

POLITECNICO DI TORINO
SECOND SCHOOL OF ARCHITECTURE
Master of Science in Architecture for Sustainability
Honors theses

THE QUALITY ASSESSMENT IN THE CITY

Development of a support instrument to manage the urban transformations

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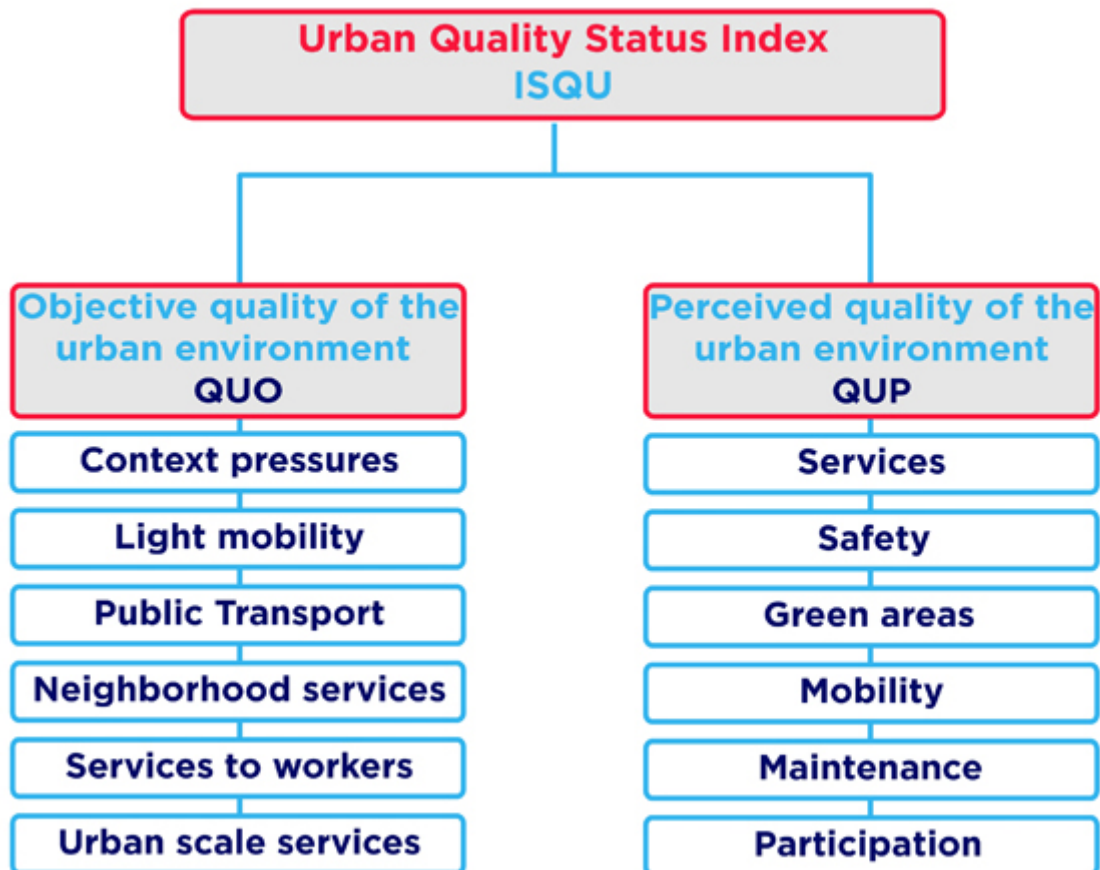
The aim of this project is the development and testing of an evaluating method on urban quality. This instrument ought to be useful in the management of the urban area transformation.

The Authorities actions for the transformation of the city seldom fully meet the specific requirements of each district. It is frequently missing not only a good localization of services and functions, but also a good design of public areas, fit for users real needs.

Studying the existing methods it has been possible to find out how current methods are highly different and heterogeneous; moreover, this step of the project helped the definition both of issues and knowledge, useful to develop a brand new system.

The developed method is composed of two main elements: on one hand there is a diagnostic instrument which enables to evaluate the quality of the different districts of a city in a specific moment. On the other hand there is an apparatus of assistance in the decision among different alternatives in the transformation of the city.

Each instrument is organized in a hierarchic way consisting of macro-areas, indicators and sub-indicators. In this way it is possible to include all the different themes concerning the urban quality, ensuring the right in-depth study.

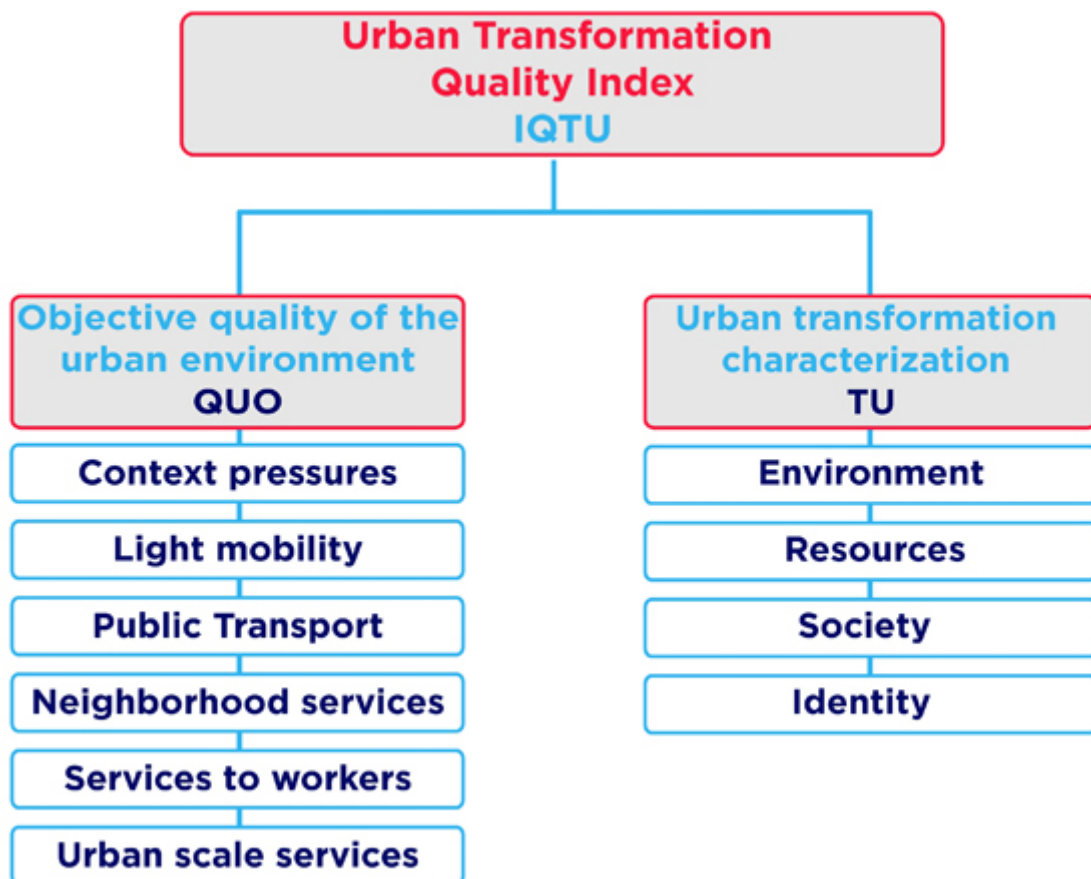


The diagnostic instrument, or the ISQU (Urban Quality Status Index) is organized in two macro-areas:

- **Objective quality of the urban environment** (assessment of the quality in a parametric way, defining the accessibility distances of services and referring to thresholds coming from literature);
- **Perceived quality of the urban environment** (through the direct judgment of citizens it deals with how the population considers some topics about the city quality)

Using the above-mentioned instrument it is possible to achieve that knowledge, useful to define priority interventions on urban scale; as a consequence, it is also feasible a snapshot of the development process of different urban areas which helps to define areas and fields where administration investments should be more pressing.

While sorting out among alternative projects the IQTU (Urban Transformation Quality Index) has been used and evaluates the quality level ensured by each option.



In addition, this index is composed of two macro-areas:

- **Objective quality of the urban environment** (see above; in this case it is used to evaluate the simulation of implementation of each alternative project);
- **Urban transformation characterization** (a set of indicators and sub-indicators, producing either a positive or a negative score according to the sustainability level guaranteed by every alternative)

Both systems analyze many and really different urban issues. Several aspects are taken into consideration, such as quality and correct disposition of services, presence of interference conditions in the life of citizens, organization of public transport systems, design effectiveness as well as maintenance of public areas. The hierarchical organization of the evaluation systems has been managed in the aggregation phase of indicators, giving different levels of importance to several topics.

In this phase the ANP Method (Analytic Networked Process, developed by Thomas Saathy) has been used. This system provides a pool of experts with a comparison questionnaire in pairs, thus defining the worth of sub-indicators, indicators and macro-areas. Moreover, it is possible to highlight eventual relations among indicators and sub-indicators in a relational network, developed by the system maker even considering causal relations.

Once the evaluation system has been developed, it was tested in Corsico, a specimen city on the outskirts of Milan.

The city was divided into four zones, and in all of them the ISQU assessment has been made. At first maps were analyzed and inspections were carried out; then, a sociological survey, consisting of a questionnaire given to citizens, was used to assess some indicators of the quality awareness.

In particular, a former industrial and abandoned area in Corsico, once seat of Pozzi Ginori company, is undergoing transformation projects nowadays. Two of these have been compared with the assessment of IQTU. The collected data have been used to define a mathematic model which can simulate the population tranfers from a district to another, taking into account the urban quality of every district.

The application of the developed system enables to confirm the proper framework of this method, easy to use, its reliability and efficiency in the definition of the quality of different urban areas.

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