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USABILITY BRIEFING FOR HOSPITAL DESIGN

Aneta Fronczek-Munter,
Post Doc, PhD, Architect M.Sc.

Ph.D. project 2010-2016

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Usability Briefing for hospital design

Exploring user needs and experiences to improve complex buildings

Main hospital cases:



Herlev Hospital, DK



Bispebjerg Hospital, DK



Skt. Olav Hospital, NO

Background

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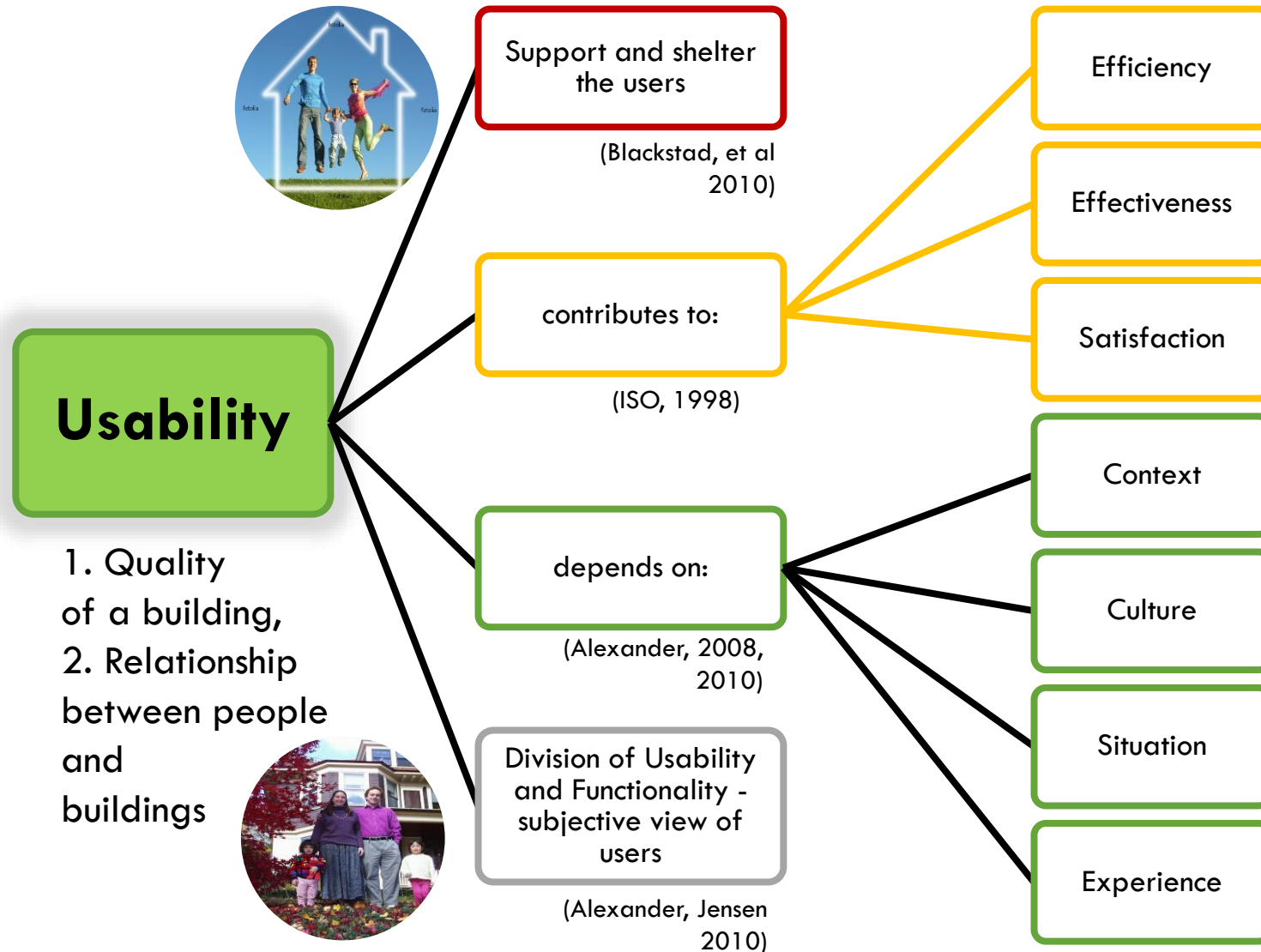


- hospitals – all visit them, society
- complex buildings
- many users, contradictory requirements



Usability definition

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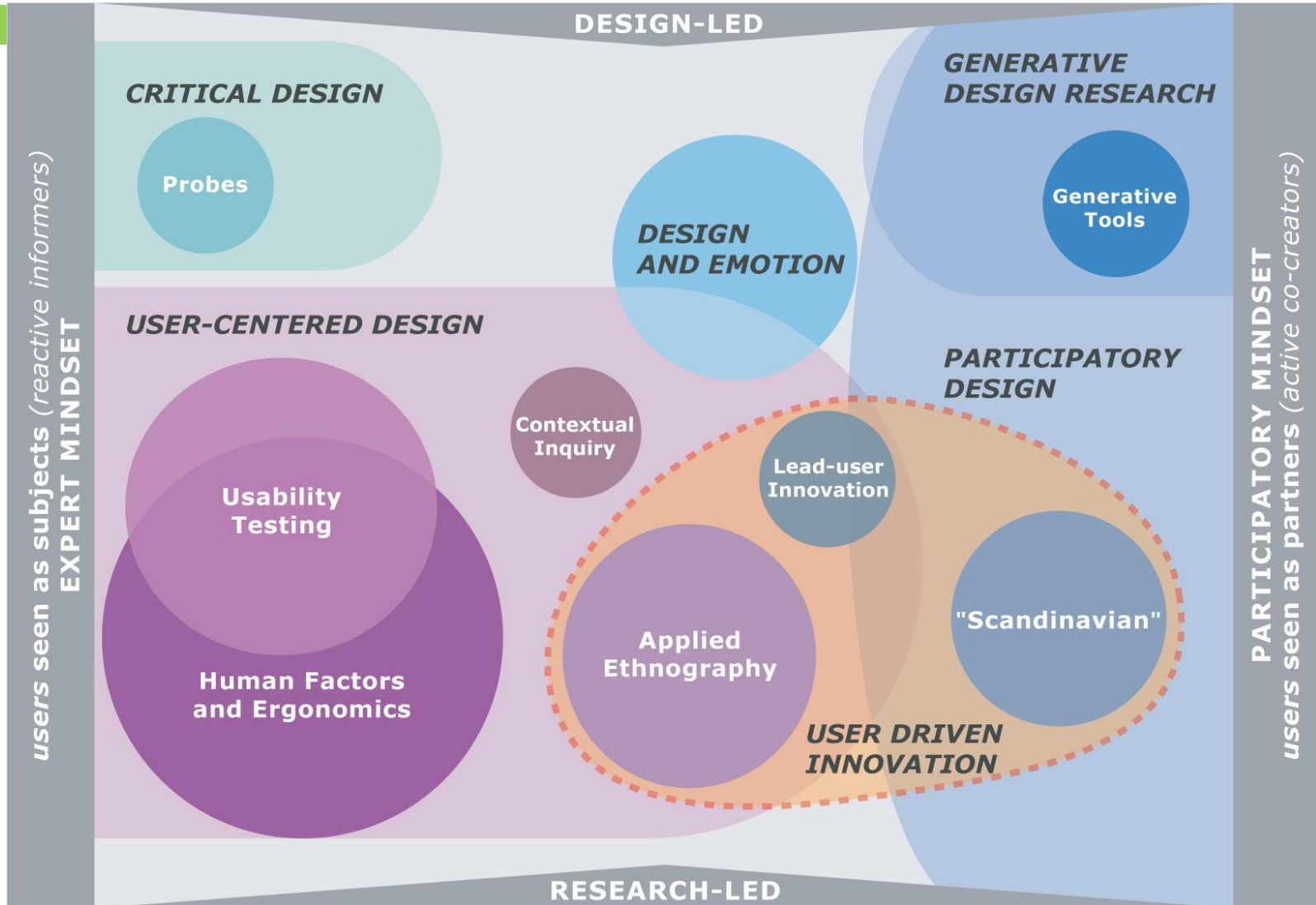
Usability Briefing / Programming

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Traditional briefing	Usability briefing
Concerns new building project	Concerns client and user needs in existing or future facilities
A definite phase at an initial stage of building project	A continuous process with changing focus in all phases of building life cycle including design, construction and in use
An expert based information collection	A co-learning and dialogue process with users
User opinions mainly used as data source	Users actively involved as co-designers and part of a corporate change process
The result is a brief, i.e. a requirement specification	Continuous collection of visions and requirement specifications, with changing detail and focus in all phases

User involvement, user driven innovation

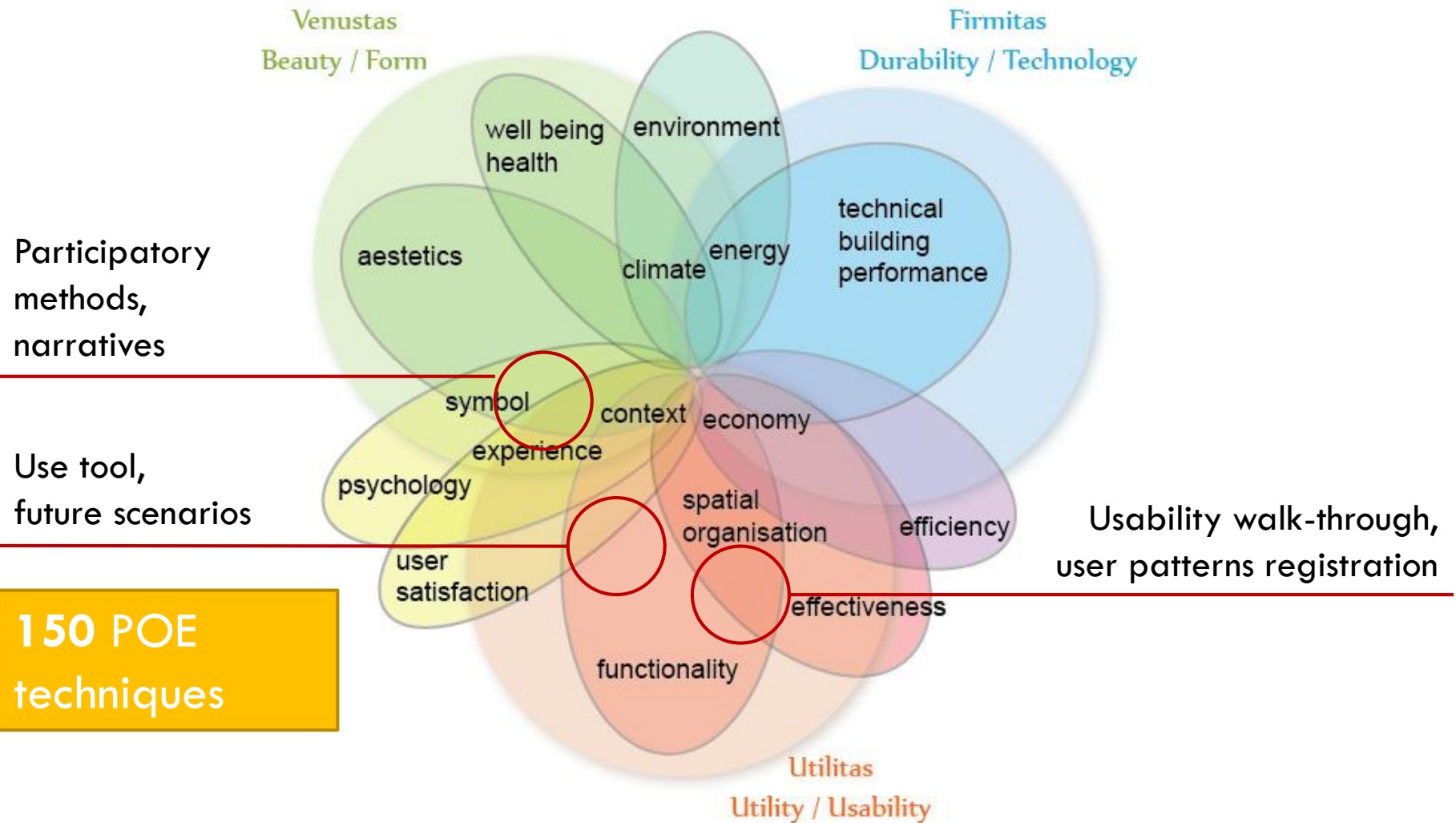
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Evaluation Focus Flower Model

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Evaluation focus flower



Case - Healthcare Innovation Lab (HIL), Herlev Hospital, Denmark.

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case Healthcare Innovation Lab

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Photo	Name, BO	Evaluation of Boundary Objects
	1 Expectations, Bull-eye target poster, post its, markers	Easy to use actively, communicate and prioritise, making common agreements
	2 Patient flow, Post its, markers, room prototyping	Innovative visions - Royal Model, traditional physical design, uneven results in groups, need for rules
	3 Observations, BO Process: Observing, hearing stories, listing of issues	Better understanding of the department, list of challenges,
	4 Map of Communication, Blank poster, drawing arrows showing communication	Easy to make, gives overview of tasks and communication between people, breakdowns
	5 Patient flow, Colourful post its, markers notes, arrangig steps-fish-	Productive, easy to arrange patient steps and staff tasks - overview
	6 Design game Ovals, Poster with abstract ovals, icons and photos of rooms	Flexible, playful, free task, result: innovative ideas to organisation and building, users in "design mode"
	7 Design game Squares, Square grid, room icons, colourful squares	Restricted to reality, serious, frustrating, details development of functional plan, discussing the building
	8 Square concept validation, Square rooms, patient flow, Duplo figures	Small changes in arrangements, optimisation, no innovative spirit
	9 3D design, 3D visualisations of chosen areas	Discussing details, furniture, atmosphere, immediate changes by participants not possible, professional look
	10 Simulations, Room boxes, Duplo figures, patient flow, disturbances, egg timers	Testing basic models & innovating, easy, quick to test usability, organisation and functionality, new scenarios

HIL - Design games

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- Examples of boundary objects, contrasting results



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HIL - simulations

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- **design and simulation workshops with a user group**
- scenario-based table-top simulation
- concept for future **spatial layout, work organization**
- time efficient, easy to use for all participants



Evaluations &
involvement of users

Evaluation can lead to
innovation

Usability briefing new model

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Model from a paper, under review in 2016 for
Co-Design International Journal of CoCreation in Design and the Arts

Conclusions

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Usability Briefing

- Usability focus not just in evaluations but in briefing and design
- Briefing is not one phase, but continuous process with changing focus.
- Allow briefing and design to interact with one another

Users

- Involve users actively during the process, continuous user presence throughout all phases
- Co-creation of design with users at participatory workshops

Evaluations

- **Evaluations** - not just at the end of building process, but also at front-end, integral part of the process
- They give input to briefing and design;
- can also be participatory, i.e. simulations.



Aneta Fronczek-Munter

Post Doc at NTNU

PhD from DTU - CFM

Architect M.Sc. Arch. Eng.

aneta.f.munter@gmail.com

Workshop

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- groups discuss the statements in 3 themes:

Usability

- No good architecture without usability
- Usability for now contradicts flexibility for the future

Users

- Today's users cannot predict future demands
- Happy users mean usability of facilities

Evaluations

- Evaluation is looking backwards and therefore does not lead to innovation
- Usability has to be designed based upon evaluations