

il corso di laurea in Architettura e Innovazione

**Il titolo della tesi**

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**Abstract**

Nowadays, historic buildings represent a great opportunity for our generation by considering both historical and cultural point of views, but also the technical one. Their recovery allows us to keep and hand down to posterity the knowledge of the past era by saving and preserving in the meantime space and nature.

Historic buildings are affected by the energy problem because they were built several decades ago, with very old methods and without the current technological innovations and the lack in their energy efficiency is a very important topic for the sustainability of the building stock. Furthermore, any conversion or modification shall insert and include innovative devices by trying to preserve all the historical aspects. Consequently, their recovery shall not be an end in itself. As whatever precious artifact, it shall be safeguarded and maintained endlessly.

In this respect, all the environmental and energetic survey methods for buildings able to perform in-depth analyses and to provide more details for their proper usage can be included. Among them, the LEED (Leadership in Energy and Environmental Design) is a method to control both the construction or maintenance procedures, with emphasis on sustainable and energetic aspects.

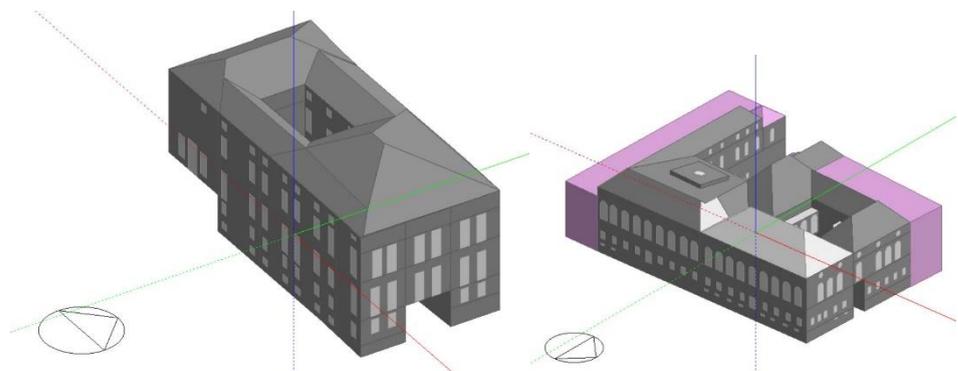
The main objective of this thesis is to apply this innovative certification system as design model to follow or the main guideline for creating a sustainable project by focusing on the Protocol O+M (Operations and Maintenance).

The results will ensure an increase in the LEED internal scores and improvements in several macro themes, such as the energy, the comfort and the inner quality of the project.

To understand by means of the scientific method if the proposed system could be applied to the entire architectural heritage and not only to a single building, two different case studies were identified. In fact, the selected is applied to two different historic buildings:

- Ca 'Rezzonico palace (museum of venetian '700) in Venice;
- Shuvalov palace (Faberge's museum) in St. Petersburg.

This choice led to the additional opportunity of studying maintenance and energy improvements methods fundamental to our era.



1. Energetic model of case studies