Sustainable Mobility and Urban Development Models: An Integrated Scenario-Building Approach

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Abstract. The radical transition towards sustainable and resilient approaches to urban development has become increasingly urgent under the interrelated pressures of both environmental aspects and the evolution of the regulatory framework at European, national, and local levels. In the context of sustainable mobility, some steps forward are possible due to the increasing diffusion of digital solutions that support the implementation of real sustainable strategies in urban contexts. Starting from a theoretical-methodological investigation of the potential of eco-district models and the analysis of experiences at an international level, this work uses the case study of the San Salvario district in Turin as a laboratory for analyzing mobility strategies and sustainable actions. Through the adoption of an integrated approach of scenario building that combines SWOT analysis and Stakeholder analysis, the work proposes a reflection on different hypothetical scenarios for the neighborhood within the challenges of sustainable mobility and its solutions provided by digital tools. More specifically, the scenarios focus on some key elements of sustainable mobility such as the increase of awareness and social responsibility, the creation of synergies between institutions, urban policies and individual needs, the integration of new infrastructures within the existing system and a set of networking hubs for supporting multimodal transit, as well as the promotion and support of investment solutions. The implications of the proposed scenarios are discussed in terms of reconfiguring urban public transport services, adopting a policy- and decision-making-oriented approach.

Keywords: Sustainable neighborhood · Mixed method · Scenario design · Mobility · Strategic assessment

1 Introduction

In recent decades, many directives and programs have been adopted and supported by the European Union to promote sustainable development, especially in urban areas [1]. These areas present a particular challenge due to the interrelated and balancing population needs, environmental concerns and economic pressures. The United Nations Sustainable Development Goals (SDGs) have placed a significant emphasis on sustainable communities. For instance, SDG 11 (sustainable communities and cities) has

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contributed to a notable increase in research on sustainable neighborhood planning and development [2–4].

The analysis has required to be shifted from considering and implementing individual buildings to broader scales, such as neighborhoods or entire cities. Smart cities, eco-districts, sustainable neighborhoods, Net Zero-Energy Districts (NZEDs), and post-carbon cities are some of the experiments, both theoretical-methodological and applied, to support sustainable development in urban contexts [1, 5, 6]. These approaches focus on the variety of aspects at stake and aim to explore and possibly compose viable and effective solutions, which must be considered by decision-makers in defining strategies for the transformation and development of the city.

The neighborhood, in particular, has been recognized as the most appropriate level for sustainable urban development, as it represents an "intermediate" level of analysis and action between the city and the building, where various social and institutional networks are directly active, offering greater opportunities for participation in collective decisions [7, 8]. Additionally, the neighborhood scale is precisely the ideal location for the fulfilment of daily requirements, social interaction, and creation of sense of community [9, 10]. Despite the fact that neighborhood planning has a relatively long history, it was not until the beginning years of the 21st century that researchers, policymakers, architects and urban planners began to experience the design and development of the neighborhood scale from a sustainable perspective [11, 12].

Policies and strategies at this scale can facilitate access to essential services by foot or bicycle, whilst also creating new open spaces for leisure and socializing. It is therefore evident that sustainable mobility is of crucial importance in ensuring the facilitation of straightforward connections to all services, the establishment of a safe environment, and the promotion of social interaction. Within this context, models like the Paris en Commun of the "15-min city" (or more generally x-minutes city) and Barcelona's "Superblocks" become significant experiences to be adopted and adapted to other contexts [13]. In fact, the possibility of reaching workplaces and essential services on foot or by bicycle, according to the French model, or the attempt by Superblocks to provide new open spaces for pedestrians, cyclists, and children, moving between bike paths, pedestrian paths, trees, street furniture, and equipment for recreation and play [13], becomes extremely strategic and relevant. Both proposals would give more space to slow mobility, becoming decisive bets to encourage public transport over private transport.

Within this context, this work aims to explore the concept and the potential of designing a sustainable neighborhood in a real-world case study, giving particular emphasis to the proposal of sustainable mobility. In particular, the case study of the San Salvario district in Turin (Italy) is used as a laboratory to analyze sustainable mobility strategies and actions from an eco-neighborhood perspective. This district has become a multicultural, vibrant, and constantly evolving place, showing its potential for innovation and growth and is a place worth investing in for transformation. In particular, starting from some theoretical and methodological considerations on the potential of the eco-neighborhood model and the analysis of international experiences, the San Salvario case study uses a scenario building approach that integrates SWOT analysis and Stakeholder Analysis(SA). The integrated approach proposes a reflection on the construction of different hypothetical scenarios for the neighborhood within the scope of opportunities defined

by the challenges of sustainable mobility and the solutions enabled by digital tools. The work will emphasize several pivotal elements, including an escalation in awareness and social responsibility, the cultivation of synergy between institutions and urban policies and local requirements, the establishment of novel support infrastructure within the prevailing system and a network of multimodal transit hubs, in addition to initiatives to encourage and facilitate investment. The work therefore assumes and discusses implications from a policy- and decision-making-oriented approach.

After this introduction, the remaining paper is structured as follows. Section 2 contains the background of research, which explores the literature regarding eco-districts and sustainable neighborhoods, with particular reference to the role of mobility. Section 3 presents the methodological proposal, that combines SA and SWOT+STEEP in a scenario-building approach. Section 4 contains the application of the methodological proposal to the specific case study. Section 5 illustrates the results of the application, including some remarks focused on a policy-oriented perspective. Finally, Sect. 6 contains the concluding remarks and future steps of the work.

2 Research Background

In the debate on sustainable transition, various development models and paradigms have been proposed, including those of so-called eco-districts and sustainable neighborhoods. The two terms are often used interchangeably to describe episodes of change and innovation within cities and, in particular, at a specific urban level, that of the neighborhood. Research conducted by Holden et al. (2015) classifies 420 projects as eco-district experiments around the world [14]. Despite the growing number of these experiments, the characteristics and strategies adopted are far from uniform and develop according to their own specific path. This is often also the result of the intrinsic variability in the meaning of sustainability and neighborhood, as well as in the role it plays within the urban areas, the policy framework and planning practices. The term district/neighborhood, in particular, does not correspond to any specific and codified characteristic in terms of type, number of people it hosts, size, or civic function [15].

At the same time, it seems limiting to consider the neighborhood simply as a subdivision of the city; the relationships and interactions that are established within and with neighboring areas play a fundamental role both in functional and intangible terms, such as the sense of belonging or recognition of a place. Similarly, the relationships between a part and the whole, i.e., between a specific district or neighborhood and the urban area in which it is located, deserve attention, as only through their analysis is it possible to reflect on the current impact of the interventions adopted and their potential in terms of the transferability of strategies or dissemination on a larger scale [16].

Another element of great variability among the various eco-district experiments around the world is related to the possibility of designing them in an existing context or in expanding areas. It is easy to imagine how the solutions and strategies adopted are enormously different and, consequently, so are the results obtained. In one case, it will be necessary to engage with an already established context in terms of both urban design and resident population; in the other case, despite having greater flexibility and freedom of action at the local level, it will be more of an isolated example than an experiment that could potentially be spread across the entire city.

Various authors have attempted to define the paradigm of eco-district/sustainable neighborhood in a clear and unambiguous manner. Luederitz et al. (2013) [17], for example, identify nine integrated principles for their development: (i) creation of a harmoniously coordinated human-environment system, (ii) urban metabolism, (iii) design of environmentally friendly buildings using local and sustainable materials, (iv) livable and vibrant neighborhood, (v) compact development and integrated sustainable mobility, (vi) resilient neighborhood, (vii) democratic governance and empowerment of neighborhood residents, (viii) satisfaction of human needs, (ix) consideration of the neighborhood's impact on the environment. This perspective, however, is more of a guide to implementation than a representation of how this paradigm is applied.

Bottero et al. (2019) show a lack of uniformity among the different experiences explored in Europe. The study identifies clusters of strategies adopted in different cities, which can be categorized as follows: energy/environmental aspects, socio-economic aspects, mobility, and urban design. The energy/environmental cluster mostly pushes attention to the energetic component (e.g., renewable energy sources, building materials). Limited attention is given to the environmental aspects: some examples mentioned about the increase of biodiversity or actions to promote flood protection. Regarding the socio-economic aspects, the strategies are mostly based on residents' engagement, stakeholders' cooperation and the realization of a community center, as well as the investigation of the types of investors and governance approach. Considering urban design, both private and public spaces are considered, especially trying to provide a mix of uses. According to the mobility – focus of this contribution – the European experiences (especially in [17] and [1]) highlight as one of the primary objectives to discourage the use of private cars by implementing public mobility services (in particular, new tram lines, but also railway and underground connections or new and extended bus lines). Furthermore, the disincentive to use private cars is encouraged by the growing spread of car-free areas, in which the number of parking spaces is significantly reduced, confining them to the edges of the district. In many cases, these actions are combined with the spread of mixed-use roads shared between pedestrians, cyclists, and recreational areas. In other cases, cars are allowed to pass, but only if they are electric or combined with carpooling and car sharing initiatives.

It is important to underline that mobility is worldwide considered one of the most important pillar for a sustainable neighborhood development and similar mobility strategies are also proposed outside Europe. For instance, Holden et al. (2015) [14] explored worldwide eco-urban neighborhoods experiences: they described these models as having higher densities, being located on brownfield sites and featuring mixed-use and social diversity [14]. They also involved more active discouragement of private car use and more encouragement of active and public transport [14]. In China, Qi et al. (2025) [18] highlight the increasing role of mobility modes combined with agglomeration and location for the development of sustainable neighborhoods, as testified by the literature review conducted and the analysis on the neighborhood sustainability assessments tools and China's regulations. In North America, Tiznado-Aitken et al. (2025) [19] identify as main policy in Toronto for Net Zero strategy the expansion of public transport services, providing more bus and rapid transit infrastructure or evaluating free transit in order

to reduce car use. However, Tiznado-Aitken et al. (2025) [19] clarify that these strategies should be in-depth examined according to people's lifestyles and neighborhood aspirations: in some contexts, people may prefer walkable and human-scale neighborhoods, others transit-oriented communities, while others may continue to favor car-based mobility places. These reflections underscore the necessity to transition from theoretical models to empirical case studies, incorporating meticulous analyses of citizens' awareness, acceptance, and preferences, as well as their local governance.

3 Methodology Proposal

Several assessment models are available to support the evaluation of policies, plans, and projects in the context of urban transformations. To increase the efficiency and effectiveness of these models, there has recently been growing interest in experimenting with integrated approaches that take into account the multiple actors and stakeholders involved, as well as the different values and perspectives at stake, such as socio-economic, technical, political, and environmental aspects [20, 21]. This contribution, in particular, integrates a Stakeholder Analysis (SA) and a SWOT+STEEP analysis, for developing a scenario building approach to support the definition of alternative mobility scenarios for the San Salvario neighborhood, taking into account the main elements characterizing the decision-making problem and the area of investigation, as well as the key actors involved in the process.

Scenario building is a tool that supports strategic planning [22–24] exploring "what-if" futures and preparing for multiple plausible realities. Scenario building is increasingly used in urban planning, which is characterized by high levels of uncertainty and complexity. It allows for the development of strategic thinking capable of giving rise to alternative courses of action through a sequence of coherent and sequential reasoning. Generally, in planning projects, at least three scenarios are considered: the inertial scenario which represents the state of art, the inertial scenario which refers to the preserving or transforming provisions contained in local and/or regional plans, and the strategic scenario(s) which can be more than one and refers to explorative visions based on strategic and competitive purposes. Building scenarios, particularly the strategic scenarios, requires following a step-by-step process: (1) clarifying the objectives, partners and time horizon of the project, (2) identifying internal and external elements of the project, (3) ranking the elements, (4) building the scenarios according to the ranking. In all steps, some frameworks and methods can be used to support the scenario generation.

SA can be useful in the first step to analyzing the possible partners and identifying the main goals and objectives. SA is a fundamental tool to identify and map all the actors and stakeholders involved and interested in a decision-making process. In the context of urban transformation and planning, and also at the neighborhood scale, it allows, on the one hand, to identify the roles, needs, degree of interest, and power of each actor and anticipate their impact; and, on the other hand, to support the definition of strategies shared among all the often conflicting demands of the various stakeholders [25]. Following Dente approach [25], once all the stakeholders are identified, it is possible to distinguish them according to their level of intervention (whether national, regional, or local), the category to which they belong (politicians, bureaucrats, experts, or those

with general or special interests) and the resources they have (political, economic, legal, and/or cognitive), as well as their roles and expectations. Among the various approaches to developing a stakeholder analysis, this research uses a power-interest matrix [26, 27]. Stakeholders are located in a 4-quadrants matrix according to their level of interest on the project and the power to stop it. The location of each stakeholder makes possible to understand the way in which they must be involved during the decision-making process: when both power and interest is low, it is sufficient to monitor if their views change over time (i.e. if their level of power and/or interest change); when interest is high but power is low, the stakeholder must be informed to avoid conflicts and oppositions; when power is high and interest is low, it is necessary to satisfy the stakeholders, because they have the resources to stop the process; when both power and interest are high, the decision-making process must be conducted actively involving those stakeholders.

In the second step, the STEEP or PESTEL framework makes it possible to organize the main drivers of a project according to Social, Technological, Environmental, Economic, Political and Legal components, while SWOT Analysis to analyze these drivers based on strengths, weaknesses, opportunities and threats. SWOT analysis is a technique widely used in strategic planning to analyze the strengths (S), weaknesses (W), opportunities (O), and threats (T) of a complex decision-making problem [28]. SWOT analysis supports the interpretation of the state of the art and the identification of strategies that can enhance strengths and opportunities and minimize weaknesses and threats. Despite the validity of the results obtained through SWOT, this contribution proposes integrating the SWOT model with the STEEP model in order to improve the efficiency and effectiveness of the analysis and visualization of the strategic factors to be implemented in action and transformation scenarios [29]. The STEEP analysis considers the following components: 1) Society (S), i.e., characteristics relating to the citizens living in the context under investigation; 2) Technology (T) refers to the presence or absence of devices and infrastructure; 3) the environmental component (E) provides an analysis of Environmental characteristics with the aim of monitoring the health of the context; 4) the Economic component (E) refers to the state of the sectors that contribute to GDP and make the context economically vibrant and attractive; 5) Politics (P) refers to the presence or absence of plans and programs, funds, or projects related to the topic under analysis [30].

In the third step, different types of ranking methods (from less to more structured systems) can be used to rank the driving forces. An example of method is the Building Wilson scenario matrix, scoring the drivers according to the level of impact and uncertainty. In this work, we avoid ranking drivers but we simply select among a long list of drivers, the most important ones from the SWOT+STEEP, considering the ones with the highest impact and less uncertainty.

In the fourth step, from the most important drivers or from the ranking is possible to identify the strategies used for the creation of the scenarios. In our case, the main drivers are combined with stakeholders' need to build three alternative strategic scenarios.

4 Application

4.1 Case Study

San Salvario is one of the 34 districts of the city of Turin, recognized by the municipality for administrative purposes. Its boundaries clearly separate the district from other parts of the city: to the west the main railway station, to the south the biggest city healthcare center, to the east the river, and to the north the city center. With an area of approximately 2.2 km^2, this district is mainly residential, characterized by a multi-ethnic population, partly due to its proximity to the railway station. It also has many shops and bars, mainly for evening entertainment, as well as some prestigious historic buildings, such as the Valentino Castle, the medieval village, and the Church of Saints Peter and Paul. Although the population residing in the neighborhood has declined since 1995, the number remains fairly stable, both due to the high number of students from different regions of Italy who decide to live here because of the presence of many universities in the immediate vicinity and the leisure opportunities offered by the neighborhood, and due to the high number of foreigners who increasingly reside in San Salvario [31]. The multi-ethnic and multicultural aspect is now one of the main characteristics of San Salvario. In fact, the Islamic cultural center, the Waldensian Church, and the Synagogue are located here.

In terms of transport and connections, San Salvario benefits from numerous bus lines and four metro stops (excluding Porta Nuova), which provide easy access to other areas of the city (Fig. 1). In addition, there are also several car and bike sharing stations. In terms of increasing slow mobility, the municipality has recently increased the number of bike lanes in and around the neighborhood and created some slow roads and free-car areas. In addition, the neighborhood of San Salvario has been selected to take part to the Torino Mobility Lab initiative to facilitate walking and cycling between home, and school and work[1].

[1] https://www.comune.torino.it/schede-informative/torino-mobility-lab.



Fig. 1. San Salvario district and its mobility elements

4.2 The Methodological Approach Applied to the Case Study

The methodological approach integrates in a scenario building framework a combination of SA and SWOT + STEEP to support the definition of alternative mobility scenarios for the San Salvario neighborhood. The combination of the these approaches makes it possible to combine the specific characteristic of the mobility system of San Salvario, with the socio-economic characteristics of the neighborhood and all the relationships with its surroundings. These relationships are not limited to spatial connections with the other parts of the city, but also in terms of stakeholders involved and satisfaction.

Figure 2 illustrates the main stakeholders involved in the sustainable mobility process of San Salvario, organized according to the power-interest methodology. In Fig. 3, instead, the components of the STEEP analysis have been integrated into the SWOT analysis, using specific codes, to analyze the complex dynamics of the study context. In particular, the list of elements contained in Fig. 3 only represents the most important aspects identified: a more detailed analysis was conducted for each component of the STEEP between 4 to 8 subcategories (such as demographic characteristics, traffic system, walkability and safety of the streets, local businesses, bureaucratic issues).

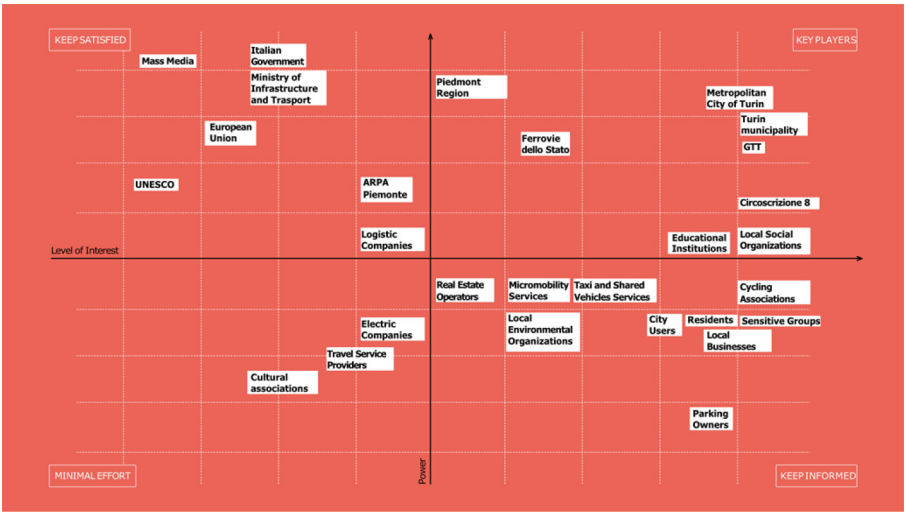

Fig. 2. Power-interest matrix applied to the case study



Fig. 3. SWOT+STEEP Analysis applied to the case study

From Fig. 2, it is possible to appreciate that the most important key players are the city of Turin, the public transport authorities (i.e. GTT for bus, tram and local train networks and Ferrovie dello Stato (RFI) for metropolitan-regional and national railway connections), as well as residents, thanks to the active involvement of district associations. Some synergies also emerged from the synthetic SWOT+STEEP (Fig. 3) aim at reducing potential conflicts between stakeholders. In particular, the opportunity of European funds, combined with local ones (e.g. FESR Piemonte 2021–2027 – priority III and

local incentives from PNRR), can boost the financing of sustainable mobility projects. Additionally, the presence of the widespread micro-mobility services (car and bike sharing, electric scooters, etc.) in the area can serve as the final link in the network provided by local public transport and railway connections, provided by GTT and RFI. San Salvario can benefit in this transition due to the presence of various local organizations and associations that can guide change, especially in terms of project acceptance at the level of local citizen action. Also, it benefits from a great number of young inhabitants and students that are generally more inclined to utilize alternative modes of transportation. It is worldwide recognized that the transition from private car usage to alternative transport modes is perceived as a high-cost behavior change (e.g., [32]), in terms of independence, flexibility, and comfort losing [33]. The city of Turin is currently experiencing a period of significant transformation, for the engagement in the process of formulating its new urban regulatory plan. One of the fundamental elements of the proposal is precisely the issue of mobility, which serves as the structural element of the entire urban development. Considering that this city is one of the most polluted in Italy and Europe in terms of air quality, and San Salvario is one of the districts with high traffic and congestion in different hours of the days, new mobility systems can improve the quality of life in the area by reducing congestion, pollution, and noise.

From digitalization, the district (but in general the whole city) requires some steps forward. In this context, the implementation of apps can assist residents, especially young people, in efficiently changing their mobility choices.

Based on the elements identified in the SWOT+STEEP analysis and the synergies with SA, it was possible to identify a series of strategies for mobility in San Salvario (Fig. 4). These range, for example, from improving pedestrian routes to implementing ICT technologies, from structuring a multimodal transport system to increasing shared mobility systems. Based on these strategies, three alternative scenarios were created (Fig. 5), exploiting the synergies between the actions. Scenario 1 organizes the blocks into macro-blocks, which promote pedestrian and bicycle mobility by limiting car traffic to the outer boundaries only, in the style of Barcelona's Superblocks. Scenario 2 creates a network of multimodal transit hubs throughout the neighborhood that allows access to and from the neighborhood through an integrated app-based service. Finally, Scenario 3 involves the development of various ICT tools to help citizens actively collaborate on mobility and share goods and services offered by the city.

Strategies	SCENARIO 01	SCENARIO 02	SCENARIO 03
1. Improve walkability	X	X	X
2. Create new public spaces	X		X
3. Increase the security on the roads	X		X
4. Implementation of ICT			X
5. Introducing electric public means of transport		X	X
6. Improve multi modality of transport system		X	
7. Increase the number of clients for night life activities	X	X	
8. Increase number of pedestrians in commercial activities' streets, easing the access			X
9. Improve Shared Services		X	
10. Partnership with local public and private institutions	X		X
11. Attempt of local political institutions to reach higher institutions	X		X
12. Reduce air pollution	X		X
13. Reduce noise pollution	X		X
14. Enhance and improve green areas and The Po river	X		

Fig. 4. Alternative strategies for the case study development

5 Results and Discussion

All three scenarios have, albeit in different ways, a significant social and environmental impact on life in the neighborhood.

Scenario 1, in particular, following the model of Barcelona's Superblocks, would reduce the overall flow of traffic within the neighborhood, with benefits in terms of the environment and social interaction among residents. However, the project could face considerable resistance from citizens due to the profound changes in habits that it would entail. Nevertheless, examples of Superblocks experiments have shown general acceptance by citizens due to the significant improvement in quality of life and enhanced social interaction. This experiment in San Salvario, thanks in part to the numerous associations in the area, could become a model of civic life that could be exported on a larger scale.

Scenario 2, on the other hand, represents a less invasive project in terms of changing residents' habits, but with significant benefits in terms of alternative mobility options offered to the inhabitants of San Salvario. In fact, it would complement and add new mobility solutions, particularly around the Porta Nuova station, potentially becoming a pilot example to be tested in other areas of the city.

Scenario 3 is the least invasive design solution from an urban and morphological point of view, although it requires considerable effort in terms of technological implementation costs. The app and its initial features could be developed fairly easily and quickly, but overall, the system and its adoption should be considered a long-term project, particularly in terms of acceptance and uptake among residents.

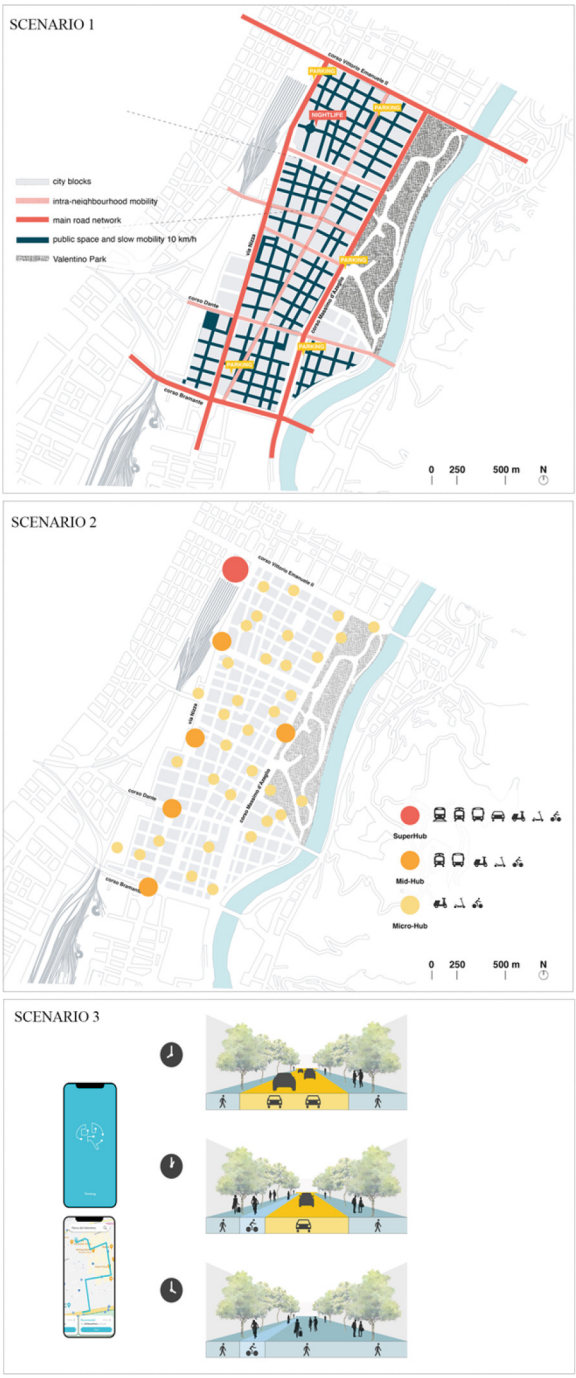

Fig. 5. The three mobility scenarios proposed for the case study

The city of Turin is at a particularly suitable moment for experimenting with new solutions for sustainable and resilient development, as it is in the midst of revising its Municipal Plan. The San Salvario neighborhood appears to be fertile ground for implementing technological and sustainable strategies, becoming a pilot test for future transformations on a larger scale. Other initiatives are also underway in the neighborhood to encourage the use and spread of soft mobility and, for example, in the area of separate waste collection and monitoring. These experiments could represent opportunities to to develop broader guidelines and guide cities toward sustainable development.

However, it is important to highlight that all scenarios could have some community or public resistance. For example, the super-block proposed in Scenario 1 should be developed with some mitigation strategies or participatory governance models in mind, to reduce resistance during actual implementation. Promoting a multimodal approach in Scenario 2 could also represent a radical paradigm shift affecting long-standing habits and economic interests. Scenario 3 relies on ICT tools which may face practical obstacles: for example, elderly residents may be excluded due to unfamiliarity with new software. Designing an interface, providing offline assistance or offering community training would make the proposal more effective for the entire community. Therefore, in all cases, the strategy must shift from a 'top-down' to a 'bottom-up' approach, gradually proposing these more sustainable and convenient alternatives.

6 Conclusions and Future Perspectives

The present study explored some theoretical urban development models (especially sustainable neighborhoods or eco-districts) to understand the possible strategies for real-world case applications. In particular, the work focuses on the mobility aspects proposed by such models, to identify some possible alternatives of development in a specific district of the city of Turin (Italy), i.e. the San Salvario district. The proposal considers this place as a suitable test bed for experimenting with sustainable mobility tactics and initiatives. To do that, the integrated use of SA and SWOT+STEEP Analysis in a scenario building approach made it possible to identify alternative solutions considering at the same time the specific characteristics of the district, its relationship with the overall city and its strategies, as well as all possible stakeholders involved in the process. In this way, the alternatives proposed should be coherent with the multiple aspects in play but also with the multiple perspectives of the different stakeholders involved.

The application to a single case study is certainly a limit of the present work. However, the methodology proposed for scenario building can be easily replicated and adapted to other contexts, analyzing the specific characteristics of the area under investigation through the SWOT+STEEP analysis and the stakeholders involved in the process.

Future prospects for this research will certainly involve the development of a quantitative or quali-quantitative analysis. In particular, it could be useful to introduce some quantitative KPIs to compare the alternatives (e.g. CO2 emission reductions, increased pedestrian zones, changes in transportation modes) or quali-quantitative methods, such as a multi-criteria analysis (MCA) in order to evaluate the best alternative with respect to the various elements at stake [34], from a social, environmental and economic perspective. In particular, MCA will show the best-performing alternative in relation to the

initial objective, but it will also provide an insight into the most suitable strategies to implement and, possibly, help to construct new scenarios.

Another important element of the research will concern the direct involvement of citizens through the administration of a questionnaire in order to identify their real needs and habits and define potential guidelines for transformation. In addition, monitoring the behavior of San Salvario residents could be useful in understanding the most relevant assets to implement, at least in the short term. In this perspective, further prospects could concern the application of participatory agent-based models in order to thoroughly evaluate the scenarios under consideration, taking into account the opinions and perspectives of residents and the various stakeholders involved in the process [35, 36].

The analysis conducted and the construction of the proposed scenarios can also contribute to a broader vision of urban development: building people-friendly cities that balance essential daily services with climate and disaster resilience. In this context, open and collective spaces serve a dual purpose, acting as strategic hubs for emergency response and fostering cohesive communities capable of synergetic action. The opportunities provided by models such as Superblocks or the x-minute city fit perfectly into the transformation prospects of contemporary cities that have to deal not only with economic problems, but also social, cultural, healthy, and environmental-climate. However, to minimize resistance and ensure alignment with local needs, all proposals must be developed through a bottom-up approach that prioritizes active community engagement.

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