Where does visualization meet user-centred design? Exploring the tension between innovative design ideas and user preferences and innovation.

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What is the problem?

• We expect the great design ideas to show up as evidence of a bright idea from the “exceptional designer”
What is the problem?

• There is no such thing as a bright idea that comes from nowhere, simply based on inspiration.
• Most ideas are iterated several times and comes out of hard, (user-centred) design work.
• “It is not inspiration – it is perspiration!”

Framing the problem

• Today users become more and more engaged in finding new solutions to their problems.
• New solutions leads to new knowledge that leads to new ideas
User-centred design ≠ Usability engineering

- Usability engineering – an engineering process where evaluation is in focus
- The tension between the usability field and design oriented development

Definition of User Centred Systems Design

“User Centred Systems Design is a process focusing on usability in the entire development process and further throughout the system life cycle. It is based on the following key principles:”

User-Centered Systems Design is a process

**Vision**
- initial concept
- business objectives and goals
- plan for UCSD

**Analyze**
- requirements and user needs
  - users, users’ context and scenarios
  - users’ needs, usability requirements and design goals

**Design for usability**
- by prototyping
  - conceptual design
  - interaction design
  - detailed design

**Feedback**
- plan the next iteration
  - suggestion for changes
  - project planning based on the outcome

**Evaluate**
- use in context
  - evaluate early and continuously
  - measure usability, business and effects

**Construct and deploy**
- continuous focus on users and usability
- usability testing and monitoring
Distorted visualizations
Conference visualization (Jofish Kaye)
Studying how doctors make use of the Medical record and what happens when these routines are computerized.

From E. Nygren – The art of the obvious. Presented at CHI 1992
Myocardscintigraphy

Recipie: Omelet +
+ Technetium 99m

From E. Borälv, Uppsala university
User-centered visualization in practice
Komplexa dynamiska styrsituationer
Insitutet för IT Kurser i människa-datorinteraktion
Summary and take-away message

• It doesn’t take an exceptional designer to create usable information visualization

• An iterative process successively bring you closer to the desired visualization

• Users are valuable resources in the design process, even for visualization