Sustainable transport and SUMPs

STEP-UP | Luca Lucietti

29 July 2019
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Transport and mobility planning framework

• **Mobility Master Plans** (MMPs) are intended to represent the global transport policy of a large municipality, including urban goods movements. MMPs aim to improve air quality and public health, promote accessibility and social justice, making cities more pleasant and increasing economic performance. In the UK, the equivalent document is the *Local Transport Plan*.

• National Law n. 340/2000 in Italy introduces the **Urban Mobility Plans** which include the planned interventions in the overall mobility system. Urban Mobility Plan is defined as a 10-year systematic and integrated planning instrument for managing mobility in urban areas, including infrastructural measures. It is not mandatory, but it is identified as a fundamental prerequisite for all municipalities or conurbations with populations over 100 000 in order to receive national funds to co-finance mobility projects.

• The European “**Covenant of Majors**” initiative, addressing “20-20-20” target (20% decreasing of greenhouse gas emissions by 2020 and 20% increasing of energy saving as well as using energy produced from renewable sources).

• **Sustainable Energy Action Plan** (SEAP), according with the Covenant of Majors initiative, is aimed at describing a the set of measures and interventions in the different fields to be implemented in a concrete manner and planned timeframe.
Transport and mobility planning framework

Common strategic objectives of the **Urban Mobility Plan** are:
- satisfaction and development of mobility needs
- reduction of air and noise pollution as well as the reduction of energy consumption
- increasing transport and traffic safety
- minimizing individual usage of private car and traffic moderating
- increasing transport capacity and quality of service
- enhancing competitiveness and efficiency of public transport versus private cars
- increasing modal split towards public transport and sustainable mobility modes
- reducing traffic congestion through integrated solutions of the transport system
- encouraging use of alternative transport modes with lower environmental impact

Common strategic objectives of the **Sustainable Energy Action Plan** (transport-related measures only) are:
- strategic cycle network design and cycling promotion for home-work trips
- development of a recharging network for electric vehicles
- progressive increasing of green buses in substitution to diesel buses
- using green vehicles for last-mile delivery in the city center
- promoting electric car sharing for urban and peri-urban areas
- implementation of measures aimed at facilitating traffic flows and reducing congestion
- modulation parking rates aimed at discouraging private car use in favour of public transport and cycling
Transport and mobility planning framework
- 60% GHG emissions from transport (inc. aviation) by 2050 compared to 1990
Transport and GHG emissions scenario

- 60% GHG emissions from transport (inc. aviation) by 2050 compared to 1990

Reduce international bunker GHG emissions by 40% by 2050, compared to 2005

Reduce average CO₂ emissions of new cars to 95 g/km by 2020

Reduce average CO₂ emissions of new vans to 147 g/km by 2020

For each EU Member State, the share of renewable energy consumed in transport must be at least 10% by 2020.

Transport and GHG emissions scenario

10% renewable share
Transport GHG -20%
New cars ~95 CO₂/km
Conven. fuel car -50%
CO₂ free logistics

2015/2017
New cars ~130 CO₂/km

2020/2030
FUNDAMENTAL CHANGES

2050
White Paper vision:
Transport GHG -60%
Conven. fuel car -100%

2020/2030: comprehensive policies or specific targets.
2050: long term vision.
How to move forward

REINFORCING EU SUPPORT

- Sharing experiences and best practices, fostering cooperation
- Research and innovation
- Targeted financial support

Coordinated intervention
Sustainable Urban Mobility Plans
Urban logistics
Urban access regulations
Urban ITS deployment
Urban road safety

Conditions conducive to transforming urban mobility
How to move forward: from the traditional transport planning to Sustainable Urban Mobility Planning

- Cities are almost always connected with areas around them by daily flows of people and goods.

- The geographic scope of a SUMP needs to be based on the “functional urban area”, depending on local context, this might be a city and its surrounding peri-urban area, an entire polycentric region, or other spatial constellations.

- New business models provide “Mobility as a Service”, changing attitudes among travellers result in an increase in shared mobility and cycling.

![Table: Differences between traditional transport planning and Sustainable Urban Mobility Planning](image)
How to move forward: Sustainable Urban Mobility Plan

Guidelines for Developing and Implementing a Sustainable Urban Mobility Plan (Second Edition)
Final Draft for SUMP Conference, 12 June 2019
Sustainable Urban Mobility Plan: strategic objectives

• **Sustainable Urban Mobility Planning** focuses on a process that can support the required “step change” to cope effectively with the complex problems that cities are facing.

• A sustainable transport system should meet the following basic **criteria**:
  ● Is accessible and meets the basic mobility needs of all users
  ● Balances and responds to the diverse demands for mobility and transport services by residents, businesses and industry
  ● Guides a balanced development and better integration of the different transport modes
  ● Meets the requirements of sustainability, balancing the need for economic viability, social equity, health and environmental quality
  ● Optimises efficiency and cost effectiveness
  ● Makes better use of urban space and of existing transport infrastructure and services
  ● Enhances the attractiveness of the urban environment, quality of life, and public health
  ● Improves traffic safety and security
  ● Reduces air and noise pollution, greenhouse gas emissions, and energy consumption
  ● Contributes to a better overall performance of the trans-European transport network and the Europe's transport system as a whole.

A Sustainable Urban Mobility Plan is a strategic plan designed to satisfy the mobility needs of people and businesses in cities and their surroundings for a better quality of life. It builds on existing planning practices and takes due consideration of integration, participation, and evaluation principles.
Sustainable Urban Mobility Plan: characteristics

• A clear vision, objectives and a focus on achieving measurable targets that are embedded in an overall sustainable development strategy

• A long-term vision and clear implementation plan. A long-term strategy and a plan for short-term implementation, specifying the timing for implementation, clearly allocating responsibilities and identifying resources and finances

• A participatory approach that involves citizens and stakeholders from the outset and throughout the planning process

• A pledge for sustainability to balance economic development, social equity and environmental quality

• An integrated approach that considers practices and policies of different policy sectors, authority levels, and neighbouring authorities

• A review of transport costs and benefits, taking into account wider social costs and benefits
Sustainable Urban Mobility Plan: overall steps

Step 1: Assess low-carbon mobility framework in FUA
Step 2: Conduct self-assessment
Step 3: Identify relevant major actors (stakeholders) in FUA
Step 4: Mobility diagnosis and goals setting for FUA
Step 5: Develop scenarios and long-term vision
Step 6: Develop effective low-carbon mobility actions

Geographical scope
To-do list for SUMP preps
Policy coordination & actor cooperation
Leading partner
Plan stakeholder and citizen involvement
Management arrangements
Sustainable Urban Mobility Plan: overall steps

1. Analyse successes and failures
2. Share results and lessons learned
3. Consider new challenges and solutions

II. Monitor progress and adapt
II.1 Inform and engage citizens and stakeholders
II.2 Coordinate implementation of actions
II.3 Prepare goods and services

III. Implement and monitor

Milestone: Sustainable Urban Mobility Plan adopted
9.1 Finalise and assure quality of Sustainable Urban Mobility Plan document
9.2 Develop financial plans and agree cost sharing
9.3 Describe all actions
9.4 Estimate costs and identify funding sources
9.5 Agree priorities, remove barriers and innovat
9.6 Ensure political and public support

B. Prepare for adoption and financing
1. Create and assess long list of measures with stakeholders
2. Define integrated measure packages
3. Plan measure monitoring and evaluation

Milestone: Measure implementation evaluated
12.1 Revise and learn lessons

Milestone: Decision to prepare a SUMP
1. Set up working structures
2. Determine planning framework
3. Analyse mobility situation
4. Identify information sources and cooperate with sister cities
5. Analyse problems and opportunities (all levels)

Milestone: Analysis of problems and opportunities concluded
6. Set indicators and targets
7. Select measure packages with stakeholders

Milestone: Develop visions and objectives with stakeholders
5.1 Agree common vision of mobility and beyond
5.2 Co-create objectives for all modes with stakeholders

Milestone: Develop scenarios of potential futures
4.1 Develop scenarios of potential futures
4.2 Discuss scenarios with citizens and stakeholders

Milestone: Vision, objectives and targets agreed
6.1 Identify indicators for all objectives
6.2 Agree measurable targets

Interreg Italy - Croatia
STEP-UP
European Regional Development Fund
Sustainable Urban Mobility Plan: measures selection

1. Walking
2. Urban freight
3. Travel information
4. Traffic safety
5. Traffic management
6. Taxes and fares
7. Site-Based Travel Plans
8. Roadspace reallocation
9. Public transport Enhancements
10. Personalised travel planning
11. Parking
12. New public transport systems
13. New models of car use
14. Marketing and rewarding
15. Land use planning
16. Integration of modes
17. Inclusive urban design
18. e-ticketing
19. Environmental zones
20. Electric Battery and fuel cell vehicles
21. Cycling infrastructure
22. Congestion charges
23. Cleaner Vehicles
24. Bike sharing schemes
25. Access Restrictions
Relevant funding opportunities

• **HORIZON 2020**

• European Structural and Investment Funds
  ➢ Some 8 billion Euros were allocated for urban mobility projects over 2007-2013

• Connecting Europe Facility (CEF) funds for TEN-T projects (Trans-European Transport Network)

• EIB (European Investment Bank) loans and other financial products

• INTERREG programme, CENTRAL EUROPE, for regional sustainable development projects

• LIFE+ programme, for sustainable development projects
Case studies: Sustainable Mobility Action Plan Liguria

**DEMO-EC PROJECT SCHEME**

- **SWOT Analysis**
- **Regional Stakeholder**
- **Best practices Analysis**

**IDENTIFICATION AND DISCUSSION ABOUT LOCAL NEEDS, KNOWLEDGE, OPPORTUNITIES AND WEAKNESS IN THE REGION**

**Action Plan**
Case studies: Sustainable Mobility Action Plan Liguria

Car reduction

The Regional Government improve policies as guidelines aimed to reduction of car use as issue in different local reality (pedestrian and cycling zones):

- **PEDIBUS**: In many areas of the cities is active the modal shift from car to walking in home-to-school daily trips in different cities in the Region (from 2013)

- **RETE CICLABILE LIGURE (RCL) network with 5 cycle routes** in the region to connect Italian and European cycle networks

In Liguria Region a lot of walking/cycling paths are old railway lines not used for several years
Case studies: Sustainable Mobility Action Plan Liguria

E-mobility
Project at Regional Level

“Progetto Mobilità Sostenibile Genova e Savona”

OBJECTIVES
Definition of the optimal position of the charging stations and installation.

In 2014: project approved by the Region within PNIRE programme

In 2015: Memorandum of Understanding between the municipalities of Genova, Arenzano, Cogoleto, Cairo Montenotte, Savona

In 2018 (May): end of design phase → Within 2019 installation of new 22 charging stations

<table>
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In total there will be 52 charging stations

BLU POINTS: state of art
RED POINTS: New stations
E-mobility

Incentives for E-mobility

OBJECTIVE: Create a sustainable development model for improve environmental condition in urban areas with economic incentives for citizens

- Car tax exemption for electric and hybrid cars for 5 years, the longest exemption for hybrid cars in the north of Italy
- Free parking pass for electric vehicles in Blu Area park in Genova and urban goods vehicles access in LTZ (Limited Traffic Zone)
- Scrapping incentive in Genova for electric scooter and bike (December 2017)
- Free parking pass for electric vehicles in municipality area of La Spezia
- Electric cars (8 cars, 16 charging/parking stations) and electric bikes (25 bikes) available for employees of Municipality of La Spezia
**Case studies: MaaS**

Mobility as a Service (MaaS) is a mobility distribution model in which customer’s major transportation needs are met thanks to one single integrated service provider combining transportation infrastructures, travel information, payment services and more.

(Source: M, FINGER (2015) ‘Mobility as a service: from the regulation of transport to the regulation of transport as a service’, European Transport Regulation Observer)

- MaaS is a paradigm change in transportation towards offering personalized and smart mobility services reflecting users’ different needs

- MaaS is to be the best value proposition for its users, providing an alternative to the private use of car that may be as convenient and more sustainable

- MaaS is all about multimodal passenger transport, shared mobility, multimodal traveler information, integrated booking/ticketing/payment, etc.

- MaaS is fed by scheduled public transport services, parking, private sharing mobility services, on-demand public transport services, etc.
Case studies: MaaS

Expected impacts of Mobility as a Service:

- reducing private car use
- decreasing private car ownership
- facilitating behavioural change towards sustainable mobility modes
- increasing collective passenger transport use and ride sharing
- reducing CO2 emissions
- reducing congestion and traffic levels
- increasing public transport system’s revenues by reaching new customers
- improving attractiveness of PT system
- increasing of PT commercial speed
Case studies: MaaS in the city of Turin

URBI supplies MaaS technology and signs commercial agreements with mobility operators integrated into the MaaS platform
URBI supports the coordination among stakeholders, the feasibility and operational implementation of the Living Lab
ST facilitates the technical integration of the systems and manages the operation of the Living Lab

URBI business as MaaS platform for companies in the target FUA of Turin

✔ Mobile app (Android and iOS) of the MaaS platform for companies to:

- search on map the nearest vehicle (ride sharing, taxi, car sharing) and bike sharing
- compare by time or costs
- reserve (and open) the chosen vehicle and bike
- buy integrated public transport tickets
The City of Turin is testing the technology platform, accessed for free for the entire duration of the LL through a mobile app:

- Route planner, booking and payment (and validation) for the following means of transport: local public transport, bike sharing, car sharing, taxi;
- Collection of anonymous and aggregated data on users, regarding use of the app, mobility choices made, kilometres travelled;
- Monthly corporate billing for costs for work to work mobility-job of employees, during the trial period.

travelling by

(...by now!)
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