



**Politecnico
di Torino**

Honors Thesis

Master of Science in Architecture Construction City

Abstract

**The ITACA Plus Protocol:
a new methodology to support urban design**

Tutor

Francesca Abastante

Candidate

Margherita Penza

July 2023

The focus on sustainable development and building performance emerged as early as the 1960s, but the recent scientific literature argues that it is necessary to adopt a point of view that considers the interaction between buildings and their surroundings, as well as the influence of transport systems, energy production, resource distribution and waste management on urban sustainability. Therefore, various methods, techniques and tools for assessing urban sustainability have been developed in order to understand how cities can become more sustainable. Among these, the thesis proposes to investigate NSAT because they are the most complete tools. These include both qualitative and quantitative aspects and overcome the environmental focus by opening up to the modern definition of sustainability. The aim of the thesis is to study and analyse the sustainable protocols available in Europe for urban sustainability assessment in order to verify their positioning with regard to the pillars of sustainability and their capability to address and guide environmental, economic and social issues. In particular, it was chosen to focus the research on the Italian scenario and the ITACA protocol in order to propose a new evaluation method. The research methodology includes an analysis of the eight most widely used protocols in Europe, the study of scientific literature, an in-depth analysis of the texts produced by ITACA, and the use of interviews and questionnaires administered to experts to verify the proposed evaluation model. At the end of the work, a paragraph was produced analysing the strengths and limitations of the proposed model, as well as possible future developments and implementations to which it might lend itself. In conclusion, the thesis aims to provide a comprehensive overview of urban sustainability assessment and to propose an assessment model that overcomes the current limitations of the Itaca protocol urban scale.

For info:
s291976@studenti.polito.it