

**Innovations in
Sustainable Urban
Mobility Plans**

**for low-carbon
urban transport**

InnovaSUMP

Interreg Europe



European Union
European Regional
Development Fund

**Action Plan
for the City of Prague**



The City of Prague



June 2019

Map of Prague Integrated Transport Area which includes the core city and the part of the Central Bohemian Region



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Citation: Interreg Europe Project InnovaSUMP Action Plan for the City of Prague, the Czech Republic

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June 2019

Interreg Europe Programme

Interreg Europe Programme of interregional cooperation helps regional and local governments across Europe to develop and deliver better policy. By creating an environment and opportunities for sharing solutions, the aim is to ensure that government investment, innovation and implementation efforts all lead to integrated and sustainable impact for people and place.

By building on its forerunner, INTERREG IVC_(2007-2013), Interreg Europe aims to get maximum return from the EUR 359 million financed by the European Regional Development Fund (ERDF) for 2014-2020.

Solutions exist that can help European regions become the best that they can be. Today, the EU's emphasis is very much on paving the way for regions to realise their full potential – by helping them to capitalise on their innate strengths while tapping into opportunities that offer possibilities for economic, social and environmental progress.

To achieve this goal, Interreg Europe offers opportunities for regional and local public authorities across Europe to share ideas and experience on public policy in practice, therefore improving strategies for their citizens and communities.

InnovaSUMP Project

The InnovaSUMP project aims at introducing:

- a) New innovations, enhancements & advances in preparation, elaboration, consultation, adoption, implementation, evaluation & monitoring of Sustainable Urban Mobility Plans (SUMP), based on the EU established methodology, for sustainable lowcarbon urban transport & mobility policies & measures promotion, funding, implementation & enhancement.
- b) Policies & measures that promote the use of & investments in sustainable mobility solutions, can be included in SUMP, i.e.: high quality PT systems, alternative/clean fuels, electric vehicles, smart ticketing, urban freight logistics, active modes of cycling & walking, new forms of car ownership & use, access control, congestion charging, fair & efficient pricing, ICT mobile applications, ITS transport telematics infrastructure, FTS/DRT, Intermodality improvements for 'seamless' travel, links with Smart Cities mobility initiatives, etc; including stakeholder engagement, public participation, consultation procedures, social media applications, policy formulation and adoption by city and transport authorities, polycentric SUMP approach for regional and district authorities.
- c) Policy & institutional implications for advances in implementing & funding innovative sustainable mobility solutions.
- d) Contribution of SUMP process innovations to: urban regeneration, social inclusion, equity considerations, economy, competitiveness, effective PPPs, citizen society empowerment, cohesion, links with the 'Urban Mobility Package 2013', links with SEAP, mid-term review of White paper & Europe2020 targets.
- e) Enhancements to SUMP Methodology: Promotion of low-carbon mobility solutions, Travel behaviour research & potential user response analyses, Integrating pricing & financing measures, Planning for visitors at tourism destinations, SUMP-SEAP-SECAP Integration.

InnovaSUMP Project Partnership



InnovaSUMP facilitates the take-up of Sustainable Urban Mobility Plans, with innovations on travel behaviour, pricing and financing, planning for tourism and sustainable energy, towards low-carbon transport solutions

www.interregeurope.eu/innovasump

1. Acknowledgements

This Action Plan forms a part of the InnovaSUMP interregional cooperation project. It is developed with co-funding support from European Regional Development Fund and made possible by the Interreg Europe programme.

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We are also grateful to the following departments of Prague City Hall and other participating institutions for their assistance in the development of this publication:

Department of Transport Development, Prague City Hall, Czech Republic

Department of European Funds, Prague City Hall, Czech Republic

Prague Institute of Planning and Development, Czech Republic

Prague Public Transport Company, Czech Republic

Technical Road Administration, Prague, Czech Republic

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2. Executive Summary

The main purpose of InnovaSUMP Project was to enhance the take up of SUMP by the local authorities through the development and implementation of innovative procedures and processes regarding the undertaken methodology. The Project is a part of the Interreg Europe Programme and its task was to share good examples and lessons learned with other partners, as well as to apply for innovative measures related to sustainable urban mobility. The project associated 9 partners (mostly cities in charge of SUMP implementation) from 8 countries which cooperated in terms of sharing experiences, defining integrated priorities, summarizing achieved results, presenting best practices and local as well as interregional activities.

Participation in the InnovaSUMP project was beneficial for the City of Prague. Thanks to more than two-year cooperation with partner cities and institutions Prague gained a lot of practical knowledge in the given area. The main benefit for the City is especially getting experience with International EU financing within Interreg Europe Programme. Furthermore, exchange of experience and familiarization with concrete projects in the field of sustainable transport, energy and climate in particular cities, so called Study Visits and Interregional workshops (which is an appropriate learning tool), were also very beneficial. Prague City Hall would like to highlight direct involvement of particular participants and institutions in the InnovaSUMP project such as Prague Public Transport Company, Prague Institute of Planning and Development, Department of European Funds, Department of Transport Development within the Prague City Hall and ESA Business Incubation Centre in Prague.

Prague has fulfilled its commitment and developed a Sustainable Urban Mobility Plan (SUMP) that included not only the City itself, but also the metropolitan area. The objective of the Prague SUMP is to ensure the mobility of its inhabitants enabling their future movement around the City without unnecessary constraints, while improving the quality of life of the City's inhabitants and its environment. In addition to this document, Prague has prepared also other strategic documents (see Chapter 5), whose common objective in the field of sustainable transport is, in particular, to increase the share of public transport, pedestrian and cycling as well as promotion of higher use of electromobility and other alternative fuels in public transport.

Specific actions focused on sustainable mobility, energy and climate in Prague were defined in "Action Plan" linked to InnovaSUMP Project. Financing of these actions is expected within the Operational Programme Prague - Growth Pole of the Czech Republic and within other possible funding options, especially from the own city budget. In the next programming period the City of Prague will no longer have its own Operational Programme, but only its own envelopes in different OPs.

With the support of InnovaSUMP project Prague's successfully achieved the goal to improve our Policy instrument by modifying the priority axis 2 where InnovaSUMP project was targeting. Based on ongoing discussions between the Project Management Department and the Department of European Funds of the Prague City Hall which is the responsible body for launching individual calls and in cooperation with our Stakeholders and other relevant parties a call for the actions of Pilot testing and Purchasing of electric buses for the Prague Public Transport Company was announced under the Priority Axis 2. This acquisition is a part of overall City's support

of alternative fuels. Implementation of these two actions was achieved by the end of the phase 1. The third action named Strategy for Alternative Drives will be implemented in the very near future.

3. Topics and Inspiration

Inspiration for this Action plan came mostly from the interregional workshops. City of Prague would like to highlight the interregional workshop B which took place in Ravenna and the interregional workshop C which took place in Nicosia.

Interregional Workshop B: Visitor Mobility at Tourist Destination, Ravenna (IT)

The Municipality of Ravenna hosted the “Visitor Mobility at Tourist Destination” workshop on 9th November 2017 at MAR, Art Museum of Ravenna. The purpose of this workshop was to give a contribution to the InnovaSUMP project on the specific topic of tourism related mobility, a phenomenon with the specific characteristics such as Seasonality, High variability and unpredictability, Different targets with very different needs and expectations and possible conflicts between tourist and citizens need. Representatives of the City of Prague were present as well as Prague’s stakeholders from ESA Business Incubation Centre, Josef Pindák (Triphood) and Jana Přibyllová (Tuddy Tuddy). Václav Novotný from the Prague Institution of Development presented detailed analysis regarding the situation with tourist in Prague, especially he picked out high exposed areas in the city centre and related issues in these areas. Prague’s stakeholder presented two possible solutions how their mobile apps could help to keep tourist out of the already overcrowded Prague city centre. During the interregional workshop partner presentations were present on specific situations in each city on the topic of tourist mobility as well as best practice in partner cities during a group discussions was shared.

Interregional Workshop C: SUMP – SEAP – SECAP Integration, Nicosia (CY)

The Municipality of Nicosia hosted the “SUMP – SEAP – SECAP Integration workshop on 14-16th May 2018 in conjunction with the 5th SUMP Conference at the Filoxenia Conference Centre. InnovaSUMP project actively participated in the 5th SUMP Conference on Sustainable Urban Mobility Plans. Municipality of Nicosia as the lead partner of the InnovaSUMP project presented on topic of SUMP-SEAP-SECAP Integration in the dedicated session, as well as the ITMP/SUMP in other session and Nicosia Tramway Feasibility Study. Regarding the Exchange of Experience project partners got benefit from the synergies with the Interregional workshop and the 5th SUMP Conference. Partner Cities had the chance to attend highly relevant session, participate in discussions and interact with representatives of the other urban authorities and expert. Representatives from the Prague City Hall – Department of Transport Development and Project Management Department were present at this workshops as well as representatives of Prague Institute of Planning and Development and a stakeholder from Siemens company which maintains metro C line in Prague.

4. Sustainable Mobility Strategy of the Prague Capital

The City of Prague, in addition to documents required by law, also has its own strategies and policies. Key strategic documents of the city are: regularly updated *Strategic Plan, Transport Policy (Prague Sustainable Mobility Plan), Public Space Manual, Air Quality Improvement Programme, Adaptation Strategy and Capital City Territorial Energy Concept 2013–2033*.

In these documents, Prague has clearly committed itself to support the development of sustainable urban mobility. Transport accessibility of resources and objectives will be significantly oriented towards more environmentally friendly modes of transport and mobility. The main objective is to increase the share of public, pedestrian and cycling traffic above 70%. An attractiveness of using these modes of mobility will improve, so that they will become a convenient and popular alternative to individual car transport. In road transport, a combination of regulatory and investment measures reducing negative impacts of car transport on densely populated urban areas will be applied. Fulfilment of this goal is going to support the values of the city in order to become more attractive for its inhabitants who will enjoy living in their city and using its public spaces. Balancing the different modes of transport and movement in accordance with sustainable mobility principles will bring more reliable, faster and enjoyable travel for people as well as better environment. Higher energy efficiency in transport will have a positive economic impact and application of electromobility, including other efficient alternative drives, will contribute to reducing oil dependency.

The Prague Sustainable Mobility Plan defines 7 strategic transport objectives. These objectives were complemented by specific indicator values in order to monitor the progress and the level of fulfilment of objectives compared to their current status.

Strategic goal Indicators – state in the year 2017 (2016 in case of missing data) compared to year 2030 proposal

**TRAVEL
BEHAVIOUR -
INCREASE OF
TRANSPORT
SPACE
EFFICIENCY**

The share of public, pedestrian and cycling in the transport division will increase from 70% to 73%.

The stage of motorization will increase from 655 to 714 passenger cars per 1,000 inhabitants.

The capacity of P+R system in Prague and the surrounding region will increase from 4,167 to 20,434 vehicles.

The share of public rail transport (metro, trams, railways) in the number of passengers transported by integrated public transport in Prague will increase from 67.29% to 72%.

The total number of parking spaces in Prague conservation areas will decrease from 15,927 to 14,334.

The average occupancy rate of passenger cars will remain at 1.3 per vehicle.

The daily number of cars passing through the central cordon will decrease from 530,000 to 464,000.

The total length of protected marked and recommended cycling routes will increase from 173 km to 260 km.

The total length of cycling two ways will increase from 23 km to 55 km.

The number of car sharing vehicles will increase.

The share of public, pedestrian and cycling in the transport division will increase from 70% to 73%.

VOC emissions from car traffic will decrease.

Specific greenhouse gas emissions (CO₂ eq.) from transport will decrease.

The number of registered vehicles with electric engine (pure electric vehicles) will increase from 1,060 to 56,000.

The number of buses with electric engine in public transport will increase from 2 to 30.

The number of cars passing through the central cordon will decrease from 530 to 464 thousand per day.

The average travel speed of trams will increase from 18.6 km/h to 19 km/h.

The average bus (of Prague Integrated Transport - PIT) speed will increase from 25.2 km/h to 26 km/h.

The average delay of PIT buses at the entry from the Central Bohemia Region to the City of Prague will decrease.

The accuracy of PIT trains will increase from 94% to 96%.

The length of roads with regular occurrence of 4+ level of transport will be 85 km or less.

The number of passengers transported by integrated public transport in the city of Prague will increase from 1.26 million to 1.35 million per day.

The number of light signalling equipment connected to traffic headquarters will increase from 69% to 100%.

The share of realized part of the Prague Ring Road will increase from 50% to 100%.

The number of injured or killed pedestrians and cyclists will be decreased from 732 to 650 per year.

The number of slightly injured people in traffic accidents will be reduced from 1,951 to 1,750 per year.

The number of killed or seriously injured people in traffic accidents (according to the Police of the Czech Republic) will be reduced from 173 to 110 per year.

The total number of traffic accidents (registered by the Czech Police) in Prague will remain at approximately 23,000.

The number of traffic accidents between trams and motor vehicles will decrease from 1,312 to 1,200.

**SUMP-SEAP-
SECAP
INTERGRATION**
REDUCTION OF
CARBON
FOOTPRINT

INCREASE OF
EFFICIENCY AND
RELIABILITY

INCREASE OF
SAFETY

<p>INCREASE OF FINANCIAL SUSTAINABILITY</p>	<p>The share of transport revenues on the total city budget will increase from 4.6% to 6.6%.</p> <p>The share of public transport loss compensation in the City of Prague to its total costs will be reduced from 80% to 75%.</p> <p>The number of Prague residents will increase from 1,280,000 to 1,357,000.</p> <p>The share of bridges with construction status "3-good" and better will be only slightly reduced, from 39% to 35% of the total number of bridges.</p> <p>The territory with exceeded annual emission limit values for PM10 and PM2.5 will be reduced to 0%.</p> <p>The territory with exceeded emission limit for benzo(a)pyrene will be reduced from 54% to 0%.</p> <p>The territory with exceeded emission limit for nitrogen dioxide will be reduced from 0.6% to 0%.</p>
<p>HUMAN HEALTH IMPROVEMENT</p>	<p>NOx emissions from car traffic will be decreased.</p> <p>The number of inhabitants permanently living in the territory with exceeded emission limits will be reduced to 0.</p> <p>The number of residents living in areas where night noise exceeds 50 dB will be decreased.</p> <p>The number of killed or seriously injured people in traffic accidents (according to the Police of the Czech Republic) will be reduced from 173 to 110 per year.</p>
<p>TRANSPORT ACCESSIBILITY IMPROVEMENT</p>	<p>The share of low-floor tram transport services during working days will be increased from 52% to 90%.</p> <p>The share of low-floor PIT buses transport services during working days in Prague will be increased from 88% to 95%.</p> <p>The share of low-floor PIT buses transport services during working day outside of Prague (in Prague metropolitan area) will be increased from 52% to 80%.</p> <p>The proportion of barrier-free metro stations will be increased from 72% to 95% of all stations.</p> <p>The proportion of barrier-free stations and PIT trains stops will be increased from 45% to 100%.</p> <p>The number of inhabitants with permanent residence within 30-minute accessibility to the City centre by means of PIT (including walking to the station/stop and waiting for the connection) will be increased from 939,000 to 1,029,000.</p>

The Territorial Energy Concept of the Capital City of Prague for the period 2013-2033 defines three main objectives in the area of urban transport:

- Increasing of public transport efficiency and its greening
- Increasing of car traffic efficiency and its greening
- Non-motorized transport promoting

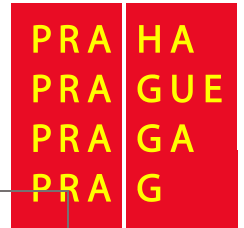
To meet these goals, the following specific measures have been defined:

- Improved electric power recuperation
- Heat pumps in the subway
- Active favouring of public transport
- Introduction of low-emission zone

- Enable discount parking in the centre for vehicles with ecological drive (electro, CNG, etc.)
- Support of the green drive extension by the trial renting and respective support of companies
- Expand the offer of ecological fuels and motivate the City units to utilize them
- Develop P+R systems and bike paths, increase the safety and comfort of public transport and pedestrians
- Build a railway siding to ZEVO Prague
- Verify the possibilities how to transfer a part of the City cargo via rail transport
- Eliminate dangerous intersections where major non-motorized routes cross other modes of transport
- Increase the City's throughput for cyclists
- Examine the possibilities of a bicycle rental system development in Prague Capital
- Ensure sufficient storage capacity for bicycles, near public transport stops and stations.

City of Prague goal is to improve the environment and adapt to the growing tourist trend in Prague.

5. Details of Actions



Part I – General information

Project: InnovaSUMP

Partner organisation(s) concerned: City of Prague

Country: Czech Republic

NUTS2 region: Prague

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Part II – Policy context

The Action Plan aims to impact: Investment for Growth and Jobs programme

Sustainable Urban Mobility Plan of the City of Prague

European Territorial Cooperation programme

Other regional development policy instrument

Name of the policy instrument(s) addressed:

Operational Programme Prague – Growth Pole of the Czech Republic

Sustainable Urban Mobility Plan of the City of Prague

Further details on the policy context and the way the action plan should contribute to improve the policy instruments:

The main relevant area is PRIORITY AXIS 2, Sustainable mobility and energy savings within the Operational Programme Prague – Growth Pole of the Czech Republic

The actions focus on the topic - “Measures to ensure priority of public transport in traffic”

The City of Prague will no longer have its own Operational Programme in the next programming period, only its own envelopes in the frame of different OPs. This is why the Prague City Hall made changes in the current Operational Programme, namely in the Priority Axis 2 which is dedicated to sustainable mobility and energy savings.

Part III – Details of the actions envisaged

ACTION 1:

Name of the action: **Pilot electrifications of the bus line 140 (Palmovka – Miškovice)**

1. Relevance to the project

The City of Prague, in cooperation with the surrounding region, applies the principles of sustainable mobility and orientation towards more environmentally friendly modes of transport. Its aim is to reduce the negative impacts of individual car traffic, give priority to public transport as well as increase transport safety and energy efficiency. The project InnovaSUMP seeks innovative solutions in partners Sustainable Urban Mobility Plans. In the Prague's Sustainable Urban Mobility Plan, the topic electromobility is highlighted as an innovative technology that can help to reduce pollutions. Since 22 December 2015 Prague is a signatory of Covenant of Mayors for Climate & Energy so InnovaSUMP project brought a perfect opportunity for our City to improve our future strategy which is focused on innovations in sustainable public transport especially with emphasis on sustainable energy and climate.

In the beginning the InnovaSUMP project targeted the Priority Axis 2 (PA 2) in the Prague Operational programme – Growth Pole of the Czech Republic. Individual calls in this Priority Axis were primarily targeting for energy efficiency and smart energy management in the city infrastructure such city buildings, P+R facilities and so on. It made the Operation programme less flexible for any certain activities in transportation.

Inspiration for this action came also from an interregional workshop C held in Nicosia on 14-16 May 2018. At this meeting Nicosia Municipality presented their practice regarding SUMP-SEAP-SECAP at the dedicated session, as well as partners discussions about these topic took place during a second day. Municipality's overall strategies in the field of sustainable energy and climate management were discussed during these sessions. All the presentations were very inspiring and helpful for overall look, especially how Nicosia Municipality and other partners deals with the necessary measurement for the evaluation of the current situation, the proposed measures package to improve the energy consumption and emissions and an estimation of the future potential reductions as well. With regards to that the City of Prague plans of electromobility promotion include also more evident introduction of electric buses into urban public transport.

Based on ongoing discussion within the Prague City Hall between the Project Management Department and the Managing Authority (Department of

European Funds which is the responsible body of the OP for launching individual calls in PA 2) and between the Ministry of Regional Development and European Commission and especially on ongoing InnovaSUMP project, was suggested to replace or update some activities in cooperation with the stakeholders. After all the result was that the PA 2 of the Operational Programme was modified by adding new individual calls into the PA in order to better correspond to the objectives of sustainable mobility, energy and climate.

Based on the above mentioned the action of Pilot electrifications of the bus line 140 is directly addressed to Operational programme - Growth Pole of the Czech Republic and will be fully financed from this OP. The overall allocation for this call is 13,6 mil. EUR.

2. Nature of the action

Application within Call no. 43 (under the OP Prague - Growth Pole) for pilot testing of fully emission-free electric buses will be prepared. This call concerns to 2.3 specific objective of Development of Low-Emission Urban Transport Mobility in Street Traffic.

Electric buses are an attractive option for cities particularly because of their quiet and environmentally friendly operation. Possible variants of bus transport electrification are based on technological possibilities and traffic-operational parameters of individual lines and areas. In terms of charging technology, three variants have been under consideration: dynamic charging, static charging in a turning place, and static charging including balancing of batteries in the garage

The project consists in the replacement of existing diesel buses with battery trolleybuses, using a combination of dynamic charging (in motion charging - the vehicle charges on the move from the trolley wire) and static charging (the vehicle is charged at the terminus during its scheduled breaks and in the garage). Thanks to the battery technology, it is not necessary to build the overhead trolley wires on the whole route, but only in selected sections. The overhead trolley wires will be installed on approximately 45% of the route length, in the remaining sections the vehicle will run in "battery" mode.

It is expected to purchase approx. 15 battery trolleybuses (18 m long) via the OP Prague - Growth Pole.

The main benefit is zero-emission operation, as well as reduced noise pollution compared to a conventional fuelled engine bus. Another advantage comes by way of significantly lower demands on the infrastructure. There is no need to implement power wires along the entire route, but only in certain sections, typically in hilly terrain. There is no need to implement complex overhead constructions at intersections, in garages etc. The vehicles are no longer dependent on following the lines, but can be flexibly deployed on different types of routes. The system also exhibits greater reliability, because it allows for operative responses to emergencies or diversions.

This technology is well utilizable e.g. in cities with existing trolleybus lines. Moreover, this method allows for the electrification of long routes operated at short intervals, often in hilly terrain, where the technology of purely static charging has its limits, due to battery capacity and weight and the charging speed.

3. Stakeholders involved

- Prague Public Transit Company
- Prague City Hall – Department of Transport Development, Department of European Funds
- In a broader context – Prague visitors and inhabitants

4. Timeframe

2018 – 2019 individual call preparation and launching the call
 2020 – 2021 project preparation and getting of all permits
 Q1 2020 submission of application for funding via Operational Programme Prague – Growth Pole of the Czech Republic, Priority Axis 2
 2020 – 2021 public procurement of vehicles
 2022 project realisation

5. Costs

1. Expected infrastructure investment costs CZK 192 million
2. Estimated investment costs for 15 pieces of battery trolleybuses CZK 300 million

The application for funding will be submitted only for the acquisition of vehicles

6. Funding sources

1) Infrastructure investments

- *Budget of the City of Prague*
- *Operational programme Transport 2020+*

2) Funding through the Operational Programme Prague – Growth Pole of the Czech Republic

Applicant: Prague Public Transit Company (DPP, a.s.)

Funding sources:

European Regional Development Fund (ERDF) - 50% of the costs of the project

Prague Public Transit Company - 35% of the costs

City of Prague - 15 % of the costs

ACTION 2

Name of the action: **Electric buses in public transport - Purchase of 14 pieces of standard electric buses**

1. Relevance to the project

Prague as a tourist destination is very popular across the world. The influx of tourists to Prague each year continues to accelerate. Through the first six months of 2019, the number of visitors to the city rises over 10% compared to the previous year. The number of passengers transported by integrated public transport in the city of Prague will increase from 1,26 million to 1,35 million per day. The increasing number of visitors goes hand in hand with increasing number of visitors using the Prague airport as a gateway for visiting Prague. A number of new regular long-distance flights connected Prague and China, and Prague and North America as well as Emirates carrier started using Airbus A380, the world's biggest transport aircraft on its line to Prague. Unfortunately from the airport to the city centre is no direct metro or train connection. Using public buses and Airport Express bus line are the only transport option (except taxi) to get to the city centre. As the City of Prague wants to apply the principles of sustainable mobility and orientation towards more environmentally friendly modes of transport we very appreciated the interregional workshop held in Ravenna, since the fact that Ravenna is also a very busy tourist destination. The interregional workshop was also a great opportunity to share our experiences between such busy tourist cities and get to the point of view from a different perspective with similar or different issues. **The interregional workshop B: Visitor Mobility at Tourist Destination which took place in Ravenna 9-10 November 2017 was the main discussing platform hot to deal with our challenges.** We'd like to highlight the implemented solution in Viseu where is a new integrated circuit in the urban public transport service operated by 3 electric minibuses. The circuit is in operation until today and transports approximately 13 000 passengers every year. Also the implemented solution in Nicosia where 13 new mini buses, Euro VI category were bought. All that solutions helped to increase the attractiveness of the public transport and reduce emissions. However the biggest inspiration came from the City of Ravenna even though that both cities are facing different issues. Representatives of City of Prague very appreciated the implemented solution in Ravenna. Especially their first intervention that has been creating of Multimodal Tourist Hubs which are reachable by pedestrians, bike and public transport. Also the new P+R system for tourist buses which are now very close to city centre but still in a walking distance for visitors were very inspiring.

With regards to the above mentioned the Prague Public Transport Company recently bought new high capacity vehicles which can accommodate 191 passenger. Also time intervals were minimized to be Based on ongoing discussion within the Prague City Hall between the Project Management Department and the Managing Authority (Department of European Funds which is the responsible body of the OP for launching individual calls in PA 2) and between the Ministry of Regional

Development and European Commission and especially on ongoing InnovaSUMP project, was suggested to replace or update some activities in cooperation with the stakeholders. After all the result was that the PA 2 of the Operational Programme was modified by adding new individual calls into the PA in order to better correspond to the objectives of sustainable mobility, energy and climate. Based on that we were able to prepare such project as the Electric buses in public transport.

2. Nature of the action

With regards to the above mentioned all the afford leded to that this particular action could be directly addressed to Operational programme - Growth Pole of the Czech Republic and will be fully financed from this OP. Application within Call no. 43 (under the OP Prague - Growth Pole) for purchase of fully emission-free electric buses will be prepared. This call concerns to 2.3 specific objective of Development of Low-Emission Urban Transport Mobility in Street Traffic.

The Prague Public Transport Company has been working on testing of electric buses and possibilities of their integration into public transport for several years, especially for the connection between the Airport and the city centre which is the most exposed bus line in the city. Following the pilot projects, the Prague Public Transport Company wants to extend electric buses to the all public transport in the very near future.

Annual emission savings on planned electric lines is estimated at more than 12 tonnes of dust, sulfur dioxide and nitrogen oxide. Simultaneously, annual saving of 155 tonnes of carbon dioxide will be achieved. However, Prague needs to purchase more electric vehicles and to build a new infrastructure to electrify public transport buses lines.

3. Stakeholders involved

- Prague Public Transit Company
- Prague City Hall – Department of Transport Development, Department of European Funds
- In a broader context – Prague visitors and inhabitants

4. Timeframe

2018 – 2019 individual call preparation and launching the call
 2020 project preparation and obtaining all necessary permits
 2020 procurement contract for purchase of vehicles
 Q1 2020 submission of application for funding
 2020-2021 expected project implementation

5. Costs

1. Expected infrastructure investment costs approx. CZK 30 million
2. Estimated investment costs for 14 pcs of electric buses approx. CZK 170 million

The application for funding will be submitted only for the acquisition of electric buses

6. Funding sources

1) Infrastructure investments

- *Budget of the City of Prague*
- *Operational programme Transport 2020+*

2) Funding through the Operational Programme Prague – Growth Pole of the Czech Republic

Applicant: Prague Public Transit Company (DPP, a.s.)

Funding sources:

European Regional Development Fund (ERDF) - 50% of the costs of the project

Prague Public Transit Company - 35% of the costs

City of Prague - 15 % of the costs

ACTION 3

Name of the action: **Strategy for Alternative Drives by 2030 in accordance with the Prague Sustainable Urban Mobility Plan**

1. Relevance to the project

The inspiration for this action came especially from the Territorial Energy Concept of the Capital City of Prague for the period 2013-2033 which defines main goals in the field of energy management, **from the Interregional workshop held in Nicosia where the best practice regarding the integration of SEAP/SECAP into SUMP was shared between cities at relevant sessions** and from the Covenant of Mayors for Climate and Energy. All the inspiration help to recreate a new city approach in the field of implementation these strategies into our SUMP and possibly prepare an option to fund the action from the Operational Programme Prague – Growth Pole of the Czech Republic. Prague has been part of the Covenant community since 2015. The commitments for Covenant signatories are linked to the EU's climate and energy policy framework. Covenant signatories commit to adopting an integrated approach to climate change. In order to meet the goals which's been set by the City some of specific measures have to be defined such as supporting of the ecological fuels, develop P+R system, improved electric power recuperation and so on. Based on that City of Prague is currently working and the above mentioned Strategy for Alternative Drives by 2030 in accordance with the Prague Sustainable Urban Mobility Plan.

In addition to the electromobility described above, the Czech Republic (including the Capital City of Prague) deals with the development of other types of alternative drives in transport. The National Clean Mobility Action Plan, approved by the Czech government in 2015 emphasizes the support of the development of infrastructure not only

for charging stations, but also for CNG, LNG and hydrogen filling stations. The Czech Ministry of Transport allocated a total amount of CZK 1.2 billion to the programme of support of alternative fuels infrastructure in the frame of the Transport Operational Programme.

Regarding the achievement the Czech Republic's declared goals of reducing greenhouse gases emissions in the air, CNG utilisation appears to be the most effective solution until 2020. After this year, a significant increase of electromobility is expected as well as LNG and subsequently hydrogen-based vehicles. Support of research and development in the area of increased efficiency of internal combustion engines and environmentally friendly means of transport (especially CNG, LNG, alternative fuels from RES, hybrid engines) is also one of objectives of the State Energy Concept of the Czech Republic.

2. Nature of the action

Prague is currently working on its "Strategy for Alternative Drives by 2030". At present, only its analytical part (analysis), mapping the current state and possibilities of support of alternative drives in the City, is available. This Strategy will be followed by a document, de facto an action plan, setting out proposals for concrete measures aimed at supporting the development of the use of different types of alternative drives in Prague. The City of Prague will elaborate the Strategy for Alternative Drives in the line with the Prague Sustainable Urban Mobility Plan.

3. Stakeholders involved

Stakeholders are the main City organizations:

- Prague City Hall
- Prague Public Transit Company
- Technical Road Administrator
- Prague Institute of Planning and Development
- Prague Integrated Transport organizer

4. Timeframe

4Q 2019 Action Plan of the Strategy for Alternative Drives
 1Q 2020 final version of the Strategy
 3Q 2020 approval of the Strategy by the Prague Council
 2020 – 2030 implementation

5. Costs

Expected costs of strategy and action plan management approx. CZK 500 thousand

6. Funding sources

- *Budget of the City of Prague*
- *Operational programme Employment*

6. Resume

During a phase 1 of the InnovaSUMP project City of Prague´s participated in four interregional workshops. Prague City Hall led the first workshop held in Prague on the topic of Travel Behaviour research & potential user response analyses. The second workshop was held in Ravenna on the topic of Planning for visitors at tourism destinations where City representatives were present as well as Prague´s stakeholders from ESA Business Incubation Centre. The third workshop on the topic of Integration of SUMP-SEAP-SECAP was held in Nicosia in conjunction with 5th SUMP Conference. Representatives of City of Prague and a stakeholder from Siemens company participated in the sessions and discussions. The fourth workshop on the topic Pricing & Financing was held in Vilnius. Representatives from the Department of Transport Development and the Project Management Department were present. Within the InnovaSUMP project a study tour was organised by the Devon County Council in Exeter. The Study tour was attended by the representatives of the Department of Transport Development and the Project Management Department as well as stakeholders from the Technical Road Administration in Prague.

Based on the participation in all of these project events, City of Prague was able to discuss many relevant topics and related issues with other partner cities. Good practice was shared at dedicated sessions and during a partner discussions. City of Prague was also leading the working group on the topic of Travel behaviour. All this helped to create an approach for this Action plan.

With regards to ongoing InnovaSUMP project and the discussion within the Prague City Hall between the involved departments and the Managing Authority and between the Ministry of Regional Development and European Commission. City of Prague was able to suggest to replace or update some activities in cooperation with the relevant stakeholders. After all the result is that City of Prague´s already influenced the Policy Instrument by implementing two particular actions. The PA 2 of the Operational Programme was modified by adding new individual calls into the PA in order to better correspond to the objectives of sustainable mobility, energy and climate. The action which supports the alternative fuels will be implemented in the very near future.