Participatory Design

Tutorial

Jesper Simonsen

Professor of Participatory Design
Director at Designing Human Technologies
Roskilde University

designinghumantechnologies.dk

Tutorial: Fundamental Concepts and Commitments of Participatory Design - PDC'2014

PDC'2008 anniversary conference:
Experiences and Challenges

PDC'2012 Book release

PDC'2010 Book workshop

Routledge International
Handbook of
Participatory Design
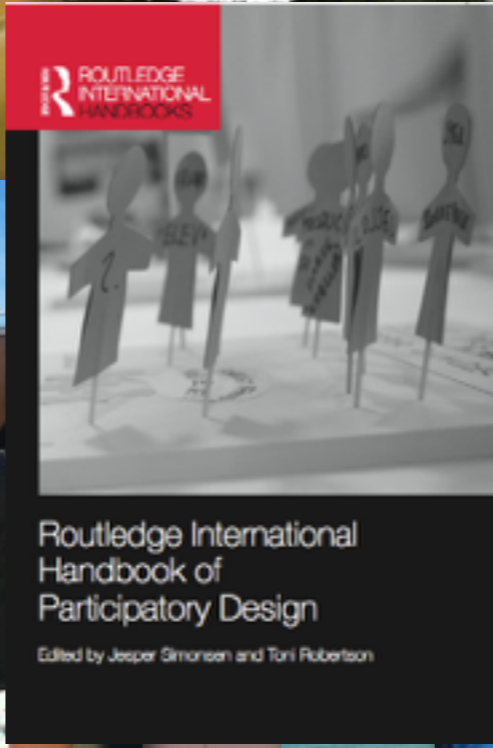
Participation and mutual learning

▶ My traditional conceptualization (bachelor-level)

▶ My contemporary conceptualization (graduate-level)

Participatory Design
- a preliminary definition

"Participatory Design can be defined as a *process of investigating, understanding, reflecting upon, establishing, developing, and supporting mutual learning between multiple participants in collective 'reflection-in-action' (Schön 1983). The participants typically undertake the two principle roles of users and designers where the designers strive to learn the realities of the users' situation while the users strive to articulate their desired aims and learn appropriate technological means to obtain them*."

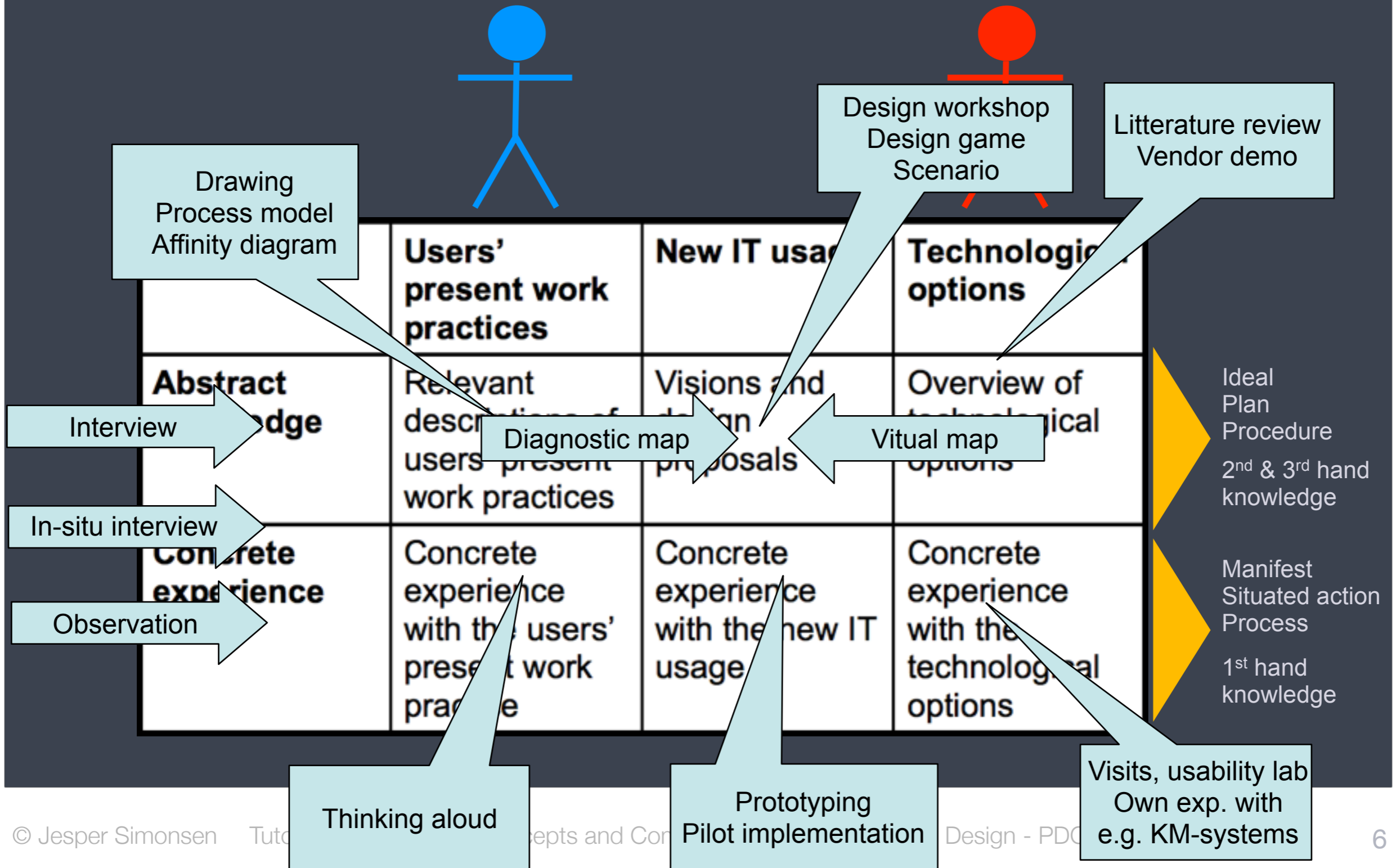(Robinson and Simonsen, Routledge International Handbook of Participatory Design, Routledge 2012, p. 2).

Mutual learning
- two principal roles

Domain expert
(user)

Dialogue and mutual learning
Concrete exemplary knowledge
Sharing knowledge
Supported by tools and techniques
Open contact and authentic meeting

Techn. expert
(designer)

6 knowledge areas

	Users' present work practices	New IT usage	Technological options	
Abstract knowledge	Relevant descriptions of users' present work practices	Visions and design proposals	Overview of technological options	Ideal Plan Procedure 2nd & 3rd hand knowledge
Concrete experience	Concrete experience with the users' present work practice	Concrete experience with the new IT usage	Concrete experience with the technological options	Manifest Situated action Process 1st hand knowledge

Callout labels:
- Drawing / Process model / Affinity diagram
- Design workshop / Design game / Scenario
- Litterature review / Vendor demo
- Interview
- In-situ interview
- Observation
- Diagnostic map
- Vitual map
- Thinking aloud
- Prototyping / Pilot implementation
- Visits, usability lab / Own exp. with e.g. KM-systems
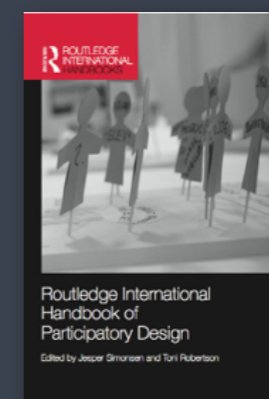
Participation (PD-Handbook p. 5)

"Any user needs to participate willingly as a way of working both

▶ *as themselves* (respecting their individual and group's/community's genuine interests) and

▶ *with themselves* (being concentrated present in order to sense how they feel about an issue, being open towards reflections on their own opinions) as well as

▶ *for the task and the project* (contributing to the achievement of the shared and agreed-upon goals of the design task and design project at hand) (Storm Jensen 2002)."

Experiences and challenges

▶ Design as 'emerging' change

▶ Sustained PD: Extending the iterative approach (2 ways)
Realization/implementation + ambition (think *BIG*)

▶ Formative real-use evaluation (design-in-use)
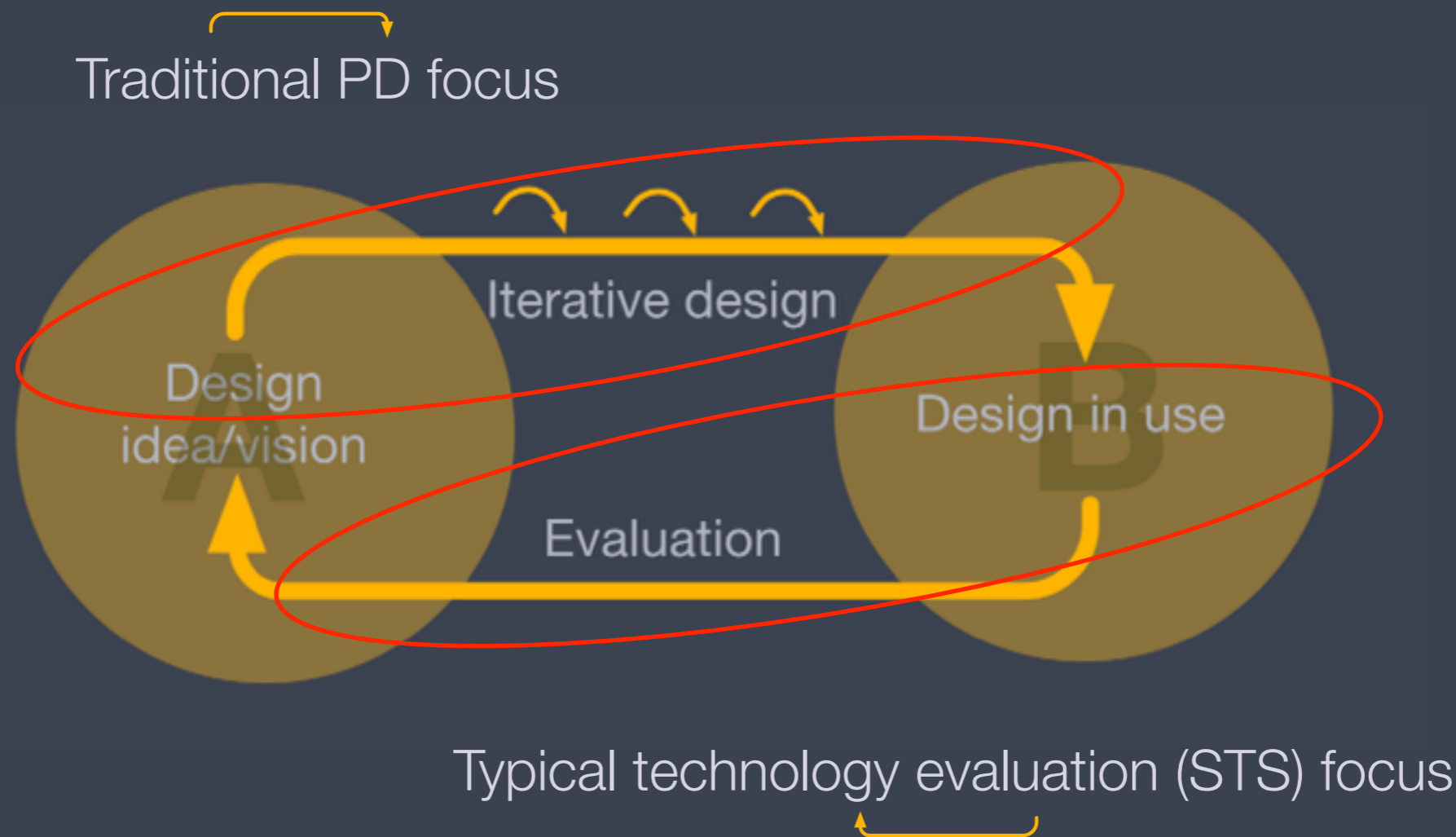
▶ The role of the users in sustained PD

Design as 'emerging' change

Iterative design

Design idea/vision

Design in use
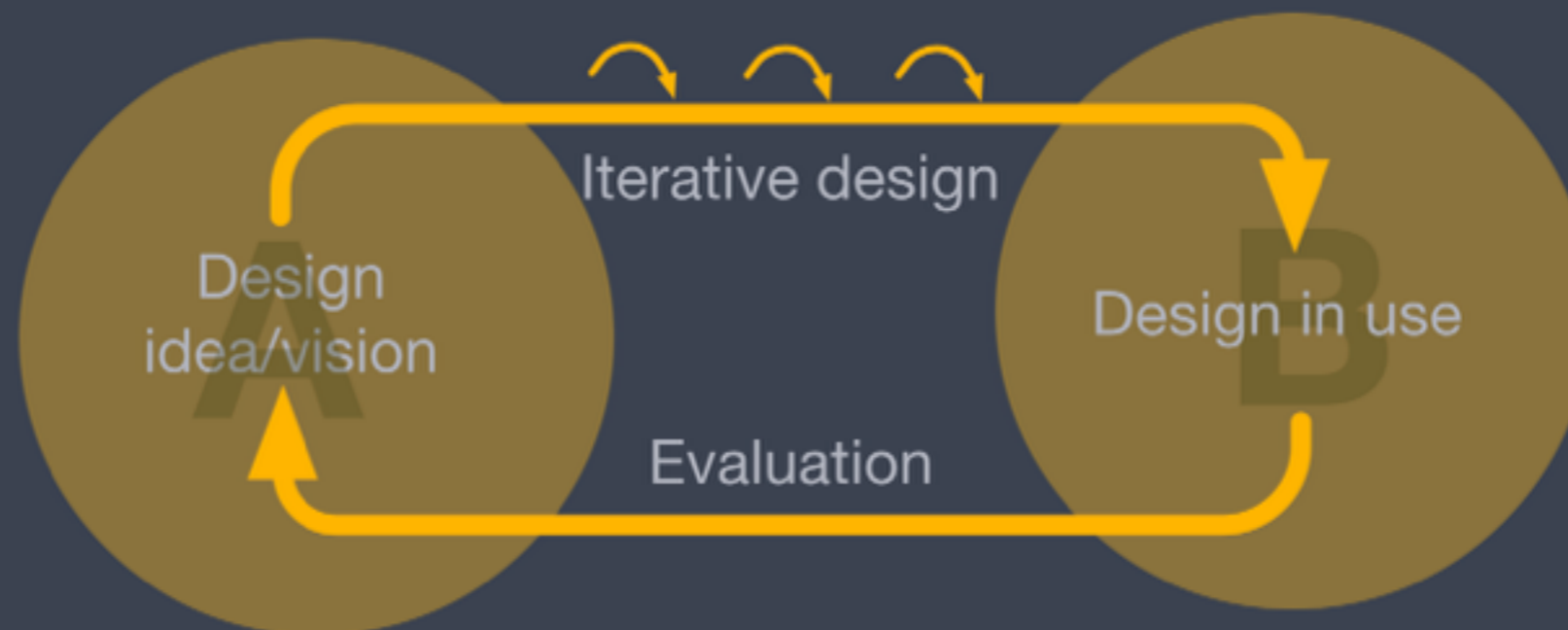
Evaluation

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

(Orlikowski and Hofman, 1997)

Design as 'emerging' change

Traditional PD focus

Iterative design

Design idea/vision

Design in use

Evaluation

Typical technology evaluation (STS) focus

Sustained PD must embrace: +

Simonsen et al., PDC 2008, 2010, 2012 (pdcproceedings.org)

Iterative design

A Design idea/vision

B Design in use
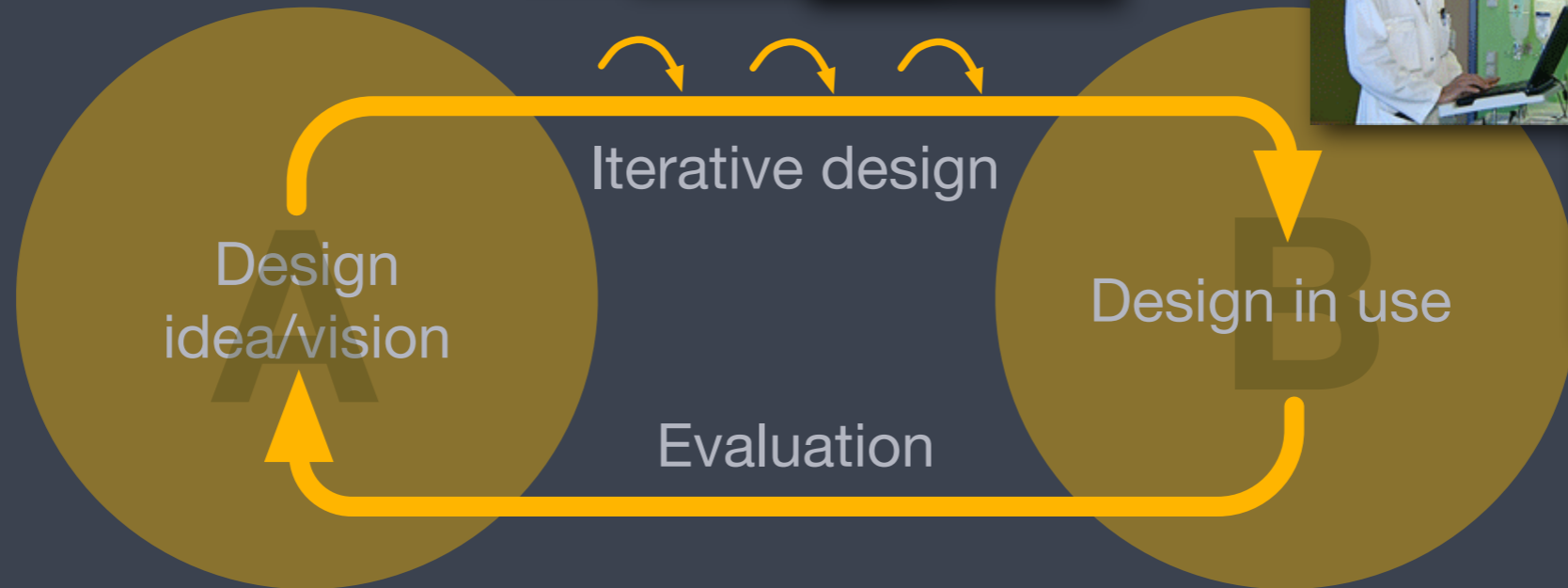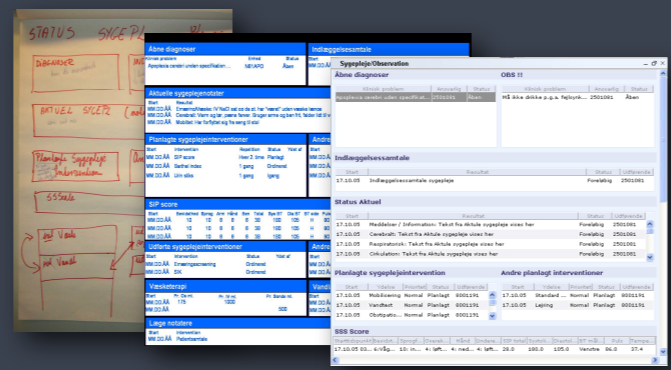
Evaluation

(Simonsen and Hertzum, 2010)

Tutorial: Fundamental Concepts and Commitments of Participatory Design - PDC'2014

|	Change	Evaluation method
Anticipated -realized	Better overview of patients	Mental workload/TLX
	Better coordination	Counting # missing pieces of inf. & messages to pass on
Anticipated -curtailed	Improved NIP recordings	Record audit (paper and EPR)
	Impr. med.-treatment/nursing plans	Rating scale
Emergent	From oral reporting to collective reading of EPR	Observation
	Collective investigation of the EPR	Observation
Opportunity -based	Sharing nursing observations during the team conference	Observation and focus-group interview
	Task list supporting coordination	Observation and focus-group interview

	Change	Evaluation method
Anticipated -realized	Better overview of patients	Mental workload/TLX
	Quantitative assessment & documentation (PD *weakness*) Better c...	Counting # missing pieces of inf. & messages to pass on
Anticipated -curtailed	Improve... NIH recordings	Record audit (paper and EPR)
	Impr. med.-treatment/nursing plan	Rating scale
Emergent	From oral reporting to collective reading of EPR	Observation
	Qualitative identification & evaluation (PD *strengh*) Collective investigation of the	Observation
Opportunity -based	Sharing nursing observations during the team conference	Observation and focus-group interview
	Task list supporting coordination	Observation and focus-group interview

Sustained PD

▶ Sustained PD must embrace: [+]

▶ Local competences are pivotal to sustained PD (initiated by AR projects, Simonsen, 2009)

▶ PD must think *BIG*

  ▶ Large scale technologies are highly configurable
    (Industrialized ISD - Bansler and Havn 1994; 1996)

  ▶ Rapid development in global business logic standards (e.g. HL7, SNOMED-CT)

▶ PD must seek sustained influence (beyond research projects)

  ▶ Short iterations, effective outcomes, quantitative measurements

 ▶ Scaling and disseminating PD to public and private companies
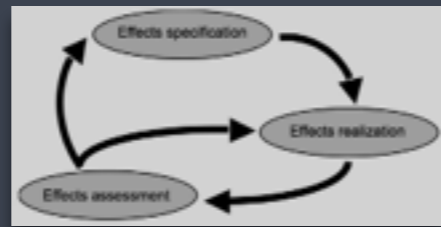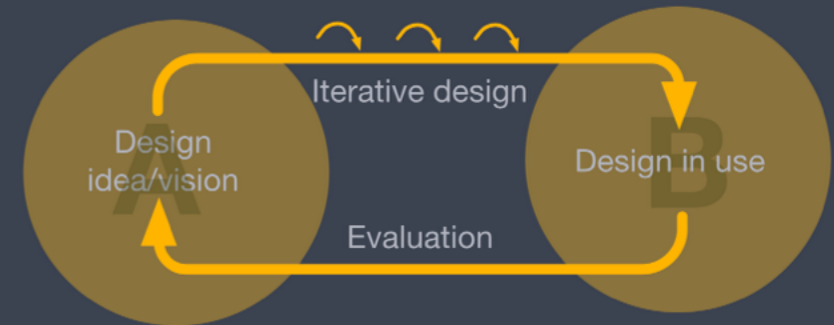
Schön: The reflective Practitioner

Reflection-in-action

- or "situated learning" (Lave and Wenger 1991):

"The practitioner allows himself to experience surprise, puzzlement, or confusion in a situation which he finds uncertain or unique. He reflects on the phenomenon before him, and on the prior understandings which have been implicit in his behaviour. He carries out an experiment which serves to generate both a new understanding of the phenomenon and a change in the situation" (Schön, 1983, p. 68).
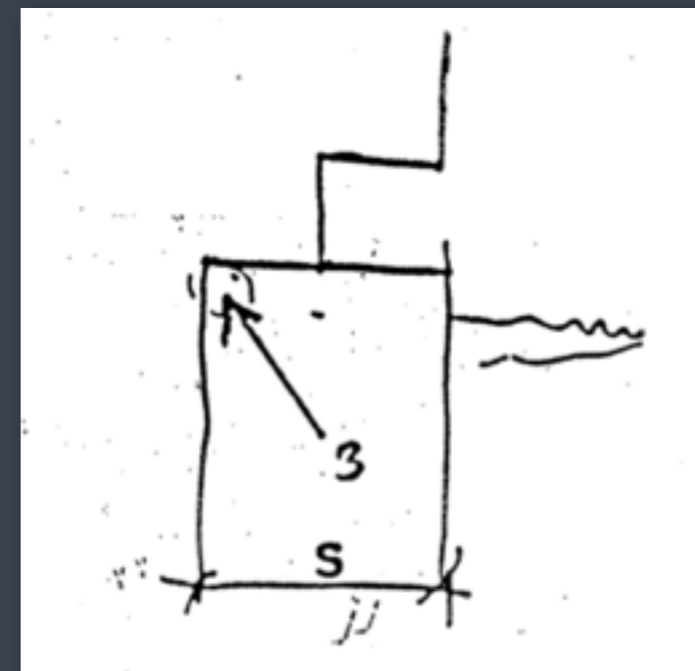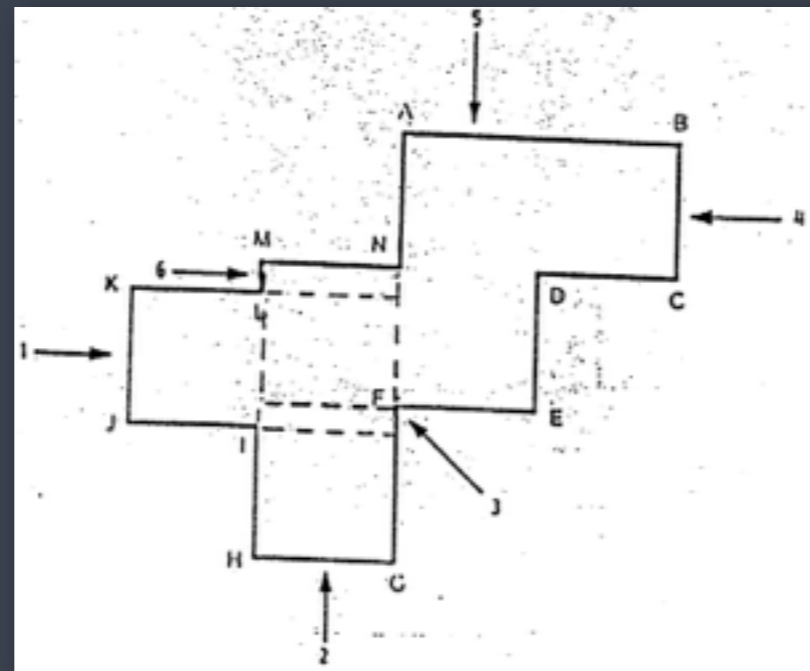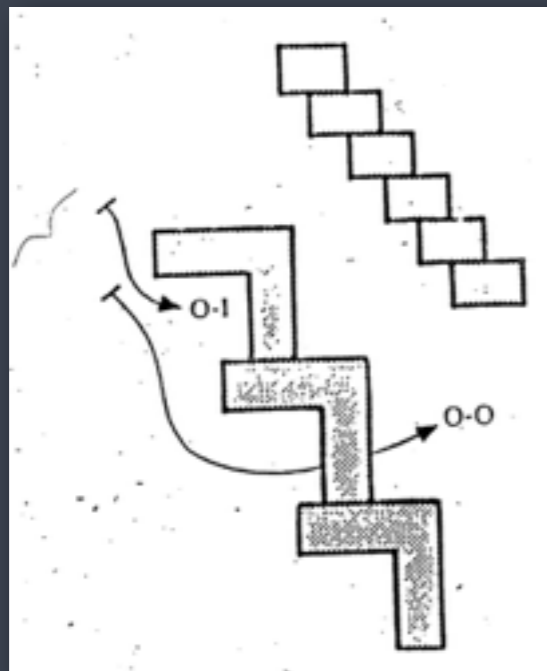
Petra's and Clara's drawings (Schön 1992)

References

▶ Bansler, J., and E. Havn, "Information Systems Development With Generic Systems," Proceedings of the Second European Conference on Information Systems, Nijenrode University Press, 1994, pp. 707-715.

▶ Bansler, J. P., and E. Havn, "Industrialized Information Systems Development: Procurement and customization of generic software," Center for Tele-Information, Technical University of Denmark, 1996, pp. 1-19.

▶ Bødker, K., F. Kensing, and J. Simonsen, Participatory it Design. Designing for Business and Workplace Realities, MIT Press, Cambridge, Massachusetts, 2004.

▶ Hertzum, M., J. P. Bansler, E. C. Havn, and J. Simonsen, "Pilot Implementation: Learning from Field Tests in IS Development," Communications of the Association for Information Systems, (30:1), 2012, pp. 313-328.

▶ Hertzum, M., and J. Simonsen, "Effects-Driven IT Development Specifying, Realizing, and Assessing Usage Effects," Scandinavian Journal of Information Systems, (23:1), 2011, pp. 1-26.

▶ Orlikowski, W., and D. Hofman, "An Improvisational Model for Change Management: The Case of Groupware Technologies," Sloan Management Review, (38:2), 1997, pp. 11-22.

▶ Simonsen, J., "A Concern for Engaged Scholarship: The challenges for action research projects," Scandinavian Journal of Information Systems, (21:2), 2009, pp. 111-128.

▶ Simonsen, J., J. L. Nielsen, M. Hertzum, and S. Riis, "A Framework Theorizing Design of Human Technologies," DASTS Conference 12th - 13th June 2014 Roskilde University, Danish Association for Science and Technology Studies, 2014, pp. 23-25.

▶ Simonsen, J., J. O. Bærenholdt, M. Büscher, and J. D. Scheuer: Design Research: Synergies From Interdisciplinary Perspectives, Routledge, 2010

▶ Simonsen, J., and M. Hertzum, "Iterative Participatory Design," in J. Simonsen, J. O. Bærenholdt, Monika Büscher, and J. D. Scheuer: Design Research: Synergies From Interdisciplinary Perspectives, Routledge, Boston, 2010, pp. 16-32.

▶ Simonsen, J., and M. Hertzum, "Sustained Participatory Design: Extending the Iterative Approach," Design Issues, (28:3), MIT Press Journals, 2012, pp. 10-21.

▶ Simonsen, J., C. Svabo, S. M. Strandvad, K. Samson, M. Hertzum, and O. E. Hansen: Situated Design Methods, MIT Press, 2014

▶ Simonsen, J., and K. Friberg: Collective Analysis of Qaualitative Data, in Simonsen, J., C. Svabo, S. M. Strandvad, K. Samson,