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Global warming, ageing of population, reduction of energy consumption, immigration flows, optimization of land use, technological innovation

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TeMA Journal was established with the primary objective of fostering and strengthening the integration between urban transformation studies and those focused on mobility governance, in all their aspects, with a view to environmental sustainability. The three issues of the 2024 volume of TeMA Journal propose articles that deal the effects of global warming, the ageing of population, the reduction of energy consumption from fossil fuels, the immigration flows from disadvantaged regions, the technological innovation and the optimization of land use.

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Laboratory of Land Use, Mobility and Environment
DICEA - Department of Civil, Building and Environmental Engineering
University of Naples "Federico II"
Piazzale Tecchio, 80
80125 Naples

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e-mail: redazione.tema@unina.it

The cover image shows heavy damage from floods in the Valencia, eastern Spain in October 2024
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REVIEW NOTES – Urban strategies, programmes and tools

Strategies and instruments for active mobility: the main Italian policies

Annunziata D'Amico

Department of Civil, Building and Environmental Engineering
University of Naples Federico II, Naples, Italy
e-mail: annunziata.damico@unina.it
ORCID: https://orcid.org/0009-0005-5481-8064

Abstract

Starting from the relationship between urban planning and mobility management, TeMA has gradually expanded the view of the covered topics, always remaining in the groove of rigorous scientific in-depth analysis. This section of the Journal, Review Notes, is the expression of continuously updating emerging topics concerning relationships between urban planning, mobility and environment, through a collection of short scientific papers written by young researchers. The Review Notes are made of four parts. Each section examines a specific aspect of the broader information storage within the main interests of TeMA Journal. In particular, the Urban strategies, programmers and tools section presents the different strategies and tools for active mobility implemented internationally.

This work aims to highlight the various actions undertaken at national and local level to promote the spread of active mobility in Italy, providing a general overview of the tools and strategies adopted and also presenting concrete examples of solutions implemented in some cities.

The numerous positive experiences at local level allow us to highlight the attention of Italian cities to reduce dependence on the car (and motorcycle) mode in daily travel, in favor of lower-impact modes of transport This trend of promoting active travel (on foot and by bicycle), which is more ecological and healthy, could contribute to achieving the goal of improving the quality of urban environments and the quality of life of people.

Keywords

Walking; Cycling; Italy; Urban strategies; Active mobility.

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1. Active cities: the challenge of soft mobility in italian cities

The paradigm of urban mobility is undergoing profound transformation. New global scenarios, characterized by climate and social emergencies, are pushing cities to completely rethink their transport systems, focusing on sustainable and low environmental impact solutions. On the Community front, there is the objective of climate neutrality by 2050, with the ambitious goal of reducing greenhouse gas emissions in the transport sector by 90% compared to 1990 levels (D'Amico, 2024; EC, 2022).

Cities, faced with global challenges such as climate change and social inequalities, are radically rethinking the way they design and manage urban mobility (Gaglione & Ayiine-Etigo, 2022), proposing alternative approaches to conventional transport planning.

By combining different modes of transport, such as public transport, walking, cycling and micromobility, and integrating them with innovative technologies, we can create more efficient, flexible and sustainable mobility systems. In fact, sustainable mobility refers to a transport system that favours intermodality and low environmental impact travel methods, capable of reducing pollution, noise, congestion and road accidents, safeguarding the environmental heritage.

For years, European policies have been directed towards promoting low-emission and zero-emission mobility. The cornerstone of European urban mobility policy is based on Sustainable Urban Mobility Plans (SUMPs) introduced by the 2013 Urban Mobility Package. SUMPs provide a framework for cities and municipalities to plan and implement solutions to urban mobility policy challenges across the functional urban area. Europe encourages the large-scale adoption of SUMPs, which have been widely used by local authorities, planners and stakeholders as an effective, robust and flexible tool for planning urban mobility measures (Commission Recommendation (EU) 2023/550).

In order to ensure the effective flow and interaction of the entire trans-European transport network (TENT-T), the revised TEN-T Regulation (2024) reinforces the role of cities as vital enablers of sustainable, efficient and multimodal transport and collect and regularly submit to the Commission data on urban mobility indicators. Furthermore, the Regulation designates 431 cities as urban nodes and sets specific requirements for them. These include the adoption by urban nodes of a sustainable urban mobility plan. As highlighted in the EU Recommendation 2023/550 the European Commission invites each Member State to implement a national programme to support cities in planning sustainable urban mobility.

In Italy, SUMP have been regulated since 2017 with the Decree of the Ministry of Infrastructure and Transport n. 397, which defined the guidelines. This was updated with Decree n. 396 of August 2019, which was approved with the explicit aim of promoting a homogeneous and coordinated approach to the preparation of SUMP throughout the national territory. National Decree n. 396 requires all municipalities with over 100,000 inhabitants, excluding metropolitan areas that must have an integrated SUMP, to adopt a Sustainable Urban Mobility Plan.

To encourage the adoption of SUMPs, Italy in 2022 provided a bonus in the form of funding for rapid mass transit and cycling projects. Starting in 2023, the adoption of the SUMP becomes an essential requirement to access any funding related to public transport and cycling mobility (EU Urban Mobility Observatory, 2022).

Developing a SUMP means undertaking a strategic mobility planning process, in a medium-long term time horizon (10 years), aimed at identifying innovative and sustainable solutions from a financial, social and environmental point of view, which take into account future territorial dynamics.

In 2022, the Italian Ministry of Infrastructure and Sustainable Mobility (MIMS) published a "Vademecum" (MIT, 2022) for the drafting of the SUMP based on Italian and European guidelines. The Vademecum presents a series of operational and procedural guidelines useful and supportive to Italian municipalities and metropolitan cities in the preparation of SUMP. According to the "Vademecum", the drafting of the SUMP is then divided into four well-defined procedural steps:

- Preparation of the knowledge framework;

- Definition of the objectives;
- Construction of the plan "scenario";
- Definition of the monitoring plan.

The Italian guidelines also provide for the addition of two further procedural steps:

- Strategic environmental assessment (known as VAS);
- Adoption and approval of the SUMP.

In Italy, a SUMPs Observatory has been created, with the patronage of the Ministry of the Environment and Energy Security, which aims to be a point of reference for those who address or manage the issue of urban mobility from a strategic, participatory and sustainability perspective. The Observatory, aimed first of all at Italian cities and conceived and designed for them, was born as an evolution of the European network ENDURANCE, conducts an ongoing survey on the state of the art of SUMPs in Italy. The Observatory networks Municipalities, Unions of Municipalities, Provinces and Metropolitan Cities that are committed to sustainable planning of urban mobility and promotes access to information and services, strengthening the network of cities active in sustainable mobility (Italian SUMPs Observatory).

According to the latest data from the Italian SUMPs Observatory (updated to November 2023), a total of 211 Sustainable Urban Mobility Plans have been drawn up in Italy. Of these, 80 have already been approved, demonstrating a concrete commitment by many local administrations towards more sustainable mobility. Another 57 SUMPs have been adopted and are being implemented, while 74 are still being drawn up. These data highlight a positive trend, but also underline the need to accelerate the planning and implementation processes of the interventions envisaged by the SUMP.

2. Active mobility policies in Italy

In Italy, as in most European cities, historic centers are particularly relevant as places of identity, memory and belonging, playing a fundamental role as economic and social nucleus.

The quality of life in cities is closely linked to the quality of the urban environment. It is clear that to make cities more liveable and attractive, it is necessary to drastically reduce negative factors such as vehicular traffic, climate-altering emissions, and noise.

"Friendly cities", characterized by a high quality of life, are urban contexts where efficient, integrated and sustainable collective mobility is combined with a wide range of public services and high-quality infrastructures (Busi, 2023).

Efficient and sustainable mobility requires a profound cultural change that goes beyond the centrality of the private car and enhances other modes of travel (Cecchini, 2023).

To build sustainable and pleasant cities, the challenge that city authorities, both national and international, have been putting in place for some time now is the implementation of adequate strategies and innovative solutions to manage traffic and promote more eco-friendly and healthy mobility choices.

The promotion of active travel, on foot and by bicycle, could contribute to achieving the goal of improving the quality of urban environments and the quality of life of people. In fact, active mobility represents a huge potential to improve air quality, reduce congestion and promote a healthier lifestyle. Furthermore, the redevelopment of pedestrian and cycle paths allows for the creation of a more efficient and safe network, which connects neighbourhoods, workplaces and services, thus improving accessibility and social inclusion (Gargiulo & Sgambati, 2022).

In this regard, many Italian cities have made enormous progress and have implemented a series of initiatives and programs aimed at developing services for cycling and pedestrians integrated with urban functions and the main mobility hubs. Additionally, many cities have expanded their cycling and pedestrian infrastructure in recent years to increase their resilience in the face of the COVID-19 pandemic (Cirianni et al., 2022).

The different measures adopted by cities to promote active mobility vary from city to city and reflect territorial specificities, the needs of citizens and the strategic objectives of each administration, in line with national and international political guidelines.
Some of these strategies are illustrated below and allow us to highlight the attention of Italian cities to reduce dependence on the car (and motorcycle) mode in daily travel, in favor of lower-impact modes of transport (foot, bike,TPL), highlighting the greater competitiveness of soft transport modes.

Bolzano (TRENTINO-ALTO ADIGE) – *School Streets*

The SUMP of the city of Bolzano was approved in 2022 and places a strong emphasis on pedestrian mobility, recognizing its importance for the quality of urban life, the health of citizens and environmental sustainability.
Among the complementary strategies planned to encourage pedestrian mobility especially for the new generations, the SUMP of Bolzano promotes a series of initiatives starting from the systematic Home - School trips of primary school children including: the "Nonni Vigili" service, the Pedibus service, School Streets and bus accompaniment (SUMP of Bolzano, 2022).
In particular, the School Streets were introduced for the first time by the city of Bolzano in 1989 and are areas around schools where, at certain times, vehicular traffic is limited or prohibited, thus creating pedestrian and cycle areas. This simple and economical measure reduces pollution and promotes the health of children and families.
This initiative has been successfully replicated in many other cities, and is identified as an effective tool for improving road safety and air quality in school areas, helping to solve current urban problems. Furthermore, School Roads also represent a response to the urgent need to make our cities more child-friendly.

Parma (EMILIA-ROMAGNA) – *SUMP*

In recent years, solving problems related to traffic and mobility in the urban area has been a strategic objective for the Municipal Administration of Parma.
The SUMP of Parma, approved in 2017, aims to adopt a series of strategies to progressively discourage the use of private cars in the most central areas, while promoting the most environmentally friendly types of travel. Limited Traffic Zones and pedestrian areas have been established for many years, and Car Sharing and Bike Sharing services have been implemented for a decade now (Municipality of Parma, 2024).
With regard to cycling mobility, the Plan promotes a vision aimed at encouraging the use of bicycles for regular trips (home-work and home-school), as well as for those related to free time. To this end, the Plan scenarios define, among the main actions to be taken, the completion of cycle networks in line with the Biciplan (approved in 2009), the identification of new strategic itineraries and the development of a network of complementary services (bike sharing stations, bicycle parking, etc.).
The plan provides for encouraging the spread of cycle logistics initiatives: use of cargo bicycles for the delivery of goods. Parma, thanks to its compact and flat urban layout, promotes the delivery of goods with ecological means, in line with the new regulations on sustainable mobility, to reduce emissions and develop low environmental impact logistics activities.

Milano (LOMBARDIA) – "*Cambio Biciplan*"

"Cambio" is the Biciplan of the Metropolitan City of Milan that identifies the objectives of the development of cycling, starting from the current demand for mobility and the potential of the territory.
It is called "Cambio" because it wants to bring the metropolitan territory to change its point of view and bring citizens to change the way they move around the territory.
"Cambio" identifies super-cycle corridors at the metropolitan level and integrates them with the municipal cycle paths, in particular, the Biciplan provides for the creation of 24 super-cycle lines: 4 circular, 16 radial and 4 greenways. The super-cycle paths are designed for heavy bicycle traffic and suitable for a high cruising speed, compatible with widespread use of bicycles, even electric ones, for daily trips of medium length (between 5 and 15 km); these super-cycle paths intersect with the greenways and the secondary network of routes generating a widespread and efficient cycle network (Metropolitan City of Milano, 2021).
The 2035 objectives for the Metropolitan City are ambitious: with 750 km of infrastructure, reaching 20% of total travel on the territory by bicycle and 10% of intermunicipal travel.

The ambition of this project is to integrate multiple aspects: environmental protection, safety, economic development and general well-being. The development of cycling leads to a reduction in climate-altering emissions, to the creation of green corridors for the protection of biodiversity, to making travel safer for all types of cyclists, to improving public health by increasing daily opportunities for exercise and movement. Furthermore, a reduction in travel congestion is correlated with an increase in productivity and the development of local economies.

Torino (PIEMONTE) – "BIPforMaaS"

"BIPforMaaS" is the new strategic project of the Piemonte Region, which intends to create the conditions for the diffusion of MaaS services in the urban and metropolitan area of Turin and throughout the territory of the Piemonte Region, starting from the BIP electronic ticketing system (Regione Piemonte, n.n.).
The implementation objectives of the "BIPforMaaS" project include:
1) to create and consolidate a new integrated tariff system for local public transport (TPL), based on pay-per-use and best fare logics, which allows users to freely access all regional TPL services also through smartphone apps that allow the purchase and use of travel tickets;
2) to create a "MaaS ecosystem", made up of the Piemonte Region and other local authorities, mobility operators, stakeholders and citizens, enabled by a technological infrastructure and a system of tariff rules and policies, capable of facilitating the creation of new digital services for mobility according to the MaaS paradigm for a more integrated, accessible and sustainable local mobility system.
In Europe, the country that has made the most progress towards mobility as an integrated service is Finland, which since 2010 has been supporting several pilot projects in urban and rural areas with the aim of spreading a new concept of mobility that involves the integration of multiple public and private transport services (local public transport, ride-sharing, car-sharing, bike-sharing, scooter-sharing, taxi, car rental) combined in a single service and with a single payment system accessible through a dedicated platform.

Padova (VENETO) – "*MetroMinuto Padova*"

"Metrominuto Padova" is a sustainable mobility project that aims to increase urban pedestrianization, through the creation of a schematic metro map indicating the places of greatest cultural, historical, tourist interest and services in the city.
The map indicates distances and travel times between the various points of the metro map, so as to encourage non-motorized mobility over short distances and better understand the effectiveness of walking in the city (Padovanet, 2022).
The project, based on the model of the city of Pontevedra, in Galicia (Spain), also replicated in other cities, aims to make the city easily reachable in a few minutes, with rapid, comfortable and sustainable travel.
The scheme is based on a representation of the city in terms of reciprocal distances between the places of interest and the relative average travel times for pedestrian travel, identifying the routes of greatest usability and interest with different colors.
The city of Padova is characterized by a strong focus on sustainable mobility and the "Metrominuto Padova" project is part of the program of interventions on mobility that, in an urban context, are implemented to improve the quality of life of citizens and reduce the environmental impact of traffic.

3. Conclusion

Active mobility represents a fundamental lever for achieving the environmental sustainability objectives set at international and national level.
Starting from the general regulatory guidelines, also through the drafting of procedural guidelines prepared by the Italian government in order to create homogeneous approaches to sustainable mobility planning, a crucial aspect of the planning process is the ability to interpret these operational guidelines by adapting them flexibly to individual contexts.
The growing attention to sustainable mobility is leading many Italian cities to invest significantly in the creation of infrastructures dedicated to pedestrians and cyclists. Thanks to tools such as SUMP, it is possible to plan targeted interventions to promote active mobility, improving the quality of urban life and contributing to the reduction of pollution and traffic. Furthermore, new technologies are facilitating the spread of innovative solutions for shared mobility and for a more efficient management of urban spaces (e.g. MaaS services).

This document illustrates some of the most significant experiences carried out in Italy in the field of promoting active mobility, demonstrating the vitality and diversity of the approaches adopted.
The numerous positive experiences at local level demonstrate how investing in infrastructures dedicated to active mobility and incentive measures can lead to significant results in terms of quality of life and urban efficiency. However, consolidating these tools requires a constant commitment from all actors involved, in order to overcome resistance and ensure the long-term sustainability of these policies.

References

Busi, R. (2023). Il divenire della disciplina urbanistica: il contributo di Roberto Busi. *TeMA - Journal of Land Use, Mobility and Environment*, (1), 9-35. https://doi.org/10.6093/1970-9870/9734

Cecchini, A. (2023). Il divenire della disciplina urbanistica: il contributo di Arnaldo Cecchini. *TeMA - Journal of Land Use, Mobility and Environment,* (1), 37-59. https://doi.org/10.6093/1970-9870/9744

Ciriann, F., Comi, A. & Luongo, A. (2022). A sustainable approach for planning of urban pedestrian routes and footpaths in a pandemic scenario. *TeMA - Journal of Land Use, Mobility and Environment, 15* (1), 125-140. https://doi.org/10.6093/1970-9870/8629

Commission Recommendation (EU) 2023/550. Commission Recommendation (EU) 2023/550 of 8 March 2023 on National Support Programmes for Sustainable Urban Mobility Planning (notified under document C(2023) 1524). Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023H0550

D'Amico, A. (2024). Strategies and instruments for active mobility: a European overview. *TeMA - Journal of Land Use, Mobility and Environment, 17* (2), 363-371. https://doi.org/10.6093/1970-9870/10940

EC (2022). Study on New Mobility Patterns in European Cities. Task A: EU Wide Passenger Mobility Survey. Retrieved from: https://transport.ec.europa.eu/system/files/2022-12/2022%20New%20Mobility%20Patterns%20in%20European%20Cities%20Task%20A%20Executive%20summary.pdf

EU Urban Mobility Observatory (2022). *Sustainable Urban Mobility Plans - Member State profiles – Italy*. Retrieved from: https://urban-mobility-observatory.transport.ec.europa.eu/sustainable-urban-mobility-plans/member-state-profiles/italy_en

Gaglione, F. & Ayiine-Etigo, D. A. (2022). Accelerate urban sustainability through policies and practices on the mobility system in Italy. *TeMA - Journal of Land Use, Mobility and Environment, 15* (3), 549-553. https://doi.org/10.6093/1970-9870/9413

Gargiulo, C. & Sgambati, S. (2022). Active mobility in historical districts: towards an accessible and competitive city. The case study of Pizzofalcone in Naples. *TeMA - Journal of Land Use, Mobility and Environment*, 31-55. https://doi.org/10.6093/1970-9870/8395

Italian SUMPs Observatory. Retrieved from: https://www.osservatoriopums.it/

MIT (2022). Vademecum per la redazione del Piano Urbano di Mobilità Sostenibile (PUMS). Retrieved from: https://www.mit.gov.it/documentazione/vademecum-per-la-redazione-del-piano-urbano-di-mobilita-sostenibile-pums

Metropolitan City of Milano (2021). Cambio: il Progetto Biciplan. Retrieved from: https://www.cittametropolitana.mi.it/portale/news/Cambio-il-Progetto-Biciplan/

Municipality of Parma (2024). Sustainable Urban Mobility Plan. Retrieved from: https://www.comune.parma.it/it/argomenti/mobilita-sostenibile/pums

Padovanet (2022). Metrominuto Padova. La città al passo. Retrieved from: https://www.padovanet.it/informazione/progetto-metrominuto-padova-la-citt%C3%A0-al-passo

Regione Piemonte (n.n). Progetto BIP4MaaS (BIP for Mobility as a Service). Retrieved from: https://www.regione.piemonte.it/web/temi/mobilita-trasporti/bip-biglietto-integrato-piemonte/progetto-bip4maas-bip-for-mobility-as-service

SUMP of Bolzano (2022). Sustainable Urban Mobility Plan. Retrieved from: https://opencity.comune.bolzano.it/Documenti-e-dati/Documenti-tecnici-di-supporto/PUMS-Piano-urbano-della-Mobilita-Sostenibile#descrizione

TEN-T Regulation (2024). Regulation (EU) 2024/1679 of the European Parliament and of the Council of 13 June 2024 on Union guidelines for the development of the trans-European transport network, amending Regulations (EU) 2021/1153 and

(EU) No 913/2010 and repealing Regulation (EU) No 1315/2013 (Text with EEA relevance). Retrieved from: https://eur-lex.europa.eu/eli/reg/2024/1679

Author's profile

Annunziata D'Amico

She is an engineer, Ph.D. student in Civil Systems Engineering at Department of Civil, Building and Environmental Engineering of University of Naples Federico II. Currently, her Ph.D. research concerns the topic of MaaS and soft mobility in urban systems for children, to encourage walkability and more sustainable and active mobility.