer.

Cycle tracks – separated road or part of a road intended for cycling and marked with Road Sign 413 "Cycle track" and road marks 932 or 941 (Latvian State Roads, LLC (carried out by *Enviroprojekts, Ltd*), 2019).

Bicycle parking – a place, square or territory arranged with several bicycle stands for parking bicycles (Latvian State Roads, LLC (carried out by *Enviroprojekts, Ltd*), 2019).













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Introduction

On behalf of the Riga Planning Region, AC Konsultācijas, Ltd performs the Service "Potential of the Baltic Loop Connections and Solutions for Inland and Cross-Border Mobility of the Riga Metropolitan Area". The Service is carried out on the basis of the mutual agreement No. 5.3/47 concluded with the Riga Planning Region on September 29, 2020.

The developed material is part of the **"Baltic Loop"** project within the Interreg Central Baltic Region Program 2014-2020 (hereinafter the Baltic Loop). The main objective of the Project is to reduce travel and freight time, while also reducing CO2 emissions in the three corridors of the Central Baltic Region, making them attractive for new companies and for the development of innovation.

The main task of the Project is to raise the issues relating to the development of A-R direction traffic flows in the central part of the Baltic Sea Region, creating appropriate solutions for the improvement of passenger and freight transport and for the compatibility between different modes of transport.

Within the framework of the Baltic Loop project, three corridors are distinguished:

- Northern Corridor: Orebro-Turku-St. Petersburg;
- Middle Corridor: Orebro-Tallinn-St. Petersburg;
- Southern Corridor: Orebro-Riga-St. Petersburg.

The main focus of the Service and this document is the Southern Corridor of the Baltic Loop (Orebro–Riga–St. Petersburg), which also includes connections such as Ventspils–Riga and Riga–Valmiera–Valka.

This document views the significance of the Southern Corridor in two aspects. The first aspect is the role of the Southern Corridor in the international accessibility, where Riga plays the key role, which means it is a North European metropolis, an international cultural, science and business center and an important international transport hub with a number of multimodal mobility points of international interest (Riga Central Railway













Station, Riga International Airport, and Port of Riga). The implementation of the Rail Baltica project will further strengthen the role of Riga as an international transport hub.

The second aspect analyzed concerns the possibilities of internal accessibility, which means the possibilities of the populated areas around the corridor to reach the Corridor, paying particular attention to the connectivity of the residential areas of the Riga Metropolitan Area (RMA) and the reach of the population to the international multimodal mobility points in Riga.

Methodology and data used. The following data acquisition methods were used to accomplish the work:

1) Document analysis (documentation available to the customer, national and regional level territorial development planning documents, sectoral guidelines, various studies, etc.). The results of the document analysis were used both to describe the current situation and to prepare proposals for improving transport flows in both passenger and freight transport. An overview of the most important principles of planning documents and research conclusions is provided in Chapter 1 of this Report.

2) Analysis of statistical data (statistics compiled by the RPR on the mobility points, vehicle flows in the Southern Corridor and its various sections; information on the road condition collected by the LSR; CSB data; RTA data; etc.). The analysis of statistical data was used to describe the intensity and directions of traffic flow in the Southern Corridor and the RMA, the existing connections, and the condition of the infrastructure. These data were used to develop cartographic material.

3) Spatial analysis and development of cartographic material (mapping of the Southern Corridor with a display of railway and road networks; mapping of traffic flow intensity; mapping of data on Ventspils and Riga ports – data on passenger flow, cargo turnover). A cartographic material was developed which visually reflects the data on the intensity and directions of traffic flow and connections. The GIS was used to process spatial data, which allowed various spatial indicators to be calculated. ArcGIS options were used for the spatial analysis of data and for the visualization of this analysis.











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4) Co-creation meeting, which was organized within the preparation process of the current situation report. It took place on January 14, 2021, between 10:00 and 12:15 on the ZOOM platform. The aim of the meeting was to discuss the current situation and possible solutions for passenger and freight traffic in the Southern Corridor of the Baltic Loop, including the RMA, taking into account the need for connectivity between major development centers (areas along the Corridor and RMA) and the international multimodal mobility points (Port of Riga, Riga Central Railway Station, Riga International Airport). The purpose of the discussion was to obtain information on the identified drawbacks and to develop proposals for non-technical and technical solutions. The co-creation meeting was attended by industry professionals from various organizations and institutions (Ministry of Transport; Vidzeme, Kurzeme and Zemgale Planning Regions, Latvian State Roads, Eiropas Dzelzcela līnijas ('European Railway Lines'), Pasažieru vilciens ('Passenger Train'), Road Transport Administration, Rīgas satiksme ('Riga Traffic'), Freeport of Riga Authority, Latvian Aviation Association, Ministry of Environmental Protection and Regional Development, Riga City Municipality, Babite, Marupe, Jurmala, Stopini, Kekava, Adazi and Carnikava municipalities). Two representatives of the Riga Planning Region, seven representatives of AC Konsultācijas, Ltd and 46 industry experts and professionals participated in the meeting.

5) Expert discussions, planning meetings were organized regularly throughout the work implementation process, the research methodology was debated, the obtained results and problem issues were talked over.

6) Structured discussions with the Customer. When necessary, discussions with the Customer were organized to inform the Customer about the progress of the Service.



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1. Characteristics of the Southern Corridor and the scope of analysis

Within the framework of the Interreg Project, three corridors of the Central Baltic Region (the Northern, the Middle and the South Corridors) are viewed in general, and expertise of the Riga Planning Region as a Project partner is related to the Southern Corridor:

- Northern Corridor: Orebro-Turku-St. Petersburg;
- Middle Corridor: Orebro–Tallinn–St. Petersburg;
- Southern Corridor: Orebro-Riga-St. Petersburg.

Figure 1: The Northern, the Middle and the Southern Corridors of the Baltic Loop (Baltic Loop, n.d.)



Spatial research within the framework of this work includes several directions – not only the direct Corridor route in the territory of Latvia (Ventspils–Riga Ring Road–Valmiera–Valka), but also the connections of the most important centres of the Riga Metropolitan Area to international transport hubs:











 The exploration of the Southern Corridor was carried out in three sections of the Corridor (depending on the available information, the sections of the Corridor were analyzed in even smaller stretches): Ventspils–Riga; Riga Ring Road; Riga–Valmiera–Valka. The exploration of cross-border connections will include the following directions: Ventspils – maritime transport in the direction of Sweden; Valka – road transport in the direction of Estonia (Tartu).

The city of Riga plays an important role as a transport hub in the Southern Corridor; it is an important international transport hub with several multimodal mobility points of international significance (Riga Central Railway Station, Riga International Airport, and Port of Riga). Ventspils is a center of national importance, an important port city in the Baltic Region and Latvia, as well as a transport and industrial hub, developing in the multimodal transport system of Europe (Ventspils, 2014). The population of Ventspils in 2019 was 34,377. In turn, Valmiera is a development centre of national significance, a service and business centre, a centre of economic growth, knowledge, innovation and smart technology development. The population of Valmiera in 2019 was 24,865 (Valmiera, n.d.). And Valka is an important cross-border point between Latvia and Estonia (Valkas novada dome, 2014). The population of Valka in 2019 was 8,796 (Valka, 2019).

2) The exploration of the Riga Metropolitan Area was carried out by assessing the connectivity of inland connections of the major cities and regional centres to international transport hubs in Riga and its surroundings (Port of Riga, Riga Central Railway Station, and Riga International Airport). The following directions of traffic flow were analyzed: (1) Riga–Salacgriva, (2) Riga–Jelgava– Dobele, (3) Riga–Kekava–Bauska and (4) Riga–Aizkraukle.











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Figure 2: Riga Metropolitan Area (Action Plan for the Development of Riga Metropolitan Area, approved 10/01/2020)





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2. The key guidelines of planning documents for transport and mobility

The Action Plan of the EU Strategy for the Baltic Sea Region includes the transport policy objective of transport policy to **improve external and internal connections** (TEN-T network and **macro-regional solutions for passenger and freight transport**) while implementing adaptation measures to climate changes.

VASAB long-term perspective (until 2030) for the territorial development of the Baltic Sea Region. The document focuses on promoting territorial cohesion in the Baltic Sea Region. One of the three development directions emphasizes the improvement of internal and external accessibility, i.e. the reduction of cross-border barriers in the primary (TEN-T) and secondary networks of the BSR countries, as well as the integration of the Baltic Sea transport networks (Rail Baltica corridor, TEN-T network corridor linking ports, air transport connections, the arterial sea connections). *For now, a tender for the renewal of the document has been announced.*

VASAB Secretariat publication-study on the accessibility of the Baltic Sea Region. The document assesses multimodal accessibility options (road, rail and air traffic) in the Baltic Sea Region. In all the countries of the Baltic Sea Region, the largest increase in multimodal accessibility was observed in the regions of the capital cities, which has been facilitated by the development of air traffic. At the same time, it was concluded that within each country, the gap in accessibility between the capital regions and the rest of the country has increased. Latvia is also mentioned in this regard.

Sustainable Development Strategy of Latvia until 2030 highlights the need to promote the mobility of regional residents and the quality of public transport services with a view to reducing travel time. As a result, the year 2030 goal is to increase passenger turnover in public transport, i.e.> 2,850 million passengers turnover in public road transport (passenger-kilometers of scheduled traffic per year) and > 1,150 million passenger turnover in rail transport (million passenger-kilometers per year).

The National Development Plan of Latvia for 2021-2027 sets as an objective of the transport sector as an integrated, sustainable transport system that provides high-













quality mobility opportunities for people and freight throughout the country; ensures local accessibility, using rail as the backbone of public transport; as well as international connectivity, completely integrating into the EU core network (Rail Baltica) and ensuring the interconnection of the core network and the overall network. In addition, one of the challenges is to ensure mobility for employment and receipt of services by improving infrastructure and providing support for innovative micromobility solutions. Accordingly, the goal of the 'green course' is to reduce GHG emissions and improve air quality by decarbonising the transport system. The value of the indicator to be achieved in the field of public transport in 2027 is determined as follows - the share of railway passengers in public transport should reach 12%.

The Draft Transport Development Guidelines for 2021-2027 aim at an integrated transport system that ensures safe, efficient, smart and sustainable mobility, promotes the country's economic growth, regional development and contributes to the transition to a low-carbon economy. Reduced GHG emissions from transport and improved environmental quality, improved mobility and other results have been set as the medium-term results to be achieved in the field of transport.

In order to achieve the objective of the guidelines, a number of action lines are identified and, in the context of this document, a highlighted direction involving creation of a multimodal public transport network with a key role for rail, i.e. development of railways as the "backbone" of public transport, development of new regional railway passenger routes, establishment of multimodal mobility points, as well as moving towards the introduction of digitalization solutions in the provision of public transport services (introduction of a single ticket storage system). Priority should be given to the development of multimodal transport in the Riga Metropolitan Area, where the most significant commuting of people takes place.

The Regional Policy Guidelines for 2021-2027 include the 'accessibility and living environment in the regions' action line and measures aimed at providing regional residents with mobility opportunities, including on-demand transport in municipalities, as well as the reconstruction and renewal of the regional and local road

















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network in the context of administrative and territorial reform; **improvement of mobility in the Riga Metropolitan Area**.

The Riga Metropolitan Area Mobility Spatial Vision and the Action Plan for its **development** include a vision for the development of external and internal accessibility of the Metropolitan Area.

Riga with the rebuilt Riga Central Railway Station will become the central Baltic multimodal transport hub, an international mobility center. The center of Riga will provide connections for all modes of transport - European connections with highspeed train in Rail Baltica network, the Eastern connection to the conventional gauge railway network, the city public transport, the Riga International Bus Station, a 10minute direct railway connection to the Riga International Airport, as well as the Passenger Port of Riga, a 20-minute-ride away. The Central Railway Station will be surrounded by convenient bicycle and pedestrian infrastructure and mobility services, reduced private road traffic, improved public transport, pedestrian and bicycle connections between the Centre and the Moscow neighbourhood, as well as to the left bank of the Daugava and Zakusala. An intermodal cargo terminal will also be built in Salaspils Municipality. The specific solutions mentioned in this document include the following: multifunctional mobility points to be set up at railway stations, where it is possible to easily transfer to bus (including schedules harmonized with train schedules); parking cars and bicycles; calling a taxi or a shared car, and various mobility services. All this is intended to promote the use of trains and not to duplicate the movement of buses and private transport through the centre of Riga. It is also planned to build new cycle tracks and reconstruct streets with daily cycling infrastructure according to the municipal cycle plans of Riga and the Metropolitan Area municipalities. It is planned to use a single ticket for connecting different modes of transport – train, intercity-buses and *Rīgas Satiksme* ('Riga Traffic') city transport routes.

Riga Planning Region Sustainable Development Strategy 2030. A unified traffic system is being developed in the Region, which is based on all types of public transport networks that ensure territorially even accessibility over time in line with the requirements of daily mobility, the region being a single working-residing space.























Conceptually, Riga is distinguished as a national and multicultural metropolis of Northern Europe – the driving force of Latvia and the region. The region with its center in Riga is a place of Eurasian significance, N-S and E-W connections, logistics hub, a business and cultural synergy. Given this importance, the Port of Riga should become an international hub not only for cargo, but also for passenger transportation. It is important to develop inner-city connections, infrastructure for walking, cycling and public transport, as well as the infrastructure and high-speed public transport connections of the Rail Baltica and Via Baltica corridors. In the international context, fast connections of Riga to the largest metropolises in Europe are essential. Integrated development of Rail Baltica railway, Riga International Airport, as well as W-E railway connections can form the basis for the development of Riga as a European and Eurasian mobility place. At the regional level, the connection between Riga and Surroundings (Pieriga) is of the utmost importance. It will be provided by high-speed regional connections, mainly by rail and major national motorways. In the long run, park & ride is expected to play an important role in various nearby locations that are easily connected to the public transport system, such as Marupe and Kekava, in order to reduce individual road traffic flows to the capital city. The international area of Northern Europe includes infrastructure corridors and objects of common European interest -Via Baltica, Rail Baltica, Riga International Airport, Port of Riga, etc. and their integrated and co-modal development using metropolitan loop connections in Riga and Surroundings (Pieriga).













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3. Examination and analysis of the current situation – the potential of transport connections

Flow analysis

Within the framework of the research study, an analysis of transport flows was performed. First, the flows of public transport by sea, rail and road were analyzed; secondly, the flow of private cars and; thirdly, the flow of freight transport by rail and road. The significant railway and road infrastructure for the study is provided in the figure below.

Figure 3: Railway and road infrastructure (Information collected by the contractor)













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Public transport

The study analyzed public transport data, focusing on three modes of transport – by sea, by rail and on regional buses. City transport or local bus data were not analyzed.



Figure 4: Number of train and regional bus trips (Contractor's calculations).

Maritime transport

In the Southern Corridor, passenger transportation by sea, i.e. by ships, is organized from the Passenger Port of Riga and from the Passenger Port of Ventspils. The Passenger Port of Riga offers two routes: Riga–Stockholm (all year round) and Riga–Helsinki (in the summer season from April to September). The route Riga–Stockholm is operated daily and the duration of the journey is 17 hours. The route Riga–Helsinki is operated every other day and the duration of the journey is 18–19 hours. Total passenger turnover in the Passenger Port of Riga in 2019 was 869 thousand.











The Passenger Port of Ventspils offers a route Ventspils–Ninashamna. The route is operated daily and the duration of the journey is 8.5 hours. Total passenger turnover in the Passenger Port of Ventspils in 2019 was 233 thousand.

Trains

The largest number of passengers is in the directions of Riga–Aizkraukle–Jekabpils (in zone A – on average 7.8 thousand passengers per day) and Riga–Ventspils (up to Jurmala) (in zone A – 5.7 thousand); the direction of Riga–Jelgava–Dobele is also congested (up to Jelgava) (in zone A – 3.4 thousand). The flow of passengers is relatively small in the directions of Riga–Valmiera–Valka (in zone A – 1 thousand) and Riga–Salacgriva (up to Skulte) (in zone A – 1.4 thousand).

One railway route of international interest – Riga – Valga – is also provided in the area under consideration. It's possible to make a connection to Tartu on a connecting voyage from Valga. An average of 2 trips per working day is provided from Riga to Valga, with an average travel duration of 156 minutes to Riga. On the other hand, 4 trips per day are provided from Valga to Tartu, with a duration of 72 minutes to Valga.















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Regional buses

The largest number of passengers is in the direction Riga–Kekava–Bauska (the total flow in 2019 was 1,017,966 passengers) and Riga–Jelgava–Dobele (921,930 passengers). The passenger flow is of medium-intensity in the directions Ventspils–Riga (467,887 passengers) and Riga–Valmiera–Valka (774,750 passengers). The flow of passengers is comparatively smaller in the direction of Riga–Aizkraukle–Jekabpils (214,227 passengers) and Riga–Salacgriva (245,435 passengers).

International transport to Estonia, Lithuania, Russia and Belarus is provided in the area under consideration. The study provides direct transport in the Southern Corridor of special interest to Riga – Valka/Valga – Tartu or via connection to Valga. 7 direct daily trips are available from Tartu to Riga. The average time of arrival to Riga is 518 minutes.









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Private road transport

The largest flow of private cars is in the direction of Riga – Ventspils, especially in the Riga - Tukums section. There are 44.3 thousand cars registered in this corridor outside Riga. A large flow of private vehicles is also observed in the direction of Riga - Valka (36.6 thousand cars registered in Riga). In other directions (Riga - Jelgava - Dobele, Riga - Kekava - Bauska and Riga - Salacgreva), the equivalent number of passenger cars is observed. It is within the range of 23.5 – 25,0 thousand. A slightly lower flow is in the direction of Riga - Aizkraukle - Jekabpils, where 21.4 thousand cars are registered at Riga.









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Figure 7: Private car flow (LSR, 2019)



Cargo transport

Cargo transport flows are viewed in three thematic aspects – port cargo carriage, cargo carriage by rail and cargo carriage by road. The map provided below shows that the most intensive cargo flow takes place by road in the North–South direction, as well as from the Port of Riga. In the direction of the Southern Corridor, Riga–Ventspils cargo flows are among the smallest on the overall Latvian background; cargo intensity is very high along the Riga Ring Road; and cargo intensity is also high in the direction of Valka up to Sigulda, but it is subsequently declining significantly because at Sigulda the cargo flow splits into two directions – A2 and A3.



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Figure 8: Intensity of cargo transport and circulation of cargo in ports (Customer's data)























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Analysis of the infrastructure condition

Assessment of road infrastructure. In the period from 2021 to 2023, construction work is scheduled to be carried out in the Southern Corridor for a total length of 208.59 km, of which in the section Ventspils–Riga it is planned to perform construction works in the total length of 25.37 km, in the section of Riga Ring Road it is planned to perform construction works in the total length of 47.58 km, and in the section Riga–Valka - in the total length of 135.64 km. Analyzing the planned construction works by their type, it can be concluded that the reconstruction of the road pavement is planned in a 54.45 km long section or 25% of the total planned amount of construction works in the length of 114.00 km or 55% of the total planned amount of construction works in a 36.61 km long section or 18% of the total planned amount of construction works in the Corridor. Renovation of the gravel cover is planned for a 4.53 km long section or 2% of the total planned amount of construction works in the Corridor. Renovation of construction works in the Southern Corridor. Renovation of the gravel cover is planned for a 4.53 km long section or 2% of the total planned amount of construction works in the Corridor. Renovation of construction works in the Southern Corridor. Renovation of the gravel cover is planned for a 4.53 km long section or 2% of the total planned amount of construction.



Figure 9: Length of roads to be repaired (km) (Information provided by LSR)

A scale of 1 to 5 was used to analyze the visual assessment of the roads. The best condition of roads is detected in the Riga–Ventspils section, but the worst – in the Riga Ring Road.











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Figure 10: Visual assessment in the Corridors (Information provided by LSR)

Infrastructure assessment of railway stations and stops (prospective multimodal mobility points / railway stations). The study provides an assessment of the infrastructure of railway stations / stops for those stations within the scope of the study analysis (*Southern Corridor* and *RMA*). The assessment is limited to rail; it does not apply to regional bus stops, as justified by the concept of public transport development defining approach to railway as the backbone of public transport. The role of regional and local bus services is complementary, i.e. they aim to take passengers to the nearest railway station or multimodal mobility point.















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Figure 11: Train routes and multimodal mobility points (Customer's information)



- On the **Ventspils–Riga** route, there are 25 stations or stops, but in the future the development of passenger transportation to Ventspils is possible. In general, the infrastructure of the stations on the line is outdated; it does not meet the requirements of environmental accessibility and modern passenger service infrastructure, incl. multimodal interconnection. The 13 railway stations reconstructed in 2015 are exceptions.
- On the **Riga–Valka** route, there are 28 stations or stops. The infrastructure of all stations is outdated; it does not ensure the requirements of environmental accessibility and modern passenger service infrastructure, incl. multimodal interconnection. The stations of Cesis and Sigulda are exceptions. In order to ensure multimodal connection and integration of other modes of transport with railway traffic, it is necessary to provide a public transport stop in the immediate





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vicinity of the station or passenger platform, as well as to provide gravel or hard surface Park & Ride and bicycle parking facilities with video surveillance.

- In the direction of **Riga–Aizkraukle**, there are 54 stations or stops, but this assessment only includes the stations from the RMA up to Plavinas, i.e. 27 stations. The assessment of stations on this route reveals a positive correlation between the infrastructure assessment and the mobility point function, i.e. regional mobility points got a higher assessment of station infrastructure compared to the city or local mobility points, but this still needs to be improved. In order to ensure multimodal connection and integration of other modes of transport with railway traffic, it is necessary to provide a public transport stop in the immediate vicinity of the most stations or passenger platforms, as well as to provide gravel or hard surface Park & Ride and bicycle parking facilities with video surveillance. First of all, infrastructure improvements should be made at the stations with the greatest passenger turnover potential (Aizkraukle, Koknese, Plavinas), initially ensuring a proper connection with public road transport and safe parking lots for individual transport.
- In the direction of Riga–Jelgava–Dobele, there are 19 stations or stops, but this assessment only includes the stations from the RMA up to Dobele, i.e. 14 stations. The infrastructure of the stations on the Jelgava route in many places of Pieriga is assessed at the lowest level, i.e. the stations are not provided with a platform or a building, and there is no multimodal infrastructure. Some of these stations are planned to be developed as regional traffic mobility points, which requires appropriate infrastructure. First of all, infrastructure improvements should be made at Jelgava and Dobele stations having the greatest potential for passenger turnover, initially ensuring a proper connection with public road transport and safe parking of individual transport.
- In the direction of **Riga–Salacgriva**, there are 18 stations or stops. The infrastructure of the planned regional mobility points is rated higher than most infrastructure cases of the city or the local mobility points; however this is not sufficient to ensure multimodal interconnection.



















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Drawbacks and challenges

Drawbacks and challenges in the context of passenger and freight transport were identified on the basis of documents and data analysis, as well as taking into account the results of expert discussions.

International mobility points and international passenger transport:

- The port is badly connected to other international transport hubs (Bus Terminal, Railway Station, and Airport).
- It is difficult to reach Riga Airport by public transport from the Riga Ring Road, especially from the left bank of the Daugava, because it is necessary to cross the Daugava. Improvements are needed for accessibility between the city of Jurmala and the Riga International Airport, considering the large number of tourists visiting Jurmala.
- It is relatively the easiest to reach The Riga Central Railway Station and the International Bus Terminal, both of which are located in the centre of Riga and connected with the city transport and regional transport. Improvements are needed in reaching the Port and the Riga Airport – *Rail Baltica* will provide a good connection to the Airport in the future.
- The reach of Riga International hubs is weak in railway transport. Passenger transportation by rail is not currently available to Ventspils; the connection to Valka/Valga is not efficient, because the train only runs twice a day and its speed is slow. The connections to St. Petersburg, Moscow and Belarus are not efficient because the train speed is slow and the time to be spent by passengers at the border control (about two hours) is an additional hindrance. Rail transport to Lithuania is not developed at all, which will be changed by the construction of *Rail Baltica*.
- In the international transportation of tourists, there is no understandable, Englishaccessible and clear system for informing passengers, including the purchase of tickets. It is recommended to choose appropriate route names, clearly including the names of the most important tourist destinations, so that they can be well understood (e.g. in Jurmala case – Jurmala vs. Dzintari, Majori, etc.)

Passenger traffic in the Riga Metropolitan Area:





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- Efficient functioning of the Southern Corridor of the Baltic Loop (for road transport) is hindered by the missing Northern Crossing in Riga.
- The existing rail passenger services at regional and local level are not sufficiently developed and convenient for passengers, as there is a long time to be waited between transfers.
- Regional transport duplicates public transport in the city of Riga, creating additional congestion and creating a negative impact on the environment when entering the centre of Riga. Regional traffic should be organized so that buses do not enter the centre of Riga – providing connection to international hubs (Bus Terminal, Railway Station, Port, Airport) by train or the city transport, especially by trams.
- The current connection between regional and city transport is not in the interests of passengers. There are situations when a regional bus passenger gets to the outskirts of Riga by a regional bus fast enough, but he has to spend just as long time to get to the centre of Riga.
- Transfer between different modes of transport is hindered by the lack of a single ticket, which makes the transfer process more expensive and inconvenient, as tickets need to be purchased for different modes of transport separately.
- Micro-mobility in the city of Riga and in the Surroundings (Pieriga) is not sufficiently developed; it does not provide a convenient opportunity to move between different neighborhoods of Riga or to the nearest residential areas in Pieriga.

Multimodal cargo transport:

- Similar to the passenger transport, cargo transport is hindered by the missing Northern Crossing in Riga.
- Although the flow of cargo transport in the centre of Riga is limited, there is still a high intensity of trucks in the vicinity of the Riga centre, especially in the Port area. This worsens the quality of the environment, causes inconvenience to the population and creates safety risks for road accidents.
- One of the most congested transport corridors is the *Via Baltica* corridor. Thanks to *Rail Baltica*, part of the cargo will be transferred to the railway and the cargo























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- flow along the road through Kekava will decrease. The new Kekava bypass will also divert road cargo off the city of Kekava. At the same time, there are concerns that the constructed Kekava bypass will divert only transit cargo, while the rest of the transport in the direction of Baldone and Daugmale will continue to run along the existing A7 road through Kekava.
- In the current situation, there is a weak e-commerce offer and infrastructure for cargo transport. There is no efficient packaging and picking centre; bulk shipments are not handled.













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Summary

The **main focus** of the study is the Southern Corridor of the Baltic Loop (Orebro–Riga–St. Petersburg), which also includes such connections as Ventspils–Riga and Riga–Valmiera–Valka.

This document views the significance of the Southern Corridor in two aspects. The first aspect is the role of the Southern Corridor in the international accessibility, where Riga plays the key role, which means it is a North European metropolis, an international cultural, science and business center and an important international transport hub with a number of multimodal mobility points of international interest (Riga Central Railway Station, Riga International Airport, and Port of Riga). The second aspect analyzed concerns the possibilities of internal accessibility, which means the possibilities of the populated areas around the corridor to reach the Corridor, paying particular attention to the connectivity of the residential areas of the Riga Metropolitan Area (RMA) and the reach of the population to the international multimodal mobility points in Riga.

The significance of the Southern Corridor is analyzed by conducting research in sections of the Corridor and in certain directions of the RMA:

- In three parts of the Southern Corridor: Ventspils–Riga, Riga Ring Road and Riga– Valmiera–Valka.
- RMA directions: Riga–Salacgriva, Riga–Jelgava–Dobele, Riga–Kekava–Bauska, Riga–Aizkraukle–Jekabpils.

Assessing the offer and flow of public transport, it can be concluded that regional buses play a more important role in passenger transport in the Southern Corridor. In the Ventspils–Tukums section of the Ventspils–Riga corridor, transportation takes place only by road. In turn, in the Tukums–Riga section, rail transport plays a more important role. Passenger transportation along the Riga Ring Road is not organized. Finally, in the Riga–Valka corridor, although there is transport by rail, which in terms of the number of passengers up to Sigulda makes the most significant part, other parts of the Corridor are dominated by road transport, because the train schedule is slow and the number of trips is small, especially in the Sigulda–Valka section. In other directions in the territory of the RMA in general, the most significant role is played by railway transport – especially in the Riga–Saulkrasti section of the Riga–Salacgriva direction, the Riga–Jelgava section of Riga–













Jelgava–Dobele direction, as well as throughout the whole Riga–Aizkraukle–Jekabpils direction. In the Riga–Kekava–Bauska direction, transportation takes place only by buses; bus transportation is also the only one in certain sections of other corridors, for example, to reach Adazi, Salacgriva and Limbazi, Dobele and Smiltene (see the following table).

Table 1: Number of trips and passengers, duration of the journey to the destination by train and regional bus (Pasažieru vilciens, JSC and RTA data)

Corridor /	Locality	Trains			Regional buses			
direction		Average no. of single trips per 1 working day	Average duration of the journey (minutes)	Average no. of passing. per day*	Average no. of single trips per 1 working day	Average duration of the journey (minutes)	Average no. of passing. per day	
Ventspils-Riga	Jurmala (Dubulti)	35	34	5689	97	40	141	
	Tukums	27	78	954	7	52	43	
	Kandava	-	-	-	9	114	40	
	Talsi	-	-	-	19	139	144	
-	Ventspils	-	-	-	15	186	256	
Riga–Valmiera-	Vangazi	10	44	985	75	49	244	
Valka	Sigulda	13	64	861	24	83	181	
	Ligatne (Augsligatne)	4	68	861	32	80	31	
	Cesis	5	88	203	15	110	166	
	Valmiera	5	120	203	20	130	251	
	Valka	2	156	203	6	202	23	
	Smiltene	-	-	-	10	152	47	
_	Limbazi	-	-	-	13	117	87	
Riga–Jelgava–	Olaine	27	24	3416	57	46	504	
Dobele	Ozolnieki	25	35	2425	33	44	24	
	Jelgava	27	44	2425	53	56	571	
	Dobele	1	65	33	31	99	168	
Riga–	Salaspils	29	25	7769	21	25	9	
Aizkraukle –	Ogre	35	36	7769	31	43	173	
Jekabpils	Ikskile	25	32	7769	18	36	55	
	Kegums	22	52	4143	8	54	5	
	Lielvarde	27	56	4143	9	59	9	
	Skriveri	15	69	2776	1	186	3	
	Aizkraukle	20	75	2171	25	88	36	
Riga–Kekava–	Kekava	-	-	-	245	32	649	
Bauska	Baldone	-	-	-	42	50	222	













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WP2 / Deliverable 1: Efficiency analysis of the03/existing transport connections. Summary03/							
	lecava	-	-	-	31	50	6
	Bauska	-	-	-	32	83	365
	Vecumnieki	-	-	-	14	64	65
Riga–	Adazi	-	-	-	55	49	200
Salacgriva	Carnikava	18	36	1425	8	47	12
	Saulkrasti	15	56	524	17	72	35
	Salacgriva	-	-	-	8	129	27

*Note: Train passengers were not calculated at stations because such data are not collected. Instead, the number of passengers in the area to which the station belongs is indicated.

The **main drawbacks** of the current situation in the **population mobility** in the Southern Corridor and the RMA are: firstly, the accessibility of international transport hubs – the Passenger Port of Riga and the Riga Airport – by public transport; secondly, inefficient international rail transport, as passenger transport by rail to Ventspils (and further to the ferry) is currently not provided, the connection to Valka/Valga is not efficient, because the train runs only twice a day and the speed is slow. The connection with St. Petersburg, Moscow and Belarus is not efficient because the speed of the train is slow and the time passengers have to spend at the border control is an additional hindrance. Rail transportation to Lithuania is not provided, but the construction of Rail Baltica will change this; thirdly, the efficient functioning of the Southern Corridor of the Baltic Loop (for road transport) is hindered by the missing Northern Crossing in Riga.

Addressing the reach of international transport hubs from the RMA, it can be concluded that the current rail passenger transport is not sufficiently developed and convenient for passengers at regional and local level, as a long time is often to be waited to transfer from one (mode of) transport to another. Similarly, the current connection between regional buses and the city transport is not in the interests of passengers, as it does not ensure a fast transfer to the Riga centre. In addition, the transfer between the different modes of transport is hindered by the lack of a single ticket, which makes the connection more costly and inconvenient as the ticket needs to be purchased for different modes of transport separately. The analysis shows that regional transport is currently duplicating the Riga city public transport and creating additional congestion and negative environmental impacts when entering the Riga centre. Regional transport shall be organized so that buses do not enter the centre of Riga – by providing connections to























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international hubs (Bus Terminal, Railway Station, Port and Airport) by train or city transport, especially by trams.

The development of a single, multimodal transport system is hindered by the lack of mobility points. Passengers are not provided with a convenient possibility to transfer between different modes of transport (both in terms of space and time); they are not provided with the opportunity to leave their car, bicycle or electric scooter safely and conveniently. For example, in the *Rail Baltica* project 16 regional stations are planned, which could serve as mobility points, but also in their case it is necessary to find solutions to ensure passengers get to/from the stations, since the stations are mainly located away from residential centres; Park & Ride network should be also developed.

In turn, the **main drawbacks in the field of cargo transport** are related to the missing Northern Crossing in Riga, which thereby creates a greater load on the Riga Ring Road, as well as the intensity of cargo transport near the center of Riga. The current situation has a negative impact on the environment; such cargo traffic causes inconvenience to the population, as well as creates safety risks for traffic accidents. Cargo needs to be diverted from entering the center of Riga; it is especially necessary to reduce the transportation of harmful and dangerous cargo through the city center.

There are large cargo flows in the North–South direction, which not only have harmful effects on the environment and transport infrastructure, but also create risks to road traffic accidents when cars overtake lorries, as there is only a two-lane road in each direction. Thanks to *Rail Baltica*, part of the cargo will be transferred to the railway and the flow of cargo along the road through Kekava will decrease. The new Kekava bypass will also divert road cargo traffic off the city of Kekava.













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