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Publication date:
2011

Document Version
Accepteret manuscript, peer-review version

Link to publication from Aalborg University

Citation for published version (APA):
A Method for Holistic Evaluation of Sustainable Buildings of the Future


Project description: Interest in quantitative assessment of building performance has increased through the last decades in line with the technical and practical development of sustainable buildings. How, contrasts of a more holistic approach to sustainable buildings begin to emerge and the increasing holistic approach calls for new ways to assess and evaluate our buildings, not solely based on quantitative reviews but particularly based on qualitative reviews. The usual approaches, how can we determine and assess both quantitative and qualitative aspects of sustainable buildings without distorting the value of either of them.

Research set up: The research project consists in measuring, registering, analysing and comparing seven houses and occupants - through both quantitative and qualitative studies. The quantitative performance is assessed through measurements or on the technical parameters, e.g. the energy consumption are measured through measurements on occupant's registered and recorded experiences and through observations, surveys, interviews, registrations and surveys and descriptions.

Research hypothesis: Quantitative measurements on sustainable houses can help determine fine energy consumption and energy production in passive and renewable sources, healthy indoor climate and interactions with the surrounding environment.

Research hypothesis 2: Quantitative measurements on sustainable houses can help demonstrate that its occupants experience benefits of healthier indoor climate and affects in the surrounding environment and to discover increasing awareness of their energy behavior.

Research hypothesis 3: Measuring qualitative aspects of sustainable houses and their occupants makes it possible to identify what parameters are central to develop sustainable buildings of the future and design a method for holistic evaluation of these houses.

How can we measure our buildings by their ability to improve our lives?

Research design and methodology: The project focus on interdisciplinary teams related to developing sustainable buildings of the future. The research design is based on compiling a study of methods and means to measure the performance of occupied experimental sustainable homes. A three-way perspective from a private, an inter-relational and a professional perspective is to build the qualitative research setup on in a triangulation of methodologies.

The occupant’s private perspective is explored through Cultural Probes, inter-relational perspective is to build the qualitative research setup on in a triangulation of methodologies, and professional perspective is to build the qualitative research setup on in a triangulation of methodologies. The research design is based on determining what is measured by their ability to improve life!

How can we measure our buildings by their ability to improve our lives?

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By compilation of methods from natural science and artistic and humanities disciplines in the project design on how to measure are quantitative and qualitative in sustainable homes.

Hypothesis 2: By compilation of methods from natural science and artistic and humanities disciplines it is possible to design a framework on how to measure are quantitative and qualitative in sustainable homes.

Research hypothesis 3: The scientific documentation of what aspects can be measured by their ability to improve life!

Data logging:

Cloud Storage

Data logging of climate data:

Weather

Data logging of climate data:

Diary and Photos

Scientific objectives: The scientific objective of the project is to develop a method to assess buildings evaluation of sustainable buildings of the future, this evaluation method will be used to support the development of both technical and poetic aspects of future buildings.

Scientific hypothesis: The scientific documentation of what aspects can be measured by their ability to improve life!

“I only wish that the first really worthwhile discovery of science would be that it recognized that the unmeasurable is what they’re really fighting to understand, and that the measurable is only the servant of the unmeasurable; that everything that man makes must be fundamentally unmeasurable.”

– Louis Kahn