

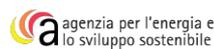
Sustainable Shared Mobility

Case study: Shared Mobility Roadmaps for Sofia

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Sustainable shared mobility for Sofia

The Sustainable Shared Mobility (SuSMo) project aims to catalyse systemic change by instigating behaviour change, enabling connections and collaborations, and removing barriers through policy change. SuSMo brings together leading European cities with experts in the transport sector to provide decision-makers with tools and knowledge to maximise the benefits and mitigate the negative impacts of shared mobility modes. Funded by EIT Climate KIC, SuSMo was launched in 2019 and has worked with city representatives and private sector shared mobility providers to establish the key needs and priorities for the effective deployment of sustainable shared mobility.

The City of Sofia

Sofia, the capital of Bulgaria, is the most densely populated city in the country. In the past years, the city experienced a rapid population increase adding to the urban mobility challenges. The geography of the city, being positioned between mountains, sets limits on its expansion in terms of territory. This is one of the reasons the city struggles with excessive traffic, overloaded streets, limited space for pedestrians and the related health risks for the inhabitants.

As one of the SuSMo partner cities, Sofia has been involved since the project's start. Providing a wide geographical coverage and the Eastern-European perspective on shared mobility. This case study is an assessment of the city's first Sustainable Urban Mobility Plan (SUMP) using policy roadmaps on shared mobility in Europe developed under the SuSMo project.

Reviewing Sofia's SUMP from a shared mobility outlook

A review of Sofia's Sustainable Urban Mobility Plan (SUMP) was performed prior to a workshop organised in October 2020 by the SuSMo partners. Cenex looked at the role of shared mobility in the SUMP. Determining possible improvements using the trends outlined in the policy and technology roadmaps, to ensure that shared mobility was appropriately considered and resourced in the future.



Once this information was presented an open discussion on how this information should be applied to Sofia was held with the municipality. The workshop highlighted the positive start Sofia has made with implementing shared mobility, and where the focus should lie in order to build further on the work already performed.

Reflections on Sofia's SUMP

A review of the Sofia SUMP has prompted the municipality to re-look at the targets to be set out for shared mobility in the future.

Overall, shared mobility is underrepresented in Sofia's SUMP, meaning that the upcoming technologies are taken into account without the development of specific plans for deployment and placement of shared mobility in the city's transport masterplan. The measures envisaged in the SUMP are generally related to infrastructure changes and regulations and therefore the SUMP has been analysed against the City Plan roadmap.

At the heart of the SUMP lays the ambition to limit city centre private vehicle use through to 2024, followed by a reduction of privately owned vehicles via the utilization of 'push and pull' measures (increasing parking cost, reducing free parking spaces, reducing speed limits). The role of shared mobility for replacing private car usage is pinpointed. The SUMP envisages measures for bike infrastructure and introduction of speed limits. Most of these measures are presented in the Development and Enabling phase in the City Plan roadmap up until 2023, indicating that Sofia has the preconditions to lay the basis for setting up an operational shared mobility system.

In terms of funding, measures are envisaged to support development of infrastructure but there are some aspects missing such as funding for shared mobility services in low-income areas and passive funding for charging points and parking.

The aspect of supporting innovation through trials led by the cities in order to understand the impact of shared mobility on the transport network is missing in the SUMP. Pilot tests are mentioned but without specific focus on shared mobility.

In terms of law and policy dimension, the SUMP of Sofia is detailed and foresees several 'push

and pull' measures enabling low emission alternatives and disincentivising car ownership.

The public perception will experience a shift from seeing shared mobility services as novelty (and not an alternative) to more widespread daily usage due to active communication campaigns. The SUMP of Sofia contains plans for campaigns and events to promote transport modes alternative to cars, however, the emphasis on shared mobility is missing.

Additionally, the SUMP is ambitious about the deployment of intelligent mobility solutions in the city and mirrors the envisaged trends in the roadmap.

Finally, the SUMP covers some of the main trends related to city landscaping - city-wide bike lanes created, charging infrastructure, introduction of low emission zones, shared roads with speed limit but specifically in relation to low emission zones there is only an intention stated and no roadmap available.



Technology and policy roadmaps

Development of technology and policy roadmaps

Policy and technology roadmaps inform cities of upcoming technology developments, and the likely policy and strategy decisions cities need to take in order to accelerate the low carbon shared mobility agenda. The value of policy roadmaps for cities is twofold:

- They help city planners and urban mobility professionals to understand where their city stands in terms of shared mobility development compared to an EU-wide context.
- They give cities the context of future trends and support professionals in short- and mid-term decision making in relation to shared mobility services.

The roadmaps displayed on the next page were developed by Cenex in 2020. They serve to inform cities of upcoming technology developments in the shared mobility transport sector from 2020 through to 2030. The roadmaps are aimed at local authority transport decision makers, as well as regional and national policymakers in continental Europe and the UK.

The services covered are car clubs/car sharing, e-bikes and e-scooters. To draw a full picture of the upcoming trends, each existing service is analyzed against several perspectives:

- Technologic developments
- Operations of the service provider
- Effects on the environment and emissions
- The areas and type of users that are covered
- The economic viability of the service

Besides the sustainable shared mobility services, a City Planning dimension is included. This incorporates the more policy-related areas that

cities usually need to deal with when planning and deploying a new service.

These roadmaps were first disseminated in October 2020 in an online workshop with Sofia municipality workers. The session helped the municipal officials from Sofia to get a deeper understanding on the position of the city ahead or behind the general EU trend enabling them to establish what areas of shared mobility they need to work on. It also allowed the participants to understand what the future holds for shared mobility and what action the city needs to take now in order to be ready.

Integrating mobility trend roadmaps in SUMP

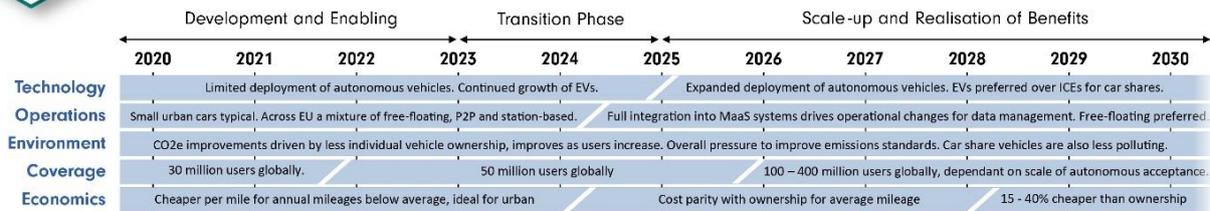
The approach of analysing the city's SUMP using the trends outlined in the policy roadmaps represents a powerful tool for identification of the strengths and weaknesses in city planning. Starting from the current status with a 10 years time-frame.

The way of structuring the policy roadmaps around the perspectives of different shared mobility services on technology, operations, environment, coverage and economics gives a comprehensive overview of the expected trends for each service.

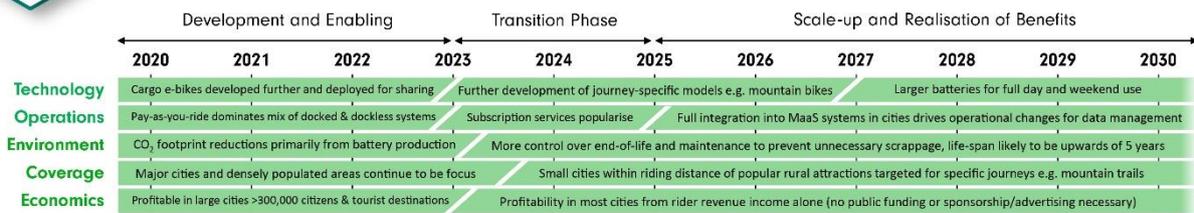
In the City Planning section, the scope is enlarged to policy related perspectives. This enables the policy roadmaps to be easily applicable to more advanced cities where the SUMP already include shared mobility services as well as to cities whose SUMP contain little or no information on these services as in the case of Sofia. No matter the use case, the roadmaps will support city planners and urban mobility professionals to better understand how valid their SUMP is in relation to the expected trends.



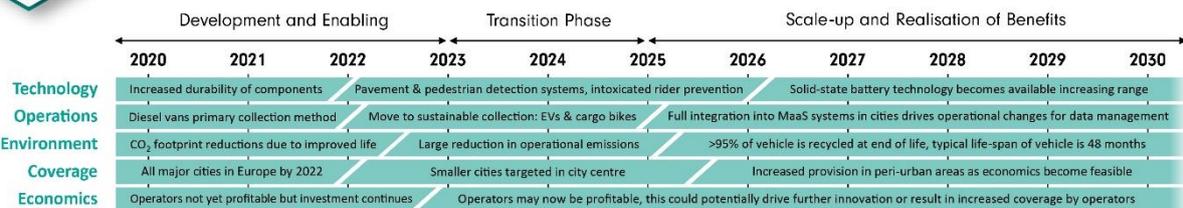
Car Clubs



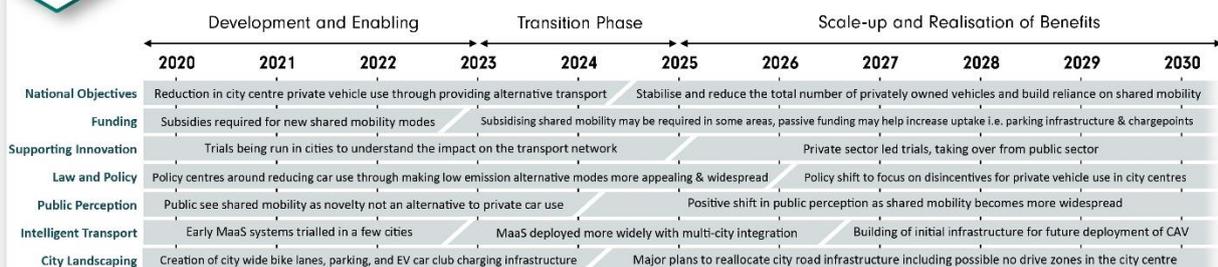
E-bikes



E-scooters



City Plan



How did SuSMo contribute to Sofia

The study provided valuable insights on the current role of shared mobility services have in the SUMP of Sofia while at the same time widened the perspective to an EU-wide context enabling urban mobility professionals from the municipality to get a deeper understanding on the strengths and weaknesses of the SUMP and what corrective actions should be taken to respond to the future development trends of shared mobility in Europe.

