# MOBILE INTERACTION DESIGN RESEARCH from usability to user experience

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### Usability

- Usability beskriver kvaliteten af et interaktionsdesign
- Brugeren forhindres eller sinkes i at realisere hensigten/målet med at anvende systemet.
  Forhindringen er oplevet af en konkret bruger

- Interaktive systemer som er brugbare er:
  - Let at lære
  - Let at huske
  - Effektivt at bruge
  - Forståeligt
  - Tilfredsstillende at bruge

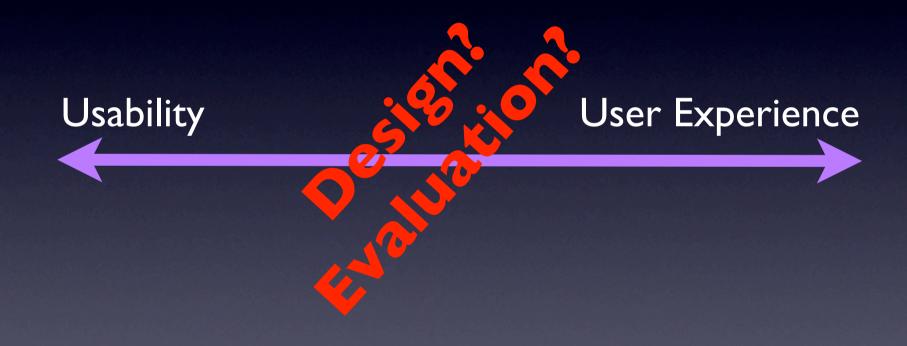
### User Experience

engagement is identity, adaptivity, narrative, immersion, flow

pleasure is physio-, socio-, psycho- and ideo-pleasure



#### From Usability to User Experience



#### Lab vs. field

#### **Field studies**

- Realistic use context
- Difficult to control
- Complicated data collection
- Complex and time consuming
- Safety and ethical issues

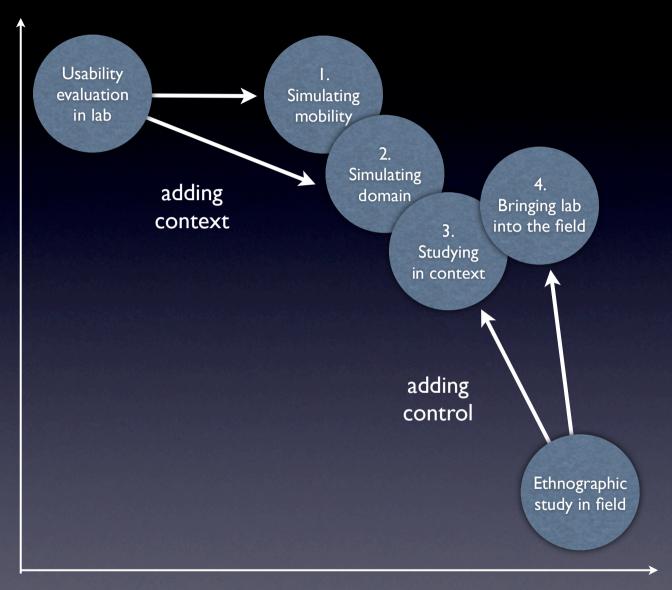
#### **Laboratory studies**

- Experimental control
- High quality data collection
- Lack of realism





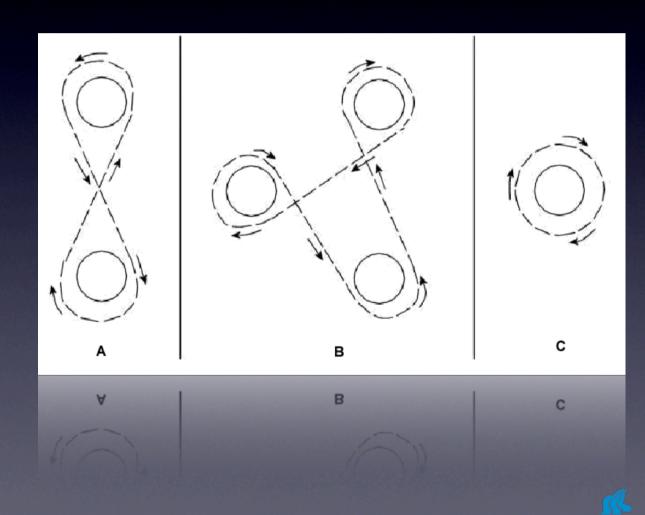
#### Control



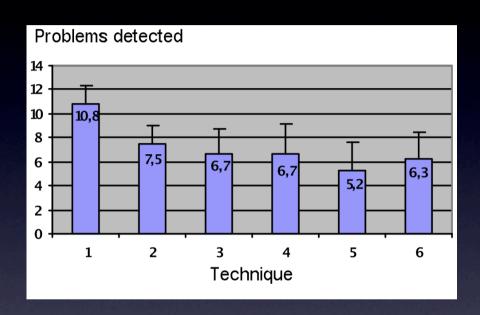
Ecological validity



# Simulating mobility



#### 6 techniques compared



- 1. Sitting at a table
- 2. Walking on a treadmill with constant speed
- 3. Walking on a treadmill with varying speed
- 4. Walking at constant speed on a changing track
- 5. Walking at varying speed on a changing track
- 6. walking in a pedestrian street

- More usability problems found on average when seated at a table
- Physical mobility in the lab triggered identification of unique interaction problems also found in the field
- Added value in relation to e.g. layout and button sizes

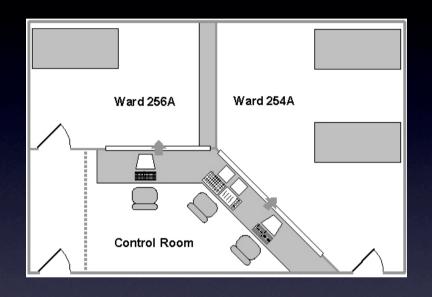
### Simulating the domain

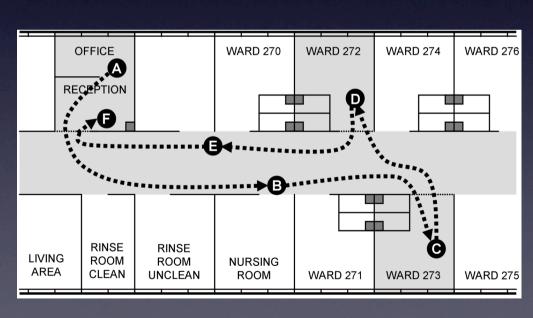






## example: a hospital ward



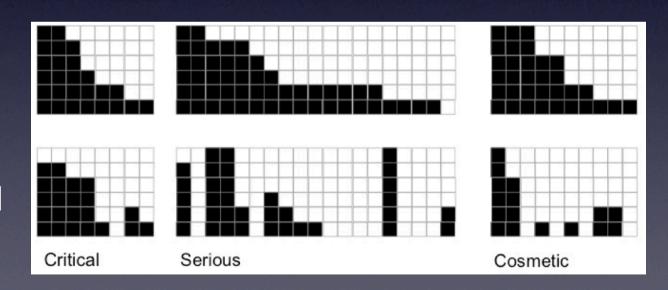


#### How well did the simulation work?

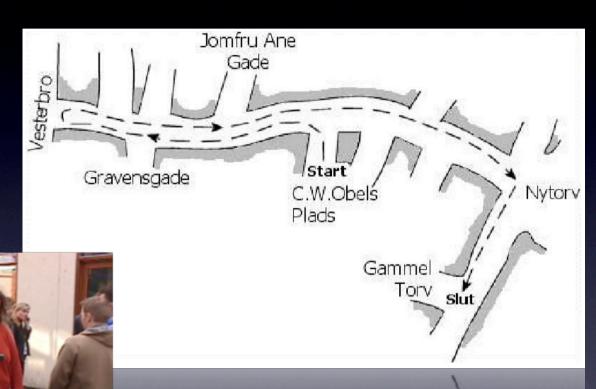
- Very well at least not for usability problem identification
- However, the field provided additional information on real world user experience

Simulated ward

Real ward

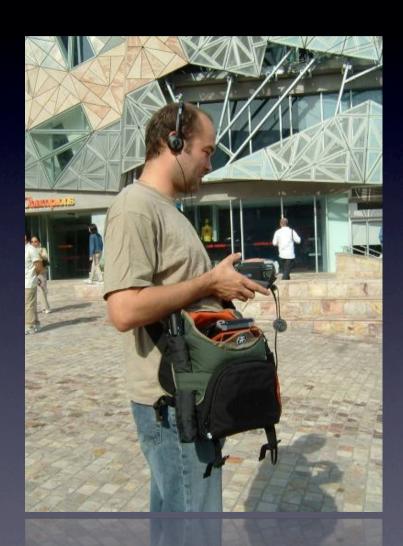


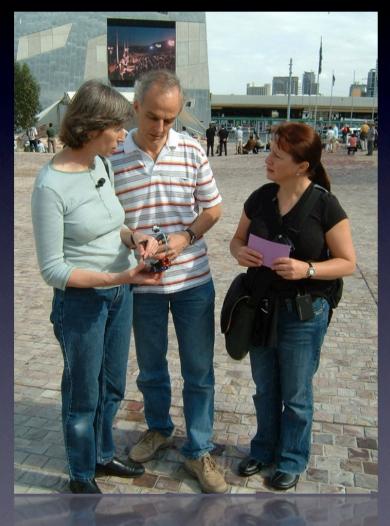
# Studying in context



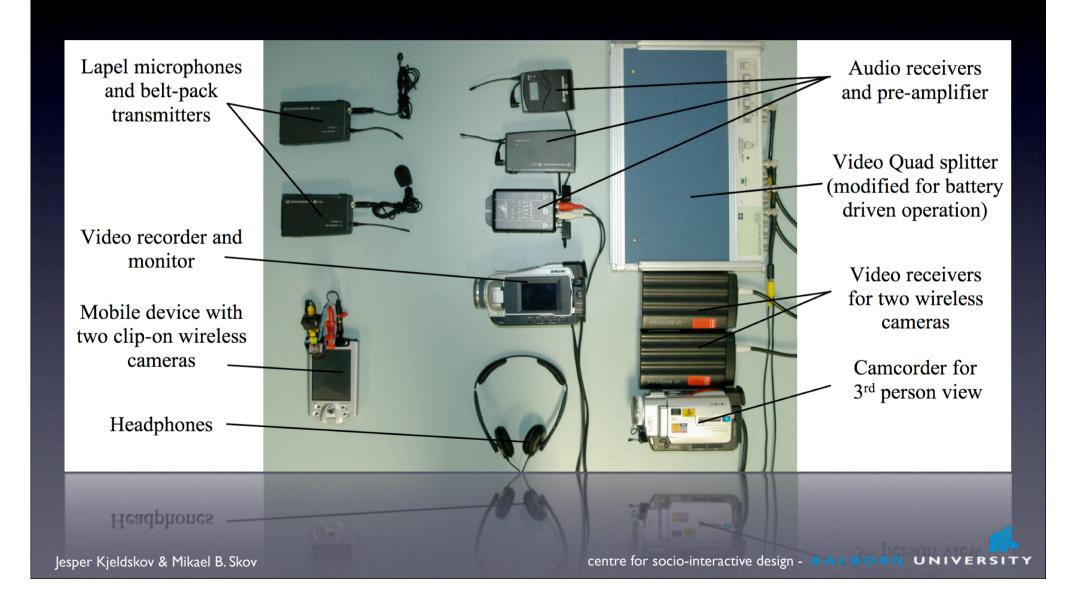
- Recorded with a camcorder
- Difficult to capture good images of screen
- The "bodyguard" effect

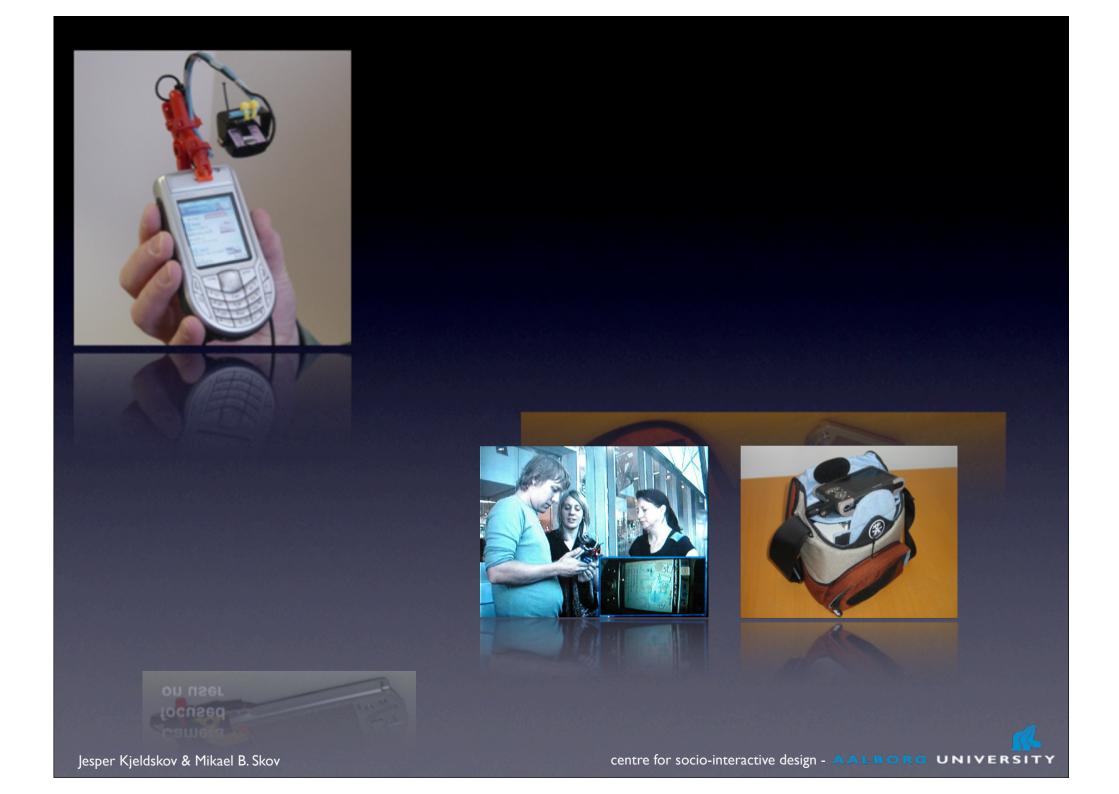
# Bringing the lab with you





### Lab = a lot of equipment

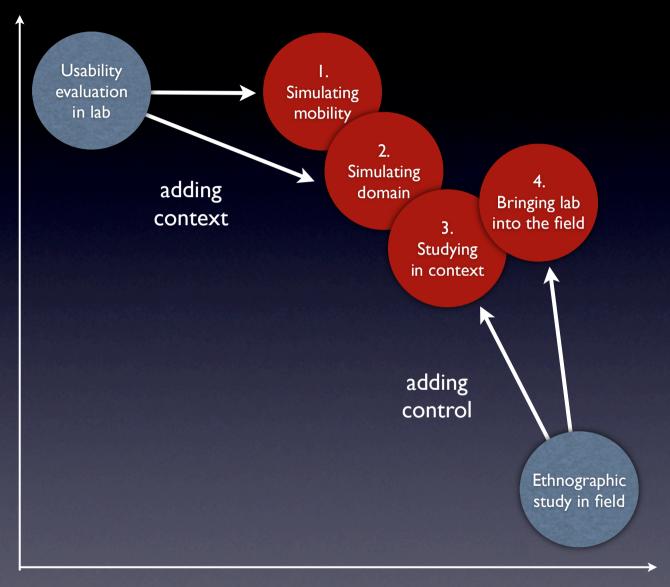




### Bringing the lab with you

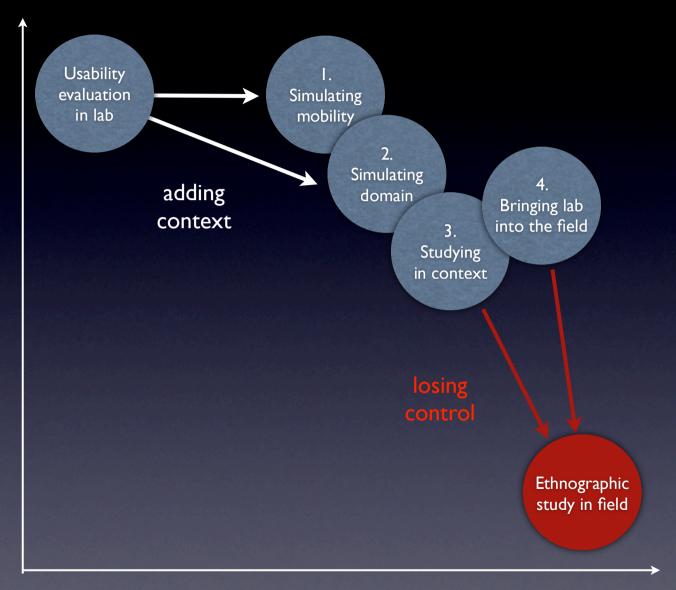
- 2 kg and measuring 18x14x25 cm
- Facilitating high-quality data collection
- Facilitating control and realism
- Still restricted to traditional "snapshot of use" methods

#### Control



Ecological validity

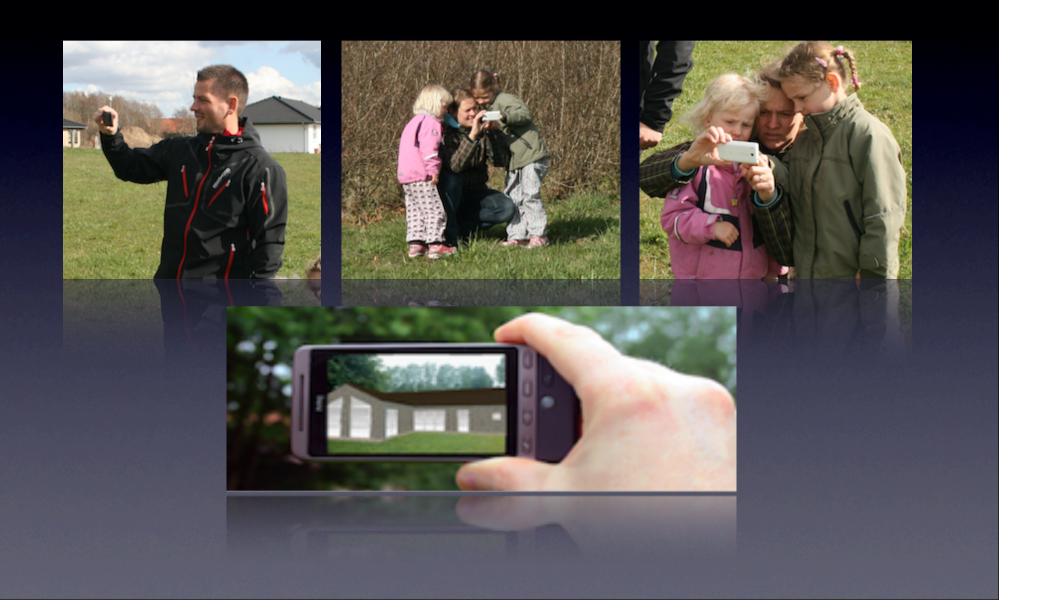
#### Control

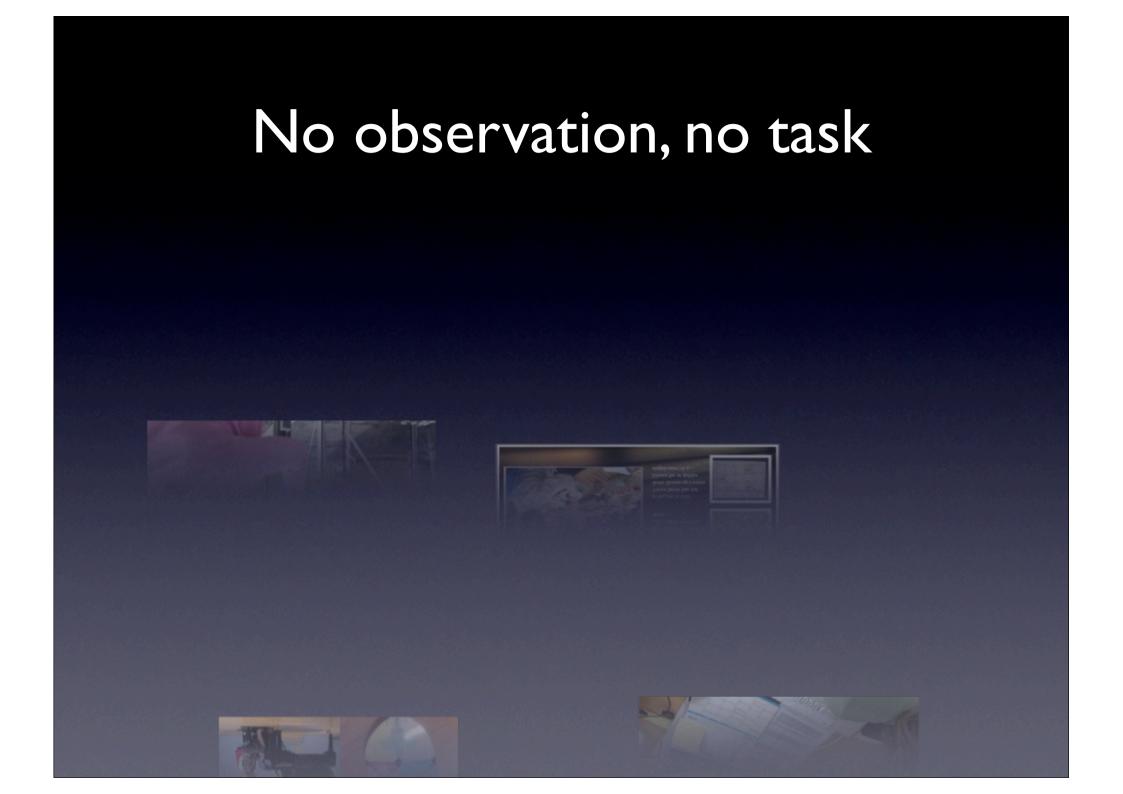


Ecological validity



### Observation, no Task





#### From Usability to User Experience

Usability

User Experience