



Increasing the Walkability Level Through a Participation Process

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Abstract. The paper analyses the theme of walkability in the western part of Potenza municipality. It is based on participatory process developed in Active Citizenship for Sustainable Development of the Territory (CAST) project. During this experience a cognitive framework has been defined both adopting traditional approaches, and, in order to increase the participation, using new information technologies and social networks. The data that emerged were revised and evaluated for the definition of possible strategies for the improvement of walkability, accessibility to the services and equipment and, more generally, the neighbourhood liveability.

Keywords: Walkability · Liveable city · Citizens participation
Urban regeneration · Pedestrian mobility

1 Introduction

Nowadays the regeneration of cities requires a particular attention to the theme of walkability: reducing the use of private cars, increasing the number of people walking or cycling, using public transport are the conditions for transforming cities and improving the people quality of life. The contemporary city is suitable for motorists, because of the centrality given to cars. Consequently, urban spaces, squares and streets are designed on the needs of private mobility. The possibility of walking is often denied culturally and materially because of the hypertrophy of the urban areas, urban and planning deficiencies, with serious consequences on the quality of life and health.

Walkability, therefore, must be conceived as the possibility of citizens to move on foot. Consequently, it is fundamental for people to have a modal choice in moving, and therefore to choose whether to move on foot or not. It is important to consider walking as a valid alternative to motorized vehicles, and not, as often happens, a limitation. In fact, the possibility of moving on foot is often reserved for a few categories of users, or worse for a few areas.

Therefore, the concept of walkability [21–28] goes beyond the accessibility to urban services, but it implies a discussion on spatial quality and on the ability to accommodate and promote pedestrian mobility in urban areas. With reference to theories of the capability [12–15], approach and the right to the city [11, 16–20], walkability must be

understood as one of the main factors of urban capacities. The quality of urban life doesn't represent the quality of life of individuals living in a certain geographical limit, but the quality of the urban environment that influences the development and the possibilities of choice and action, according to the individual needs and desires. In fact, the characteristics of the environment influence and are influenced by the spatial behaviour of individuals. In this framework, we have to consider the walkability not only as a goal to be pursued to improve the quality of life of people who live in the city, but also as a tool that urban planners and architects can use to orient the methods of assessing the quality of the urban life and to innovate urban policies and projects, especially those that benefit the most marginal areas of the city and the groups of the most disadvantaged individuals [1, 2]. The walkability level can be improved by means of a participatory process, where citizens can express needs, opinions, preferences, etc. in order to improve the urban quality of life.

The theme of walkability was tackled during the participatory process carried out in the city of Potenza (Fig. 1) in the contest of the Cast project.



Fig. 1. The location of Potenza municipality and Basilicata region in Italy.

Potenza is the main city of the Basilicata region, located in the mountains (900 above sea level) in southern Italy, has approximately seventy thousand inhabitants. In this place, and in its surrounding area several participatory activities have been developed,

in great part of cases based on direct citizens' initiative with a bottom-up approach [35–40], and in other cases promoted by local authorities [3, 34].

2 The CAST Project

The CAST Project (Active Citizenship for Sustainable Development of Territory) is an experimentation of a participatory process for the definition of an urban regeneration program in Potenza municipality. It has been selected within a call for application for the development of innovative and creative activities launched by Basilicata Region [3, 4].

One of the first activities of the project was the experimentation of a Participatory Planning Workshop about urban regeneration in a neighbourhood in the western part of the city that involved citizens, some decision makers and technical staff of the municipality, cultural associations and volunteers. The area of CAST Project includes (Fig. 2) the neighbourhood of Poggio Tre Galli, the G area, defined in this way by master-plan, and the district called “Study-Centre” [5].

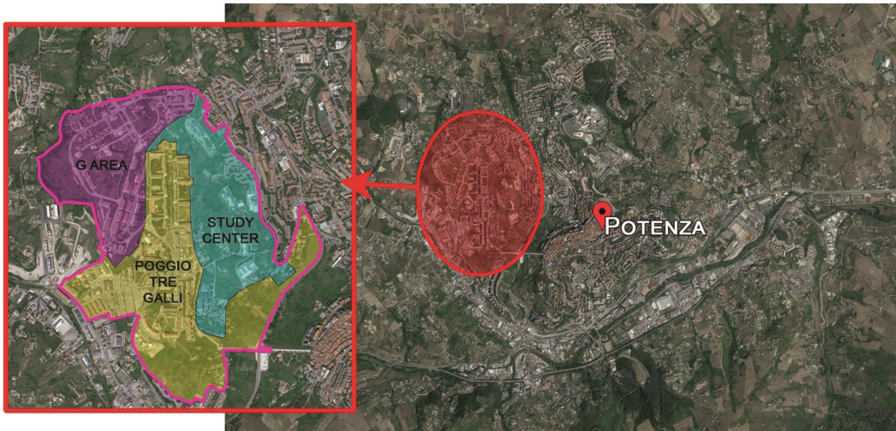


Fig. 2. Location of the area of CAST project: the neighbourhood of Poggio Tre Galli, the G area and the district called “Study-Centre”.

The Participatory Planning Workshop was supported by evolved ICT tools which has generated a wide interest of the local community and public administration, and which has contributed to the implementation of forms of Inclusive Smart Planning [4, 6, 29–33, 41–43].

2.1 The Implementation Context of the Workshop

The urban area involved in the process includes the neighbourhood of Poggio Tre Galli, the G area and the district called “Study-Centre” (Fig. 2).

Poggio Tre Galli and the G area are predominantly residential neighbourhoods with high settlement density, instead in the Study-Centre district there are several high and primary school institutes and a lot of not built areas.

The neighbourhood of Poggio Tre Galli and the district of the “Study-Centre” were built between the ‘70 s and ‘80 s on the basis of two plans whose implementation has never been satisfied. In recent years the original planning forecasts have been changed leading to a transformation of the urban structure.

The G area was built in more recent years and is currently lacking in public services and equipment.

According to the Italian National Institute of Statistics (ISTAT) demographic data, at 2011 the neighbourhood of Poggio Tre Galli has a population of 4357 inhabitants, while the G area has 1919 inhabitants. In both cases, in the last decades an increase of population over the age of 50 and a reduction of younger people occurred. This is also confirmed by the increase of the old age index in the decade 2001–2011.

In these neighbourhoods there are a lot of green areas and some services of territorial interest like the regional bureaus. There are also potential areas that could be used to promote a comprehensive urban regeneration of the neighbourhood, but this is connected to potential risks related to some provisions of Planning Rules that instead could represent elements of degradation of the neighbourhood.

2.2 The Methodological Approach and the Adopted Techniques

Workshop activities have been development with two different approaches: the first, more traditional (Fig. 3), based on the work of a small group of people (experts, neighbourhood representatives, organizations, and associations) and the second, more innovative, centred on a dialogue with a wider audience through the use of new information technologies and social networks (Fig. 4).



Fig. 3. Traditional approach of public participation based on public meeting in C.A.S.T. project.

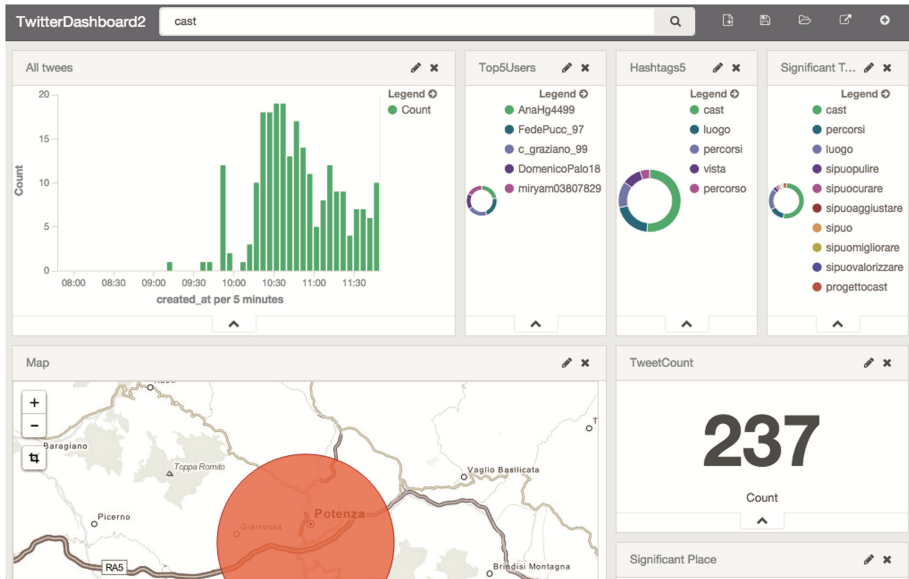


Fig. 4. ICT platform C.A.S.T. project.

At the beginning of the workshop, great attention has been paid to territorial knowledge as collective and shared construction according to the interaction between different actors [5].

In this phase, a cognitive framework was elaborated on the basis of the existing urban planning instruments, site inspections, photographic take-over and qualitative thematic cards (traditional methodology), but also by means of twitter that allowed to different users to report positive and negative elements of the area, and online questionnaires (innovative methodology).

The collected data were processed in thematic maps and used for definition of problem tree and objective tree that were discussed in the workshop to define some strategies about urban regeneration, according to the Logical Framework Approach procedure [7–10].

2.3 The Support of ICT

The Project C.A.S.T. was supported by a technological component based on an online ICT platform (Fig. 4), which integrates open-source tools and frameworks in order to have a high level of interaction among users [3, 5].

The use of ICT has enabled the involvement of a large number of citizens, giving them the opportunity to participate to workshop activities even after time and space from the scheduled meetings, making the dissemination of information fast and the participatory process more transparent.

Information and communication technologies allowed analysis of urban realities and communication between various social actors enabling access and use of information.

The system used combines CMS features (Content Management System), a Geoportal to get territorial information, advanced systems for the management of online polls and votes, OGC services for data sharing according to OPEN DATA standards, the integration of social networks and the management of spatial social alerts for participation and collaborative mapping [3].

3 Results of the Workshop: The Cognitive Framework

Walkability was one of the topics discussed in the workshop. This activity highlighted significant criticalities that negatively affect the accessibility and the connections between the different parts of the area.

The analyses carried out and shared during the workshop, highlighted a discontinuous and lacking pedestrian network from quantitatively and qualitatively point of view (Fig. 5).

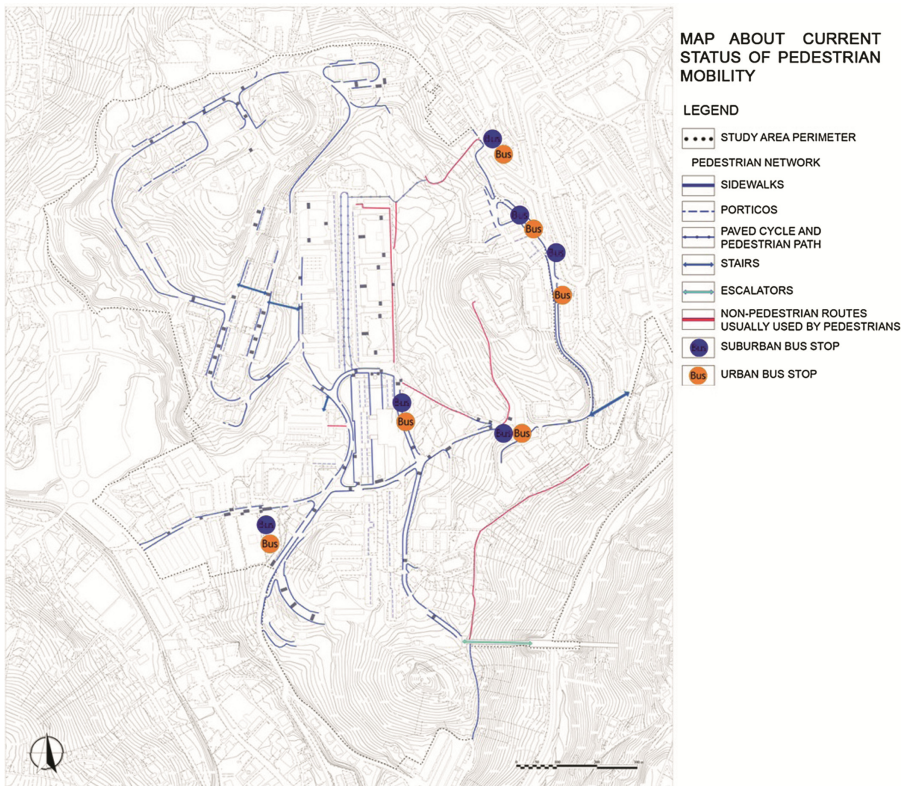


Fig. 5. Map of current status of pedestrian mobility.

The pedestrian mobility has different problems:

- The presence of architectural barriers, in particular along the sidewalks, which do not allow to everyone the usability of the routes;
- The discontinuity of the sidewalks, absent in some stretches where there is a connection between vehicular and pedestrian traffic;
- Insufficient section of the paths: in some cases they are too narrow, in others the section is restricted by the presence of elements such as trees and benches;
- Absence of security measures (parapets), especially along the sidewalks adjacent to the most traffic driveways;
- Presence of dangerous pedestrian crossings;
- Presence of not much used paths in a state of neglect and decay;
- Poor maintenance and cleaning;
- Absence of cycle paths.

These problems do not allow a full use of the network to all categories of users, limiting pedestrian access to the equipment and services.

Based on these considerations, it can be said that pedestrian mobility in this part of the city is lacking and unsafe.

This is particularly important in the Study-Centre district because there aren't adequate and safe connections for a lot of students who walk through the area.

In the Study-Centre district there is no efficient pedestrian network linking the various schools to each other and with the services present in the remaining part of the area. The main effect is the presence of disconnected schools, which in some cases are not connected with the Study-Centre district and are isolated.

It was possible to analyse all these aspects in different way, with the surveys carried out on the territory, using social media and examining the results of questionnaires submitted to the inhabitants of the area.

With the online questionnaires, the point of view of different types of users was identified: residents, students and users of services located in the neighbourhoods.

About walkability, many users have said to move on foot in the district even if this is not considered safe and comfortable: vehicular traffic, the slope of roads, the presence of stray and domestic dogs, the poor path maintenance are elements that discourage cycle and pedestrian mobility. Access to the area with public transport is also negatively assessed.

The same considerations also emerge from the questionnaires addressed to the students who expressed the desire for alternative pedestrian paths to car traffic along which to find spaces of relationship immersed in the green, multifunctional spaces equipped for leisure and other services.

3.1 The Strategies Proposed in the Workshop

The overall vision for the proposal and intervention strategies developed in the participatory workshop refers to an urban regeneration project based on the promotion of sustainable mobility and the development of pedestrian mobility.

More particularly, an effective construction of a network system of green infrastructure, services and open spaces for the community of citizens have been considered as a fundamental cornerstone for the promotion of a sustainable city. The proposal is to develop an urban structure based on green, pedestrian zones and integrated services [5] (Fig. 6).

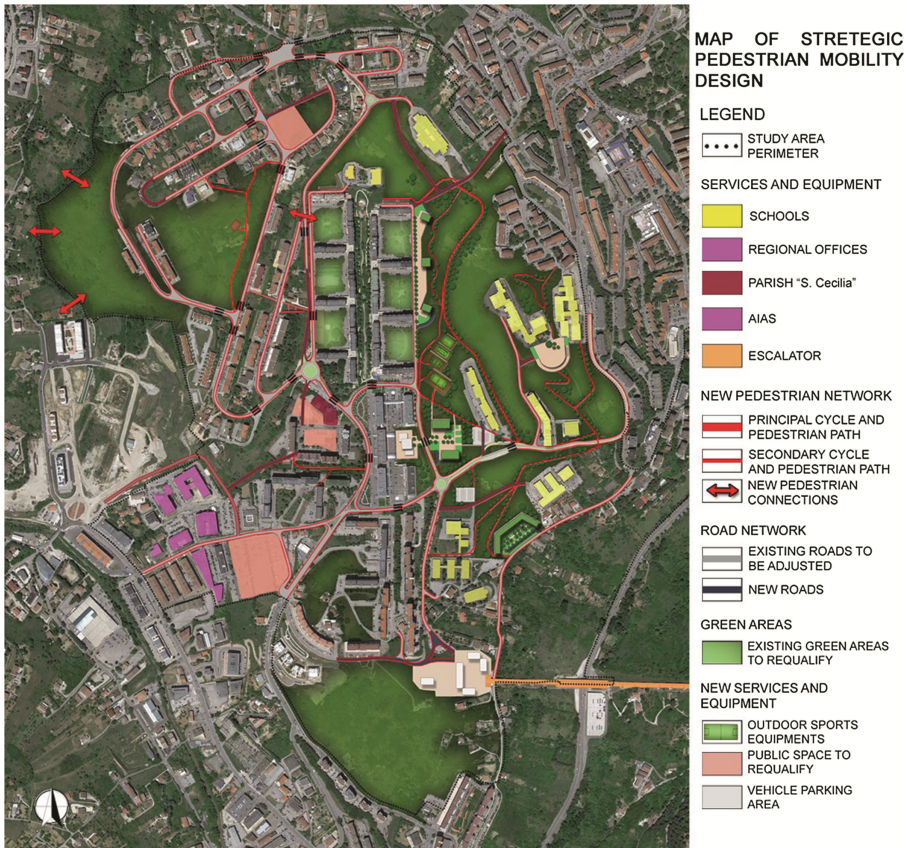


Fig. 6. Degree of urban fragmentation of 131 municipalities of Basilicata region 1989–2013.

About walkability, this proposal aims to promote sustainable mobility and to improve technology networks. This strategy generally based on the improvement of driveways, public transport system and pedestrian mobility, can be summarized in the following points:

- The functional improvement of the sections of the main road infrastructures;
- Traffic calming interventions.
- The construction of a network of pedestrian paths for reconnecting the different parts of the area.

- The adaptation of the rainwater disposal networks along the main road and in the stretches at risk of flooding.
- Through the improvement of the public lighting network (especially in the G area).

More particularly, in the workshop the following interventions have been identified:

- The improvement of the characteristics and maintenance status of the sidewalks (especially in the G area).
- The construction of secure pedestrian crossings.
- The construction of a protected pedestrian path able to connect the most popular areas.
- The functional reorganization of some streets in order to create pedestrian spaces.

4 Conclusions

The experience of the workshop described in this paper shows how it could be possible to analyse a theme and to arrive at shared choices that take into account different points of view. In particular, it demonstrates how the use of social networks, and more generally of electronic participation tools, represents a fast and solid approach through which to define a shared knowledge framework with citizens.

The urban regeneration proposal that derives from this experience gives great importance to the theme of pedestrian mobility, because its improvement would help to solve many problems exposed by the citizens who took part in the workshop, in a sustainable way.

Improving pedestrian mobility means creating the conditions for a re-appropriation of spaces. Creating an efficient pedestrian network would allow greater accessibility to green areas, to equipment and services, favouring the rehabilitation of disconnected urban areas and problems related to vehicular traffic congestion. Creating a valid alternative to the use of the private vehicle can lead to an improvement in the quality of life.

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