

Roskilde University
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Conference:

**Perspectives on
Practice-Oriented Design Science
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Proceedings

**Department of Environmental, Social and Spatial Change (ENSPAC)
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Introduction: Perspectives on Practice-Oriented Design Science

Design science may be defined and theorized in many ways. At Roskilde University, there have recently been different attempts to identify more accurately what design science may be. At the heart of design science is however a belief that humans are capable of achieving stunning and sometimes almost incomprehensible results if scientific knowledge is put into practice effectively.

Design processes are characterized by the presence of actors who want to change something or create something new. Certain attractive and wished-for effects (a piece of art, architecture or music, a performance, a new product, service or process, higher quality, reduction of costs, employee satisfaction etc.) are sought for. Some scientific and typically cross-disciplinary knowledge about how to obtain such results or effects may be available but how this knowledge is put into practice effectively often turn out to be unclear. Design science focuses specifically on this; how is crossdisciplinary scientific knowledge put into practice in ways that are ethical, helpful for practitioners and makes extra-ordinary results possible? Design science thus approaches the problems related to translating scientific research and knowledge into useful and practical artifacts, environments, spaces, professions, performances, products, services and processes head on.

Design science includes both analytical studies (e.g. case studies) and prescriptive studies (e.g. action research studies). In order to develop a deeper understanding of design processes (general as well as specific characteristics) design science identifies and studies the designers who want to change something or make something new. It also identifies and studies the processes through which attractive effects or outcomes are or may be obtained. Design science moreover studies how different scientific disciplines approach and try to cope with the design problem as well as how research based knowledge about design processes from different disciplines may cross-fertilize each other making design processes even more effective in achieving wished-for effects and outcomes. Design science studies ethics related to design processes just as economic, political, sociological, technological, material and environmental consequences of design processes are or may be considered. Design science addresses many different application areas and they are typical of a complex, unpredictable, contingent, context dependent and situated nature.

Practice-oriented design science is inherently interdisciplinary and is approached from various different subject areas at Roskilde University including business studies, communication, computer science and informatics, performance design, geography, planning etc. The conference at Roskilde University the 15th of may 2008 where the papers in this volume were presented focused on an overall question: *What are the common features and approaches*

*that characterize different strands of research disciplines addressing practice-oriented design science? In order to further develop and explore a cross-disciplinary design science contributors to the conference were asked to consider the characteristics of his/her strand of research discipline that address practice-oriented design science. The specific question asked was: *How are design approaches and processes understood, theorized, and practiced in my scientific field?**

Contributors to the conference were asked to consider the following type of questions:

- What is considered to be the state of the art in my field ?
- Empirical cases illustrating and contributing to our understanding of core aspects of design processes.
- General characteristics of design processes and design science – what may they be ?
- Which are the ontologies, epistemologies and methodologies at play in design sciences, and how do they play together ?
- What kinds of methods may be used to study design processes ?
- What is the nature of the iterative and experimental design strategies ?
- How are experiments (to be) conducted during design processes ?
- How do we measure effects of design processes and design outcomes/products ?
- What is the role of ethics in design-processes ?
- What is the role of intuition and creativity in design processes ? What other competences may be needed ?
- What is the role of the actor vis-à-vis groups (communities) and non-human actors in design processes ?
- To what degree is design possible ? What are the possibilities and limitations of “designing”?
- The philosophy of design science: How should “new” types of practice-relevant scientific knowledge look like ?

The two first papers by John Damm Scheuer, Poul Bitsch Olsen and Lorna Heaton are conceptual papers suggesting two different perspectives on design processes in organizations. Maria Duclos Lindstrøm also focuses on design processes in organizations and particular on the relationship between design science and the study of economic advice in politics. Jørgen Ole Bærenholdt is focusing on tourism experience design processes. Jesper Simonsen, Morten Hertzum and Jan Pries-Heje’s papers focuses on the design of user-driven IT systems. Jesper Holm is reflecting on Eco-Design for Housing as social entrepreneurship while John Pløger and Kristine Samson is focusing on the design and development of urban spaces.