SMART-MR
Interreg Europe

European Union
European Regional
Development Fund

ACTION PLAN

for implementing sustainable measures for achieving resilient transportation in

LJUBLJANA URBAN REGION

until March 2021

ZNANSTVENORAZISKOVALNI CENTER
SLOVENSKE AKADEMIJE ZNANOSTI IN UMETNOSTI

RRA LUR
regional development agency
of ljubljana urban region

1. INTRODUCTION

Transportation in urban areas, particularly metropolitan regions, generates congestion and vast greenhouse gas emissions and thus imposes enormous challenges upon authorities in providing healthy living conditions for inhabitants and a supportive environment for businesses. Thus, the overall objective of the SMART-MR (Sustainable Measures for Achieving Resilient Transportation in Metropolitan Regions; Interreg Europe Programme) is to support local and regional authorities in improving transport policies and providing sustainable measures for achieving resilient low-carbon transportation and mobility in metropolitan regions. To tackle this issue, 10 project partners from 8 metropolitan regions (Oslo, Gothenburg, Helsinki, Budapest, Ljubljana, Rome, Porto and Barcelona) have shared their experience in transport and mobility planning by organizing 7 topically interrelated workshops. For each workshop the partners have issued an in-depth analysis, describe good practices and organize a study visit. Practical experiences have been presented and discussed, and policy recommendations developed. Through the project outputs, such as the guide Transforming European Metropolitan Regions: Smart Mobility for Better Liveability, selected good practice descriptions, and policy recommendations, and through dissemination events, such as political meetings, the final conference, and regional stakeholder meetings, SMART-MR contributes to Europe 2020 goals, Cohesion Policy, and the Interreg Europe Program by aiding managing authorities and regional and local authorities in setting new transport and mobility policies.
At the level of individual metropolitan region, the partners have used experiences, gained in the SMART-MR, to fine-tune own set of activities and goals, that are fully presented in this action plan.

2. THE MAIN LESSONS LEARNED WITHIN THE INTERREGIONAL EXCHANGE OF EXPERIENCES

The interregional exchange of experiences has followed the steps (workshops), presented in the introduction, where we discussed the seven thematically interrelated topics. The main conclusions of the interregional learning process, that took place within the SMART-MR project are presented below:

I. Participatory transport planning

The exchange of experiences in the field participatory transport planning had two main aims – I) to define participatory methodology for the project and II) to elaborate on partners' experiences in order to guide and implement successful participatory planning process at regional level. The main lessons learnt were linked to specifics of the participatory planning at the regional level and to experiences with larger and sometimes unpopular investment projects. Activities at the local level are more concrete and easier to understand, whereas the complexity of tasks rises with the territorial level. This also affects the participation and engagement of the public. At the local level, initiatives often come from residents because they clearly understand the needs of the community and respond appropriately. At the regional, national, and international levels, the issues become more complex and abstract, and they can only be managed by politicians and professionals (i.e., planners and experts), whereas the residents are mostly represented by NGOs or representatives of the civil sector. At the regional stakeholder meetings, we have noticed larger interest of institutional stakeholders whereas we approached the citizens by using e-tools.

II. Regional mobility planning

The lessons learnt already in the first topic (e.g. specificities of the regional level) proved relevant also for the regional mobility planning, where we compared the experiences on preparing mobility plans at the regional level. To ensure integral and sustainable development of metropolitan regions, a shared vision is crucial. The central issue to be addressed while formulating a shared vision is "what kind of city do we want to live in?" and it should be

created by involving all interested parties. A common strategic vision provides a description of the quality of living in a metropolitan region and serves as a guide for developing general spatial planning measures in which mobility and transport are crucial, today and in the future.
Sharing a common vision on mobility between stakeholders and the general public is an essential step in mobility planning. It should contribute to balanced and sustainable development of the environmental, economic, and social components of the territory and thus to a higher quality of life. It is also important to balance the level of the vision (and ambition) in a plan with the level of realism, consisting of what can actually be implemented during the timeframe of the plan.
This process needs to take into account the existing multimodal transport system, its conditions, and performance. It should also take into consideration land-use planning and factors that may affect the future of the area and the future performance of the transport system, including the availability of financial resources.
Multiple scenarios should be developed, indicating possible alternatives. Each alternative scenario is compared to the reference scenario, including the interventions currently being implemented and to be implemented within the given timeframe.
In a long-term perspective, the objective of the mobility plan is to provide a safer and more efficient mobility system. It also ensures an environmentally, economically, and socially more sustainable system of mobility, especially when the actions contributing to the aforementioned objective are identified during the creation of the plan together with institutions, stakeholders, and the general public. The mandatory monitoring of the plan involves measurement of the indicators linked to each individual action every two years.
The actions to be applied concern:
– Integration between the various transport systems (redistribution of the transport network in favour of public transport, pedestrians, and cyclists, strengthening interchange nodes);
– Improvement of public transport provision (lanes reserved for public transport, increase of accessibility to public transport for passengers with reduced mobility, and use of information communication technologies (ICT) to improve public transport management);
– Development of pedestrian and bicycle mobility (creation of cycling routes and services for cyclists);
– Introduction of shared mobility systems (shared mobility equipment at train or underground stations, transit and parking facilities for shared mobility, and promotion of shared mobility in public bodies and companies);
– Use of low-pollution vehicles (installation of electric charging stations, and replacement of vehicles for passenger and freight transport with electric vehicles);
– Rethinking urban logistics (changing the collection and distribution of goods in urban areas in order to reduce traffic and pollution, and redistributing the road capacity for improved flows of goods vehicles);
– Dissemination of the culture of safe mobility (improving the most dangerous road network, creating stops and protected sidewalks for pedestrians, and protected bicycle lanes).
On general, we underlined the use of the Avoid-Shift-Improve approach, which is used to address increased transport demand in a more sustainable way (GIZ-SUTP 2012):
– "Avoid" refers to the need to improve the transport system's efficiency, reducing the need to travel and the length of the journey through integrated land-use planning and transport demand management.
– "Shift" instruments attempt to improve the efficiency of the journey through a modal shift from the most energy-consuming (i.e., cars) to more environmentally friendly urban transport modes:
1. Non-motorized transport such as walking and cycling: these are the most environmentally friendly option;
2. Public transport such as buses, trains, and so on; although public transport generates emissions, lower specific energy consumption per km and higher occupancy levels mean that the associated CO2 emissions per passenger/km are lower when compared to cars.
– The "Improve" component focuses on vehicle and fuel efficiency as well as on improving transport infrastructure; it seeks to improve the energy efficiency of transport modes and vehicle technology. Furthermore, the potential of alternative sustainable energy use is encouraged.

III. Low-carbon logistics

The long-term actions and impacts of low-carbon logistics planning mainly focus on the reduction of transport externalities and vehicle movements, as well as improved acceptance and understanding of commercial activities in metropolitan regions. Thus, low-carbon logistics planning must become part of transport planning, which so far has not been particularly common.

First, long-term reduction in carbon emissions and improvement of air quality can be achieved from reduced vehicle movements. Therefore, to reduce freight traffic in metropolitan regions the total demand for freight transport must decrease or deliveries must become more efficient. Efficiency can be achieved through implementing solutions that increase load factors; for example, consolidation. Additional emission reductions can be expected from the transition to cleaner fuels and the introduction of eco-friendly vehicles for deliveries.

The second long-term benefit of low-carbon logistics planning is improved acceptance and understanding of these activities among all stakeholder groups. Increasing this acceptance might result in opportunities for shared infrastructure because stakeholders then become aware of the needs of the business sector. Another benefit is more effective and consensus-based stakeholder collaboration, which in the end provides a valuable framework for decision-making and policy implementation. Whereas the municipality traditionally focuses on social and environmental issues, businesses emphasize efficiency. Authorities also have the opportunity to guide industry by changing their own delivery and procurement practices, either by having deliveries performed by one single operator or by imposing requirements of zero-emission vehicles on operators delivering their goods. Improved knowledge of the private-sector needs helps improve the quality of public planning, and the best solution is based on the compromise achieved when the municipality knows the needs of businesses and the general public.

Finally, metropolitan regions are facing rapid changes in the transport sector due to digital and technological developments. With these changes in mind, long-term logistics planning and efficient public-private collaboration will improve the commercial potential of sustainable distribution solutions and provide more efficient management of freight traffic in metropolitan regions, which in turn will help reduce emissions.

IV. Development of and around transport nodes & V. Low-carbon urban areas

Transit corridors, especially rail-based corridors, are vital for urban development. Station areas are recognized as a development priority in terms of mobility, urban development, and climate targets. They are the starting points for transforming the urban environment from low-carbon station areas to low-carbon metropolitan regions.

Station areas or public transport hubs are the key focus for transit-oriented development (TOD). The TOD main drivers are reduction of car use and reducing congestion and pollution by avoiding urban sprawl. At the same time, TOD aims to increase regional accessibility by acquiring well-connected and affordable land for development in transport corridors.

TOD integrates transport and land-use planning, but at the same time it is a narrow concept that focuses on transport and how to make transit as effective as possible. It is defined as an area that has a compact and dense design with both housing and services within walking distance of public transport and with regional connectivity. Thus, TOD economizes mobility by decreasing the need for travel and by making possible efficient provision of public transport. In addition to TOD, there is a need for a broader perspective for community and low-carbon development, both in densifying the existing urban area and in creating new station areas.

The new development concept creates the need to redefine TOD. Supported by the study "Sustainable Density in Station Communities" (Nordström, Swartz and Ståhle 2017), recommended density for exploitation used by UN Habitat (2015) is added.

The aim of the sustainable densification and compact areas is both to increase the population within the given space and also to maintain a well-defined division of land use that ensures that a high-quality and accessible urban area with an optimal land-use mix is obtained (Figures 1 and 2).

Figure 1: Example of efficient distribution of land use (Nordström, Swartz and Ståhle 2017).

LOAD proposes a flexible attitude for how to reach these goals at the local level, adapting recommendations to unique circumstances but with the overall goals in mind.
The LOAD concept, from the perspective of efficient land use and the land-use mix in station areas, is recommended to be applied both for pre-existing station areas when complementing urban structures and for new station areas when planning land use. According to LOAD with a low-carbon development aspect, the building stock in station areas should consist of energy-efficient multifunctional buildings with businesses integrated with housing. Housing should also be mixed; that is, station areas should provide different types of housing supply for people's different needs. It is also important to increase affordable housing near stations. Increasing the amount of housing stock and residents improves the ability of services to enter the region and increase their profitability. All this requires close joint planning of land use, housing, and mobility.
At the workshop on low-carbon station areas additional concept for low-carbon station areas has been developed for assisting planners to meet climate targets. The concept will help cities develop low-carbon areas both in existing urban structure as well as in planning new station areas. In the concept, there are four perspectives on low-carbon station areas – land use, housing and living, mobility, and businesses and services – and there are four cross-cutting themes: climate change mitigation, resilience, a circular economy, and social sustainability and health. In addition, technology integration and leadership are recognized as essential parts of transformation. Nearly seventy different criteria will help planners and city developers transform low-carbon areas step by step (Figures 3 and 4).

Figure 3: The low-carbon district toolkit for station areas includes planning criteria in four themes and four crosscutting perspectives.

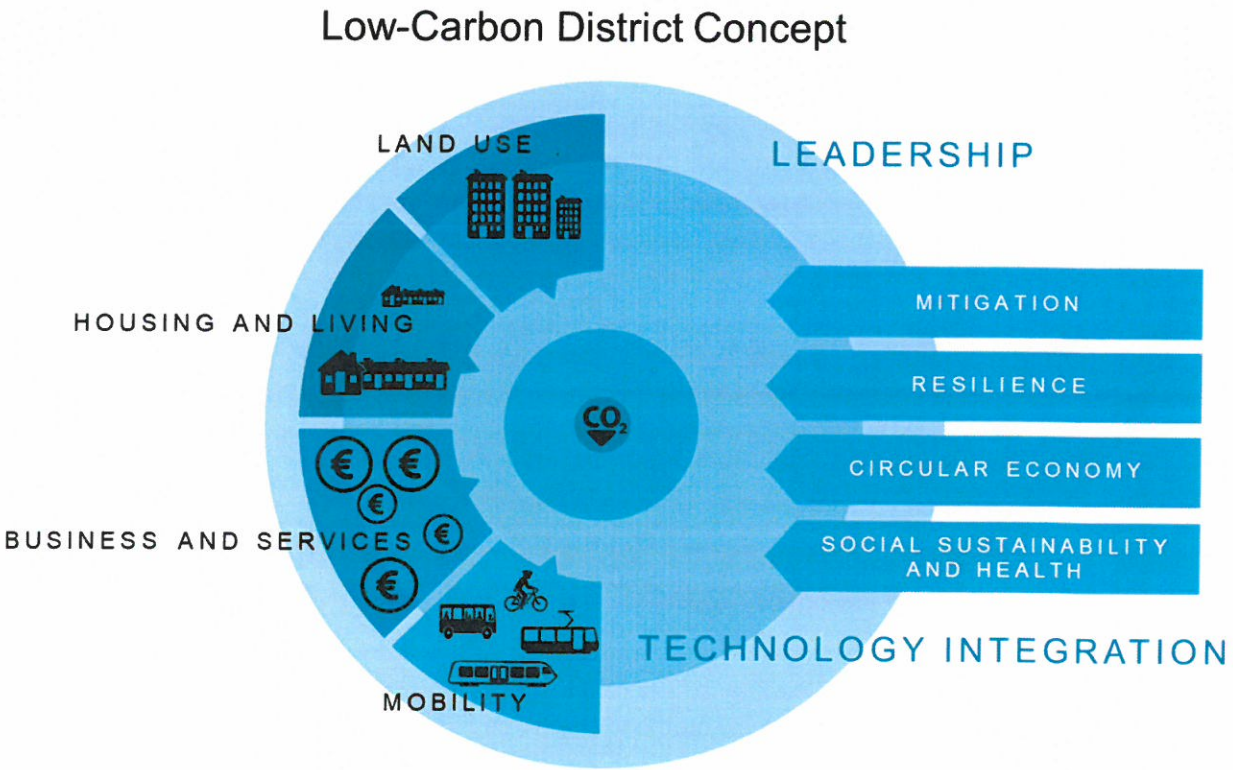


Figure 4: Low-carbon district toolkit for developing climate-friendly station areas.

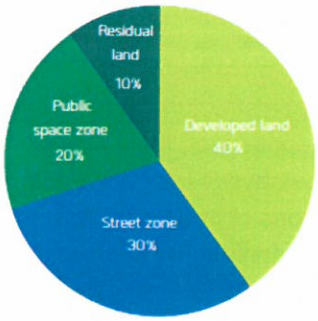
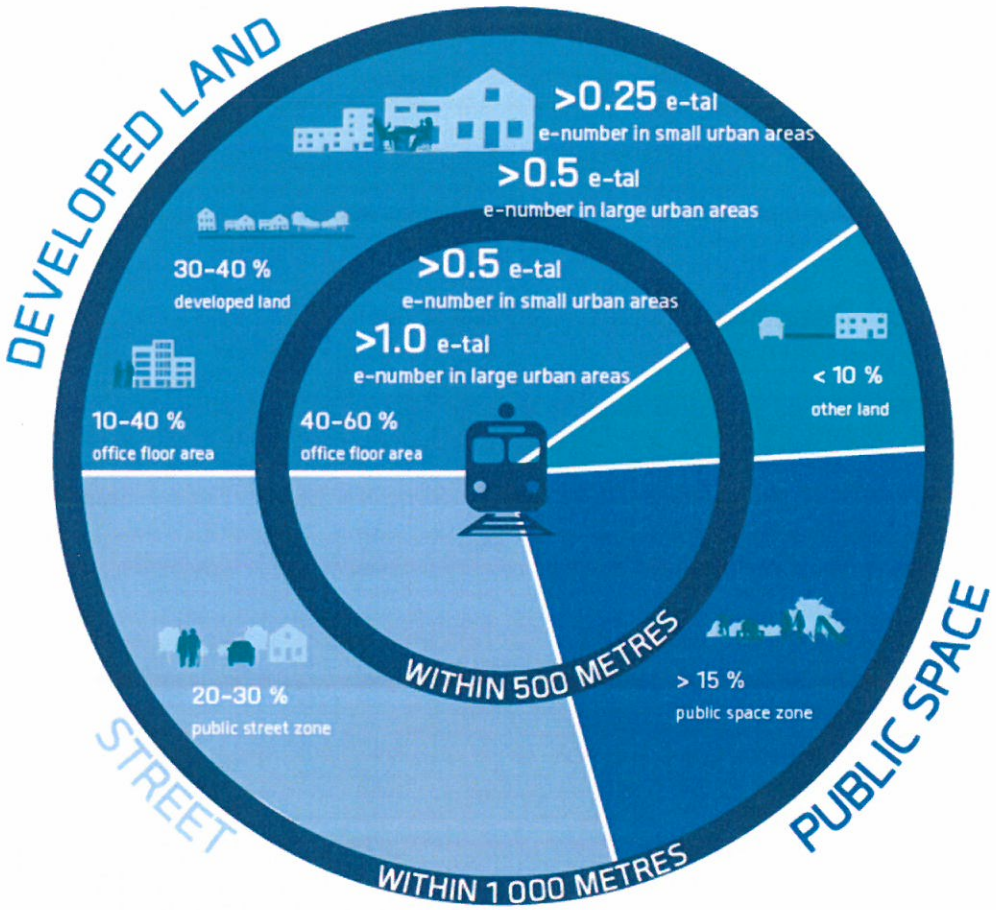
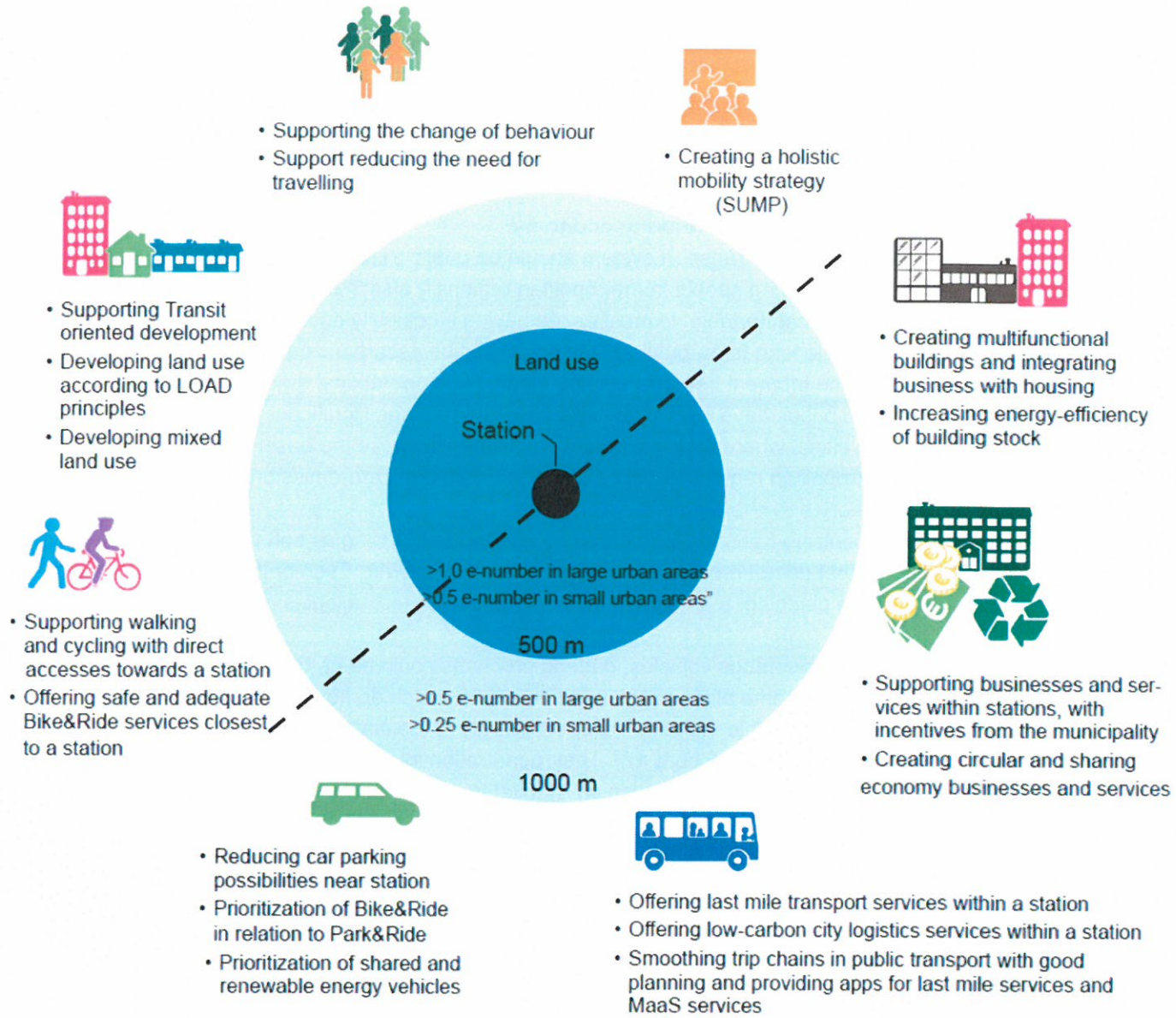


Figure 2: Land-use recommendations (Nordström, Swartz, and Ståhle 2017).



Thus the SMART-MR project developed a new methodology named Liveability-Oriented Area Development (LOAD).
LOAD is proposed to use what is commonly considered a sustainable development perspective, combining the three dimensions: economic, environmental, and social development.
LOAD is defined by an area developed with dense housing, mixed use, and liveability targets that create attractiveness.
LOAD uses a methodology that is based on UN Habitat's guidelines.
LOAD recommends considering these guidelines as an inspirational tool for development and using the set principles outlined as goals.



From a business operational viewpoint, stations have much untapped potential as a marketplace. Improving and strengthening services at station areas will increase the added value of trip chains, will make rail transportation more attractive, and will also reduce the need for travel. Enhancing the service palette of the stations makes people's everyday lives easier and encourages movement toward low-carbon mobility. Last-mile transport services, low-carbon city logistics services, and MaaS services within a station also reduce emissions. A vibrant station area also makes a sharing economy possible. Sharing and circular economies and new models of ownership can be seen as a means to reduce consumption.

The public sector is considered to have a key role in encouraging and facilitating companies to locate themselves close to stations and introduce new types of low-carbon business operations. New business operation models may result from new types of public-private partnerships. The public sector is also seen in encouraging and facilitating the public's initiatives. Social sustainability is an important theme in developing liveable oriented station areas.

If the active development of station-based services is further enhanced, the added value of the trip chains can be strengthened and people can be encouraged to use public transport. Developing station areas as small hubs for city logistics can be part of modern e-commerce and its logistics can be handled in a centralized way to reduce number of trips.

The development of public space and safety are considered key measures for improving station areas. Upgrading public space in particular is the most focused measure to be taken to increase station areas' usability, also from the perspective of safety.
Locating services centrally on ground floors at the station and nearby will also increase social activities and enhance safety. As a minor measure, increasing smart and energy-efficient lighting and enhancing underpasses and overpasses will also increase the feeling of safety.

VI. Managing transportation & VII. Sharing economy:

The backbone of a metropolitan region's transport system should be public transport, which is one of the most effective and sustainable ways of moving people in metropolitan regions – also in the long term. Public transport should be accessible, reliable, and comfortable, in most cases having electrically driven track-bound modes on the main lines with high capacity. In the long term, public transport should be decarbonized, phasing out diesel buses. However, this is not so easy at the moment because current electric bus operational models face many uncertainties. Currently, electric buses have low ranges and charging requires significant time. Trolleybuses could be a good option, especially in cities, where they are already available, because the basic infrastructure is quite expensive. Nevertheless, metropolitan regions' mobility strategies' target of zero-emission buses by 2030 is contingent upon improving battery and charging technology.
An important option for decarbonizing transport is to enhance walking and cycling as soft transport modes because the cleanest modes are those that do not require any energy except manpower. Even better is to reduce transport needs with appropriate land-use planning, the help of new communication technologies, work from home, and so on.
With the future development of autonomous vehicles, parking problems could be partially solved; however, this will not help reduce road transport. The same also applies to electric cars, which do not reduce congestion.
Autonomous vehicles are already available in public transport (mainly in the underground system); tests with autonomous trams and buses are ongoing (Figure 17). Their penetration into individual transport will cause enormous changes in the transportation system, which are not yet fully predictable.
There is a need for integration between the city and region regarding transport management, between different sectors, and also between service providers. A new manner of integration is realized in the Mobility as a Service (MaaS) system, in which a joint platform has been set up to integrate planning and managing trips together with buying and validating tickets.
A future challenge of managing transportation is to find the right mix between various transport modes, shared solutions, and autonomous vehicles in order to cut greenhouse gas emissions and create a liveable urban environment without limiting mobility options.
In the traditional mobility paradigm, the modal split is based on the majority of people using cars, followed by those using public transport, and on a small scale people that walk, bicycle, or use other transport modes.
The sharing economy could be a good way to increase the efficiency of public transport because it allows rapid change of this mobility paradigm: from car ownership to car sharing, from owning a parking space to sharing different parking spaces, and from one solution to go from point A to point B to a multiplicity of solutions in the palm of the hand (on a mobile phone). Public transport, car sharing, carpooling, bicycling, bike sharing, walking, and so on – different transport solutions, different providers, and the flexibility to make the decision on the transport mode according to the needs of each moment and with access to all the real-time information – allow people to make the best choice.
New business models in the sharing economy with their collaborative platforms, using transport digitalization, with access to big data, are changing the way people move. The main outputs of this change should be fewer cars, less congestion, and less pollution.
This allows cities to have much more space dedicated to people than to cars, permitting people to use public space to have fun, to play, to live with each other – in other words, to be happier.

Sharing solutions combined with autonomous vehicles could also be a good solution, especially for low-density areas.
Proper planning and regulation of new (sharing) business models in mobility can supplement existing public transport with new solutions for better mobility and at the same time promote fair competition between different companies, allowing traditional business to thrive in identical conditions as new ones. It is important to never forget that the target is to have fewer cars, and in the majority of cities this requires efficient public transport that allows the transportation of significant numbers of people.

3. THE INDICATIVE LIST OF ACTIONS LEADING TO GREATER LIVEABILITY IN EUROPEAN METROPOLITAN REGIONS

Field of intervention	Activity	Short-term effects/wins	Long-term effects/wins
Participatory transport planning	Public consultation	– New local knowledge and possible tailor-made solutions from stakeholders – Awareness raising – Mutual learning	– Better quality of plans/strategies – Higher public acceptance
Creating a mobility plan	Promotion and implementation of interventions to organize and manage the demand for mobility of people and goods	– Broad commitment to the principles of sustainable mobility – Involvement of relevant people	– Lower environmental impact deriving from traffic
	Regulation of access in some zones (and/or parking)	– Fewer cars – Lower pollution/emissions – Less noise from traffic congestion	– Shift to public transport – Lower environmental impact from mobility
	Support for intermodal nodes and infrastructure planning for both passengers and freight	– Multimodal approach to travel – Optimization of the use of means of transport (more passengers on each means of transport) – Less traffic – Less pollution	– Improvement of mobility – Improvement of resilience of the transport system (through multimodality) – Lower environmental impact from mobility – Better traffic flows
	Informatization of mobility, provision of real-time data on public transport and traffic; integrated ticketing	– Optimization and simplification of multimodal travel	– Shift to public transport – Improvement of resilience of the transport system (giving

	systems on mobile and personal devices		best solutions in real time for travelling) – Lower environmental impact from mobility
	Promote diffusion of and experimentation with collective services such as car sharing, carpooling, bike sharing, etc.	– Optimization and simplification of travel in modal shifts – Fewer cars – Less congestion	– Improvement of mobility – Lower environmental impact from mobility
	Increase in the size of areas and uninterrupted paths for bicycles and pedestrians	– More soft mobility – Fewer cars – Less noise from traffic congestion – Better and healthier quality of life	– Improvement of mobility – Shift to soft mobility – Lower environmental impact from mobility
Low-carbon logistics	Planning low-carbon logistics – Multilevel governance – Involvement of stakeholders	– Shift to low- and zero-emission vehicles – Better use of existing infrastructure – Improved terminal structure – Shared data on freight	– Reduction in carbon emissions – Better air quality – Better acceptance and understanding among all stakeholder groups
	Low-carbon last-mile pilot projects: – Establish consolidation centres for last-mile freight – Transition to e-vehicles in last-mile freight – Transition to bikes in last-mile freight – Extended use of ICT tools – Reduce kerbside parking for private vehicles	– Reduction in freight transport by vans – Better use of existing infrastructure – Modal split in favour of cargo bikes and e-vehicles – Improved efficiency in loading/unloading – Reduction in "search traffic" – Improved accessibility for deliveries	– Reduction in carbon emissions – Better air quality – Better use of existing infrastructure
	Establish charging infrastructure adapted for freight vehicles (vans)	– Transition to e-vehicles in last-mile freight	– Reduction in carbon emissions
	Establish low-/zero-emission zones	– Modal split in favour of cargo bikes and e-vehicles	– Reduction in carbon emissions – Better air quality
Managing transportation	Improving mobility solutions	– Better mobility options	– Lower greenhouse gas emissions

		– Accessible, reliable, and comfortable public transport	– More public space for people
	Park-and-ride solutions	– Increased parking capacity in station areas – Fewer cars entering the inner-city area	– Decreased congestion in the city centre – Healthier environment
	Introduction of alternative fuelled buses	– Cleaner diesel engines with reduced emissions – Hybrid technology for less fuel consumption	– Zero-emission buses for lower GHG emissions – Healthier environment
Sharing economy	Promotion of the sharing economy	– New and innovative business models	– More mobility solutions
	Regulating the sharing economy	– Fair competition – Integration of new business providers with public transport (mobility as a service) – Allowing and encouraging sustainable new solutions and models	– Sustainable mobility – Wellbeing of people
	Integrating sharing mobility solutions with public transport	– Enables travellers to gain access to public transport on an as-needed basis – Last-mile solutions	– Public transport sustainability
Transit-oriented development	Definition of "Liveability-Oriented Area Development" (LOAD) methodology	– Integration of spatial and transport planning – Co-creation of the neighbourhood	– Higher regional accessibility – Reduction of car use – Reduction of congestion and pollution
Shaping low-carbon areas	Promoting use of the low-carbon district concept	– Lower emissions from the transport sector – Liveability of station areas – New businesses	– Sustainable urban structure – Contributes to achieve regional low-carbon targets – Promoting low-carbon modes of transport
	Supporting new services in stations	– Added value to trip chains – Improved social safety	– Vital and attractive stations

4. ACTION PLAN

ACTION 1: SUSTAINABLE URBAN MOBILITY PLAN OF LJUBLJANA URBAN REGION (SUMP LUR)

Part I – General information

Project: **SMART-MR: Sustainable Measures for Achieving Resilient Transportation in Metropolitan Regions**

Partner organisation: PP02: RRA LUR

Other partner organisations involved (if relevant): PP01: ZRC SAZU

Country: Slovenija

NUTS2 region: Zahodna Slovenija

Contact person: Katja Butina

email address: katja.butina@rralur.si
phone number: +386 1 306 19 14

Part II – Policy context

The Action Plan aims to impact:

x Investment for Growth and Jobs programme
European Territorial Cooperation programme
× Other regional development policy instrument

Name of the policy instrument addressed:

- Sustainable urban mobility plan for Ljubljana Urban Region as a new strategic document at the regional level;
- Operational Programme for the Implementation of the EU Cohesion Policy in the Period 2014-2020; Thematic objective 7: Promoting sustainable transport and removing bottlenecks in key network infrastructures – in the field of regional cycle lines;

Part III – Details of the actions envisaged

ACTION 1: SUSTAINABLE URBAN MOBILITY PLAN OF LJUBLJANA URBAN REGION (SUMP LUR)

The background

A main goal of Sustainable urban mobility plan (SUMP) is improving the accessibility of urban and regional areas with providing resilient low-carbon transportation and mobility in metropolitan regions, one the main challenge of SMART-MR project. Even before the preparation of Ljubljana urban region SUMP municipalities of the Ljubljana Urban Region recognized sustainable mobility at the regional level as one of the priority development tasks. Based on that common vision, SUMP LUR activities focused on finding various short- and long-term solutions to provide accessible, fast, efficient, safe, environmentally and economically acceptable transport in Ljubljana urban region. As it was learned from SMART-MR exchange of practices, the SUMP LUR process took into consideration current land-use planning and factors that may affect the future of the LUR transport system performance and land-use development with available financial resources.

Despite the fact that SUMP, as a key tool for implementing new approaches to transport and spatial planning, has already been used in Slovenia at the local level (nine municipalities in the region already have local SUMPs), it has yet not been approached at the regional level in Slovenia. With logical modifications from SMART-MR experiences, preparation of SUMP LUR was done in accordance with European platform on SUMP guidelines (Eltis 2014) and the national SUMP guidelines prepared by the Ministry of Infrastructure (2012). Where applicable, SUMP LUR also took in to consideration two leading SMART-MR planning methodologies as are "transit-oriented development (TOD)" and "Livability-oriented Area Development (LOAD)".

In order to successfully achieve "Avoid-Shift-Improve approach", one of the first SUMP LUR activities was to build on a careful assessment of the present and future performance of all the urban transport systems: public transport, motorized personal transport, walking and cycling, low-carbon logistics and also spatial and transport planning. When preparing long-term vision for regional transport development, SUMP LUR took into consideration also existing regional strategies for future development of the LUR (e.g. Regional Development Programme 2014-2020, Public transport in Ljubljana urban region) which also define main regional transport and land use objectives.

On the basis of 16 strategic objectives the balanced development of all evaluated transport modes was proposed with encouragement of a shift towards more sustainable modes. As public transport is an integral part of sustainable transport in the region, measures for implementation of integrated public transport for all users (e.g. integrated tariff and ticketing, timetable unification, effective PT management) were proposed with upgrade of regional railway lines and renovation of rolling-stock, implementation of demand responsive transport system and promotion of PT use. PT and land use measures were proposed following the LOAD principle. Since there are many possibilities for improvement also in motorised personal transport, SUMP LUR proposed measures for balancing transport infrastructure, optimisation of car-use (e.g. promotion of carsharing and carpooling), various incentives for e-mobility and park-and-ride solutions in the peri-urban areas of LUR.

Taking into account policy recommendations from SMART-MR project, SUMP LUR also proposed measures for actions on low-carbon logistics mostly with various low-carbon last-mile projects (e.g. establishment of last mile consolidation centres, e-cargo bikes), optimisation of transit-oriented freight transport and other Environmentally acceptable freight delivery measures in urbanised areas. On a regional level, walking and cycling were mostly given a priority to improve accessibility to intermodal points. SUMP LUR also outlines regional/national cycling connections and promotes

further development of e-bikes in regional mobility, which is also the field highly prioritized by the policy instrument addressed.

Long-term urban and transport planning measures were mostly focused on multilevel planning and governance with inclusion of various stakeholders in planning processes and establishment of long-term impact assessment. Herewith, the first workshop of the SMART-MR project on participatory transport planning was of crucial importance as it provided valuable instruction on how to approach public participation at the regional level.

Further on the process of SUMP LUR process, priority measures were verified at workshops with representatives of the municipalities and key stakeholders, and additionally with interviews with key decision makers that will be actively involved implementing measures in the future. With inclusion of the action plan and next steps taken, the first SUMP at the level of the entire development region in Slovenia was approved at the tenth regular session of the Council of the LUR (26 mayors).

Since LUR SUMP is an innovative strategic document arising from actual needs of the region as a whole and reacting to its concrete challenges in sustainable mobility, it has become the main regional document for allocating national and regional funds to the transport related measures in LUR. In particular, it has comprehensively defined the regional cycling lines that are one of the priorities of the current structural funds in Slovenia.

Action

Preparation of SUMP LUR took place in several phases of planning cycle:

- Role of SUMP and designing a process;
- Definition of state of the art and main challenges in the field of sustainable mobility;
- Vision of regional development in the area of sustainable mobility and development priorities
- Preparation of goals, strategic objectives and activities for improving quality of transport in LUR;
- Action plan with description of measures and main stakeholders;
- Approval and adoption of the document from municipalities in the region.

Preparation of the SUMP LUR included:

- 2 workshops for state-of-the-art analysis (with representatives of municipalities and with key stakeholders);
- Interviews with mayors (26);
- Online survey on travel habits, regional mobility challenges and views on the priorities for general public;
- 5 public workshops for the vision and the goals;
- Online GIS portal;
- Interviews with key stakeholders (15);
- 2 workshops for action plan (with representatives of municipalities and with key stakeholders).

Players involved

- Ministry of economic development and Technology
- Ministry of the Environment and Spatial Planning
- Government office for development and European cohesion policy
- 26 municipalities of Ljubljana Urban Region
- Regional development council

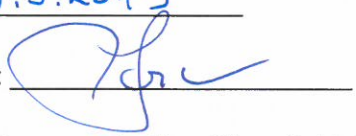
- Regional council (26 mayors)
- NGO's, institutes and researchers
- Transport operators in region
- Slovenian railways

Timeframe
Ljubljana urban region Sustainable urban mobility plan was being prepared within year 2018 and was officially approved in 24th of October 2018 from Council of the LUR.

Costs (if relevant)
Preparation of extended version of the SUMP LUR was co-financed by 26 municipalities in the sum of 80.000 EUR.
Financial structure for implementation of SUMP LUR project is not yet defined.

Funding sources (if relevant)
Municipalities

Date: 19.9.2019

Signature: 

Stamp of the organisation (if available): _____

ACTION 2: REGIONAL DEVELOPMENT PROGRAMME OF LJUBLJANA URBAN REGION (RDP LUR)

Part I – General information

Project: **SMART-MR: Sustainable Measures for Achieving Resilient Transportation in Metropolitan Regions**

Partner organisation: PP02: RRA LUR

Other partner organisations involved (if relevant):

Country: Slovenija

NUTS2 region: Zahodna Slovenija

Contact person: Klemen Gostič

email address: klemen.gostic@rralur.si
phone number: + 386 8 201 66 59

Part II – Policy context

The Action Plan aims to impact:

- [ ] Investment for Growth and Jobs programme
- [ ] European Territorial Cooperation programme
- [x] Other regional development policy instrument

Name of the policy instrument addressed:

- Regional development programme of Ljubljana urban region (RDP LUR) as a new strategic document at the regional level;
- Promotion of Balanced Regional Development Act

Part III – Details of the actions envisaged

ACTION 2: REGIONAL DEVELOPMENT PROGRAMME OF LJUBLJANA URBAN REGION (RDP LUR)

The background

Besides being located at one of important hubs of the European core network, Ljubljana urban region (LUR) is also main gravitational center for migration flows in Slovenia. Since development of the railway network and public passenger transport stagnated in the past decades, consequences can be seen in the poorer mobility of non-motorized traffic participants, traffic congestions, noise pollution and unsatisfactory traffic safety in LUR. Long-term transport planning in LUR is performed trough preparation and application of Regional Development Programme (RDP LUR) which is initiated and produced by Regional development agency of Ljubljana urban region. RDP LUR is the fundamental regional-level strategic and programming document that harmonizes the development objectives in

the region and outlines the instruments and resources for their realization. The strategic section of LUR RDP features an analysis of regional development potentials, definition of the key development obstacles and strengths of the region and finally determination of the region's development specialization, of which sustainable mobility is one of the most important elements. Including all the lessons learned from SUMP LUR, region's development priorities, programmes and measures will be outlined within RDP LUR from 2021 to 2027, taking into account also policy recommendations, experiences and methodologies (e.g. Livable-Oriented Area Development, Transit Oriented Development) from SMART-MR project.

Besides other areas of intervention, one of the main topics of RDP LUR is to define and outline all the spatial and transport development related objectives in Ljubljana urban region. As it was learned from a SMART-MR workshop "Creating a regional mobility plan", RDP LUR 2021-2027 will identify priority areas and actions in the transport sector which is a prerequisite for further allocation of national or regional funds for selected actions. Lessons learned for allocation of main intervention areas and lists of needed measures have also been identified with activities and site visits of SMART-MR project (e.g. workshops and policy exchange in Rome, Gothenburg and Budapest). Within preparation of Regional Development Plan from 2021 to 2027 Regional development agency of Ljubljana urban region will synthesize the main lessons learned and planning concepts from SMART-MR project and utilize them in preparation of RDP LUR.

SMART-MR capacity building was also reflected in preparation of Sustainable urban mobility plan for Ljubljana urban region (SUMP LUR) which is one main project results in Slovenia and will represent the main input for RDP LUR within sustainable mobility intervention area. Drawing conclusions and proposed measures from policy recommendations on SMART-MR low-carbon district toolkit (e.g. creating multifunctional areas, increasing concepts of energy-efficiency) and on multimodal transport points (e.g. Park & Ride facilities, LOAD station areas, multimodal hubs) from SUMP LUR, RDP LUR will additionally foster improvement of intermodal hubs planning within the region.

The main lessons learnt from SMART-MR project to be used in RDP LUR are linked to specifics of the participatory planning which is crucial for the acceptance of general spatial planning measures today and in the future. Within SMART-MR project, sustainable concept for low-carbon station areas has been developed. It will additionally assist regional planners in developing low-carbon areas both in existing urban structure as well as in planning new station areas and intermodal transport hubs within next programming period. In addition to above mentioned topics LOAD (Livability-Oriented Area Development) concept will be further elaborated and validated within RDP LUR in order to enhance livability and ensure transport sustainability and multimodality of different transport modes in Ljubljana urban region.
In relation to policy instrument addressed by the SMART-MR project, the RDP LUR will not address the current version, but will be important document for the implementation of the Operational Programme for cohesion Policy in years 2021-2027.

Action (please list and describe the actions to be implemented)

Preparation of RDP LUR takes place in several phases. The content that must be included in RDP is:

- analysis of regional development potentials, identification of key development barriers and the benefits of the region in the international area
- definition of the region's vision
- definition and justification of the region's development specialization
- definition and description of the region's strategic development objectives

- defining and describing the development priorities of the region with quantified indicators and indicating data sources for monitoring indicators
- a common indicative financial evaluation of the RDP
- defining and detailed description of measures under each priority
- defining the system of monitoring, evaluating and implementation of the RDP
- defining a system of informing the public on the planning and implementation of the RDP
- presentation of the most important regional projects

Players involved (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role):

- Ministry of economic development and Technology
- Ministry of the Environment and Spatial Planning
- Government office for development and European cohesion policy
- Competent Ministries
- 25 municipalities of Ljubljana Urban Region
- Regional development agency of Ljubljana urban region
- Regional development council
- Regional council (26 mayors)

Timeframe
Regional Development Programme of Ljubljana Urban Region will be prepared till the end of June 2020.

Costs (if relevant)
The Regional Development Programme will be developed through in kind contribution of the PP2.

Funding sources (if relevant)

Date: 10.9.2019

Signature: _____

Stamp of the organisation (if available): _____

ACTION 3: GUIDELINES FOR PREPARING REGIONAL MOBILITY PLANS

Part I – General information

Project: **SMART-MR: Sustainable Measures for Achieving Resilient Transportation in Metropolitan Regions**

Partner organisation: PP01: ZRC SAZU

Other partner organisations involved (if relevant): PP02: RRA LUR

Country: Slovenija

NUTS2 region: Zahodna Slovenija

Contact person: Janez Nared

email address: janez.nared@zrc-sazu.si
phone number: +386 1 200 27 16

Part II – Policy context

The Action Plan aims to impact:

× Investment for Growth and Jobs programme
European Territorial Cooperation programme
Other regional development policy instrument

Name of the policy instrument addressed: Operational Programme for the Implementation of the EU Cohesion Policy in the Period 2014-2020; Thematic objective 7: Promoting sustainable transport and removing bottlenecks in key network infrastructures
Thematic objective 4: Supporting the shift towards a low-carbon economy in all sectors

ACTION 3: GUIDELINES FOR PREPARING REGIONAL MOBILITY PLANS

The background

In Slovenia, planning at the regional level brings numerous challenges as there is no regional authority at this level and thus, the decision-making competences are shared among the local and the national level. This divide is visible also in transport planning, where national authorities are responsible for public transport, regional roads, national roads and highways, whereas local level is responsible for local roads, school buses and in case of city municipalities – for the city buses.
In mobility planning the Ministry of Infrastructure has provided guidelines and funding for sustainable urban mobility plans at the local level (9 municipalities out of 26 in the region), whereas the mobility issues at the regional level have remained unsolved.
Being aware of this situation, we directed the SMART-MR project in a way, that partners and particularly Ljubljana Urban Region could shape/provide a framework for regional mobility planning.

During the regional stakeholder meetings this idea was presented to the Ministry of Infrastructure, that has decided to take this new step in consolidating regional mobility planning by providing guidelines for preparing regional mobility plans. The ministry has already started with some activities in this direction, whereas the project SMART-MR can support this process by the main lessons learned (included in the guide and briefly presented in chapter 2 and 3):
As learnt within the SMART-MR project, participatory planning is necessary to get sufficient commitment of stakeholders, to optimize solutions and to facilitate the implementation. In addition, workshop 2 on regional mobility planning indicated that the regional mobility planning must be an integral process, joining all the spheres of planning (environmental, social and economic) into one process. In this, low-carbon logistics is an important part of regional mobility planning, particularly in the field of last-mile services, low-carbon fleet and ITS supporting efficient city logistics (e.g. using good practices from Oslo and Helsinki). Mobility planning strongly depends on area development and spatial planning. To achieve this the LOAD concept was developed, enhancing liveability in metropolitan regions in an integrated way, ensuring sustainability by densification around station areas, that should become nodes in the regional polycentric development. Both – mobility and transport planning must focus on the low-carbon development principles, ensuring mixed land use, introduction of smart solutions, the importance of leadership and private-public partnership (WS in Helsinki, particularly good practice of the Tikkurila station). This particularly can be effective by giving priority to public transport, which must become a backbone of sustainable mobility (as learned at the WS 6 in Budapest) and can be further supported by the sharing economy. The later must be regulated in a way it can support public transportation and supplement it, particularly in low-density areas.
The guidelines will provide a valuable input into the regional mobility planning in Slovenia, enabling regions to prepare integral and coherent regional mobility plans and thus supporting investments in mobility and low-carbon economy.

Action
The main action the Ministry of Infrastructure will develop within this scope is to prepare guidelines for elaborating regional mobility plans.
After deciding that regional mobility plans will become important documents in the field of mobility at the regional level, the Ministry of Infrastructure decided to actively support the projects, that might lead to this aim. Thus, the Ministry for Infrastructure joined the CROSSMOBY project (Interreg SI-IT) as an observer and CARE4CLIMATE (Life +) as a partner.
The results of the above mentioned projects will collect the existing knowledge on regional mobility planning and also by implementing piloting projects provide a guidelines for developing regional mobility plans, define appropriate governance structure at the regional level, that would replace the lacking regional administrative level, as well as define basic principles for durability/resilience of the system by defining regular funding and ensuring sufficient and competent group of experts/staff/mobility planners in each individual region and thus ensuring the continuity of the processes.
In this manner the use of ERDF funds will be optimized through deliberated measures, designed in an integrated way at the level of the entire region. This is particularly important for the mobility measures, that cover more than one municipality. In particular, thanks to regional mobility strategy in Ljubljana Urban Region, the regional cycling network, financed through Operational programme will be better suited to the needs of the entire region.

Players involved
Ministry of Infrastructure: The responsible institution for the mobility planning and thus the most responsible institution for building the regulatory framework in the field of mobility. By linking project

partners into various project consortiums, participating in various project calls, the Ministry coordinates activities in a way, that will ensure development of the guidelines for preparing the regional mobility plans.
Regional development agencies: institutions, closely connected to regional planning in Slovenia and thus potentially responsible for the preparation of the regional mobility plans.
Municipalities: Institutions at the local level, responsible for preparation of local mobility plans and also responsible for inter-municipal cooperation that is the crucial cooperation form for planning at the regional level.
Research Institutes: Institutions supporting the national and regional authorities in preparing the guidelines for the regional mobility plans.

Timeframe
The guidelines for preparation of the regional mobility plans in Slovenia will be drafted till the end of 2020. Their main goal will be to provide instructions for regional mobility plans.

Costs (if relevant)
As the Guidelines will be developed through two projects, no direct costs appear at the Ministry of Infrastructure. The total costs connected to preparation of the guidelines is estimated on 20.000 EUR.

Funding sources (if relevant):
As mentioned above, the Ministry of Infrastructure is directly included into the preparation of the guidelines, whereas the costs linked to the preparation of guidelines do not depend directly on the ministry's budget, but will be funded through various European projects like CROSSMOBY (Interreg V A SI-IT, ERDF) and CARE4CLIMATE (Life +).

Date:_____

Signature: _____

Stamp of the organisation (if available): _____