COMMUTING MASTER PLAN FOR RIGA REGION 2021–2027

Riga
2021

The CMP has been prepared within the framework of the INTERREG project "Sustainable Urban Mobility and Commuting in Baltic " (SUMBA) (Contract No. R074).

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Related materials:

1. Plan for the location and establishment of mobility hubs[1.]

2. Criteria for cost-benefit analysis of SUMBA mobility hubs and their evaluation methodology[2]

1 Ltd. "IE.LA inženieri" (2020), Plan for the location and establishment of mobility hubs (in Latvian), https://www.bef.lv/wp-content/uploads/2020/09/Mobilitates_punktu_plans_SUMBA-1.pdf

2 Ltd. "AC Konsultācijas" (2020), Criteria for cost-benefit analysis of SUMBA mobility hubs and their evaluation methodology (in Latvian), https://www.bef.lv/wp-content/uploads/2021/01/Mobilit%C4%81tes-punktu-IIA-kriteriji-un-metodika.pdf

Terms and abbreviations used

CMP area	Riga, Pieriga, impact area of Riga and Pieriga
Commuting	Daily movement of residents from their place of residence in one territorial unit to another territorial unit due to work and study and back
Mobility hub	Transport hubs of different levels with the main task to provide each user with convenient connections of different modes of transport together, offering alternative modes of transport (including public transport) and reducing the need to use private road transport
PT	Public transport
TM	Ministry of Transport
RPR	Riga Planning Region
RDPAD	Riga City Development Department
RMA	Riga Metropolitan area
RDSD	Riga City Traffic Department
BEF	Baltic Environmental Forum Latvia
TAP 2027	National Transport Development Guidelines 2021 -2027
NAP 2027	National Development Plan 2021 -2027

Introduction

Transport sector is responsible for one quarter of GHG emissions by the EU and this amount is ever increasing. The EU Green deal has set the aim to cut these emissions by 90% up to 2050. On top of the actions to reduce the transport emissions, the EU Green deal is addressing also other aspects of sustainable mobility, such as to eliminate traffic flow congestions in cities, as well as to implement improvements in public transport, utilize intelligent transport management systems and digital solutions.[3]

Sustainable urban mobility is one of the priority areas within cities of the European Union. Sustainable mobility can be evaluated by the share of different transport modes, transport related pollution, levels of congestion, as well by the public transport coverage and accessibility in cities and adjacent territories.[4] Mobility and commuting (daily movement of inhabitants back and forth from their residence at one territorial unit to another territorial unit due to work and study) trends in Latvia and elsewhere in the world are requesting changes in the concepts for transportation nets and logistics by increasing use of multimodal solutions. Ever increasing commuting challenges are addressed by introducing of new types of mobility, e.g., mobility hubs, transport sharing concepts, wide application of capabilities of smart devices, simultaneously ensuring the mobility as a service.

According to the research reports[5] and information about the passenger flows[6], almost every second inhabitant at the working age and living in Pieriga (a territory nearby Riga) finds the working place in Riga. Majority use a private car for reaching the workplace thus enhancing the commuting intensity between Riga and Pieriga and increasing the load to the transport infrastructure. Therefore, it is necessary to improve existing transport system by enhancing its sustainability, e.g., advancing the public transport and reducing the need for private car use. Municipality initiatives play an important role in this process by developing of the sustainable urban mobility plan and implementing the corresponding activities.

Commuting Master Plan (hereafter – CMP) for the period from 2021 to 2027, is a regional medium-term development planning document. The CMP aim is to improve the sustainable mobility options in commuting process between Riga, Pieriga and adjacent municipalities. The CMP is developed according to the strategic aims and long-term development priorities by the Riga Planning Region Sustainable Development Strategy 2014-2030[7] This CMP complements the Action Plan for Riga Metropolitan

3 European Green Deal (in Latvian) , https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0014.02/DOC_1&format=PDF

4 European Court of Auditors (2020), Sustainable urban mobility in the European Union (in Latvian) https://www.eca.europa.eu/Lists/ECADocuments/SR20_06/SR_Sustainable_Urban_Mobility_LV.pdf

5 Department of Human Geography, Faculty of Geography and Earth Sciences, University of Latvia (2017), Clarification of the boundaries of the Riga agglomeration (in Latvian), http://www.sus.lv/sites/default/files/rigas_aglomeracija_2017.pdf

6 Ltd. "IE.LA Inženieri" (2020), "Mobility hubs Assessment of transport and passenger flows in the project study area" (in Latvian)

7 Sustainable development strategy of Riga planning region 2014.2030 (approved 18.09.2015) (in Latvian), http://rpr.gov.lv/wp-content/uploads/2017/12/RPR-Ilgtspejigas-attistibas-strategija_2014-2030.pdf

Area development[8], where the focus is on diversification and adaptation of different transport modes up to the scale and purpose of use. The CMP fits into the Riga Metropolitan Area Mobility Spatial Vision[9] insights about the development of the outer and inner accessibility within the metropolitan area.

The Commuting Master Plan is developed within the frame of INTERREG project SUMBA "Sustainable urban mobility and commuting in Baltic cities" (project Nr. #R074). The plan is prepared by the Baltic Environmental Forum Latvia in cooperation with Riga Planning Region and Riga City Council City Development Department. In the process of development of the CMP there were experts contracted from Ltd. "IE.LA Inženieri" for compiling of material about the mobility hubs[10]. The CMP is complemented by a material on criteria for cost-benefit analysis and a methodology for evaluation of mobility hubs prepared within the frame of SUMBA by experts from Ltd. "AC Konsultācijas" [11].

The CMP contains an overview on current situation and trends in mobility related aspects, topical policy and development planning documents on national and regional scale, directions for strategic aims and priority areas, as well as planned activities at regional and local level. The plan includes an explanation of the concept for mobility hubs, as well as the recommended scope of services at mobility hubs of different categories for ensuring their functionality.

The CMP includes procedures for supervision of implementation and monitoring. The monitoring report on implementation of the CMP will be prepared in every three years – in the year 2024 and 2027. The report will reflect about completed activities or the activity progress during the reporting period. The Final report (in 2027) will contain information whether the CMP will be updated also in the upcoming period.

8 Action plan for the development of the Riga metropolitan area (2020), (in Latvian) http://rpr.gov.lv/wp-content/uploads/2020/06/Rigas-metropoles-areala-ricibas-plans_Web-1.pdf

9 Ltd. "Grupa 93", Riga Planning Region (2019), Spatial vision of Riga metropolitan area mobility - Final report, (in Latvian) http://rpr.gov.lv/wp-content/uploads/2019/03/20190201_Mob_viz_Galazinojums.pdf

10 Supra note 1

11 Supra note 2

1. The functional area the CMP covers

The territory covered by the commuting master plan (CMP) affects most of the interior area of the Riga Metropolitan area (Figure 1)[12], where three zones can be distinguished [13] - Riga (orange zone), Pieriga (yellow zone), and the territory affecting Riga and Pieriga (gray zone):

- **Riga** – the largest city in the Baltic States in terms of population. The area of the city is 304.05 km^2
- **Pieriga** covers municipalities nearby Riga. They are Jūrmala, Babīte municipality, Mārupe municipality, Olaine municipality, Ķekava municipality, Salaspils municipality, Stopiņu municipality, Ikšķile municipality, Ropaži municipality, Garkalne municipality, Ādaži municipality and Carnikava municipality.
- **The territory affecting Riga and Pieriga** includes the territories of Engure, Tukums, Jelgava, Ozolnieki, Iecava, Baldone, Ķegums, Lielvārde, Ogre, Mālpils, Sigulda, Inčukalns, Sēja, Saulkrasti districts within a radius of approximately 50 km around Riga[14].

Such a territorial division corresponds to the situation at the end of 2019 before the Administrative Territorial Reform.[15]

Figure 1. Area covered by the Commuting Master plan.

In Latvia, after the municipal elections in 2021, the work of the new municipal councils will start in July 2021. (Source: Ministry of Environmental Protection and Regional Development of the Republic of Latvia (13.01.2021), https://www.varam.gov.lv/lv/administrativi-teritoriala-reforma). In accordance with the Law on Administrative Territories and Settlements (in force from 23 June 2020), the territory covered by the CMP will include the following administrative territories and administrative centers: Riga, Jurmala, Tukums county (Tukums), Marupe county (Marupe), Olaine county (Olaine), Ķekava county (Ķekava), Salaspils county (Salaspils), Ropaži county (Ulbroka), Ādaži county (Ādaži), Ogre county (Ogre), Saulkrasti county (Saulkrasti), Sigulda county (Sigulda), Jelgava county (Jelgava).

12 The area covered by CMP in general corresponds to the internal zone of Riga Metropolitan area and partly corresponds with the borders of Riga Agglomeration.

13 The administrative division of municipalities corresponds to the situation in April 2020. According to the ongoing Administrative Territorial Reform In Latvia, in 2021 there will be 39 administrative units (in Latvian), http://www.varam.gov.lv/lat/administrativi_teritoriala_reforma/

14 The county of Tukums, Engure, Jelgava, Ogre and Ķegums are partly included.

15 Ministry of Environmental Protection and Regional Development of the Republic of Latvia (2020), Administrative - territorial reform (in Latvian), www.varam.gov.lv/lat/administrativi_teritoriala_reforma/

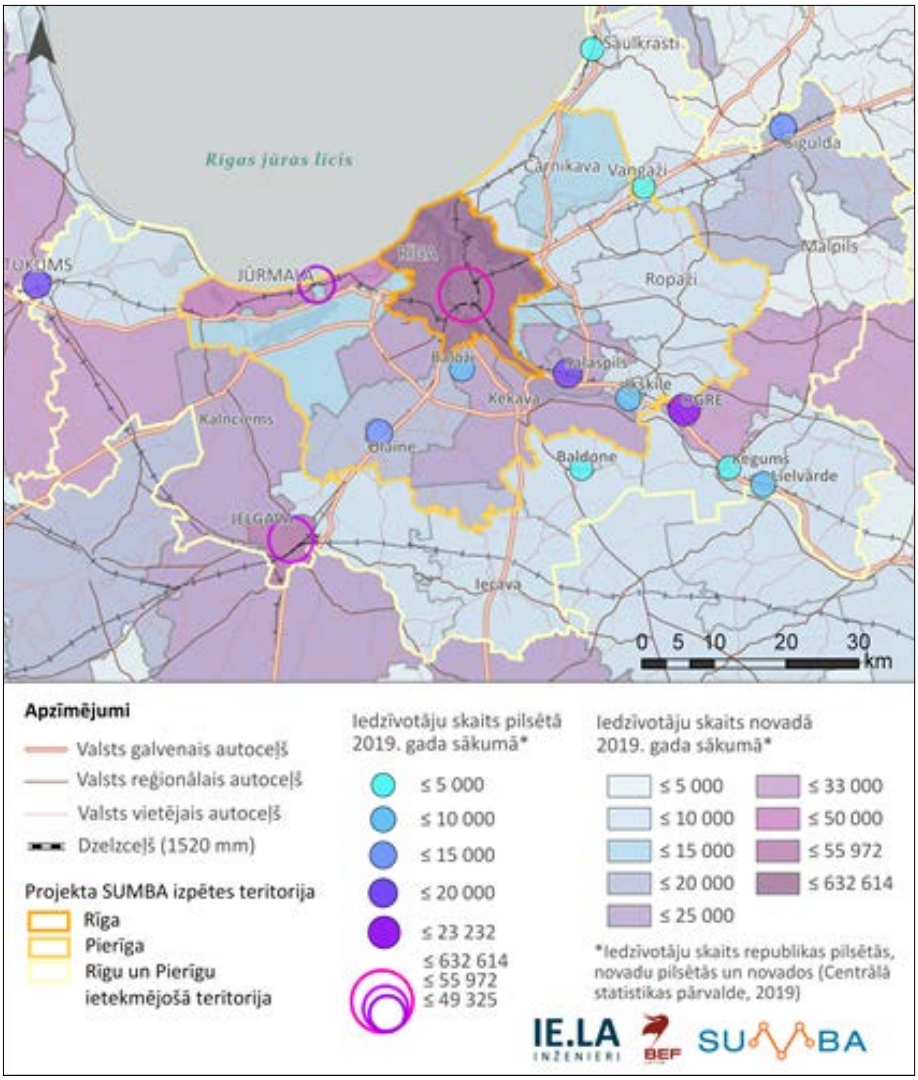

Figure 2. Population at the beginning of 2019 in cities and counties.

When looking at the territory covered by the CMP in 2019, the largest number of inhabitants are counted in Riga (632,614 inhabitants), Jelgava (55,972 inhabitants), and Jurmala (49,325 inhabitants) while Ogre, Tukums, Salaspils, Olaine and Sigulda counties are having the largest number of population[16] (Figure 2). The indicated population in the county also includes cities, except Jelgava, Riga and Jurmala. (Source: Central Statistical Bureau of Latvia[17]).

16 The indicated number of inhabitants within the county includes inhabitants also in towns, except for Jelgava, Riga and Jurmala.
17 The number of inhabitants at the beginning of 2019 (Central Statistical Bureau of Latvia, 2019), https://www.csb.gov.lv/lv/statistika/statistikas-temas/iedzivotaji/iedzivotaju-skaits/galvenie-raditaji/iedzivotaju-skaits-republikas-pilsetas

Roads and railways are important in the context of daily commuting. The territory covered by the CMP is crossed by different types of transport - land, incl. railways, strategic 1520 mm gauge railway lines, as well as trans-European transport network (TEN-T) roads, EuroVelo routes. The Port of Riga and Riga International Airport in the area covered by the CMP are important logistics and mobility hubs in the Baltic States, which are also included in the international TEN-T network.

At the beginning of 2019, the population of Latvia was 1,919,968 inhabitants. Of these, 632,614 inhabitants (approximately 33%) lived in Riga.[18] In turn, the total number of employees in Riga is about 433,000. Of these, 32% of employees work in Riga and live elsewhere, but about 4% live in Riga but work elsewhere.[19] The daily movement of the population (commuting) between Riga and nearby municipalities creates intensive traffic flows, congestion and increases emissions of harmful substances. Every morning, 86,000 people move to Riga and 29,700 leave in the direction of Riga. According to the household survey conducted in 2019, 42% of respondents (approximately 46% of women and 26% of men) have used public transport for the daily travel needs between Riga and Pieriga. In turn, 38% use road transport (about 56% of men and 30% of women as drivers) and about 3% use bicycles.[20]

18 Central Statistical Bureau of Latvia, ISG020. Population and its changes in statistical regions, cities of the Republic, regional cities, 21 development centers and counties, https://www.csb.gov.lv/lv/statistika/db

19 Riga City Council City Development Department (2019), Riga in figures 2018, https://pasvaldiba.riga.lv/NR/rdonlyres/D2187E03-C116-4534-B5EE-B48568AF1AE0/70627/R%C4%ABgaskait%C4%BCos2018LATWeb.pdf

20 Updates in the Riga transport simulation model (2020), www.sumba.eu/en/article/updates-riga-transport-simulation-model

2. Institutions involved in the development of CMP

Institutions involved in the development of mobility represent different levels of governance, planning and service provision, and their activities influence the progress of the (Daily) Commuting Master Plan.

2.1. National and public authorities

The Ministry of Transport of the Republic of Latvia[21] is the leading public administration institution in the transport and communications sector. It is responsible for policy making in the transport and communications sector, drafting policy planning documents and monitoring the implementation of the measures set out in the planning documents. The Ministry develops legislation in the transport (rail, road, maritime, aviation) and communications sectors. The Ministry of Transport and its institutions implement administration in the public transport sector - monitor compliance with laws and other regulatory enactments, manage and organize public transport services in the rote network.[22]

The performance of tasks delegated by the Ministry of Transport in the field of passenger and freight transport is performed by the state **Ltd. "Autotransporta direkcija".** It implements the planning of public transport - passenger transport by bus and train, the issuance of licenses for commercial freight and passenger transport and the issuance of permits for international transport.[23]

Five planning regions have been established in Latvia, which are competent to ensure regional development planning, coordination, co-operation between local governments and other public administration institutions. Planning regions determine the basic principles, goals and priorities of the long-term development of the region.[24] In co-operation with local governments and public administration institutions, planning regions develop long-term and medium-term development planning documents, as well as manage and monitor their implementation. In the field of transport and mobility, the planning regions shall prepare and submit proposals for the necessary amendments to the route network of regional importance; ascertains and summarizes the opinions of local governments and residents regarding the route network in the region; inspect the stops in the territory of the planning region and provide proposals regarding their necessity,

21 LR Ministry of Transport,(in Latvian) http://www.sam.gov.lv
22 Law on public transport services (2007), (in Latvian), https://likumi.lv/doc.php?id=159858&version_date=15.07.2007
23 The state Ltd. „Autotransporta direkcija",(in Latvian), http://www.atd.lv/lv/visp%C4%81r%C4%ABgs-apraksts-par-direkciju
24 Ministry of Environmental Protection and Regional Development of the Republic of Latvia (in Latvian), https://www.varam.gov.lv/lv/planosanas-regioni

construction, and inclusion in the route movement lists or route descriptions.[25] In the territory covered by the plan, development planning is coordinated by the Riga Planning Region and the Zemgale Planning Region.

The Public Transport Council consists of representatives from the Ministry of Transport, the Ministry of Finance, state Ltd. "Autotransporta direkcija", Riga, Kurzeme, Zemgale and Vidzeme planning regions and Rēzekne County Council.[26] The Council carries out the planning of regional local and intercity routes, it is responsible for ensuring a unified approach to the planning, ordering, conclusion of contracts and use of state budget funds for public transport services. The council ensures that the interests of local residents and municipalities are identified and represented.[27]

The responsibilities of cities and counties include managing the route network in their administrative territory, organizing public transport services; to submit proposals to the Public Transport Council and VLtd. "Autotransporta direkcija" regarding the organization of public transport services, rational management of the financial resources allocated to public transport. Municipalities must ensure the construction of public transport stops and the maintenance of infrastructure in their administrative territory.[28] In order to strengthen cooperation between Riga City Municipality and Nearby Riga Municipalities, to establish an effective governance model, as well as to identify and implement projects important for the entire Riga metropolitan area (including transport and mobility), on October 29, 2019, between Riga City Council and Nearby Riga Municipalities Association Memorandum of Cooperation "On the Establishment of the Cooperation Framework for the Riga Metropolitan Area". In January 2021, when 15 local governments merged, the Riga and Nearby Riga Local Government Association "Riga Metropolis" [29]. was established. One of the goals of the association is to organize the joint provision of municipal services to the population, promoting their accessibility and quality.

With the development of the Rail Baltica project in Latvia, the task of the state capital company Ltd. "Eiropas Dzelzceļa līnijas" is to implement the Rail Baltica public railway infrastructure construction project in Latvia.[30] In its turn, the Baltic joint venture JSC "RB Rail" is responsible for the implementation of the joint activities of the Rail Baltica project.

25 Riga Planning Region (in Latvian), http://rpr.gov.lv/darbibas-jomas/sabiedriskais-transports/
26 LR Ministry of Transport decree Nr. 01-03/91 (04.07.2019), On the composition of the Public Transport Council, (in Latvian), http://www.atd.lv/sites/default/files/Rikojums%20par%20sabiedriska%20transporta%20padomes%20sastavu_04072019.pdf
27 Public Transport Council (in Latvian), http://www.atd.lv/lv/jaunumi/sabiedrisk%C4%81-transporta-padome
28 Law on public transport services (2007), https://likumi.lv/doc.php?id=159858&version_date=15.07.2007
29 Riga City Council (11.01.2021.), The Association of Pieriga Municipalities is transformed into the Association "Riga Metropolis", (in Latvian), https://www.riga.lv/lv/jaunums/pierigas-pasvaldibu-apvieniba-partop-apvieniba-rigas-metropole
30 European railway lines (in Latvian), https://edzl.lv/par-edzl/kas-ir-edzl

2.2. Public transport service providers

Passenger transport by rail and road in the area covered by the Plan is performed by several domestic public transport service providers. **JSC "Pasažieru vilciens"** transports passengers by rail throughout the territory of Latvia on the routes of electric trains and diesel trains. In total, passengers traveling by train in 2019 measured 602.7 million kilometers (on average, one train journey was 32.7 kilometers long). In 2019, JSC Pasažieru vilciens carried a total of 18.45 million passengers. It is planned that the electrification and modernization of the railway will allow to further increase the number of transported passengers.

One-time tickets can be purchased for the train journey; day tickets; season tickets, as well as single train-bus tickets - for the convenience of Tukums and Aizkraukle passengers (introduced from May 2018). The most popular type of train ticket is a one-time ticket. In 2019, 67% of passengers chose this type of ticket for train travel. From 20 August 2019, all train tickets purchased online and in mobile applications will receive a discount. As a result, for example, in December 2019, 28% of the total volume of one-time tickets sold was purchased electronically (13.5% in December 2018).[31, 32]

Public transport services by road in the territory of Riga planning region are provided by 5 companies (JSC "CATA", JSC "Rigas Taksometru parks", Ltd. "Ekspress Ādaži", Ltd. "GALSS BUSS", Ltd. "Tukums auto"), providing passenger movement opportunities with regional buses.[33] According to the informative report "On the Development of Public Transport Services of Regional Importance for 2021-2030"[34], the network of regional bus routes is divided into several parts of the route network or lots, adapting it to the flow and travel habits of passengers living in the counties. It is planned to identify public transport service providers as a result of an open tender, the subject of which would be a route network with a volume of 65 million kilometers per year, divided into 16 route network parts (lots) with a volume from 2.5 to 6.0 million kilometers per year in each lot. Uniform quality requirements for the fleet (bus age and equipment) will be set throughout the route network. For the trip by regional bus it is possible to buy a ticket on the service platform https://www.bezrindas.lv. It is not necessary to print the purchased ticket, they can be stored and presented on smart devices.[35]

31 JSC „Pasažieru vilciens" (2020), https://www.pv.lv/en/about-us/
32 JSC „Pasažieru vilciens" (2020), In 2019, the number of train passengers continued to grow, reaching 18.45 million,(in Latvian) https://www.pv.lv/lv/informacija-medijiem/
33 Riga Planning Region (2020), Public Transport (in Latvian), http://rpr.gov.lv/darbibas-jomas/sabiedriskais-transports/
34 Cabinet of Ministers (2019), Information report "On the development of public transport services of regional significance in 2021-2030" (in Latvian), http://tap.mk.gov.lv/mk/tap/?pid=40473219
35 Ticketing platform BezRindas.lv (2021), https://www.bezrindas.lv/en/how-is-it-working

Passenger movement in public transport in the city of Riga is provided by **Riga Municipality Ltd. "Rīgas satiksme".** The company operates 8 tram routes, 18 trolleybus routes and 54 bus routes. In total, "Rīgas satiksme" vehicles (trams, trolleybuses, buses) cover about 45 million kilometers a year and carry about 140 million passengers. "Rīgas satiksme" manages more than 6,000 parking lots in Riga. The company also provides other services: vehicle and retro tram rental, as well as bicycle parking.[36] From 1 December 2018, the subcontractor **"Rīgas minibus bus traffic"** has been involved in the provision of public transport services (in 2020, passenger transportation was performed on 18 minibus routes).[37] Since May 1, 2009, a single electronic ticket (e-ticket) for a certain number of trips has been fully operational in Riga public transport. There are so-called time tickets for a certain number of hours, monthly tickets, as well as a one-time ticket for one trip, which can be purchased from the driver.[38]

3. Current situation and mobility trends in the CMP area

3.1. Strategies, policies, action plans, visions in the project area

An integrated, sustainable transport system, which provides high-quality opportunities for the mobility of people and goods throughout the country, is a national development goal in the field of transport, defined in the **Latvian National Development Plan 2021-2027**. The transport system must ensure local accessibility using the railways as the backbone of public transport, as well as international connectivity, within the EU core network (Rail Baltica), ensuring the interconnection of the core network and the comprehensive network. One of the tasks included in the CMP is to improve the transport system in order to increase the use of bicycles and other environmentally friendly vehicles. [39]

Considering one of the key elements of the European Green Course, to accelerate the transition to sustainable and smart mobility, the goal of Latvia's transport policy is an integrated transport system that ensures safe, efficient, smart and sustainable mobility, promotes economic growth, regional development and contributes to the transition to the low-carbon economy. The goal of the policy is defined in the **Transport Development Guidelines** for

36 Riga Municipal Limited Liability Company "Rīgas Satiksme" (2020) (in Latvian), https://www.rigassatiksme.lv/lv/par-mums/
37 Riga Municipal Limited Liability Company "Rīgas Satiksme" (2020), Interim report for the nine months of 2020, review (in Latvian) https://www.rigassatiksme.lv/files/2020_gada_devinu_menesu_starpperiodu_parskats.pdf
38 Riga Municipal Limited Liability Company "Rīgas Satiksme (2020) (in Latvian), https://www.rigassatiksme.lv/lv/biletes /
39 National Development Plan 2021-2027 (2020) (in Latvian), https://www.pkc.gov.lv/sites/default/files/inline-files/NAP2027_apstiprin%C4%81ts%20Saeim%C4%81_1.pdf

2021-2027 (draft, 1st edition)[40]. The results to be achieved include improved mobility opportunities, reduced greenhouse gas emissions in transport and improved environmental quality, competitive transport and logistics infrastructure and services, increased transport safety and security; promoted innovation and training of highly qualified professionals in the field.

At the regional level, the Riga Planning Region Sustainable Development Strategy 2014-2030[41] quality mobility and logistics have been identified as one of the priorities. The vision defined in the strategy includes the development of a unified transport system in the region, which is based on all types of public transport networks, which ensure territorially accessibility in accordance with the requirements of daily mobility. **Sustainable Development Strategy of Zemgale Planning Region 2015-2030**[42] includes guidelines for regional accessibility planning. **The Spatial vision of the mobility of the Riga metropolitan area**[43] includes a vision of the development of the external and internal accessibility of the metropolitan area[44] making the daily commuting of the population convenient and safe. Commuting in accordance with the spatial vision of the mobility of the Riga metropolitan area is daily or frequent trips to Riga from Pieriga and more remote areas (for example, Jelgava) for work, study or services. In the common transport system, rail as a basis, roads as a support, integrated and high-quality public transport, mobility points, cycling, waterways and micromobility are key elements in a common vision for the development of metropolitan mobility.

In order to achieve coordinated development of Riga metropolitan area and coordination of processes taking place there, using integrated approach and complex solutions, as well as to harmonize interests of state, Riga city, Riga metropolitan area municipalities and residents, an **Action Plan for Riga metropolitan area development**.[45] has been developed. The solutions included in the plan are to be implemented in 2021-2027. within the framework of the European Union funds, state and local government budgets, as well as other financial instruments of the annual programming period.

Riga's development vision and long-term development goals are defined in the **Riga Sustainable Development Strategy** until 2030.[46] In order to ensure a comfortable, safe and pleasant urban

40 National Transport Development Guidelines 2021 -2027 (1.redakcija) (in Latvian), https://www.sam.gov.lv/lv/sabiedriska-apspriesana-transporta-attistibas-pamatnostadnu-2021-2027gadam-projekts-un-strategiskas-ietekmes-uz-vidi-novertejuma-vides-parskata-projekts/tap-2021-2027_pirma-redakcija.pdf

41 Sustainable development strategy of Riga planning region 2014-2030 (approved 18.09.2015) (in Latvian), http://rpr.gov.lv/wp-content/uploads/2017/12/RPR-Ilgtspejigas-attistibas-strategija_2014-2030.pdf

42 Sustainable development strategy of Zemgale planning region 2015 -2030 (in Latvian), https://www.zemgale.lv/index.php/attistibas-planosana/planosanas-dokumenti/category/34-zpr-ilgtspejigas-attistibas-strategija-2015-2030

43 Ltd. "Grupa 93", Riga Planning region (2019), Spatial vision of Riga metropolitan area mobility - Final report (in Latvian), http://rpr.gov.lv/wp-content/uploads/2019/03/20190201_Mob_viz_Galazinojums.pdf

44 Riga metropolis - a space of economic and social movement functionally closely connected with the capital, formed by the city of Riga together with nearby cities of various sizes (Jūrmala, Olaine, Jelgava, Baldone, Salaspils, Ogre, Tukums un Sigulda) and municipalities of Pieriga counties, where the daily commuting of the population is pronounced.

45 Action plan for the development of the Riga metropolitan area (2020) (in Latvian), http://rpr.gov.lv/wp-content/uploads/2020/06/Rigas-metropoles-areala-ricibas-plans_Web-1.pdf

46 Riga Sustainable Development Strategy until 2030, (in Latvian), https://www.rdpad.lv/wp-content/uploads/2014/11/STRATEGIJA_WEB.pdf

environment, as well as to make Riga a pedestrian, cyclist and public transport friendly city, the strategy envisages improvement of the urban transport system and relevant infrastructure according to the "pedestrian - cyclist - public transport - private transport - freight" hierarchy. It is noted that in the central part of the city the entry and parking of private vehicles should be limited, giving priority to other modes of transport.

An action program for sustainable mobility of the Riga transport system has been prepared for the mobility of the city of Riga, accessibility of territories and accessibility of objects, as well as for better quality assurance of the living environment, including **a short-term action plan for 2019-2025**[47]. In order to reduce the intensity of road transport and air pollution in the city core, the program includes, for example, measures to restrict traffic in the city center, to divert road traffic outside the central part of the city of Riga. The program includes measures for the integration of the Rail Baltica railway line in Riga into the mobility system. At the same time, it is also thinking about improving air quality - in accordance with **the Air Pollution Reduction Action Plan 2020-2030**. It is planned to create a low-emission zone in the city of Riga, where emissions from diesel engines are limited.[48]

Cycling is one of the fastest growing alternatives to motor vehicles in Riga. "Cycling development concept for integrated cycling development in Riga" [49], determines development directions and goals for integrated development of bicycle traffic in Riga street plan, covering 3 main areas - bicycle traffic infrastructure, bicycle traffic planning and management, bicycle traffic promotion and education. In 2021, it is planned to update the concept.[50]

3.2. Current situation in the field of mobility

The area covered by the CMP is characterized by a high intensity of commuting both towards Riga and from Riga to the surrounding areas. Within the framework of the SUMBA project in Riga and Pieriga in the spring and autumn of 2019 a survey of households was conducted[51]. This was done by the research centre SKDS and the Institute of Transport and Telecommunications. The target group included residents of Riga and Pieriga who have reached at least 8 years of age. The face-to-face interviews took place at the respondents' places of residence, they had to provide information about their commuting activities on

47 Riga Transport System Sustainable Mobility Action Program, Part I, Short-term Action Plan 2019 – 2025 (in Latvian) (2019), https://www.rdpad.lv/wp-content/uploads/2019/04/2_MRP_2019_2025_Gala_versija.pdf

48 Air pollution abatement action plan 2020–2030 (in Latvian) (2020), https://likumi.lv/ta/id/314078-par-gaisa-piesarnojuma-samazinasanas-ricibas-planu-2020-2030-gadam

49 Riga city bicycle traffic development concept 2015-2030 (in Latvian), https://www.rdsd.lv/uploads/media/557550c430e1f.pdf

50 Riga City (25.01.2021), The concept of Riga bicycle traffic development will be renewed (in Latvian), https://www.riga.lv/lv/jaunums/atjaunos-rigas-velosatiksmes-attistibas-koncepciju

51 Riga City Council City Development Department (2019) Household survey on population movement habits, (in Latvian), https://www.rdpad.lv/rigas-pilsetas-pasvaldiba-uzsak-majsaimniecibu-aptauju-par-iedzivotaju-parvietosanas-paradumiem/

Tuesday, Wednesday and Thursday of the previous week. The survey was conducted in two languages - Latvian and RusLtd.n - and was conducted only in private households. Responses were received from 5,317 households, covering about 40,000 trips. 53% of respondents were women and 47% men.

According to the results of the survey, the main reason for the respondents' movement was work or study. The distribution of transport modes in Riga: 46.43% - tram, trolleybus, bus and minibus users; 34.7% - car users; 7.31% of pedestrians and 3.45% of cyclists (Figure 3).

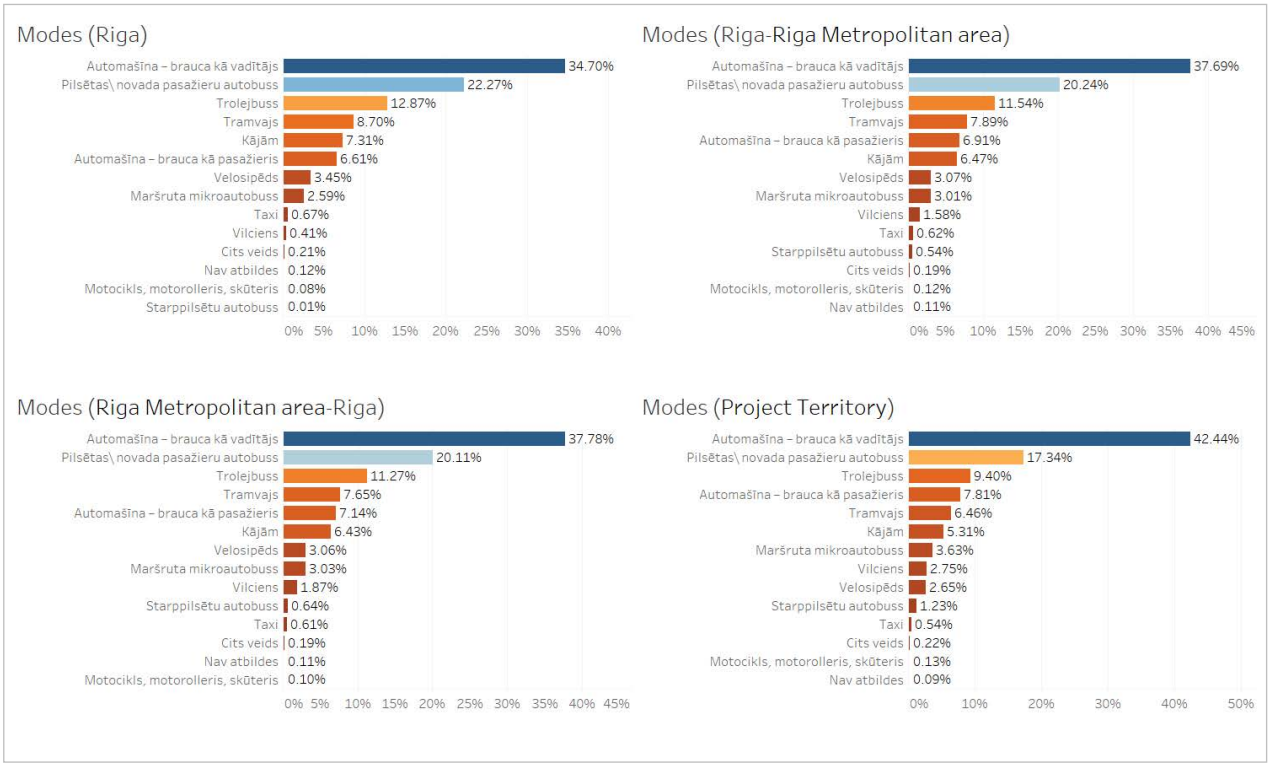

Figure 3. Distribution of respondents' modes of movement [52]

The results of Riga metropolitan residents reflect trips to and from Riga: 42% - public transport users, 38% - car users, ~ 3% cyclists and 17% use other modes of transport. The majority of private car users are men, while public transport users are mainly women. [53]

The existing public transport ticket purchase system provides an opportunity to purchase public transport tickets for one-time trips or subscription tickets for routes on regional bus routes, passenger trains, as well as for trips on Riga public transport (tram, trolleybus, bus, minibus). Since 2018, a single train-bus ticket has been introduced for the convenience of Tukums and Aizkraukle passengers. The single ticket can be used for a trip on the train route Riga – Tukums to the railway stop Tukums 1 and further from Tukums bus station for a trip on bus routes in Tukums region.[54]

52 Riga City Council City Development Department
53 Updates in the Riga transport simulation model (2020) (in Latvian), www.sumba.eu/en/article/updates-riga-transport-simulation-model
54 AS "Pasažieru vilciens" (2018), The single ticket can be used on 27 bus routes to Tukums region (in Latvian), https://www.pv.lv/lv/izmainas-un-jaunumi/jaunumi/11960/vienota-bilete-izmantojama-27-autobusa-marsrutos-tukuma-novada/

In part of the city of Riga, a single electronic ticket - an e-talons - can be used to pay for a public transport trip. The e-talons is a single electronic ticket for public transport in the city of Riga. The ticket loaded in the e-talons is valid for 12 months from the moment of its purchase, unless the ticket type tariff changes or the ticket type is cancelled, and no payment is required for payments for the use of public transport.[55]

In 2019, 727,164 passenger vehicles were registered in Latvia, of which 220,218 (approximately 30%) were registered in Riga.[56] In January 2020, the total number of passenger cars registered in Latvia increased by approximately 12 thousand.[57]

Analysing the collected data on the intensity of bicycle traffic in Riga, it has been established that in recent years the number of cyclists on weekday mornings on city bridges has significantly increased. For example, in September 2018, more than 550 cyclists were counted on the Vanšu Bridge in the morning from 8.00 to 9.00 (approximately 100 cyclists in 2008)[58].

The data of the population survey [59] (approximately 4000 respondents) show that in 2019 6.4% of the respondents in Latvia rode a bicycle every day or almost every day, while once a week 19.8% of the Latvian population rode a bicycle, most of them in Pieriga (23.2%), but the least - in Latgale (17.2%) and Riga (17.7%).

According to a study conducted to clarify the boundaries of the Riga agglomeration[60] the proportion of commuting to Riga at the working age of the population has increased in all regions of Latvia, but most rapidly in Pieriga municipalities. The intensity of commuting in all regions of Pieriga in 2016 was over 45%, which indicates that almost every second inhabitant of Pieriga of working age works in Riga. Also evaluating the commuting in the direction from Riga, higher commuting is observed in Pieriga municipalities - Ķekava, Mārupe, Garkalne and Stopiņi. Daily commuting from Riga to these regions also exceeds 40%. These trends are also confirmed by the information available in the Geographical Spatial Planning Platform of the Latvian Administrative-Territorial Reform established in 2020.[61]

55 Riga Municipal Limited Liability Company "Rīgas Satiksme" (2020), What is e-ticket? (in Latvian) https://www.rigassatiksme.lv/lv/biletes/kas-ir-e-talons/
56 Central Statistical Bureau (2020), (in Latvian), https://data.csb.gov.lv/pxweb/lv/transp_tur/transp_tur__transp__auto_celi_ikgad/TRG070.px/
57 State Joint Stock Company "Road Traffic Safety Directorate " (2021), Transportlīdzekļi, (in Latvian), https://www.csdd.lv/transportlidzekli/registreto-transportlidzeklu-skait
58 Ltd. "IE.LA inženieri" (2020), Methodology of bicycle traffic flow accounting and data analysis (in Latvian), https://www.bef.lv/velodatu_metodika/
59 Ltd. "Enviroprojekts" (2019) (in Latvian), Study on cycling and cycling infrastructure at the national level, http://veloplans.lv/wp-content/uploads/2017/08/Velo-petijums_15012020.pdf
60 Department of Human Geography, Faculty of Geography and Earth Sciences, University of Latvia (2017) Clarification of the boundaries of the Riga agglomeration (in Latvian), http://www.sus.lv/sites/default/files/rigas_aglomeracija_2017.pdf
61 Map publishing house Jāņa sēta (2021), Map of the Administrative Territorial Reform of Latvia, (in Latvian), https://atr.kartes.lv/

To assess the current situation in the field of mobility in the area covered by the CMP, a SWOT analysis was performed (in 2018)[62]. TIts aim was to assess the transport system and mobility in general, based on the responses to a survey of municipal specialists included in the area. The evaluation included 25 aspects that comprehensively described the areas of the transport sector - legislation, financial sources, parking management, expert capacity and cooperation between municipalities, impact of forthcoming development projects and population, safety of daily travel, reliability and availability of public transport, sharing, traffic control and information system, public transport fleet and capacity, as well as accessibility for people with reduced mobility, public transport priority in the common transport system, tariff schemes and ticketing system, visibility of public transport companies and information channels.

Based on the SWOT analysis, some well-developed fields in the area covered by the CMP were identified, which characterize the resources that contribute to the effective achievement of the objectives of the area. The reliability, frequency and punctuality of public transport were recognized as strengths. The public transport fleet (age of vehicles, etc.) was assessed as modern and in line with modern trends, noting the activity of public transport companies to purchase new vehicles. However, the SWOT analysis showed that most of the selected aspects were identified as organizational or systemic weaknesses in the transport sector, which make it difficult to achieve the goals of sustainable mobility. The main shortcomings included the lack of qualified and experienced staff able to deal effectively with multimodal mobility and transport planning, and the risk of overburdening existing staff in municipalities. Insufficient cooperation between the service provider and the municipality was assessed as a shortcoming in the field of improvement of the traffic control and management system. Weaknesses in the transport sector also included existing tariff schemes, in particular the lack of a unified ticketing policy within the agglomeration. One of the important development opportunities in the field of transport is cooperation between municipalities. In the area covered by the CMP, to develop a common public transport network, agree on a common tariff and ticketing policy, develop a coherent cycling infrastructure network and parking policy, and develop joint projects. Analyzing the possibility of potentially unfavorable situations, the SWOT analysis highlighted the importance of an appropriate workforce approach in municipalities, as the lack of qualified and experienced staff or overcrowding of existing staff can hinder the mobility system development opportunities. Along with the development of low-rise buildings, the relocation of residents from the city of Riga to the regions of Pieriga, while maintaining the high integrity of the labor market of the city of Riga, and social processes is

62 Pakalna L. (2020), SUMBA project - accomplished and planned activities (in Latvian), https://www.bef.lv/wp-content/uploads/2021/02/02_SUMBA_BEF.pdf

associated with an increasing amount of commuting. The choice of the residents of Riga and Pieriga in favor of private road transport as the main mode of transport creates an increased load on the transport infrastructure of the city of Riga, disturbances in mobility processes (congestion, road accidents), as well as noise and air pollution[63, 64]

In order to increase the competitiveness of public transport, in 2020 RPR municipalities were provided with the opportunity to participate in the preparation of the project application of the European Investment Bank program "ELENA".[65] Individual consultations were provided to the municipalities of the region, evaluating the most suitable locations of mobility hubs. The application was based on the concept of mobility hubs prepared in the SUMBA project and their location.

On July 1, 2020, the first mobility hub in the Baltics was launched in Riga. Compared to other mobility hubs in Europe, the solution developed in the VEF area is unique in that it takes into account not only the mobility needs of citizens, but also the interest of city, scientists and entrepreneurs in collecting, opening up and promoting innovative solutions. A stationary pedestrian and bicycle flow meter has been installed at the mobility hub, a test point has been provided for piloting the Internet, machine vision and other solutions, as well as for collecting various open data of the city. The VEF neighborhood mobility hub is a prototype, on the results of which the further development of mobility hubs in Riga and potentially also in other Latvian cities will be based.[66]

Rail Baltica - **Riga multimodal transport hub** at Riga Central Railway Station with convenient bicycle and pedestrian infrastructure and mobility services will reduce the flow of private vehicles, improve public transport, pedestrian and bicycle connections between the center and the Moscow street suburbs, the left bank of the Daugava and Zaķusala. An integrated local, regional and international passenger transport movement will be created, new mobility opportunities for pedestrians, a positive impact on the development of the Torņkalns multimodal transport hub, improving the accessibility of the left bank of the Daugava.[67]

Rail Baltic Regional traffic - potential stations in the territory covered by the CMP - Vangaži, Saurieši, Acone, Jāņavārti, Riga, Torņakalns, Imanta, Riga Airport, Jaunmārupe, Jaunolaine, Ķekava, Iecava.

In 2019, the research center "SKDS" on behalf of the Road Transport Directorate conducted a survey on population satisfaction with regional public transport. A total of 3,055 respondents were interviewed in Cēsis, Daugavpils, Jelgava, Ķekava, Madona, Ogre and Talsi municipalities. The main argument why people prefer public transport is cheaper compared to other modes of transport,

63 Riga Transport System Sustainable Mobility Action Program. Current situation report (2019) (in Latvian), https://www.rdpad.lv/wp-content/uploads/2019/04/1_MRP_Esosa_situacija_Gala_zinojums.pdf
64 Riga Sustainable Development Strategy until 2030 (in Latvian), https://www.rdpad.lv/wp-content/uploads/2014/11/STRATEGIJA_WEB.pdf
65 Riga Planning Region (2020), Project Track50 news (September 2020), Sustainable energy and climate action plans developed for nine municipalities of Riga Planning Region (in Latvian), http://rpr.gov.lv/projekta-aktualitates-track-50/
66 Riga City (2020), Launch of first mobility hub in Latvia (in Latvian), https://lvportals.lv/dienaskartiba/317678-atklats-pirmais-mobilitates-punkts-latvija-2020
67 Ltd. "Grupa 93", Riga Planning Region (2019), Spatial vision of Riga metropolitan area mobility - Final report (in Latvian), http://rpr.gov.lv/wp-content/uploads/2019/03/20190201_Mob_viz_Galazinojums.pdf

although the location of the stops is no less important. The survey also identified the most common reasons why residents of these seven counties do not use public transport services. About 69% of people who do not use public transport indicated that they have a private or work car that they also use on a daily basis. About 10% said that public transport was too expensive and 5% said it was not available. Overall, 81% of respondents evaluate regional public transport services positively. [68]

3.3. Main challenges and possible solutions

3.3.1. Intensity of commuting

During the development of Riga Transport System Sustainable Mobility Action Program,[69] the location of congestion, characteristic parameters have been assessed. The estimated monetized public losses during one working day in certain street sections reach approximately 155 thousand. EUR per working day (i.e. EUR 39 million per year). Congestion is particularly pronounced in the morning and afternoon of a working day. Evaluating the mobility aspects of the city of Riga, it has been acknowledged that the movement of pedestrians and cyclists in the city of Riga is mostly subordinated to car traffic. At the same time, the current public transport route scheme for the residents of Riga›s neighborhoods does not fully provide a direct connection between the neighborhoods, which would allow you to get to your desired destination without the need to transfer to the city center.

Research and analysis[70] of the current situation in the field of mobility in Riga and Pieriga[71] indicate that in recent years the number of cars on the streets and roads has been gradually increasing. Data from the Central Statistical Bureau of Latvia show that in 2017, a Latvian resident travels approximately 44 km by car as a driver or passenger, and travels an average of 2.7 km on foot[72] The average distance traveled by bicycle is 10.6 km, while the average distance travelled by city public transport (tram, trolleybus) is about 7 km. Assessing the load of cars, it can be assumed that residents who go to Riga on a daily basis for work or school mostly drive alone in their private cars.

It is necessary to create preconditions for the restructuring of transport flows in order

68 State Ltd. Road Transport Directorate (2019), Survey: Passengers evaluate public transport services on regional routes positively (in Latvian), http://www.atd.lv/lv/jaunumi/aptauja-pasa%C5%BEieri-pozit%C4%ABvi-v%C4%93rt%C4%93-sabiedrisk%C4%81-transporta-pakalpojumus-re%C4%A3ion%C4%81lajos-mar%C5%A1rutos

69 Riga Transport System Sustainable Mobility Action Program. Current situation report (2019) (in Latvian), https://www.rdpad.lv/wp-content/uploads/2019/04/1_MRP_Esosa_situacija_Gala_zinojums.pdf

70 Riga Energy Agency, Ltd. "Grupa 93" (2019) Final report of the mobility management solution corresponding to the specifics of the city of Riga - conceptual development and approbation of the "Mobility Point" model " (in Latvian), https://www.grupa93.lv/lv/teritoriju-attistibas-koncepcijas/rigas-mobilitates-punkts/

71 Transport development guidelines 2021. – 2027. gadam (annex 1) Description of the current situation and main challenges (in Latvian), https://www.sam.gov.lv/sites/sam/files/media_file/1_pielikums_esosas_situacijas_raksturojums_izaicinajumi-3.pdf

72 Central Statistical Bureau (2018), Results of the survey "Mobility of the Latvian population in 2017" (in Latvian), https://www.csb.gov.lv/lv/statistika/statistikas-temas/transports-turisms/transports/meklet-tema/357-apsekojuma-latvijas-iedzivotaju-mobilitate

to reduce the need to use individual cars. By developing the priority system where the highest priority is given to pedestrians, then cyclists, public transport, private transport, it is possible to change the habits of commuters and reduce the intensity of road traffic. One of the solutions is the creation of mobility hubs, which would ensure the interrelation of the road, bicycle and public transport system, convenient connection between destinations and various support infrastructures, such as indications on directions, applications to find commuting options e.g., "Last mile". At the same time, it is necessary to define specific conditions for the places where mobility hubs should be developed (e.g., population density, existing infrastructure and mobility solutions).

3.3.2. Management of public transport system

The current passenger transport model is inefficiently organized and the public transport system is poorly integrated, promoting the dominance of private cars on the roads. There is a lack of mutually agreed timetables for the various public transport routes, and no joint ticketing mechanisms have been put in place to improve citizens' mobility habits and mobility as such.[73] This is particularly important in the context of commuting processes, creating a close integrity between regional buses and passenger trains.

In order to promote wider use of public transport, significant improvements are needed in the field of public transport, to provide passengers with convenient and up-to-date purchasing system of tickets for regional routes, and to accurately list and identify those who receive discounts on public transport. Already in 2019, the state Ltd. "Autotransporta direkcija" has started to develop a joint ticket storage system. It is planned that the single ticket will be valid for commuting by bus or train including the transfer possibilities.[74] In order to solve the problems identified in the management of the public transport system in 2021, the Ministry of Transport has established a working group that has agreed on activities to be performed in the Riga metropolitan area to make Riga and Pieriga public transport unified and convenient for passengers. For the integration of public transport in the metropolitan area, it is planned to coordinate strategic planning, develop a route network, a unified passenger information system, as well as introduce a unified tariff policy and a joint ticket.[75]

73 Riga Transport System Sustainable Mobility Action Program. Current situation report (2019), 43 lpp. (in Latvian), https://www.rdpad.lv/wp-content/uploads/2019/04/1_MRP_Esosa_situacija_Gala_zinojums.pdf

74 State Ltd. "Autotransporta direkcija" (2019), From 2021 a modernized regional public transport ticket sales system will be available (in Latvian), http://www.atd.lv/lv/jaunumi/no-2021-gada-b%C5%ABs-pieejama-moderniz%C4%93ta-re%C4%A3ion%C4%81l%C4%81-sabiedrisk%C4%81-transporta-bi%C4%BCe%C5%A1u-tirdzniec%C4%ABbas

75 Randers I. (2021), 300 million for the mobility of Pieriga. For Pieriga with Riga, common routes, one ticket and uniform tariffs are planned (in Latvian), www.la.lv/300-miljoni-pierigas-mobilitatei

3.3.3. Management of mobility data

Lack of efficient mobility data management is recognized at the national level. Currently, the management of data about highways and transportation in public administration is decentralized and is not harmonized to ensure efficient data sharing. Data on traffic, roads and their change patterns are maintained by several public institutions, however, mutual responsibility for data maintenance and change notification are not clearly defined, as well unified regulated standard for classification of transport data and exchange among different institutions of public administration is missing (data exchange procedures are determined by individual bilateral agreements in each case).[76]

Data accessibility is attributed to several data holders within the territory covered by the CMP. The key data holders on transport infrastructure and mobility are JSC "Latvijas Valsts ceļi" by possessing information about traffic intensity on the state roads, JSC "Pasažieru vilciens" by possessing information about the passenger turn-out at the railway stations and stops, Aurtotransporta direkcija (Road Transport Directorate) by possessing data on inter-city bus transport, as well as Centrālā statistikas pārvalde (Central Statistical Bureau) and Riga City Council Ltd. "Rīgas satiksme. Significant shortcoming in accessibility of transport data is accounting for intensity of bicycle transportation in the country.

Municipalities are also collecting data related to the mobility issues; however, challenges may appear to ensure their availability and data accessibility from various mobility data providers and public transportation service operators. For example, data on number of boarded passengers at concrete stops, data on carried passenger flows at specific routes or data from the transport simulation model EMME, due to their large volume are available at the request for specific parts of the city or neighbourhoods and thus these are not permanently open and publicly accessible for everyone. Difficulties to access the information and data collected narrows down their utilization for broader mobility planning scope at the regional level, moreover, unified data platform is currently missing. Potential misunderstanding from data holders on data security and permission for data disclosure (according to the requirements by General data protection regulation) can create additional obstacles for accessibility of updated information to the development planning of transportation systems.

76 Order of the Cabinet of Ministers Nr. 396 (17.07.2020), On the conceptual report "On the implementation of intelligent transport systems in the field of Latvian road transport and their interfaces with other modes of transport " (in Latvian), https://likumi.lv/ta/id/316187-par-konceptualo-zinojumu-par-intelektisko-transporta-sistemu-ieviesanu-latvijas-autotransporta-joma-un-to-saskarnem-ar-citiem

3.3.4. Cooperation among stakeholders

Cooperation among municipalities within the territory of CMP was challenging during previous years when the municipal lobby was hindering the advancement of shared interests in the field of mobility. The situation has changed in 2019 when the memorandum of cooperation was signed[77] and when the recently elected Riga City Council (since October 2020) has nominated as one of their priorities the improvement of cooperation with municipalities of Pieriga. Newly established association uniting Riga and Pieriga municipalities "Rīgas metropole"[78] puts forward a decision-making principle on basis of equality and consensus by respecting viewpoints and interests of Riga municipality and Pieriga municipalities. Priority directions of cooperation will include projects for renewal of infrastructure, traffic organization, etc.

Despite these positive tendencies, in cooperation development among municipalities must be ensured also involvement of other stakeholders for successful implementation of the CMP. Regional level carries the coordinating role within their territories. The scope of the current CMP includes both, Riga Planning Region and Zemgale Planning Region, however, development of respective plans and strategies is carried out within the individual region and the mechanism for inter-coordination activities is not stipulated.

3.4. Mobility hubs as solutions to mobility problems

Mobility hubs are transport hubs of different levels with the main task of providing each user with convenient connections of different modes of transport together, offering alternative modes of transport (including shared vehicles) and reducing the need to use private road transport. Increasing the competitiveness and attractiveness of public transport reduction of private transport flows is expected and therefore also reduction of congestion.

77 Riga City Council City Development Department (30.10.2019), Riga City Council and the Association of Pieriga Municipalities sign a memorandum of cooperation "On the Establishment of the Cooperation Framework for the Riga Metropolitan Area", (in Latvian), https://www.rdpad.lv/rigas-dome-un-pierigas-pasvaldibu-apvieniba-paraksta-sadarbibas-memorandu-par-rigas-metropoles-areala-sadarbibas-ietvara-izveidi/

78 Riga City (11.01.2021), The Association of Pieriga Municipalities is transformed into the association "Riga Metropolis", (in Latvian), https://lvportals.lv/dienaskartiba/323666-pierigas-pasvaldibu-apvieniba-partop-apvieniba-rigas-metropole-2021

Depending on the level of traffic can be divided in:

- **international multimodal hubs** for international traffic,
- **regional traffic mobility hubs** that provide intercity traffic,
- **urban (city) mobility hubs** based on the city's public transport network,
- **micromobility hubs** that provide access to the nearest public transport, incl. to the nearest mobility hub, as well as providing support infrastructure for the "first" and "last" kilometers.

A schematic representation of the gradation of mobility hubs is given in Figure 4. Taking into account the specifics of the territory covered by the Commuting Master Plan, international multimodal traffic hubs may also be located in this territory.

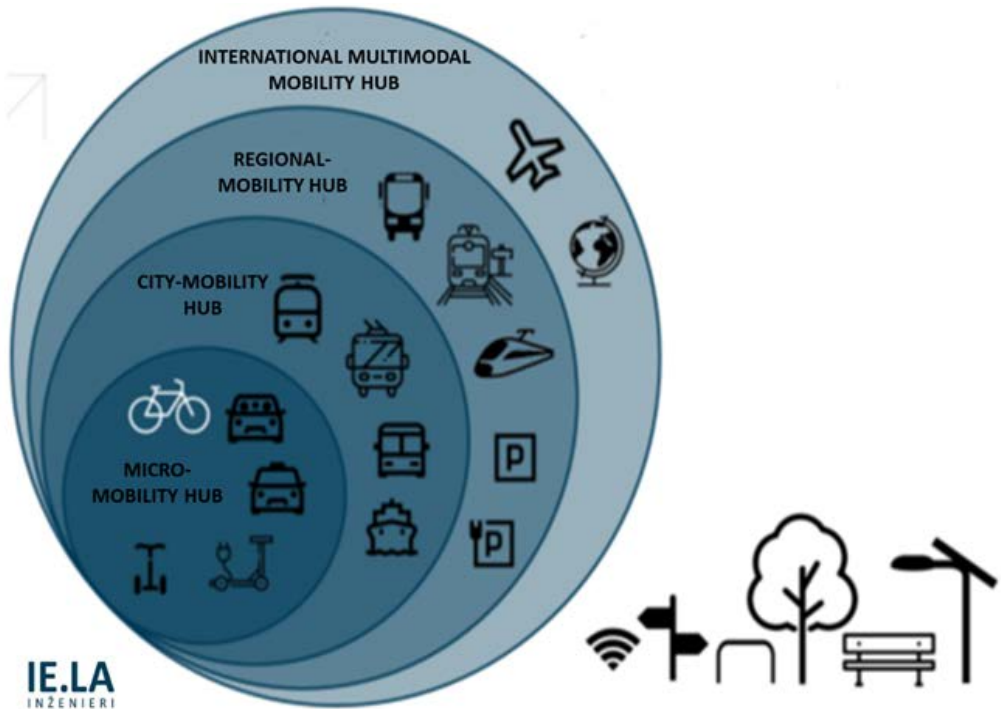

Figure 4. Schematic representation of the gradation of mobility hubs[79]

79 Supra note 1

In addition to the basic functions of mobility, mobility hubs must also provide comfort, environmental accessibility and services. The concept of mobility hubs is compatible with the use of digital mobility solutions, including the introduction of mobility as a service and a single (unified) ticket.

CMP reflects the concept of mobility hubs and the possible services at these hubs that could be implemented in the CMP area. Indications of indicative locations of mobility hubs in the area covered by the CMP are available on the Internet platform: https://www.google.com/maps/d/edit?mid=13cPD8udFQZVdN_WTgVLa2lxY_jpuwRZj.

The establishment of mobility hubs can be carried out by the municipality, public transport operators, as well as private entrepreneurs.

The tasks for the creation of mobility hubs are the integration of public and shared transport into a single system, the choice of service packages, the adaptation of car infrastructure, the provision of information to users, as well as the inclusion of additional services that would change the population's mobility behaviour.

3.4.1. Integration of public transport and shared transport

Various individual shared transport systems are developing in the territory of the CMP, each of them operates on its own platform, thus it is necessary to implement the integration of public transport and shared transport into a single information access system. The task requires the cooperation of the institutions involved in order to develop, for example, a single website or mobile application with information on public transport stops, route lists, real-time information on the location and type of public bicycles and cars available, information on taxi availability, as well as information on the locations of charging infrastructure for electric cars and bicycles. Thus, the user is provided with the opportunity to make a reservation for shared transport and charging points or to plan the choice of public transport routes. At the same time, communication with the population is ensured, for example, about changes in the schedule of public transport and road construction works.

3.4.2. Choice of a set of services in mobility hubs

For long-term planning and establishment of mobility hubs, it is necessary to choose the range of services included in the mobility hubs, taking into account the location and conditions of the respective mobility hub, the needs of residents and the municipality, as well as territorial development opportunities. Considering these needs, a detailed overview of the range of services potentially included in the different

categories of mobility hubs is also available (Annex 1).[80]

The range of offered services and functions has been prepared taking into account the set of conditions included in the concept of a mobility hub[81] corresponding to the specifics of the city of Riga, as well as the required functions of mobility hubs at the regional level in the area covered by the CMP.

3.4.3. Adaptation of car infrastructure

It is necessary to create a safe and user-friendly connection to the road infrastructure at all mobility hubs, incl. with pedestrian and bicycle infrastructure. Depending on the type and size of the mobility hub, the infrastructure for cars should include disembarkation / reception areas, car parks and shared car parks, as well as infrastructure for charging electric cars. At international mobility hubs, it is necessary to plan large long-term parking lots, as well as separate car rental parking lots. At the point of regional mobility, it is also important to provide not only a sufficient number of bicycle sheds, but also a number of private and shared car parks. City mobility and micromobility hubs do not require private parking unless they are close to large *Park & Ride* parks. In turn, it is necessary to reserve places for parking shared cars and picking up passengers at all types of mobility hubs.

3.4.4. Ensuring the availability of information

In the process of creating any mobility hub, it is necessary to ensure the availability of information and ease of use for users. The layout of the mobility hub must be comprehensible to users of all ages, both local and foreign. Therefore, special attention should be paid to different types of signs, designs, billboards, as well as electronic online information. It is necessary to create a unified design and visual identity of mobility hubs so that it can be identified in any county and city. Signs to the nearest mobility hubs and the services available at them must be clearly visible and must be visible against the background of the road signs and other information objects. At the same time, mobility hubs in different neighborhoods and cities need to create a place-specific identity in order to highlight it and highlight the specific mood of the place, for example by involving local artists and people, giving the mobility hub a name related to its location.

80 Supra note 1

81 Riga Energy Agency, Ltd. "Grupa 93" (2019), Mobility management solution corresponding to the specifics of the city of Riga - Conceptual development and approbation of the "Mobility Point" model (in Latvian), https://www.grupa93.lv/wp-content/uploads/projekti/Attistibas_koncepcijas/Mobilitate/Gala_Zinojums_Mobilitates_punkti_FINAL.pdf

3.4.5. Inclusion of additional services at mobility hubs

The inclusion of additional services is particularly needed at regional and urban mobility hubs in order to promote behavioral change and the more diverse use of mobility hubs. Pleasant and comfortable pedestrian infrastructure, safety and amenities are aspects that encourage people to stay in public places. Children, the elderly and people with reduced mobility should have an equally convenient opportunity to get to and stay in mobility hubs, incl. use the associated public outdoor space and services. It is necessary to evaluate the possibilities, increase the level of user comfort by installing, for example, benches, canopies, free wi-fi, as well as providing information about objects near the mobility hub, promote the use of mobility hubs in the long run. When assessing the location of mobility hubs, the needs at the neighborhood level should also be taken into account: nearby public institutions (e.g., educational institutions, cultural centers), availability of various public services (shops, pharmacies, etc.).

4. Strategic aims and vision

The strategic aims and vision were formulated within discussions of the involved stakeholders at several co-creation workshops and discussions (for the more detailed information, please refer to the Chapter 10).

4.1. The aim: To reduce utilization share of private cars in daily commuting by setting up of efficient mobility hubs

To reach this aim, the integrated national and regional vision shall apply by incorporating demands and provision of needs for implementation at municipalities within the CMP area. By implementing the Plan, state institutions have created preconditions for erection of mobility hubs – the legal frame has been elaborated and implemented for division of responsibilities, for regulation of shared vehicles, as well for mechanism to attract the financing. Planning Regions have incorporated conceptual development directions for mobility hubs in their planning documents to ensure practical implementation activities at municipalities. Regional mobility hubs and city mobility hubs link the train use with other type of mobility options. Multifunctional mobility hubs are erected at the train stations thus ensuring comfortable transfer to the bus (including agreed schedules with the train running), parking of cars and bicycles, calling a taxi or shared car, as well offering various mobility services. Smaller mobility hubs are placed in areas without the railway – at the regional bus stations in towns.

4.2. The aim: To promote wider use of public transport by introducing joint ticketing system

To reach this aim, the political decision is needed for introduction of the joint ticketing and setting of appropriate management model (political mandate and financing allocated) for coordination of transport service operators. By implementing the Plan, principles for fair distribution and for cost-effectiveness is ensured for ticket users as well for providers of the mobility service. Joint public transportation ticket is introduced and operates successfully within the CMP area including larger cities and adjacent smaller municipalities. Joint tickets are usable in trains, intercity busses and "Rīgas satiksme" city transportation routes. A joint ticket is intended for different social groups by applying tariff and discount policy principles. Transportation of pupils and students is attached to the joint ticketing system. Provided option for convenient payment for the transport by combining IT solutions and using apps for easy payment with cash or non-cash account for various mobility services (public transport, car/bike parking, park-and-ride, etc.).

4.3. The aim: To increase flexibility to solutions for daily commuting by applying efficient data management

To reach this aim, a comprehensive mobility data (spatial and statistic coverage) compilation in uniform platform needs to be ensured and appropriate detailing applied for planning of transport flows and application of mobility solutions. By implementing the Plan, the data holder is assigned as the institution for ensuring and coordination of data management. Interested parties and professional data users have access to the data sets and data bases in a single platform according to the data safety and data publication options. Achieving of this objective will be promoted by setting up of national information access points to the transport sector that is planned to be completed by end of the year 2023. According to the planned set-up these points will promote accessibility of data related to the traffic flows, roads, parking, routes, and traffic safety thus improving road safety, driving comfort, mobility of society and reducing travel time of traffic users. It is planned that timely traffic information will be available for everyone in public web portal and it will be useful for national emergency services, public transportation operators and intelligent transport system service providers.[82]

82 Central Finance and Contracts Agency (18.12.2020), A national access point to transport sector information will be set up with EU funding (in Latvian), https://www.cfla.gov.lv/lv/jaunumi/2020/ar-es-fondu-finansejumu-izveidos-transporta-nozares-informacijas-nacionalo-piekluves-punktu

4.4. The aim: To foster collaboration of stakeholders for creation of integrated mobility system

To reach this aim, mobility management model within the territory must incorporate stakeholder cooperation to implementation of strategic planning aspects and activities of commuting mobility development plan. By implementing the Plan, a shared vision for implementation of the key activities in a cocreation mode will be developed at the regional level. By planning their development at a local level, municipalities address respective involved parties, and by a common agreement incorporates appropriate activities for addressing daily mobility issues.

5. Development scenarios

a. Business as usual

Railway provides passenger transport in the CMP area (up to 35% share[83]), however, connections to railway stations from settlements are inferior. Rail Baltica project development is taking place. High traffic intensity remains on state roads and their sections to enter the Riga City. Intensive day-to-day commuting is mainly carried out by private cars. Carload in cities and their commuting zones remains on average 1.6 persons per car. High traffic intensity causes traffic-jams thus causing economic time costs to the society for approximately 155 thous. EUR in a working day[84]. Inhabitants also use the regional bus traffic, but it is poorly matched with other mobility options.

b. Interlinked mobility system

Clear responsibilities for state, municipality and private sector are set for the mobility system management. State institutions and municipalities are cooperating for compatible and comparable data gathering, data sharing and monitoring of transport flows by regular assessment of infrastructure efficiency parameters – passenger flows, etc., applying relevant communication and marketing activities, as necessary. Although, public well recognizes mobility hubs and understands their functionality, the management model includes activities for information to highlight the benefits of such system. By implementing the interlinked mobility system there is more pronounced

83 Ministry of Transport of the Republic of Latvia (2020), Railway (in Latvian), https://www.sam.gov.lv/lv/dzelzcels
84 Ltd. "IE.LA Inženieri" (2020), Mobility hubs - Assessment of transport and passenger flows in the project study area (in Latvian)

cooperation among municipalities of Riga Metropolitan area in other areas observed as well.

The mobility hubs of different categories providing various types of mobility services are widely introduced in practice. The relevant infrastructure for mobility hubs has been developed in Riga metropolitan area (including the Riga City) by setting of 26 regional mobility hubs, 35 city mobility hubs and 43 micro-mobility hubs (Annex 2). In this way the inhabitants are provided with opportunities to combine various modes of transport and reduce the flow of private cars for commuting.

The infrastructure for mobility hubs has been developed in close cooperation between state institutions and municipalities. Common visual identity aspects are applied to mobility hubs of all categories thus promoting their recognizability. Public transportation schedule is aligned to optimize the total travel time and car-sharing services commonly are available at the mobility hubs. Main benefits from the car-sharing service use are monetary saving, elasticity, and practicality (one shared car replaces 16 private cars). Clients for the car-sharing reaches the mobility hub predominantly by the bike, as well as more common use of bikes and public transportation occurs on a daily routine. Interlinked mobility system has increased the utilization of public transport due to higher competitiveness thus decreasing the use of private transport.

Travel payment in the interlinked mobility system is easy to carry out by using the joint ticketing system. Customized applications for easy and handy purchase of tickets are available for various mobility services, e.g., public transport, car parks and bicycle racks, park-and-ride, by incorporating the possibility for no-cash payment and pre-payment, as well as to validate bills by the identification document (e.g., ID card). Development of the interlinked mobility system is based on efficient transportation data collection and management that ensures convenient accessibility to open data compiled by various mobility data holders and providers of public transport services.

6. Priority areas and key objectives

6.1. Priority area: Establishment of mobility hubs

6.1.1. Carry out a cost-benefit analysis of potential mobility hubs

In order to encourage local governments to actively participate in the development of mobility hubs, a methodology for municipal specialists has been developed by experts of Ltd. "AC Konsultācijas".

The document "Criteria for cost-benefit analysis of project SUMBA mobility hubs and their evaluation methodology"[85] focuses on practical recommendations and specific aspects of mobility and planning, so that it can be used as a guidebook by municipal development planning or project management specialists, finding ideas and solutions for mobility hub development. The information included in the methodology will help to identify the type of mobility hub (regional, local or micromobility hub), appropriate location and to determine the services to be developed to ensure the functions of the mobility hub. The material is complemented by a table providing a guide for multi-criteria analysis for alternative options of mobility hubs (Annex 3). An example of a simplified financial model for the project life cycle - 20 years has been provided (Annex 4).

A multi-criteria analysis of alternatives is to be performed to evaluate and compare different options (alternatives) to achieve the goal. Alternatives, such as the location of a particular mobility hub, are compared using a variety of criteria, including technical, institutional, economic, environmental and climate change related aspects. In this multi-criteria analysis, possible alternatives are also considered in terms of incomparable factors, including both quantitative and qualitative factors.

6.1.2. Prepare an application for investments

If the results of multi-criteria analysis have led to a positive decision towards establishment of a mobility hub, the next step is preparation of an investment application. A set of activities necessary for mobility hub development including definition of goals, objectives, budget, and envisaged results can be considered as a separate project.

Depending on the size of the mobility hub and the potential costs, attraction of different financial sources can be considered: the municipal budget, external funding. For example, the establishment of a mobility hub as a pilot project in the VEF area was carried out within the framework of the EU Interreg Baltic Sea Region project

85 Supra note 2

"Cities.multimodal – urban transport system in transition towards low carbon mobility".[86]

Considering the scale of the infrastructure envisaged (at regional, city or neighborhood level), it is important to consider aspects of cooperation between various stakeholders (see Priority area 6.4: Co-operation of stakeholders).

6.2. Priority area: introduction of a joint public transport ticket

Coordination of the introduction of a joint public transport ticket is carried out at the national level. To ensure this, amendments to the Law on Public Transport Services have already been made and entered into force.[87] A working group organized by the Ministry of Transport, in which representatives of Riga City Municipality, RPR and public transport service providers also participate, has agreed on the work to be performed in the management of the public transport system in the Riga metropolitan area. For the integration of public transport in the metropolitan area, it is planned to develop a unified route network, passenger information system, as well as to introduce a unified tariff policy and a joint ticket. The introduction of a joint ticket will improve the amenity of passengers using different modes of transport e.g., buses and trains, on their journey.[88, 89]

6.2.1. Develop a platform for joint ticketing

Passengers need to be provided with a convenient and modern way to purchase tickets for public transport. It is necessary to develop a platform (system) for a joint ticket, which would enable the purchase of one ticket for a trip in different modes and routes at points of sale, on the Internet and in a mobile app. Such a system would ensure more convenient, faster, and modern ticket booking and purchase, and would also provide an up-to-date information on the tickets sold, which in turn would allow flexible planning of public transport service offer depending to the demand.[90]

86 Riga City (2020), Launch of first mobility hub in Latvia (in Latvian), https://lvportals.lv/dienaskartiba/317678-atklats-pirmais-mobilitates-punkts-latvija-2020

87 Public Transport Services Law (2007), Unified public transport ticketing system (in Latvian), https://likumi.lv/ta/id/159858-sabiedriska-transporta-pakalpojumu-likums

88 Ministry of Transport of the Republic of Latvia (18.01.2021), Work continues on the integration of Riga and Pieriga public transport (in Latvian), https://lvportals.lv/dienaskartiba/323921-turpinas-darbs-pie-rigas-un-pierigas-sabiedriska-transporta-integracijas-2021

89 Randers I. (2021), 300 million for the mobility of Pieriga. For Pieriga with Riga, common routes, one ticket and uniform tariffs are planned (in Latvian), www.la.lv/300-miljoni-pierigas-mobilitatei

90 Ministry of Transport of the Republic of Latvia (16.08.2019), From 2021, a modernized regional public transport ticketing system will be available (in Latvian), https://www.sam.gov.lv/lv/jaunums/no-2021gada-bus-pieejama-modernizeta-regionala-sabiedriska-transporta-bilesu-tirdzniecibas-sistema

6.2.2. Encourage the development and use of intelligent system in multimodal traffic planning

It is necessary to create the framework conditions to promote the development of intelligent systems by ensuring the compatibility of joint ticketing with other online vehicle reservation systems. Implementing such approach would improve the planning and use of public transport, car-sharing and, for example, park and ride facilities. At the same time, private mobility service providers should have access to information on travelling routes and real-time traffic.[91]

6.3. Priority area: Efficient data management

Efficient data management is one of the pre-conditions for application of elasticity approach to the mobility development planning, as well as to identification and implementation of necessary improvements for daily commuting. To ensure efficient data management there is a need for traffic monitoring, setting of respective data bases, and a set-up and maintenance of uniform data management system.

6.3.1. Implement traffic monitoring and setting-up of the attached data bases

To fully follow the mobility development, perform its planning, organize progression and maintenance in potentially most effective way, there is a need for systemic traffic monitoring and setting-up of data bases. Monitoring activities include regular traffic intensity accounting in cities, yearly traffic accident monitoring, existing traffic infrastructure monitoring, survey questionnaires to households and inhabitants on their mobility patterns in Riga and Pieriga, as well as updating and renewal of Riga transport simulation model.[92]

6.3.2. Setting-up uniform data management system

Data on types of vehicles, traffic intensity, use of public transport, mobility habits of inhabitants are collected and summarized on national, regional, and local (municipality) levels. Data are summarized by Central Statistical Bureau, Ministry of Transport and subordinated institutions, municipalities, mobility service providers, communication companies, as well as municipalities and non-governmental organizations. Data are collected and used also for model calculations, e.g., for updating and renewal of Riga transport simulation model. It is necessary to create a uniform data management system, however, at the same time ensuring accessibility of

91 European Commission Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system (2011) (in Latvian), https://eur-lex.europa.eu/legal-content/LV/TXT/PDF/?uri=CELEX:52011DC0144&from=lv

92 Riga Transport System Sustainable Mobility Action Program Short-term action plan for 2019-2025, (in Latvian), https://www.rdpad.lv/wp-content/uploads/2019/04/2_MRP_2019_2025_Gala_versija.pdf

involved institutions and mobility service providers. This would allow to obtain better overview on existing data, as well to ensure more complete utilization for mobility development planning, including erection of mobility hubs by considering the traffic intensity and mobility needs of inhabitants in the respective region or municipality.

6.4. Priority area: Cooperation of stakeholders

The successful development of an integrated mobility system in the region, the implementation of joint mobility projects requires close and coordinated cooperation of various stakeholders.

6.4.1. Cooperation for the development of mobility in the Riga metropolitan area

In order to promote cooperation between the City of Riga and the municipalities within the Riga metropolitan area, on October 29, 2019, the Riga City Municipality and the Association of Pieriga Municipalities signed a memorandum of cooperation "On the Establishment of the Riga Metropolitan Area Cooperation Framework". The signed memorandum of cooperation envisages strengthening cooperation at the level of politicians and specialists in order to participate in the development of an effective Riga metropolitan area management model, identify and implement projects important for the entire Riga metropolitan area, strengthen the international recognition of the Riga metropolitan area.[93] Tasks for improving the intensity of mobility and use of public transport in the Riga metropolitan area are identified in the "Action Plan for the Development of the Riga Metropolitan Area"[94], including the establishment of a unified public transport network and joint public transport system.

6.4.2. Co-operation with planning regions, state and municipal capital companies

In order to ensure integrated and coordinated planning of transport infrastructure and public transport development, coordinated cooperation is required not only between local governments, planning regions, but also with state and municipal capital companies. Cooperation is needed to establish a single regional traffic and transport network (including the introduction of a joint public transport ticket). Cooperation is necessary to improve and adapt mobility infrastructure (including the creation of mobility hubs), to expand the bus network and to increase the accessibility of areas having no connection to rail. Cooperation is required for the planning and integration of regional cycle routes and for establishment of connections to already existing cycle routes, as well as for the development of transit corridors and connections to them.

93 Riga City Council City Development Department (2019), Riga City Council and the Association of Pieriga Municipalities sign a memorandum of cooperation "On the Establishment of a Framework for Cooperation in the Riga Metropolitan Area", https://www.rdpad.lv/rigas-dome-un-pierigas-pasvaldibu-apvieniba-paraksta-sadarbibas-memorandu-par-rigas-metropoles-areala-sadarbibas-ietvara-izveidi/

94 Action plan for the development of the Riga Metropolitan Area (2020), http://rpr.gov.lv/wp-content/uploads/2020/01/Metropoles-ricibas-plans-10.01.2020.pdf

7. Action plan

The chapter includes coordinated and planned activities of Riga City Municipality and Riga Planning Region, which are preferably indicated both in municipal planning documents (for example, Riga Transport System Short-Term Action Plan 2019 - 2025) and for which investment project applications have been submitted (for example, Elena ; Juspers). It is important to take into account the fact that the implementation of activities is possible under such conditions as the allocation of EU funding (for example, funding for recovery and sustainability mechanisms) to submitted applications, continuation of the current sector policy course, strengthening cooperation between municipalities and institutions. All measures are in line with the objectives of regional and national planning documents.

N◦	Activity	Involved institutions/ departments	Time	Description	Results and potential impact	Indicators	Potential synergies & conflicts	Potential sources on finance (EUR)	Relation with policy/ planning documents
	Name of the planned activity	*Responsible institution*		*Short descriprion of activity*	*Potential implementation results and impacts*	*Qualitative / quantitative indicators to assess the success of the measure*	*Possible synergies / conflicts with other measures or policy planning documents*	*The financial source for the implementation of the activity and the indicative amount of funding required*	*Linking / integrating the implementation of the measure into other policy planning documents (eg national strategies, plans, regional or local policy planning documents)*
Riga city scale activities									
1.	1General PT 1General PT management and planning 2) Modernization of rolling stock and capacity provision 3) Development of passenger water transport 4) Alternative types of PT	RDPAD, Rīgas satiksme, RDSD, Road Transport Directorate	2021 - 2025	1)PT routes and schedules are coordinated with the parking system 2) Improved connection of PT with state public transport routes and schedules 3) Riga residents' mobility service management platform 4) Modernized buses, trams and trolleybuses. Their number is appropriate required passenger capacity 5) Preconditions and regulation for the development of passenger water transport have been created 6) Increase PT speed and comfort level (P., low floor) 7) Monitoring of alternative ST development trends		1)Time economy 2) Reduction of congestion and fewer cars in the territory of the city RHC AZ 3) Increased involvement and awareness of the population in the planning, implementation and monitoring of mobility processes through ICT systems	NTDG 2027 RPR Sustainable development strategy 2014-2030	Riga City budget	Riga Sustainable Development Strategy 2030, Riga Transport System Short-Term Action Plan 2019-2025
2.	Establishment of mobility hubs near railway stations in Riga	LDz, Pasažieru vilciens, RDSD, RDPAD, Rīgas satiksme, Autotransporta direkcija, Ministry of Transport	2021 - 2025	Lai nodrošinātu pilnvērtīgu In order to ensure the provision of full-fledged and comprehensive services to the population, it is planned to improve the Riga PT network by establishing and improving six mobility hubs in Riga and two points in Pieriga for approximately 50 million euros.	Mobility hubs are connected to "green" transport routes (trams, trolleybuses, zero-emission buses) and cycling infrastructure, providing convenient and safe access to railway stations. For example, extension of tram line 7 to Šķirotava station.	Mobility hubs established at railway stations in Ziemeļblāzma, Dauderi, Šķirotava, Zemitāni, Bolderāja and Sarkandaugava	TAP 2027 Public transport concept 2021–2030	RRF / ANM, a/s Pasažieru vilciens, Latvijas Dzelzceļš	Riga Sustainable Development Strategy 2030, Riga Transport System Short-Term Action Plan 2019-2025

N◦	Activity	Involved institutions/ departments	Time	Description	Results and potential impact	Indicators	Potential synergies & conflicts	Potential sources on finance (EUR)	Relation with policy/ planning documents
3.	3.1. Traffic management system 3.2. Improve traffic management tools 3.3. Traffic navigation (routing) 3.4. Traffic management in the city center 3.5. Awareness of pedestrians and cyclists improvement 3.6. Traffic information system	RDPAD, RDSD, Rīgas satiksme	2021 - 2025	3.1. Development of traffic control center, implementation of adaptive and intelligent (mutually informative) traffic management principles. 3.2. Modernization of traffic light signaling - updating of signal plans, installation of adaptive systems, development of intelligent control systems. 3.3. Direction indicator system (incl. Variable information systems), Development of electronic online public parking accounting system and application. 3.4. Road transport restrictions, checkpoints, accounting and management. 3.5. Placement of information and signs, availability of information on the Internet and accessibility of the environment for pedestrians. 3.6. Road users are informed of any restrictions in the city center.		1. Less travel time. 2. Less congestion. 3. Reduced travel costs (including for drivers, for example, when searching for parking spaces). 4. Fewer road accidents. 5. CO2 reduction	TAP 2027	Riga City budget	Riga Sustainable Development Strategy 2030, Riga Transport System Short-Term Action Plan 2019-2025
4.	Continuous data monitoring	Riga City, RDSD, RDPAD, Rīgas satiksme	2021	Annual detailed data compilation of: (1) Intensities; (2) CSNg; (3) Infrastructure technical pregnant; (4) Population mobility habits; (5) Riga transport model constant maintenance.	To create a permanent system in the form of a database that will make it easier to define the mobility measure required and to be carried out set.	1. Traffic data shall be systematically updated and processed. 2. A database useful for specialists has been created.	TAP 2027	Riga City budget	Riga Sustainable Development Strategy 2030, Riga Transport System Short-Term Action Plan 2019-2025
5.	Establishment of traffic	RDPAD, RDSD	2021 - 2025	Mobility infrastructures establishment and maintenance of the geographical system; Development of street design guidelines (or binding rules). Regulation for water transport systemic development in Riga city.	1) Vienotu vadlīniju ieviešana 1) Introduction of common guidelines in the city, which will allow to create common principles in the formation of the urban environment. 2) Digitization of the infrastructure monitored by RDSD.	1. Street passports. 2. Data processing and filtering options. 3. A publicly accessible interactive website has been set up with the possibility to send requests for traffic infrastructure improvements and comments from supervisory authorities.	TAP 2027	Riga City budget	Riga Sustainable Development Strategy 2030, Riga Transport System Short-Term Action Plan 2019-2025
6.	Cooperation with Pieriga municipalities	Riga City, RDSD, RDPAD, Rīgas satiksme, RPR, Pieriga municipalities	2021 - 2025	Cooperation with Pieriga local governments (development of cooperation principles)	Integrity of Pieriga Municipalities in Riga Mobility Processes, Promoting predictability of commuting processes and increase of comfort level	1. Number of cross-border (Riga / Pieriga) public transport passengers (including railways). 2. Local government fee for RS transport extensions outside Riga.	RPR Sustainable Development Strategy 2014-2030	Riga City budget and Pieriga municipality budget	Riga Sustainable Development Strategy 2030, Riga Transport System Short-Term Action Plan 2019-2025 RPR Mobility vision
7.	Mobility management in Riga	RDPAD, RDSD	2021 - 2025	Development of urban structures and institutions related to mobility management. Responsible units covering all tasks and activities included in the MRP.	Planning that focuses on tasks that create higher added value for society and mobility actors in particular, both speed and mobility and urban development.	Performance of administrative tasks (number and qualification of employees of local government institutions).	TAP 2027	Riga City budget	Riga Sustainable Development Strategy 2030, Riga Transport System Short-Term Action Plan 2019-2025

N◦	Activity	Involved institutions/ departments	Time	Description	Results and potential impact	Indicators	Potential synergies & conflicts	Potential sources on finance (EUR)	Relation with policy/ planning documents
8.	1. Traffic calming measures 2. Introduction of the red carpet principle - pedestrian and bicycle infrastructure continuity and priority 3. Improvements at intersections	RDSD	2021 - 2025	1. Change of speed regimes in the vicinity of Riga: introduction of 30v km / h zones in the center, including measures to slow down road traffic; separate development of pedestrian and cycling infrastructure. 2. Building regulations have been clarified, more convenient infrastructure has been created for priority modes of transport - pedestrians and cyclists. 3. Reconstruction of specific intersections by improving their safety (where necessary, conversion to roundabouts). Development of traffic light alarm.		1. Reduced (RHC AZ territory - unattractive for private transport) presence of road transport in the historical center of Riga has increased commercial activity. 2. Reduced speed, rebuilt intersections and installation of special stopping places are essential. reduce RTA risks in the territory of RHC AZ. 3. Reduction of emissions and noise.	TAP 2027	Riga City budget	Riga Sustainable Development Strategy 2030, Riga Transport System Short-Term Action Plan 2019-2025
Activities of Riga Planning Region scale									
1.	**Development of regional mobility points in Riga and Pieriga - network of 50 mobility points (RRF)**	RPR, Ministry of Transport / RMA municipalities, governmental institutions	2021. - 2026. / 2027 - 2035	**Regional mobility hubs should be developed as a matter of priority in certain places in Riga and Pieriga (bus station, railway station, Park & Ride, bicycle parking, charging points, etc.); Network of 50 mobility hubs**	By developing pilot projects - regional mobility hubs at larger railway stations, to improve the understanding of mobility as a service and to reduce commuting, thus proving the high potential benefit if full coverage of all categories of mobility hubs in the region is developed.	Reduction of commuting by private motor vehicles in populated areas with regional mobility hubs; Reduction of pollution	Business support for sharing & rental providers; Falling demand - reduction in the purchase of vehicles for individual use	Recovery and resilience mechanism (RRF / ANM); Elena; Juspers ~150 000 000 EUR	NAP 2027 TAP 2027 “Action Plan for RMA Development” “RMA spatial vision of mobility”
2.	Maximum use of the route of the North Baltic-Baltic Transport Corridor project “Rail Baltica” (regional stops)	RB Rail, RPR, Ministry of Transport / RMA municipalities, governmental institutions	2021. - 2026. / 2027 - 2035	Potential impact of the North Sea-Baltic Transport Corridor project “Rail Baltica” on area municipalities, including the Baltic States in the European railway network - maximum use of the route (regional stops) for intra-metropolitan mobility	Significant increase of international and regional accessibility of Latvia as a whole and Riga planning region (Metropolitan area) (2/3 of Latvia's population); Improvement of economic development indicators of Latvia as a whole, Riga planning region (Metropolitan area) and involved local governments	Travel time and / or from development centers, cities, capitals, neighboring countries; Territorial development indices; Reduction of pollution	Quality of Mobility & Economic Development	EU Structural Funds, State Budget, Local Government Budget	NAP 2027 TAP 2027 “Action Plan for RMA Development” “RMA spatial vision of mobility”
3.	Measures promoting “green” mobility, coordination of support infrastructure development	RPR, region municipalities and their structural units	2021 - 2027	Promoting the use of renewable energy sources, decarbonising the economy and measures for green mobility	Increased knowledge in society / institutions about the use of renewable energy resources, promotion of change of habits in economic activity and households	Number of measures taken, regularity, changes in procurement, services, habits	Infrastructure adaptation, inventory replacement, recycling of old inventory	EU Structural Funds, State Budget, Local Government Budget	NAP 2027 TAP 2027 “Action Plan for RMA Development” “RMA spatial vision of mobility”
4.	**Establishment of a unified PT network and system in the Riga metropolitan area**	RPR, Ministry of Transport, state and municipal capital companies	2021 - 2027	(a) PT security and concerted action (b) Prioritization of PT and uniform quality requirements for different carriers c) PT IT infrastructure (electronic lists, single tickets, mobile applications, etc.) (d) the establishment of integrated regional traffic and transport network management in the RPR	Improving the quality of the provision and use of mobility services, optimizing administrative resources, potential reduction of emissions	Changes in administrative costs; User reviews	Quality of Mobility & Economic Development;	EU Structural Funds, State Budget, Local Government Budget	NAP 2027 TAP 2027 “Action Plan for RMA Development” “RMA spatial vision of mobility”

N◦	Activity	Involved institutions/ departments	Time	Description	Results and potential impact	Indicators	Potential synergies & conflicts	Potential sources on finance (EUR)	Relation with policy/ planning documents
5.	Improving mobility infrastructure by making rail (rail, tram) the backbone of public transport	RPR, Ministry of Transport, state and municipal capital companies	2021 - 2027	Rail transport (railway, tram) as the "backbone" of PT, adaptation of settlement infrastructure to this concept and development of related infrastructure - level crossings, crossings, parking lots, footpaths, bicycle lanes, improvement of traffic safety.	Improvement of accessibility of settlements, safety of movement and quality of amenities in Riga planning region	Travel time and / or from development centers, within cities (neighborhood)	Quality of Mobility & Economic Development; Emission reduction	EU Structural Funds, State Budget, Local Government Budget	NAP 2027 TAP 2027 "Action Plan for RMA Development" "RMA spatial vision of mobility"
6.	Development of railway transport in Pieriga and expansion of bus route network	RPR, Ministry of Transport, state and municipal capital companies	2021 - 2027	**Development of Pieriga rail transport (railway, tram) and expansion of the bus route network and increase of intensity to places where rail is not available.**	Improvement of accessibility, safety of movement and amenities of settlements of Riga planning region	Increase in the number of PT passengers	Quality of Mobility & Economic Development; Emission reduction	EU Structural Funds, State Budget, Local Government Budget	NAP 2027 TAP 2027 "Action Plan for RMA Development" "RMA spatial vision of mobility"
7.	Planning and integration of regional cycling routes and connections into existing cycling routes	RPR, Ministry of Transport / RMA municipalities, governmental institutions	2021 - 2026 / 2027 - 2035	**Planning and integration of regional bicycle routes and Riga / Pieriga connections into existing bicycle routes (RRF & SUMBA +) - feasibility study and development of construction design guidelines.**	Improvement of accessibility of settlements, safety of movement and quality of amenities in Riga planning region	Number of users of bicycle infrastructure (in bicycle meters); number of private cars on parallel roads, streets	Quality of Mobility & Economic Development; Emission reduction	EU Structural Funds, State Budget, Local Government Budget	NAP 2027 TAP 2027 "Action Plan for RMA Development" "RMA spatial vision of mobility"
8.	Development of transit corridors and connections to them	RPR, Ministry of Transport, state and municipal capital companies	2021 - 2027	**Development of transit corridors and their connections, diverting intensive traffic flows from residential areas; development of connections between production areas, reducing congestion and improving traffic safety.**	Increasing the international and regional accessibility of Latvia as a whole and the RMA (2/3 of the Latvian population); Improvement of economic development indicators of RMA and participating municipalities	Travel time and / or from development centers, cities, capitals, neighboring countries; Territorial development indices	Quality of Mobility & Economic Development	EU Structural Funds, State Budget, Local Government Budget	NAP 2027 NAP 2027 TAP 2027 "Action Plan for RMA Development" "RMA spatial vision of mobility"
9.	Development of water transport	RPR, Ministry of Transport, state and municipal capital companies	2021 - 2027	**Development of water transport - related infrastructure (ports, berths) and inland waterways as a development potential of water transport and development of waterfront.**	Improving the accessibility, usability and quality of movement of waterfront in RPR settlements	Water transport availability and use indicators; Number of landscaped waterfront and used landscaping solutions	Improvements of waterfront accessibility, amenities; Quality of Mobility; Emission reduction	EU Structural Funds, State Budget, Local Government Budget	NAP 2027 TAP 2027 "Action Plan for RMA Development" "RMA spatial vision of mobility"

8. CMP integration in existing strategies and policies

Commuting Master Plan (2021-2027) is aimed to enhance opportunities for sustainable commuting mobility within Riga, Pieriga and adjacent municipalities. Considering that covered territory mostly concerns the Riga metropolitan area inner space, the implementation success of the current CMP will be determined by close synergy with Riga Planning Region strategic development documents:

- Regional Development Programme (2021-2027) is a key planning document that covers long-term spatial vision about development of the region. Chapters of CMP are planned to be integrated within this programme.
- Riga Planning Region Sustainable Development Strategy (2014-2030) – there is a synergy according to the strategic goals and long-term development priorities.
- Action Plan for Riga Metropolitan Area Development – the synergy by highlighting diversification of transport modes and adaptation to the corresponding scale and the purpose of use.
- The Spatial Vision of the Mobility of the Riga Metropolitan Area – the synergy by vision about the inner and outer accessibility advancement within the metropolitan area.
- Transport Development Guidelines (2021-2027) – these guidelines create good preconditions for implementation of the CMP.

The CMP is in close synergy also with Riga Development Programme 2021-2027 currently being under elaboration by the Riga City Council the City Development Department, particularly related to the goal on convenient and environmentally friendly moving around the city. Furthermore, tasks also reflect the regional coverage by enhancing cooperation on the mobility issues in Riga and Pieriga, e.g., for closer linking of the city and regional public transportation systems and development of the mobility hubs. Aims of the CMP will be integrated within the Riga Planning Region Development Programme 2021-2027 at the strategic part and the action plan.

9. CMP implementation monitoring and update

Implementation of the CMP will be monitored by the Riga Planning Region within the frame of the Regional Development Programme. Thus, Riga Planning Region will be responsible about the CMP implementation within the scope of their competences and capacity, will take care on attraction of investments for implementation of activities and attainment of the aims. By considering the coordinating role of the Riga Planning Region, the respective municipalities are implementing their development projects in cooperation with other involved stakeholders according to the priority and resources available for the activity implementation.

For monitoring of the CMP implementation, the Riga Planning Region will ensure the cooperation platform by inviting participants from public authorities, municipalities, and NGOs. Preparation of monitoring reports is planned for the progress analysis of the CMP implementation within the scope of the Regional Development Programme. Activities can be revised yearly, but the Monitoring Report on the CMP implementation will be developed every three years – in the year 2024 and 2027. The Report will reflect the implemented activities or their progress of implementation with the current reporting period, there can be improvements made, and setting of new activities or adjustment of the existing ones for successful achievement of the aims. The Final Report (in the year 2027) will contain information about the actualization of the CMP also in the next period.

10. Overview on stakeholder involvement and main related outputs

Representatives from state institutions (Ministry of Transport, Ministry of Environmental Protection and Regional Development) and institutions under their management, regional institutions (Riga Planning Region, Zemgale Planning Region), Riga and Pieriga municipalities as well as representatives of non-governmental organizations and companies have been actively involved in the development process of the Commuting Master Plan already since the beginning of 2018. During the seminar organized on January 25, 2018 planned activities and projects of the institutions and organizations involved in the field of mobility as well as the possibilities of cooperation in dealing with the mobility related challenges of the Riga agglomeration were discussed. The lessons learned from these discussions provided a basis for starting the development of the CMP, defining the scope of the CMP, further

involvement of experts, exchange of views and experience for further preparation of the CMP. In order to evaluate the current situation in the field of mobility and identify the necessary directions for improvement of the situation in the field of daily commuting, a SWOT analysis was performed in the summer of 2018, where 11 municipalities from the territory covered by the CMP participated.

Based on the identified activity areas, goals of the CMP were developed in cooperation with RPR and the Riga Municipality and further discussed in detail with other stakeholders. By application of the World-cafe method, during a seminar held on March 26, 2019, the participants discussed the possibilities of optimizing daily commuting solutions in the Riga metropolitan area, provided inputs for specification of the goals, as well as gave proposals for necessary activities to achieve these goals. The further development process of CMP was implemented in close cooperation with the Riga planning region and Riga municipality (e.g., during international projects, co-creation seminars), as well as in communication with the representatives of state institutions in the context of elaboration of National transport development policy. In order to increase awareness on mobility hubs in Latvia and to integrate the relevant activities into the CMP, during the summer of 2020 several remote meetings were held with representatives of state institutions and Pieriga municipalities. During these meetings the concept of mobility hubs, as well as the possible locations of mobility hubs in the area were discussed and clarified. Experts of Riga Municipality and Riga Planning Region were involved in the planning of the activities included in the Action plan for 2021-2027.

The drafts of the Commuting Master Plan were discussed in two meetings (remote format): on 4 March and 19 March 2021, with the participation of representatives of Baltic Environmental Forum - Latvia, Riga Planning Region (RPR) and the City Development Department of Riga City Council. During these meetings, the sections of the CMP were clarified, activities were discussed, as well as additional information was added. In turn, the objectives of the CMP will be integrated into the Strategic Part and the Action Plan of the RPR Development Program 2021-2027.

11. Studies, analysis and surveys used for compiling CMP

This chapter includes studies, analysis and surveys performed during 2016-2019 and reflecting the current situation in the field of mobility, as well as identifying the necessary improvements. The obtained results have been used for compilation of the CMP.

- **Clarification of Riga Agglomeration Boundaries** (2017)[95] - the study evaluating commuting volume and intensity between Riga and other regions of Latvia in 2016.

- **Mobility Survey of Latvia Population in 2017**[96] - a survey conducted to find out the mobility habits of the population, the main reasons for daily commuting and to obtain information on car use.

- **Conceptual development of the mobility points and approbation of the mobility point conceptual prototype (model) for the City for Riga** (2019)[97] - a report setting out the preconditions and criteria for mobility management solutions, giving proposals for a mobility point location plan in the city of Riga. The report provides a conceptual solution for a mobility point pilot project in Riga at the intersection of Gustava Zemgala gatve and Brīvības Street.

- **Study on cycling traffic and cycling infrastructure at the national level** (2020)[98], including a population survey conducted in 2019 on the population's cycling habits. Priorities have been set with respect to bicycle traffic infrastructure, alignment with public transport, public information, inter-institutional cooperation and the creation and maintenance of a unified database.

- **Cycling as an element of urban climate mitigation policy, CyclUrban** (2017-2020)[99] - the project summarizes information on the intensity of bicycle traffic, evaluates the bicycle traffic infrastructure in Riga, defines places where infrastructure improvements are needed for safer cycling.[100]

- **Survey of car drivers in the introductions of the city of Riga** (2018) was carried out (788 respondents) in order to determine the number of car drivers in Pieriga municipalities utilizing the infrastructure of Riga streets and driving to the city center of Riga, neighborhood or transit.[101]

95 Department of Human Geography, Faculty of Geography and Earth Sciences, University of Latvia (2017), Clarification of Riga Agglomeration Boundaries (in Latvian), http://www.sus.lv/sites/default/files/rigas_aglomeracija_2017.pdf

96 Central Statistical Bureau (2018), Mobility Survey of Latvia Population in 2017 (in Latvian), https://www.csb.gov.lv/lv/statistika/statistikas-temas/transports-turisms/transports/meklet-tema/357-apsekojuma-latvijas-iedzivotaju-mobilitate

97 Riga Energy Agency, Ltd "Grupa 93" (2019), Conceptual development of the mobility points and approbation of the mobility point conceptual prototype (model) for the City for Riga (in Latvian), https://www.grupa93.lv/lv/teritoriju-attistibas-koncepcijas/rigas-mobilitates-punkts/

98 Ltd "Enviroprojekts" (2019), Study on cycling traffic and cycling infrastructure at the national level (in Latvian), http://veloplans.lv/wp-content/uploads/2017/08/Velo-petijums_15012020.pdf

99 Cycling as an element of urban climate mitigation policy, CyclUrban (2017-2020), https://www.cyclurban.eu/

100 Laurs V., Zvaigzne A., Pakalna L. (2020), Cycling Action Plan for Riga City (in Latvian), www.bef.lv/wp-content/uploads/2020/12/Velosatiksmes_ricibas_plans_Riga.pdf

101 Budiloviča E. (2019), Activities of Riga City in the field of mobility (in Latvian), https://www.bef.lv/wp-content/uploads/2019/03/4_Rigas_aktivitates_SUMBA_26032019_v1.pdf

- **Household survey on population movement habits in Riga and Riga agglomeration** (2019) was conducted covering 5,317 households. Residents aged 8 and over were interviewed in person. The survey data were used in a transport simulation model to develop population movement matrices.[102]

- **Survey of transport flows in Riga (2019)** was done manually with the help of observers. The data were recorded in matrix format on paper. The obtained data on transport intensity at 50 points were used to calibrate the transport simulation model.[103, 104]

- **Modeling of Riga transport flows** (2020) was performed using the updated transport simulation model EMME of Riga Municipality aiming to determine the necessary priorities for the implementation of transport infrastructure and development projects.[105]

For the development of CMP, information from mobility development planning documents has also been used, reflecting the current situation and outlining the future perspectives:

- **The Spatial Vision of the Mobility of the Riga Metropolitan Area** (2019)[106], where the development of public transport is envisaged, making the daily commuting of the population convenient and safe, as well as marking the establishment of the Rail Baltica railway line for the improvement of internal and external accessibility.

- **Riga Transport System Sustainable Mobility Action Program** (2019)[107], presenting evaluation of the location of congestion and the parameters characterizing congestion, as well as calculation of the approximate monetary losses of the society during one working day in certain sections of streets. The provision of public transport, the interconnection of road transport, bicycles and the public transport system, the need for transfers and the possibilities of movement between the neighborhoods of Riga have been assessed.

102 Updates in the Riga transport simulation model (2020), www.sumba.eu/en/article/updates-riga-transport-simulation-model
103 Budiloviča E. (2019), Activities of Riga City in the field of mobility (in Latvian), https://www.bef.lv/wp-content/uploads/2019/03/4_Rigas_aktivitates_SUMBA_26032019_v1.pdf
104 Updates in the Riga transport simulation model (2020), www.sumba.eu/en/article/updates-riga-transport-simulation-model
105 Riga City, City Development department (23.11.2017), A project for modelling of transport infrastructure has been started (in Latvian), https://www.rdpad.lv/uzsakts-transporta-infrastrukturas-modelesanas-projekts/
106 Ltd "Grupa 93", Riga Planning Region (2019), The Spatial Vision of the Mobility of the Riga Metropolitan Area (in Latvian), http://rpr.gov.lv/wp-content/uploads/2019/03/20190201_Mob_viz_Galazinojums.pdf
107 Ltd "E. Daņiševska birojs" et al (2019), Riga Transport System Sustainable Mobility Action Program. Report on the current situation (in Latvian), https://www.rdpad.lv/wp-content/uploads/2019/04/1_MRP_Esosa_situacija_Gala_zinojums.pdf

ANNEXES

1. Annex. Range of services available at mobility hubs

	Velosipēdi u.c. mikromobilitātes rīki				Automašīna				Sabedriskais transports					Informācija				Papildus izmantošanas veidi				
Obligāts - ●; Ieteicams - ○; Neobligāts - ◊	VELOSIPĒDU KOPLIETOŠANA	VELOSIPĒDU NOVIETNES	VELOSIPĒDU PAPILDUS PAKALPOJUMI	MIKROMOBILITĀTES KOPLIETOŠANA	PASAŽIERU IZLAIŠANA / UZŅEMŠANA, T.SK. KOPĀ-BRAUKŠANA UN TAKSOMETRS	AUTO KOPLIETOŠANAS	ELEKTRISKO AUTOMAŠĪNU INFRASTRUKTŪRA	PRIVĀTĀ AUTO STĀVVIETAS/STĀVLAUKUMS	AUTOOSTAS, STARPPILSĒTU AUTOBUSU GALAPUNKTI	SABIEDRISKĀ TRANSPORTA GALAPUNKTS	SABIEDRISKĀ TRANSPORTA PIETURA, t.sk. mikroautobusi	DZELZCEĻA STACIJA (1520 mm)	DZELZCEĻA STACIJA (1435 mm)	CEĻA ATRAŠANA / NORĀDES	REĀLLAIKA SATIKSMES INFORMĀCIJA, WIFI	IDENTITĀTES PĪLĀRS	ATBALSTA PERSONĀLS	TIRDZNIECĪBAS VIETAS, PAKOMĀTI	UZGAIDĀMĀ ZONA (iekštelpas vai nojume)	LABIEKĀRTOJUMS (publiskā ārtelpa)	DROŠĪBA, APSARDZE, VIDEONOVĒROŠANA	ILGTSPĒJĪGI RISINĀJUMI
Starptautisks	●	●	●	○	●	●	●	●	◊	◊	●	○	○	●	●	●	●	●	●	●	●	●
Reģionāls	●	●	●	○	●	●	●	●	○	◊	●	○	○	●	●	●	○	●	●	●	●	●
Pilsētas	●	●	○	○	●	●	○	◊	◊	○	●	◊	◊	●	○	●	◊	○	○	●	●	●
Mikromobilitātes	●	●	◊	○	●	●	◊	◊	◊	◊	◊	◊	◊	○	◊	●	◊	○	○	●	○	●

2. Annex. Recommended mobility points in the area covered by the plan

Kategorija	Reģionālie mobilitātes punkti	Pilsētas mobilitātes punkti	Mikromobilitātes punkti
Nr.	Atrašanās vieta		
1	Tukums	Bulduri	Vangaži
2	Sloka	Majori/ Dzintari	Dubulti
3	Kalnciems	Jauntukums	Ogresgals
4	Tīraine	Jaunmārupe	Melluži - Asari
5	Jelgava	Tukuma lauktehnika	Kauguri
6	Babīte	Satiksmes ielas pasts (Jelgava)	Mārupe
7	Olaine	Ģintermuiža	Kauguru bibliotēka un futbola laukums
8	Mežsētas	RAF / Pērnavas iela	Dzintaru koncertzāle
9	Iecava	Mārupe 1 jeb Dome un TC	Līvu akvaparks
10	Baldone	Mārupe 2 jeb Mārupes ģimnāzija	Depo mikrorajons (Jelgava)
11	Lielvārde	Buļļuciems	Kalciema ceļš
12	Ķegums	Kauguri	4. līnijas mikrorajons
13	Ogre	Ķemeru stacija	Viskaļi (Jelgava)
14	Ropaži	Piņķi	Sieramuiža
15	Ikšķile	Jaunogre	LLU/ Cukurfabrika
16	Salaspils	Ulbroka	Strautnieki
17	Garkalne	Pārogre	Jelgavas pils / jahtklubs
18	Carnikava	Parka iela (Pārolaine)	Krastupes iela (Ādaži)
19	Ādaži	Medemciems	Kalngale
20	Saulkrasti	Salaspils skola	Garciems
21	Ķekava	Berģi	Ikšķile
22	Ozolnieki	Baloži	Jūras iela (Carnikava)
23	Sigulda	Zīmuļu parks (Jūrmala)	Olaines novada dome
24	Mālpils	Jaunolaine	Ogres tehnikums un ledus halle
25	Inčukalns	Berģu pagrieziens	Ogres novada pašvaldība
26	Baltezers	Langstiņi	Salaspils
27		Sunīši	Salaspils sporta nams
28		Bukulti	Odukalns
29		Institūts (Sigulda)	Vimbukrogs
30		Allažu pagrieziens / Šokolāde	Indrānu iela (Ogre)
31		Sigulda / P8	Titurga
32		t/c Spice	Medemciems
33		Deglava iela	Mārupes tenisa skola
34		VEF moblitātes punkts	Zeltrīti
35		Juglas centrs	Suži
36			Valteri
37			Akmensdārzs
38			Kadaga
39			Tukuma tirgus
40			Ozolnieku novada dome
41			Skolas iela (Ogre)
42			Atslēgu skvērs (Sigulda)
43			Dzidriņas

3. Annex. Multi-criteria analysis for locating a mobility hub

Daudzkritēriju analīzes
Mobilitātes punkta vietas (adreses) noteikšanas tabula

N.p.k.	Kritēriji	1.alternatīva		2. alternatīva		3. alternatīva	
		Paskaidrojums	Novērtējums	Paskaidrojums	Novērtējums	Paskaidrojums	Novērtējums
1.	Vai MP paredzētā vieta ir pašvaldības īpašumā?						
2.	Vai MP izvietojas dzelzceļa stacijas/ pieturpunkta teritorijā?						
3.	Vai MP atrodas viena vai vairāku starppilsēu autobusu ceļā vai galapunktā?						
4.	Vai MP atrodas viena vai vairāku sabiedriskā transporta maršrutu pieturu tuvumā (ne tālāk kā 100m attālumā)?						
5.	Vai MP ir savienots ar vienu vai vairākiem autoceļiem vai atrodas tiešā tuvumā?						
6.	Vai MP ir savienots ar vienu vai vairākiem veloceļiem (ne tālāk kā 100m attālumā)?						
7.	Vai MP ir viegli pieejams - ar kājām, ar velosipēdu, ar sabiedrisko transportu?						
8.	Vai gājējiem nodrošināta droša piekļuve MP?						
9.	Vai lielākai daļai MP lietotāju ir jāšķērso autoceļš vai dzelzceļa līnija, lai nokļūtu līdz mobilitātes punktam?						
10.	Vai MP tuvumā atrodas dzīvojamā vai darījumu teritorija (ne tālāk kā 200m attalumā)?						
11.	Vai plānotā vieta ir pietiekami liela, lai nodrošinātu visus plānotos pakalpojumus un funkcijas?						
12.	Finansiālais aspekts Ailē "Paskaidrojums"ievada projekta dzīves cikla attiecīgās alternatīvas finanšu aprēķina iegūto rezultātu, blakus šūnā norāda piešķirto ietekmes novērtējumu - skatīt piemēru (Tabula nr.2; att.nr.2).						
	KOPĀ		0		0		0
	** Pretī katram jautājumam ailē "Paskaidrojums" jāizvēlas viens no piedāvātajiem atbilžu variantiem, novērtējums automātiski aizpildīsies pelēkajās šūnās (izņemot Finansiālo aspektu)*						

4. Annex. Simplified financial model for the project life cycle (20 years)

Vienkāršots finanšu modelis projekta dzīves ciklam - 20 gadiem (piemērs)						
	Adrese 1		*Adrese 2*		*Adrese 3*	
Investīciju izmaksas		**-50 000.00 €**		**-30 000.00 €**		**-20 000.00 €**
	Vērtība 1 gadā	*Vērtība 20 gados*	*Vērtība 1 gadā*	*Vērtība 20 gados*	*Vērtība 1 gadā*	*Vērtība 20 gados*
Ekspluatācijas izmaksas	**-130.00 €**	**-2 600.00 €**	**-70.00 €**	**-1 400.00 €**	**-150.00 €**	**-3 000.00 €**
Izmaksa 1	*-50.00 €*	-1 000.00 €	*-20.00 €*	-400.00 €	*-50.00 €*	-1 000.00 €
Izmaksa 2	*-60.00 €*	-1 200.00 €	*-20.00 €*	-400.00 €	*-50.00 €*	-1 000.00 €
Izmaksa 3	*-20.00 €*	-400.00 €	*-30.00 €*	-600.00 €	*-50.00 €*	-1 000.00 €
[...]		0.00 €		0.00 €		0.00 €
Ieņēmumi	**2 130.00 €**	**42 600.00 €**	**570.00 €**	**11 400.00 €**	**1 650.00 €**	**33 000.00 €**
Ieņēmumi 1	*1 600.00 €*	32 000.00 €	*500.00 €*	10 000.00 €	*1 000.00 €*	20 000.00 €
Ieņēmumi 2	*530.00 €*	10 600.00 €	*70.00 €*	1 400.00 €	*150.00 €*	3 000.00 €
Ieņēmumi 3		0.00 €		0.00 €	*500.00 €*	10 000.00 €
[...]		0.00 €		0.00 €		0.00 €
KOPĀ		**-10 000.00 €**		**-20 000.00 €**		**10 000.00 €**
Investīciju izmaksas:	*jānorāda **prognozētās investīciju izmaksas** ar mīnus zīmi*					
Ekspluatācijas izmaksas:	*jāizvērtē, kādas MP **ikdienas uzturēšanas izmaksas** pašvaldībai var rasties (apgaismojums, apdrošināšanas, uzkopšanas u.c. izmaksas). Izmaksas gadā norāda ar mīnus zīmi baltajās šūnās, summa 20 gados aprēķinās automātiski pelēkajās šūnās*					
Ieņēmumi:	*jāizvērtē, vai MP darbības laikā pašvaldībai var rasties **ieņēmumi** (piem. ieņēmumi no zemes nomas maksas). Ieņēmumus gadā norāda kā pozitīvu vērtību baltajās šūnās, summa 20 gados aprēķinās automātiski pelēkajās šūnās.*					

CMP prepared by

Authors: Daina Indriksone, Līga Pakalna, Ingrīda Brēmere

Layout: Līga Kārkle

The following participated in and contributed to the development of the CMP:

Riga City Council City Development Department

Riga Planning Region

Ltd. "IE.LA inženieri"

Ltd. „AC Konsultācijas"

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