POLITECNICO DI TORINO

Honors thesis

COURSE OF TERRITORIAL, URBAN, ENVIRONMENTAL
AND LANDSCAPE PLANNING

Abstract

**Analysis of accessibility to public transport for disabled
users in the Turin metropolitan area.**

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The base of this dissertation is a strong interest in the use of public transport as the only transportation means for urban connection at medium and long distances. During the study years at Politecnico di Torino my knowledge and sensibility regarding these themes have always increased, thanks also to the course of study that I have undertaken. Indeed, it gave to me the instruments in order to understand if the Turin urban transport really is "public" and open for all kinds of users.

The work is included in the OPTICITIES project. My thesis introduces this project and offers a panoramic view on the state of art of the Decision Support Tool. In the Decision Support Tool the dashboard and the Decision Support Tool are deepened.

This work has been conceived basing on the question: "Is Torino a city with an accessible system of public transport?". In order to try to answer this question we have followed a twofold path:

I.   Study the accessibility of public transit stops.
II. Ensure the existence of network connections with hospital and disabled centres, starting from the public transit stops.

To study the accessibility of public transport stops means to analyse all stops of Turin Metropolitan area and then to evaluate it according to their physical features - equipment of ramps, benches, Totem, etc. The final goal is to classify the stops using three different levels of accessibility:

- Stops are not accessible.
- Stops with good accessibility.
- Stops with excellent accessibility.

Hence, the goal is to obtain "the Super Stops", which are the stops that have been classified as excellent regarding the level of accessibility in all of three disabilities types taken into account:

- motor disability;
- motor disability without wheelchair;
- visual impairment.

I have also addressed the localization of disable users as an element to complete my study.
I chose to undertake this analysis so that it could be possible to verify if their homes were located randomly in Turin or if they had taken into consideration some variables, like services distribution (hospitals and disability centres) or the construction time of buildings.

The following part of my thesis is focused on an analysis of the links between individual stops and at what degree these are served by public transport lines accessible to disabled people, in order to guarantee a full usability of stops and lines. In fact, also the lines have been studied, using a four-step methodology; in this way, it has been possible to deeply investigate which vehicles run on the urban lines and how they are equipped with disability services.

As last part of the study, I have chosen to present an example of the utility of this analysis. In this specific case, it has been studied a possible link to Hospitals and disability centres. In particular, the hospitals and centres with super stops in a buffer area of 500m and an accessible line of accessible public transport (based on the work previously done).

This study has produced two important results, the creation of maps and the creation of tables. The latter result can be considered a decision support tool, because it describes exactly and precisely the real usability of hospitals and disability centres, by the use of public transport. All analysis are made at different territorial scales, thus obtaining a comprehensive and complete vision on different territorial levels: points, neighbourhoods, districts and municipality. Thanks to this method, it has been possible to study all components and in their peculiarity.

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