A Framework
Theorizing Design of Human Technologies

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Main points

design does not build on a priori knowledge, but continuously needs to reflect on previous design experiences and its own history

- Argue for a need for theorizing our research
- ‘Theory’ as collective and shared empirical experiences
  - when engaging with or studying design processes
- How we approach this here at Roskilde University
- Present a ‘framework’ supporting a systematic empirical approach to ‘Theorizing Design of Human Technologies’

Design as main subject area at RUC (& other universities ?)

design schools traditionally rooted in practice now increasingly implement academic criteria

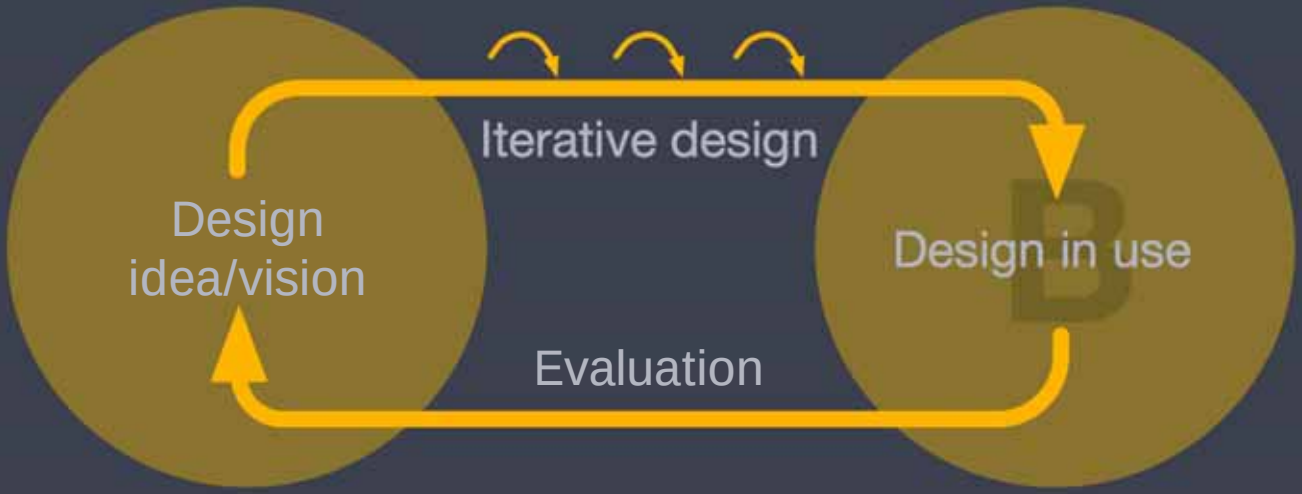
- Theorizing Designing of ‘Human Technologies’ - or:
  - Designing as reality construction
  - Designing as processes and practices
  - Designing as knowledge development
  - Designing as normative interventions
  - Designing as embedding values, ethics, politics, …
  - … as taking responsibility for the design, intervention, reality construction, …

Designing Human Technologies

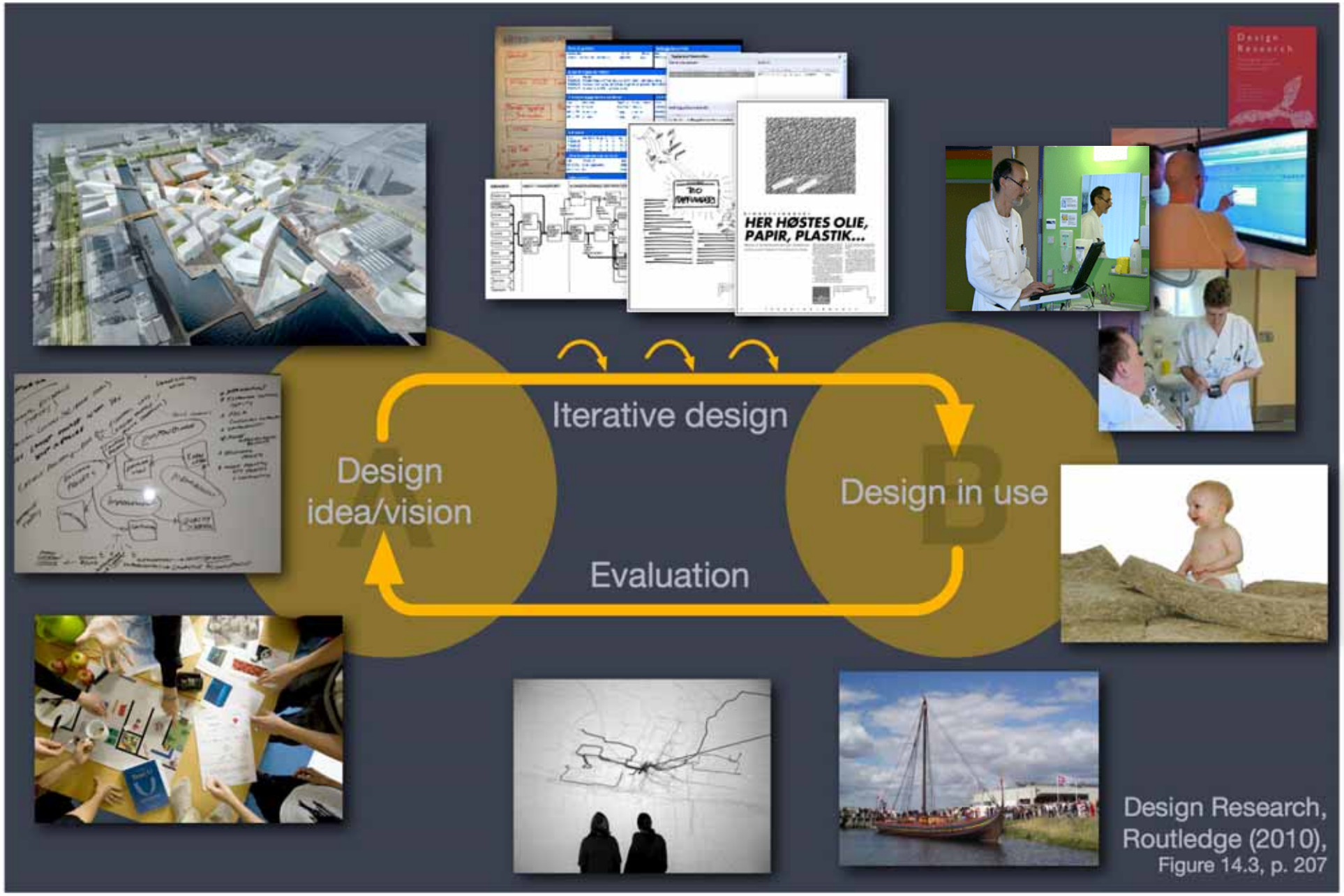
- New main subject area initiated in 2008 as new bachelor program
- Researchers gather and initiate 'grass root' community
- Designing (constructive), Human (participation), Technologies (ICT, experiences, urban planning, climate adaption, etc.)
- Design Research, Routledge (2010)
- Situated Design Methods, MIT Press (2014)
- 46 researchers reflections on 33 design projects
- What characterize *our* shared understanding so far?

Shared starting point:

Design as ‘emerging’ change



Design Research,
Routledge (2010),
Figure 14.3, p. 207


HER HØSTES OLIE, PAPIR, PLASTIK...
Iterative design
Design idea/vision
Design in use
Evaluation
A
B
Design Research, Routledge (2010), Figure 14.3, p. 207

A "framework"
- i.e. a coordination mechanism

Change
- Planned
- Emergent
- Opportunity-based
- Sustainable

Participation
- Different knowledges
- Mutual learning
- Joint goal negotiation
- Infrastructuring

Situatedness
- Situated knowledges
- Situated learning
- Situated action
- Situating contexts

Scope
- Personal
- Collaborative
- Organizational
- Societal

Simonsen, Hertzum, Nielsen, Riis (submitted)

Collective reflections, shared theory building

Change ▸ Planned ▸ Emergent ▸ Opportunity-based ▸ Sustainable	**Participation** ▸ Different knowledges ▸ Mutual learning ▸ Joint goal negotiation ▸ Infrastructuring
Situatedness ▸ Situated knowledges ▸ Situated learning ▸ Situated action ▸ Situating contexts	**Scope** ▸ Personal ▸ Collaborative ▸ Organizational ▸ Societal

Reflect on the experiences from a given project:

- What are the conditions and context of the theme/dimension?
- How did it 'unfold', how would you describe it?
- How did you strive to respond appropriately to it?
- What were the challenges and opportunities involved?
- How have you (or others) tried to remedy these challenges and make use of the opportunities?

Summing up

Design as a science where reflections on aesthetics, ethics, values, connections to politics, and strategies for enabling a better future should be recognized as legitimate

- Ambition of theorizing *our* design practice - in establishing a 'Design' oriented main subject at RUC (and elsewhere - STS?)
- Presented our experiences so far (collective "bottom-up" reflection
- Proposing a 'coordination mechanism' as a systematic way for a collective of researchers with diverse backgrounds to work toward theorizing design processes

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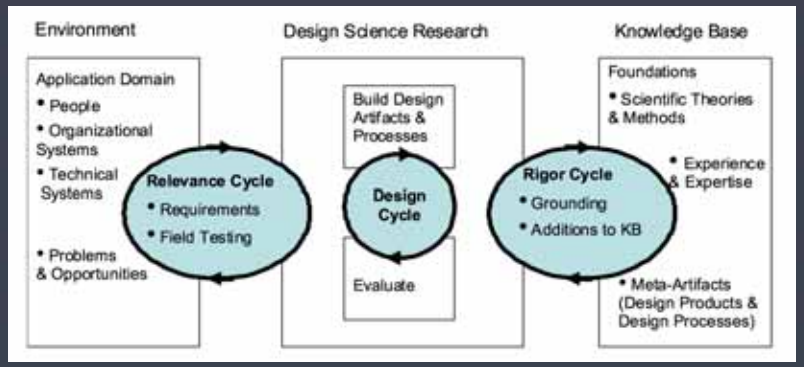
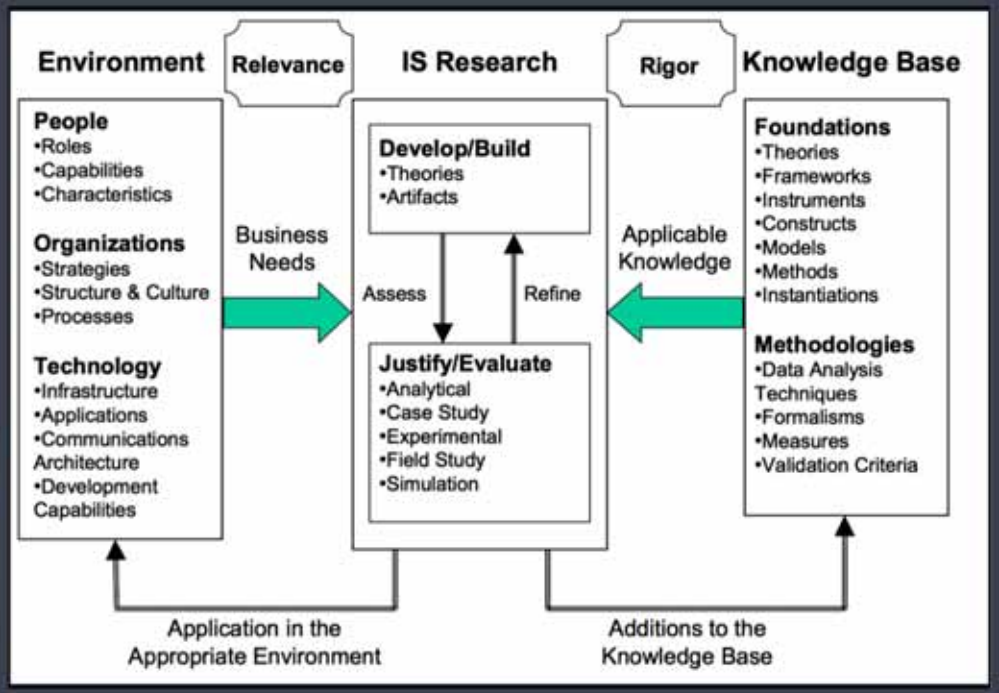
End

IS and Design Science





The framework is accompanied by seven general guidelines "in order to illustrate how authors, reviewers, and editors can apply them consistently" (p. 76).

Hevner et al./Design Science in IS Research, MIS Quarterly, 28(1), 2004