

# Towards a Holistic approach to Low Energy-Building Design: Introducing Metrics for Evaluation of Spatial Quality

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## Abstract

Building renovation is a complex task involving many stakeholders with different agendas. Therefore, various methodologies for assessing the impact of renovation initiatives on stakeholder agendas have been proposed. However, recent research questions contemporary practice in this matter and points out that the developed methodologies tend to favor technical (quantitative) values over more qualitative values, such as the potential to improve the perceived spatial quality in a manner that builds on the existing qualities and reflects contemporary social and cultural values. This paper discusses how to introduce metrics for more qualitative value creation in renovation processes. The hypothesis is that metrics for e.g. spatial quality can be established and used for decision-support in the early phases of renovation projects. The paper focuses on how to translate qualitative values related to human comfort and spatial perception into metrics, which can be operationalised for design information and performance evaluation. Examples of metrics related to façade properties are put forward and form the basis for a discussion about the relevance of including and quantifying such metrics as an integral part of a holistic approach to low energy-building design.

## Impact

Publikationen forholder sig til følgende tasks:

- Task 1.1 "State-of-the-art literature review".
- Task 1.4 "Assessment of added value due to architectural aspects".
- Task 1.5 "Development of holistic framework for assessment of added value in building renovation".
- Task 3.2: "The added value of architectural transformation generated by energy-efficient renovation solutions"



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