



POLITECNICO
DI TORINO

Honors thesis

COURSE OF
ARCHITETTURA PER IL PROGETTO SOSTENIBILE

Abstract

**The sustainability certification,
between design tool and assessment tool.
Reasoned application of LEED NC rating system
to Tiscali Headquarters.**

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December 2014

The sustainability issue and the need to meet this request, also in the building sector, has supported the creation of tools that aim to certify the "goodness" of a project. However, there are still conflicting opinions about their effectiveness.

The purpose of this work is to start from a previous assumption, anticipating any kind of evaluation related to the assessment protocol as it is: the thesis discusses what role should be assigned to the certification, whether to support the design or the assessment phase, claiming that this ambiguity is closely linked to the architect's approach and the knowledge he/her brings into play. The general objective is to study the sustainability certification and to analyse the effects on the project. Particularly, the argumentations have been developed through the reasoned application of LEED 2009 Italia New construction and major renovation to the requalification of Tiscali Campus, a complex of buildings built in Cagliari in 2003 by Arassociati.



1. Tiscali Headquarters

The first phase deepens the features of the chosen tool and the aspects of the reference project. Information related to the birth of Leadership in Energy and Environmental Design in U.S.A. have been collected, also considering its adjustment to the Italian context, its structure and the certification process. The further consideration has allowed to identify the dual nature of flexibility, which on one hand guarantees the assessment of projects that use different strategies, according to their local specificity, while on the other hand it may promote the superficial choice of certain solutions, only with the goal to increase the score. The Tiscali Campus has been described highlighting the main aspects of the first project, which represent a limit with whom the planned renovation has to be compared, both in technological and identity terms.

The central phase sets up four hypotheses, based on sectorial skills of the design team, synthetically created through a checklist's overview, and a fifth multisectorial one,

developed thanks to the detailed application of the rating system. First of all, this part describes the starting conditions, common to all the cases, taking into account the consequent score according to LEED and the advantages derived from the context, the current state and whether the team decide not to significantly change important aspects of the building.



2. Comparison between the hypotheses and effects of the adopted strategies on the thematic criteria

A later stage lists the interventions provided according to the four different sectorial approaches, separately applied: the "minimum" intervention, the renovation of the shell, the renovation of the HVAC and its advanced maintenance. The fifth one, for which it has been possible to simulate the whole certification process, follows a comprehensive strategy.

The final part consists in a discussion of the previous five cases, that has allowed to underline the importance of a general awareness by the architect about the various topics of a sustainable project, which is characterized by a choral approach, being impossible to develop individually specific skills in each sector, from the site to the indoor air quality. This assumption permits to recognize the sustainability certification as an assessment tool, without driving the design choices, at least in an exclusive way.



3. Comparison between the hypotheses and effects of the adopted strategies on the final level

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