

The challenge of teaching sustainable systems design

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ABSTRACT

Keywords – sustainable design, systems design, systemic change

Please indicate clearly the type of contribution you are submitting: ___ hands-on, explore.

Background

The authors of this paper work at Aalborg University offering the educational program Sustainable Design Engineering. At the same time, we are researchers at the Centre for Design and Innovation for Sustainable Transitions. These two institutional affiliations reveal our normative purposes: we are committed to support processes of transition towards sustainability through design at various scales. Our effort, thus, imply facing several challenges central to the analytical content of this paper.

Explanation

We present the program Sustainable Design Engineering, where Science and Technology Studies theories are a core element among design and engineering approaches. Our main claim is that existing product centred and short-term oriented solution tools and knowledges are inadequate for system design in a transition perspective. To become so, design should be upgraded in order to tackle controversies and engage in proposing how to navigate conflicting matters of concern and partial systemic clashes with a long-term scope.

Set up

In the workshop we will present results from a student project developed during the second semester of 2016 to illustrate the type of decisions the students take and the difficulties they face. The project in question dealt with the planning of a new neighbourhood that was to be built in the island of Amager, about 3 km from the city centre of Copenhagen as part of a long-term development of Ørestad, a new part of Copenhagen.

Expected outcome

Workshop participants will be invited to discuss the conclusions of our studies.

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