

CS-E5250 Data-Driven Concept Design

Concept Design: Visualization and Validation

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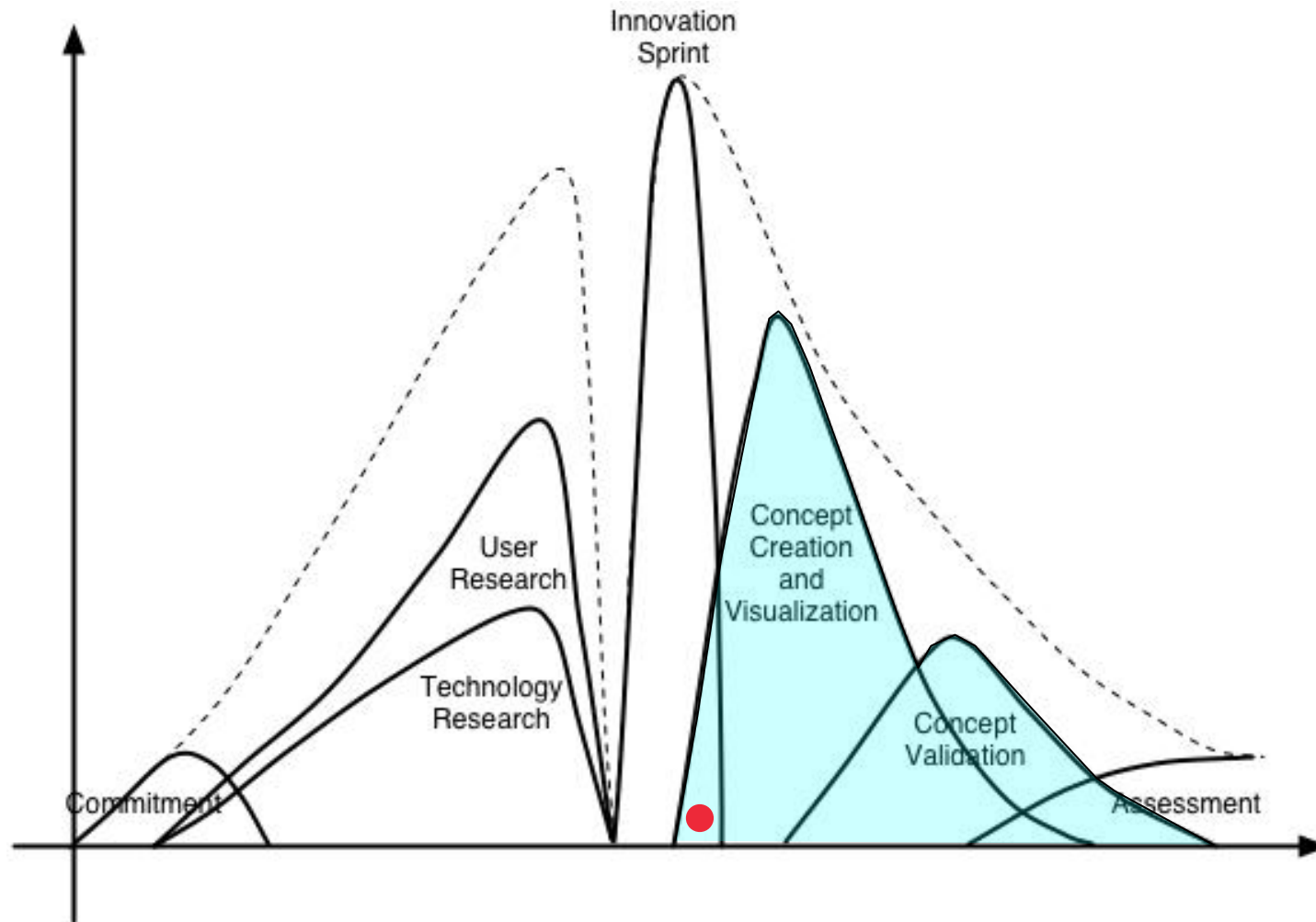
Agenda

- Learning outcomes
- Concept Design: Visualization and Validation
- Prototyping
 - Low Fidelity Wireframing
 - High Fidelity Prototyping

Learning Outcomes

- After this Assignment:
- You know how to create product and service concepts and develop select parts into visualised prototypes of various fidelity.

You are Here !

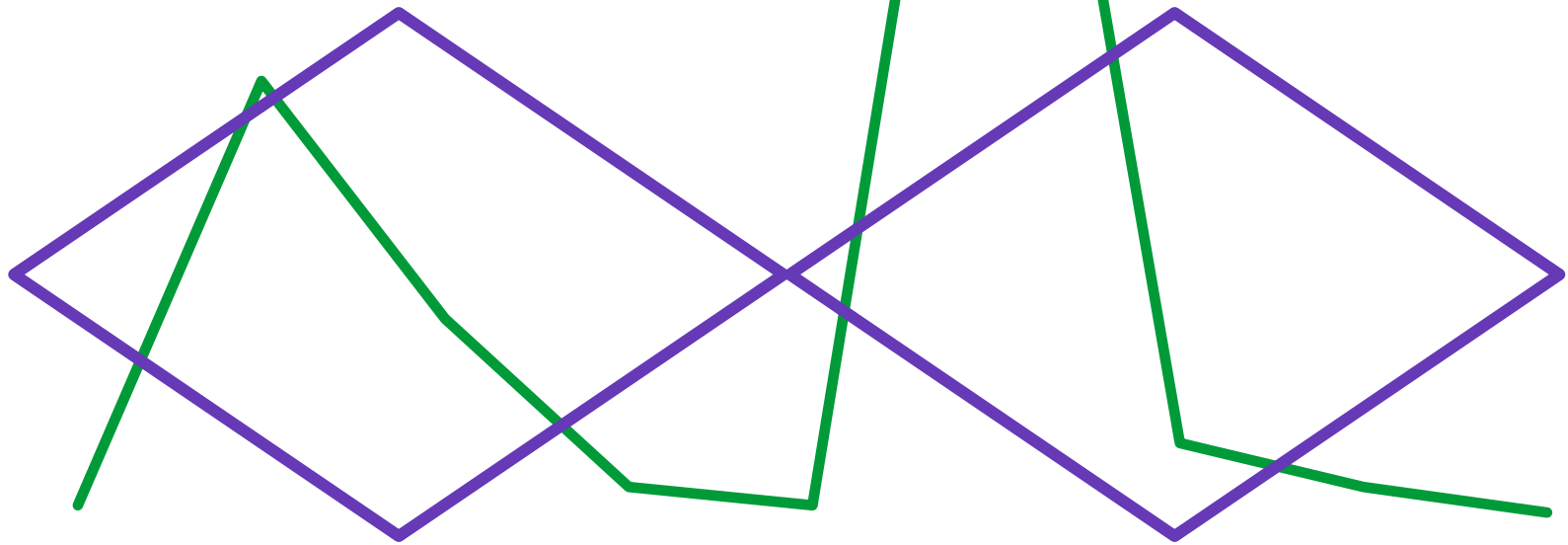


Nieminen, M.P., Mannonen, P., 2006. User-centered Product Concept Development, in: International Encyclopedia of Ergonomics and Human Factors, 2nd Edition. CRC Press, Boca Raton, FL, USA, pp. 1728–1732.

Concepts and Concept Candidates

- Concept is a complete product or service
- Document all created concepts, especially dropped or failed cases, and the process
 - Not all ideas make it to concept candidates and not all candidates get full blown visualization, but the killed ideas must be explained in enough detail to understand why they lost the game
- Consider the extremities of you Concept portfolio.
 - Sometimes the worst come out first

Quantitative representation of user-centred concept design by its then-current active design components



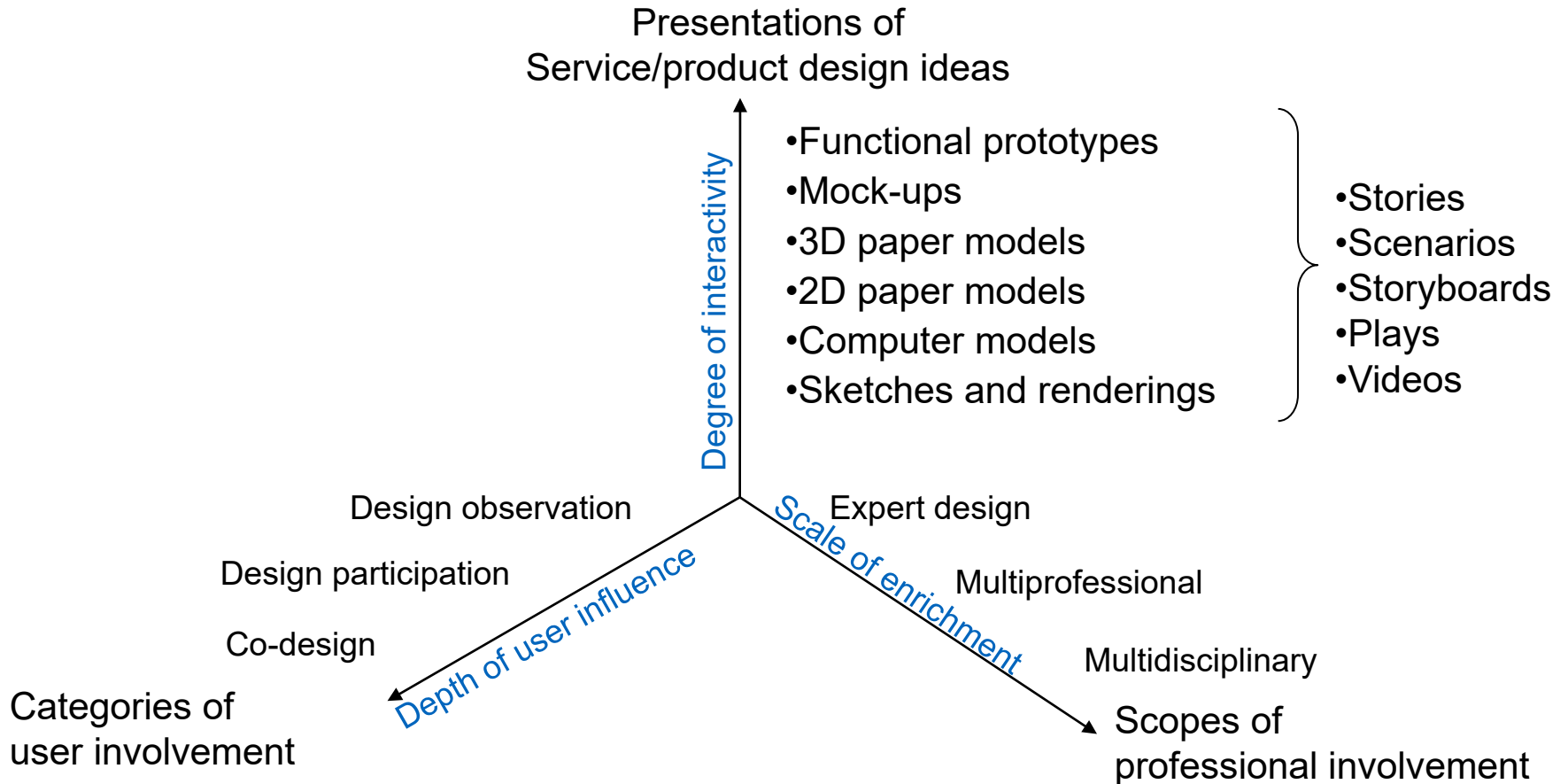
Design Brief	Research data units	Observations	Research results	Design Perspectives	Idea Generation	Idea Categories	Concept Candidates	Concepts
5	121	56	10	5	312	22	10	3

Why must I visualize the Concepts

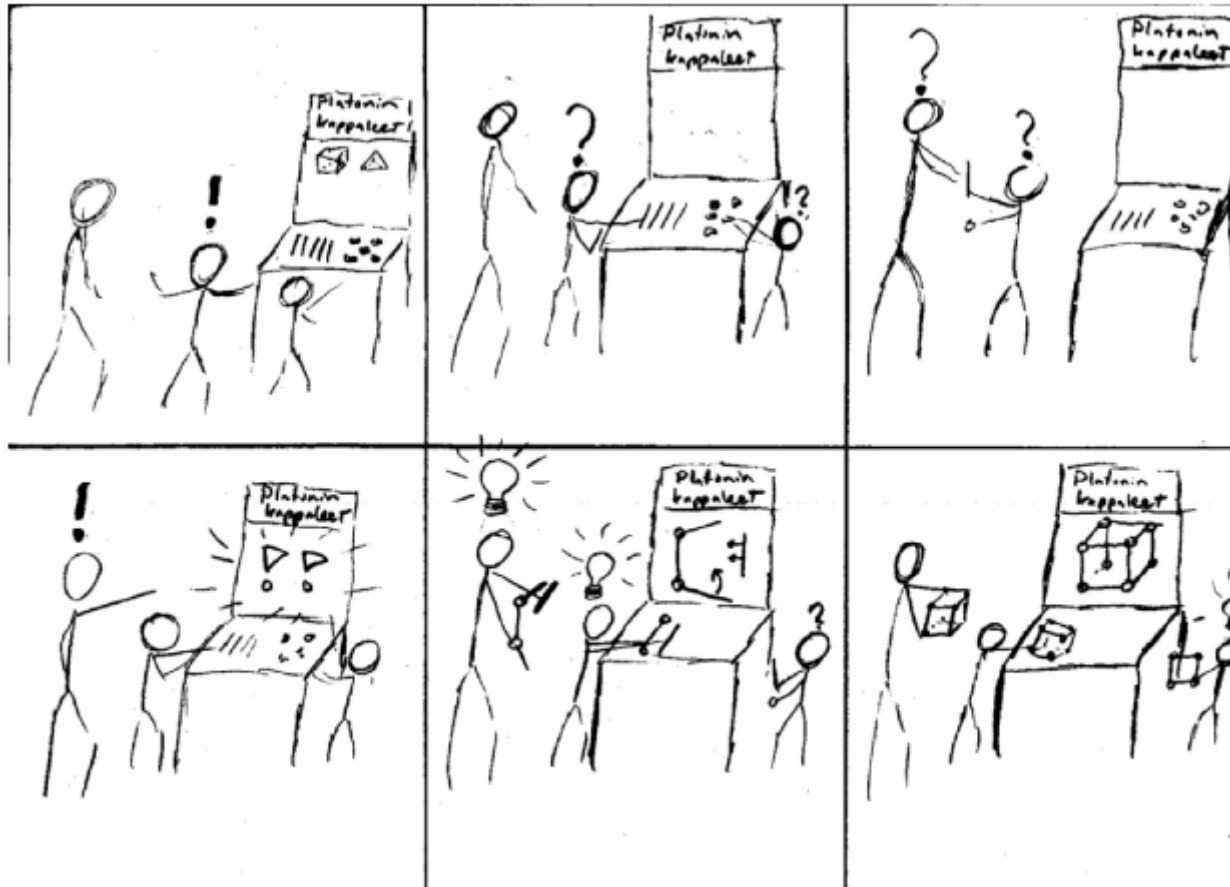
- Using several representations adds detail to the concepts
 - Designers spot the problems and get new ideas
- Only concrete concepts can be evaluated or validated
- In very rare occasions some of the work done on the concept can transfer to the final product (mostly not)

Ways to Visualize

Salovaara J. 2000 (adapted)



Examples: Scenario / Storyboard



Sarjakuva, jota käytettiin älykkäiden ohjeiden validoinnissa

Storyboard/Stop motion animation

InfoCircle



Heureka. Olin täällä viimeksi
pikku poikana. Paikka näyttää
hieman muuttuneen. Mitähän
täällä nykyään on?



i niin kuin informaatio.
Sitä tässä tarvitaankin.
Mitä kaikkea täällä
Heurekassa on ja mitä se
maksaa? Miten tämä
ympyrä toimiikaan?







Oho, kuulostaa
veisateelta! Eihän täällä
oikeasti sada!



Mitä valikossa onkaan?
Ilmeisesti näitä otsikoita
voi klikata. Planetario
kiinnostaa... Ja tietysti
näyttelyt.



Esitellään hämähäkkien
saalistustekniikoita Costa
Rican sademetsissä.
Ainakin tuo kolahtaa.



Tai tuo:
marakattiyhteisön elämää
Planetariossa! Minun
suosikkieläimiä!



Mitäköhän tämä lysti maksaa? Hinnasto-otsikon alta löytyy varmaan se tieto.



Tämä hinta ei ole paha,
jos on näin paljon
mielenkiintoista.
Ehdinköhän edes käydä
läpi kaikkea.



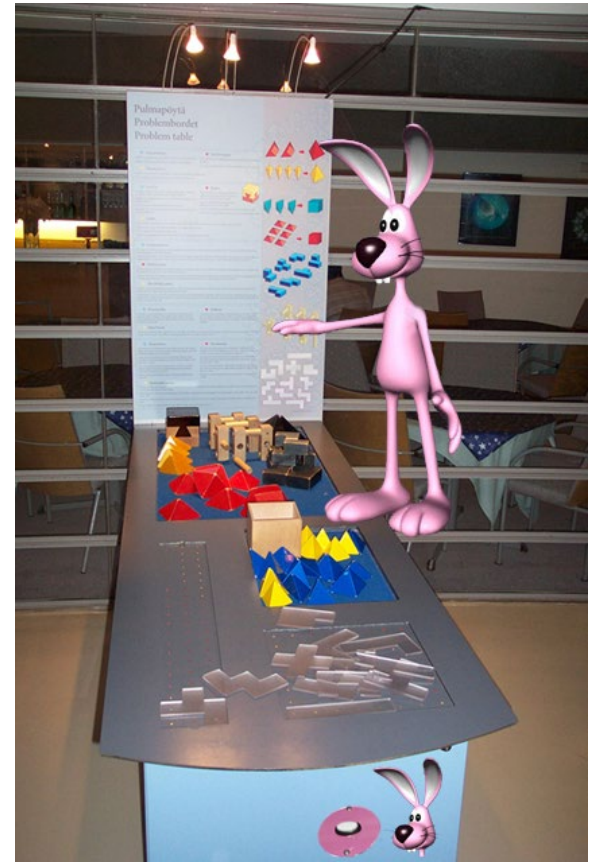
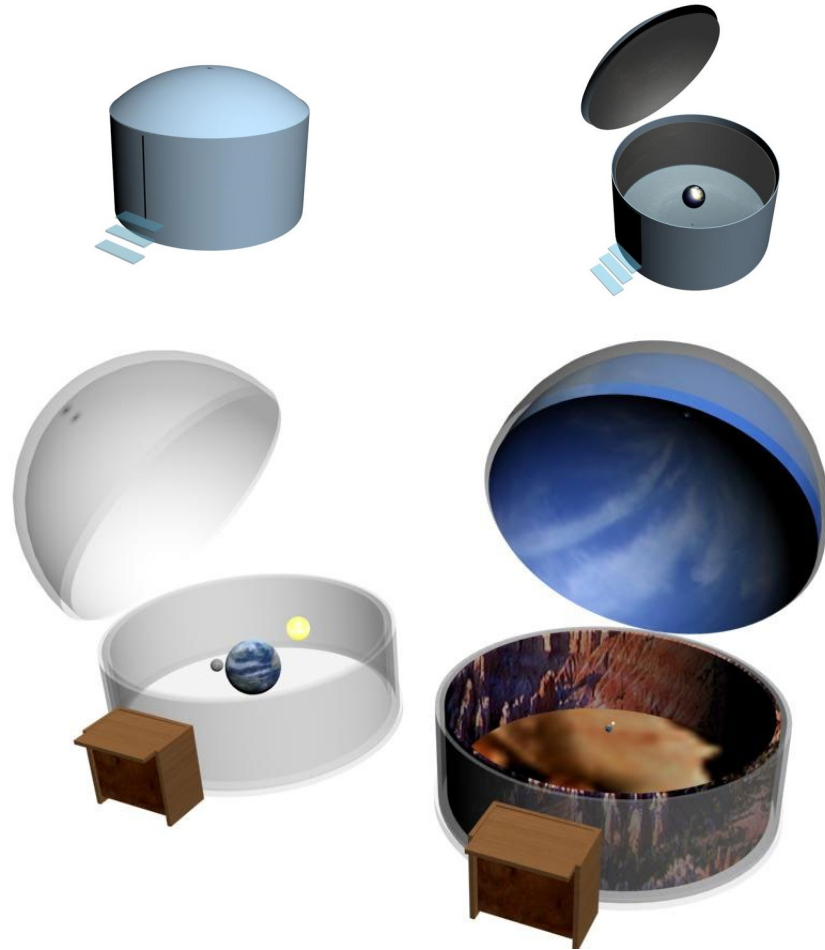
Taidan pärjätä
näillä tiedoilla.



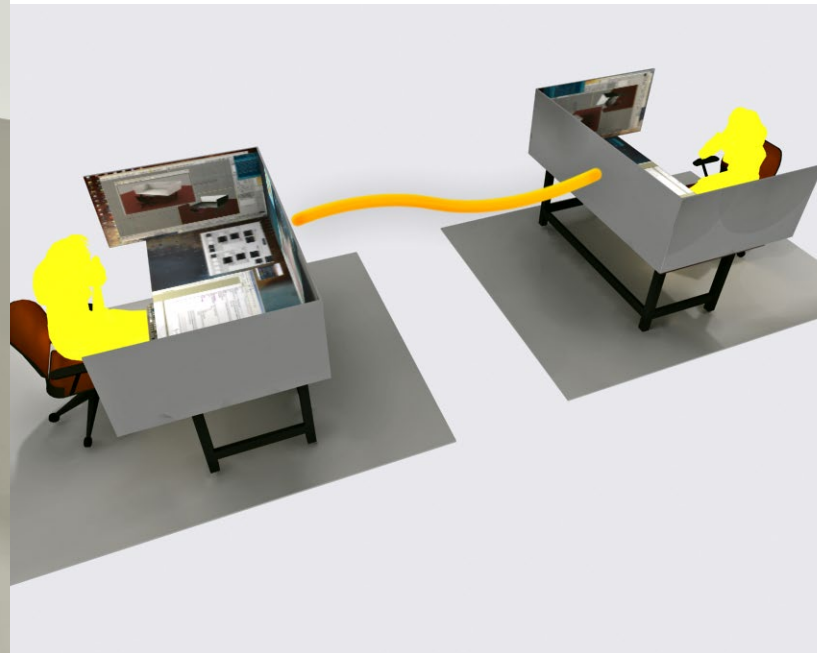
Collages / Moodboards



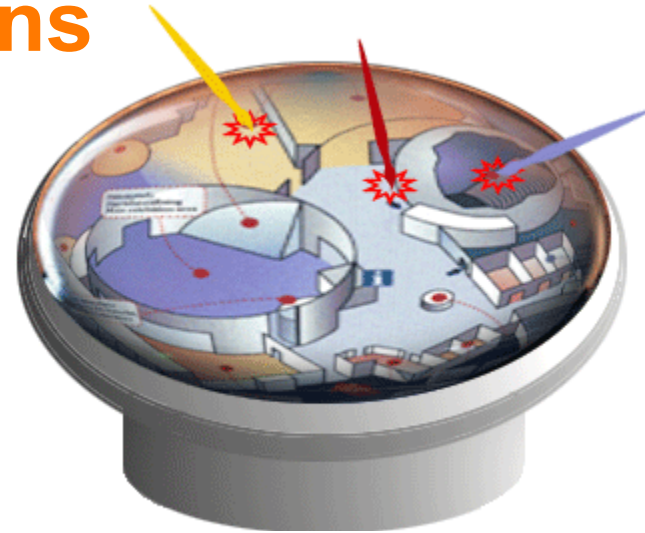
CGI Simulations / animations



3D illustrations



Example: 3D illustrations



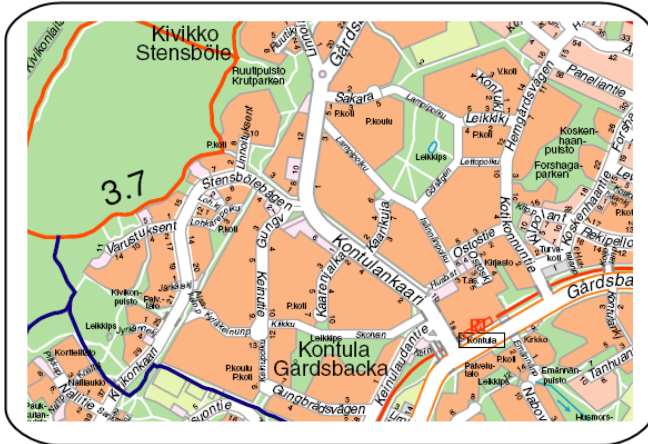
Movie / Play



Movie / Play



Paper prototypes, tangible prototypes



VOIT PIIRTÄÄ KYNÄLLÄ
UUDEN MATKAN KARTALLE

MATKAN PITUUS km

TULOSTA REITTI

KIRJAUDU
SISÄÄN

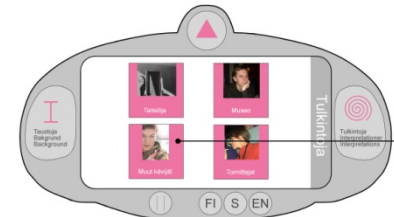
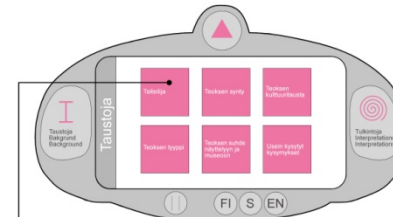
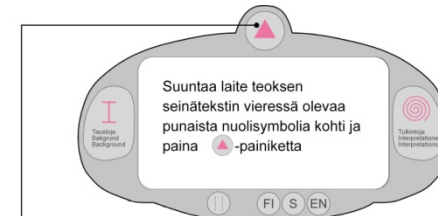


TOP 5 KÄVELY-YHTEISÖT

1. Vuosaari 8090 km
2. Kontula 7780 km
3. Itäkeskus 7327 km
4. Rajatorppa 6862 km
5. Huopalahti 6806 km

SUOSITUMMAT REITIT
TÄLLÄ ALUEELLA

- 5156 m NÄYTÄ
- 8805 m NÄYTÄ
- 7300 m NÄYTÄ
- 15560 m NÄYTÄ



Paper prototypes, 3D prototypes



Functional prototypes

DRINKit 

>> Etsi drinkki

Vapaa haku

Hintaraja euroa

Alkoholipitoisuus

Väri

Kotimaa/-alue

Lasi

Blandis

Alkoholi




Functional Prototypes

RAHAT: **0.00** e VOITOT: **0.00** e

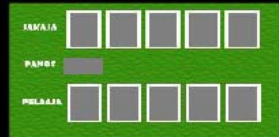
Valitse arpa

Superarpa




20c

Hyperarpa



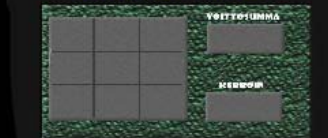
50c

Giga-arpa



1e

Mega-arpa



1,5e

OHJE

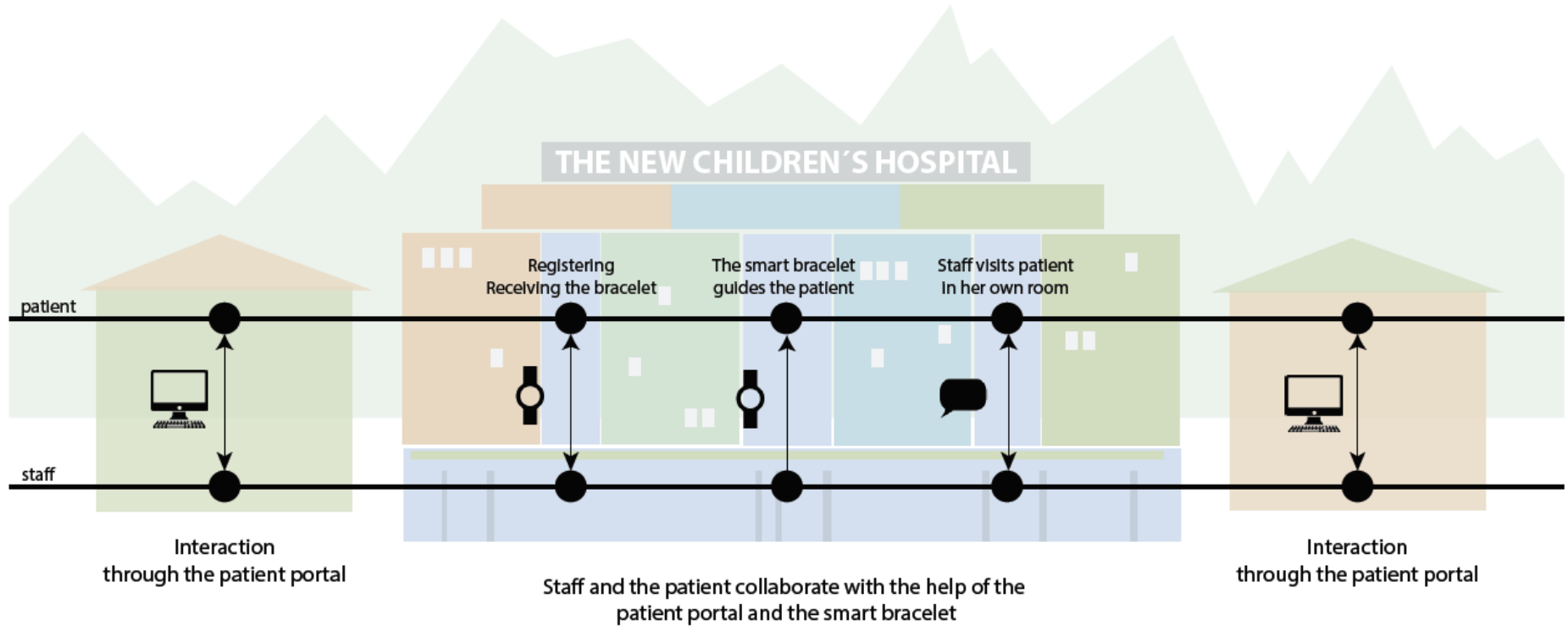
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Mega-arpa



OHJE **TARKISTA VOITTO**

Customer Journey Map





Aalto University
School of Science

T-121.5350 Strategic User-Centred Design

Concept Validation

Why must I validate the Concepts?

- To assure your research has identified and interpreted the users' needs correctly
- To assure that the concepts fit the users (not the designers)
- Both qualitative and quantitative data can be gathered
- Validation is the justification for the finalization, presentation and possible continued development of the concepts

Validation is ...

- Validation can be understood as two way communication between the design team and user during product concept development process.
- Medium for this communication are stories with various level of visualizations, like sketches, renderings, storyboards, plays, computer models, 2D and 3D paper prototypes, mock-ups, and finally functional prototypes.
- The detailing and quality of visualizations is improved the further the development process goes. However, all the different levels are used all the time.

Concept Validation ≠ Usability Evaluation

Usability Evaluation Methods

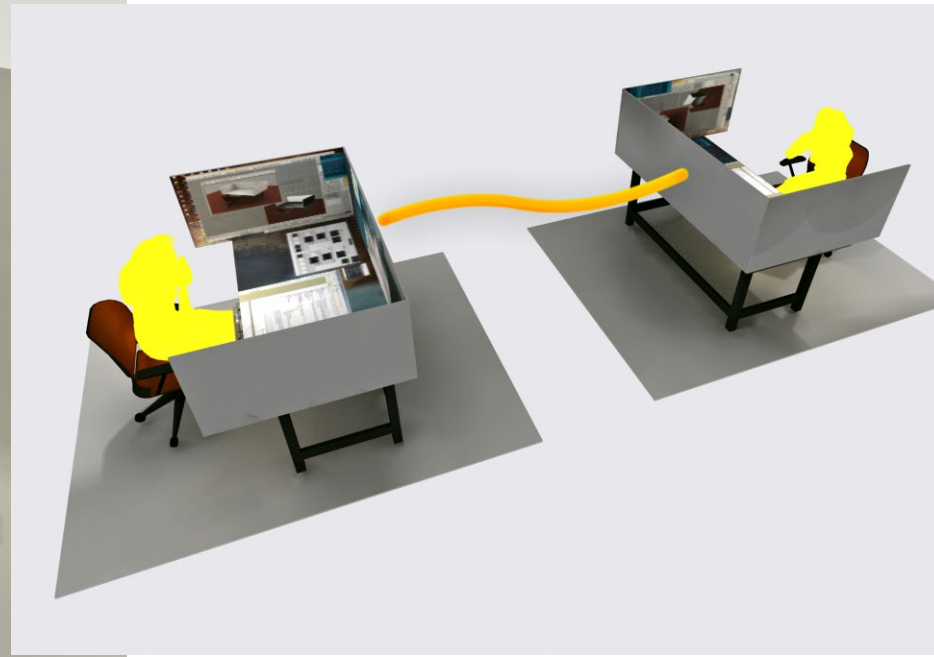
- Usability inspections
 - Heuristic evaluation
 - Standard reviews
 - Cognitive walkthrough
- User Testing
 - Usability test
 - Pluralistic walkthrough
 - Observation
 - Interview, questionnaire and survey

In validation especially WOZ

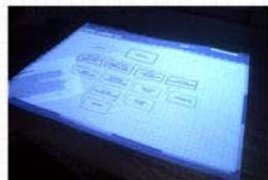
Connecting with the users

- Make it easy for the users to give feedback
 - Master & Apprentice (Beyer&Holtzblatt, 1998)
- Don't PUSH your agenda, but PULL the users' thoughts
 - Avoid good/bad judgements, ask for descriptions
 - Try to find opportunities to improve the concept
- Both old and new users can be used
 - No, that does not refer to their ages...

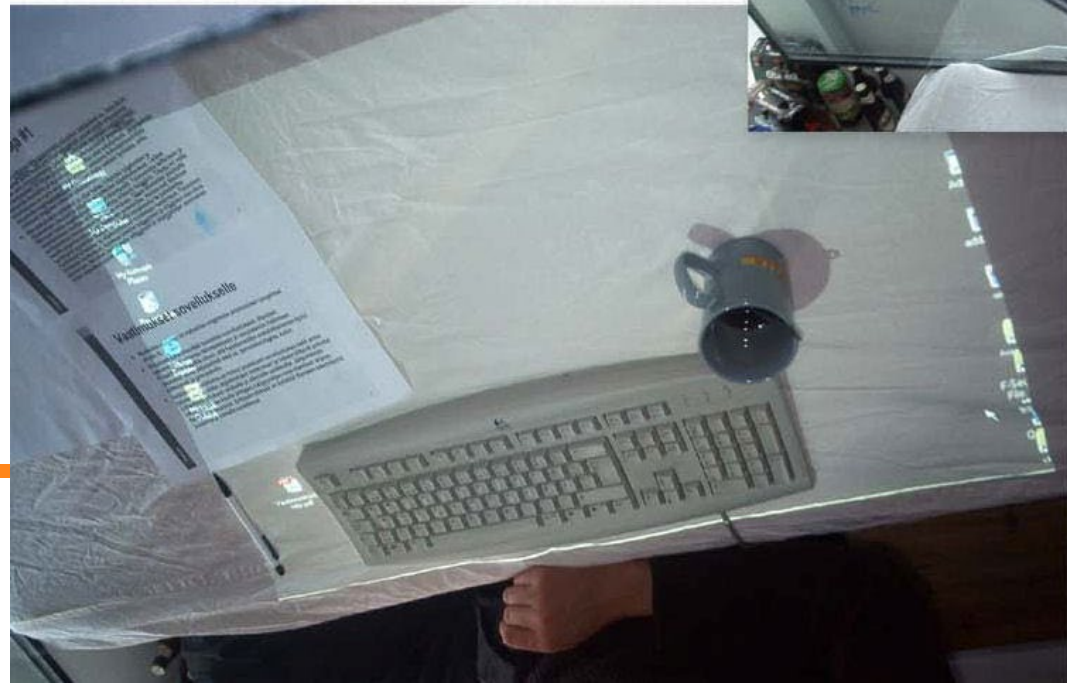
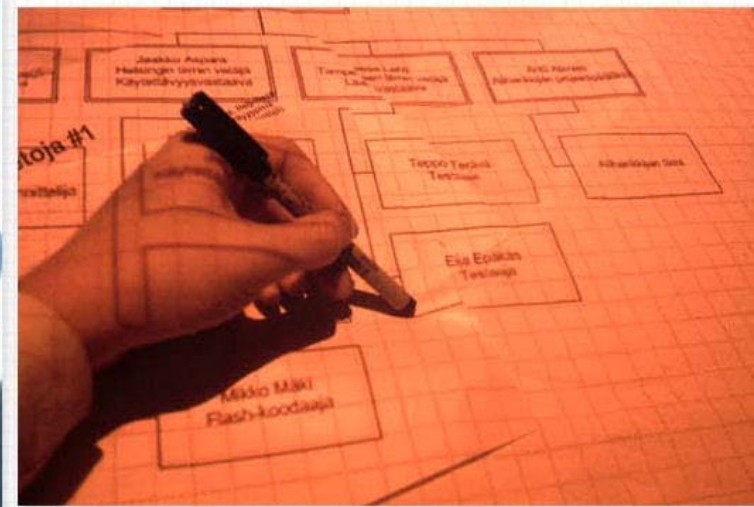
Examples iCubicles virtual workstation

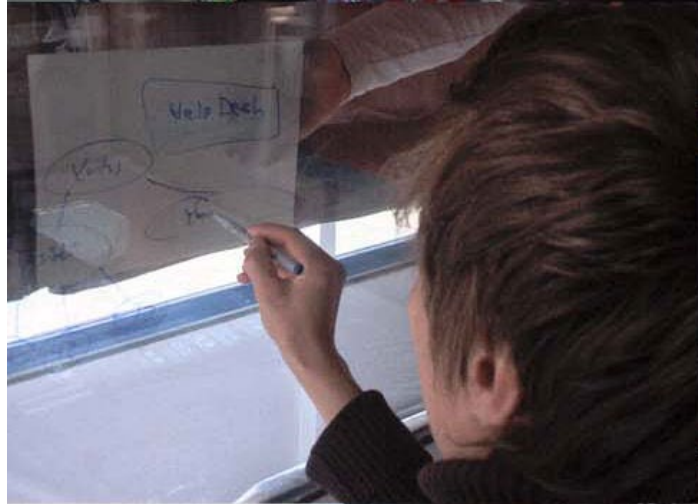








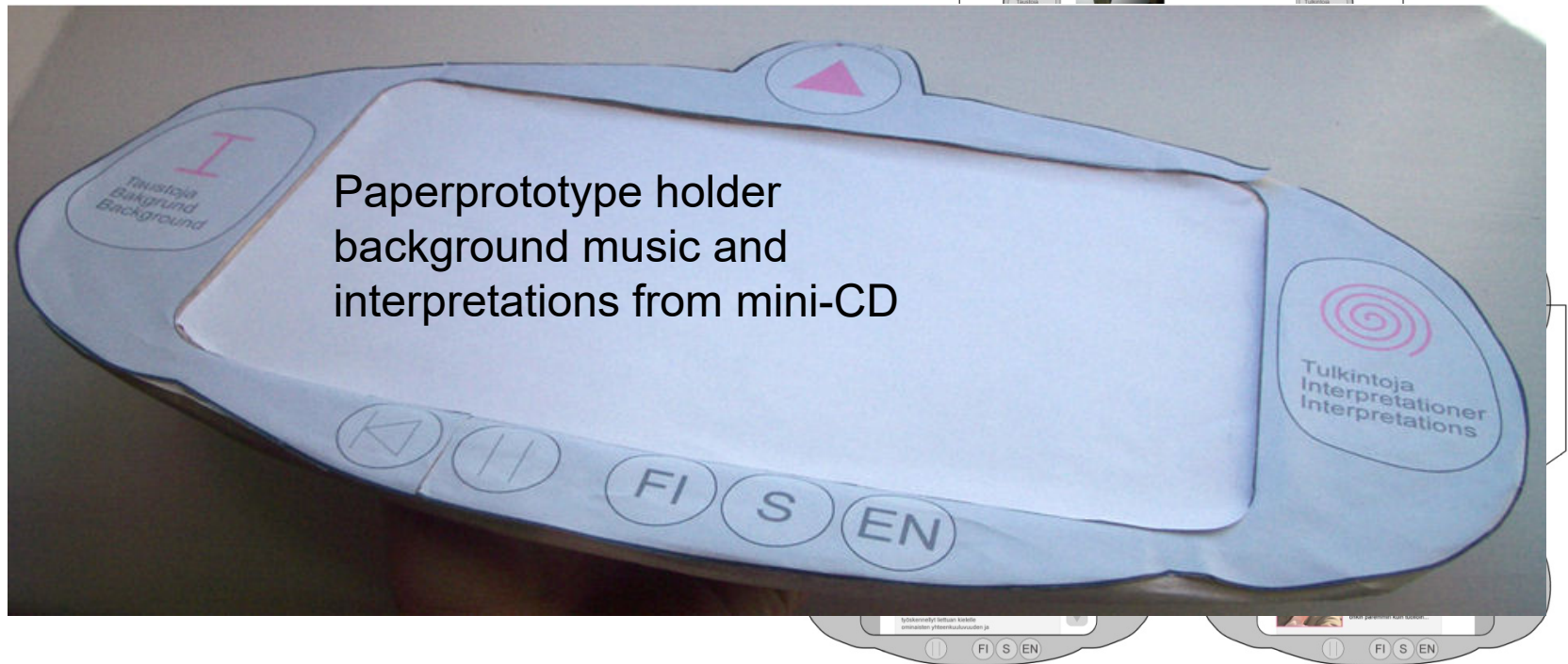






Examples

- Kiasma Guide



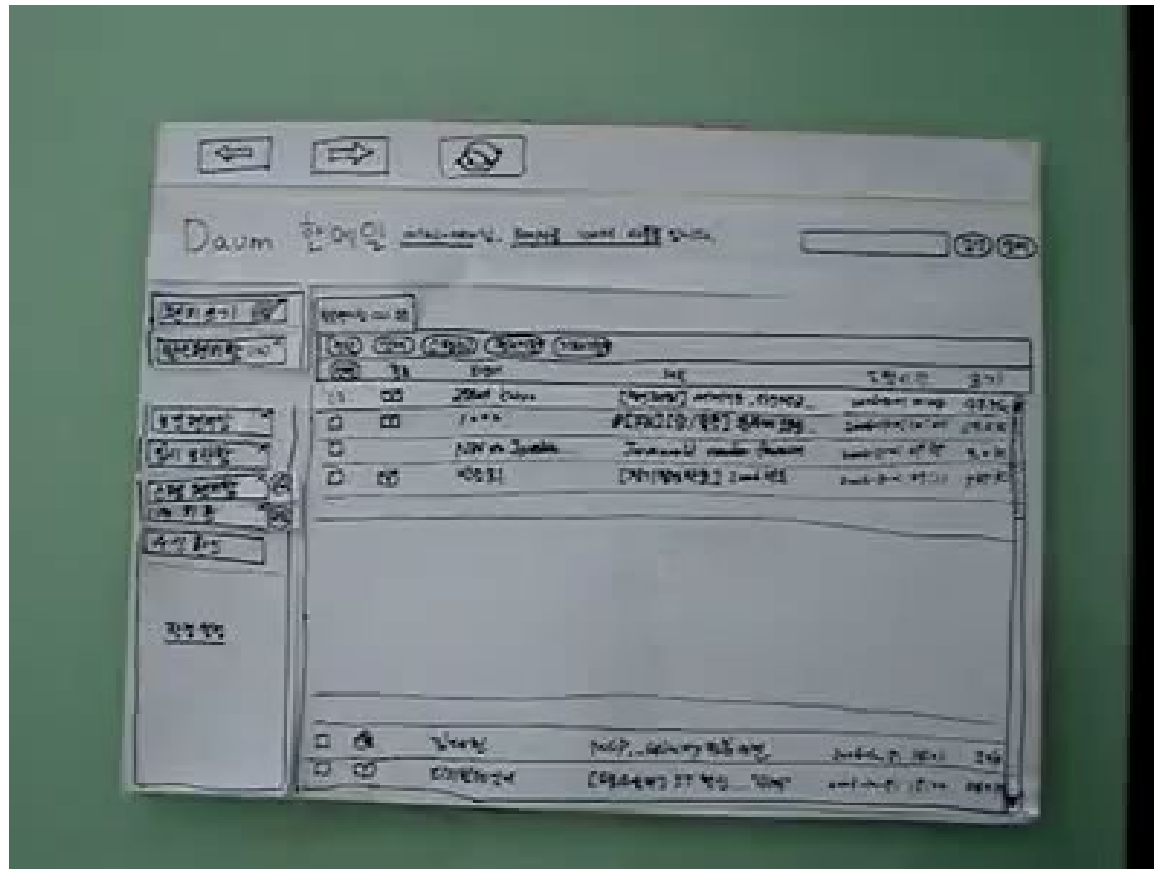
Paper prototypes



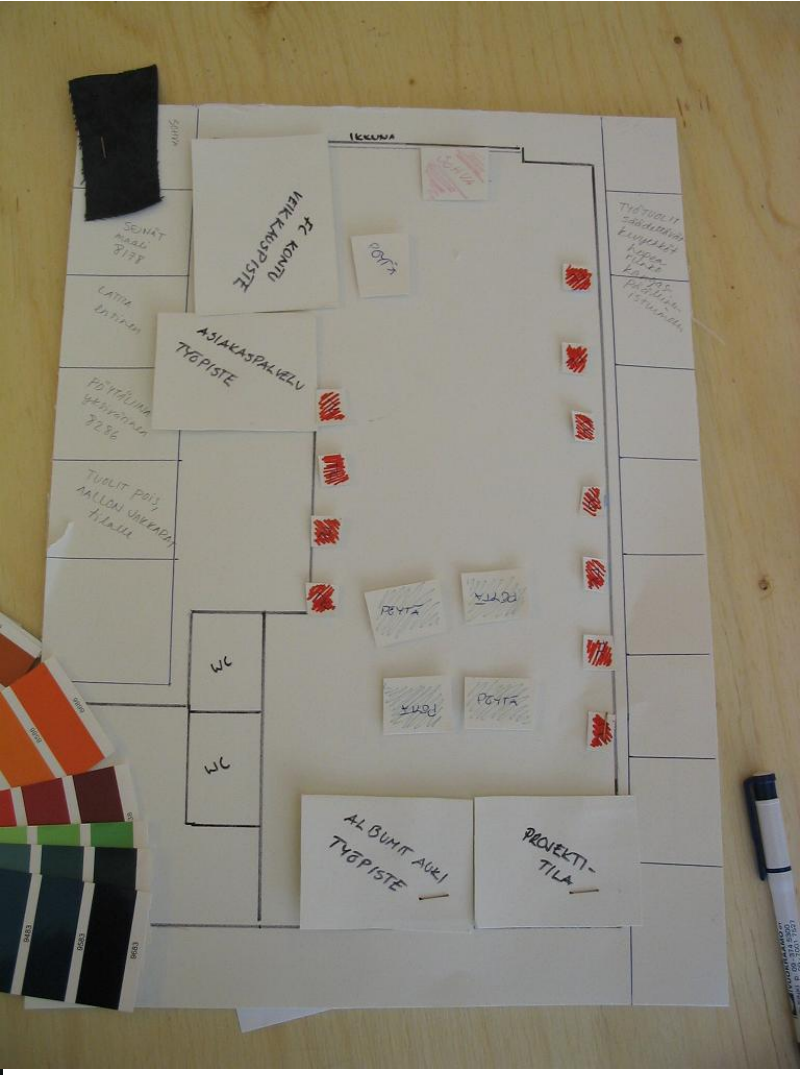


Development after validation
'Foot prints' should be added or circle should be more illuminated?

Paper prototype of an web email



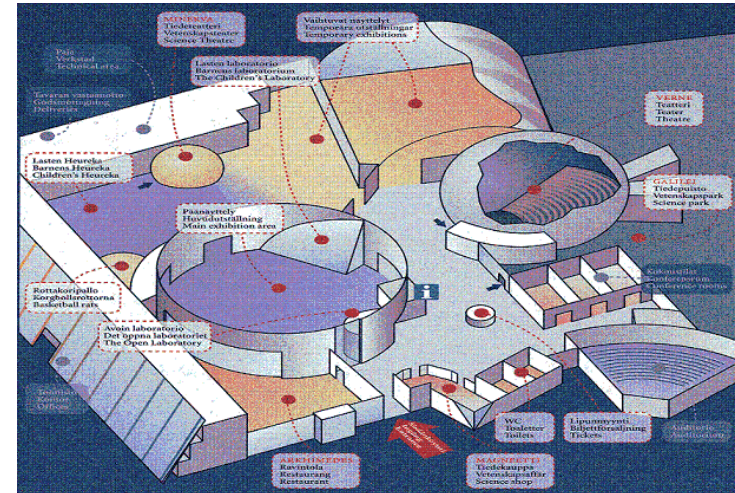
Kontu-Piste Interior



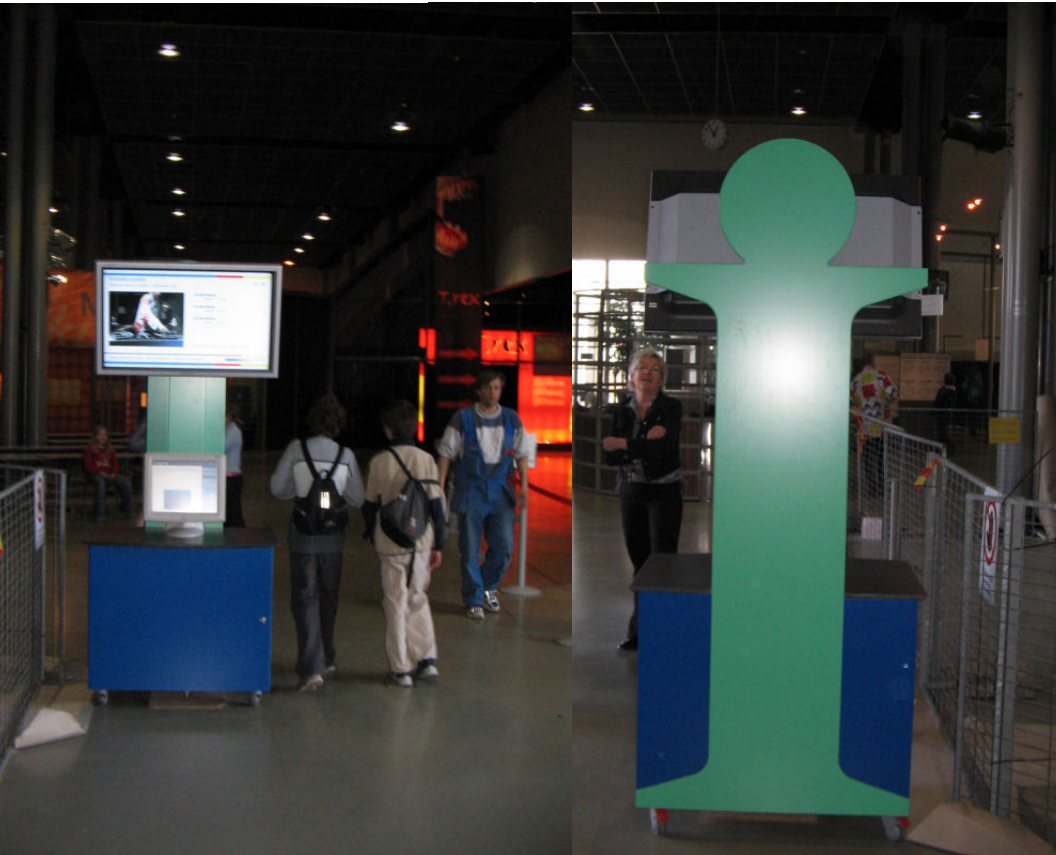
Heureka Now



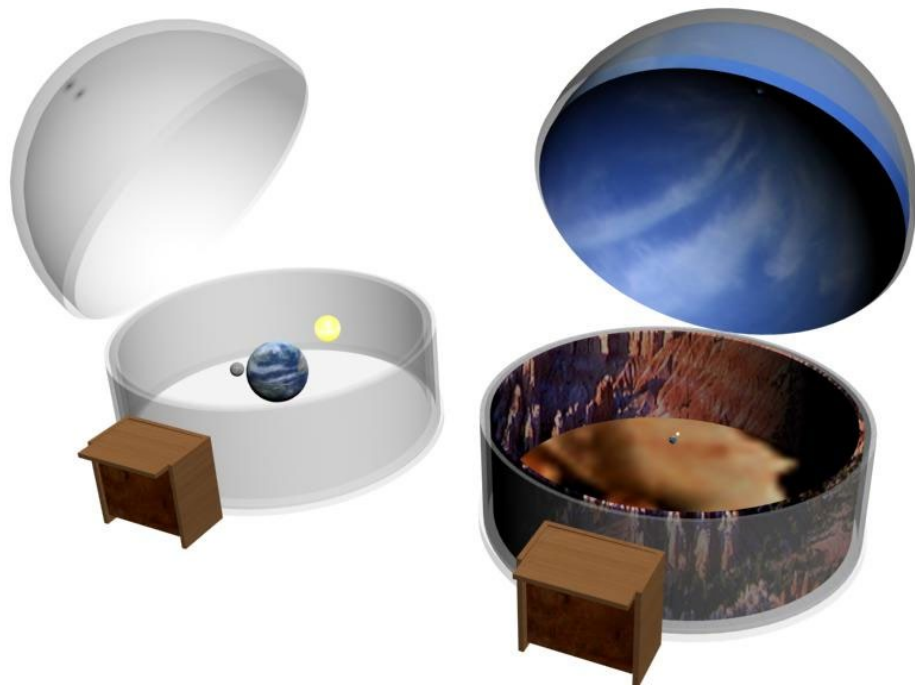
HNow validation



...and the real Heureka infoteller a.k.a. Hopastin



Heureka: Travel the Globe



Mega-Scratch Lottery

RAHAT: **0.00** e VOITOT: **0.00** e

Mega-arpa

VOITTOSUMMA

KERROIN

x2

OHJE **TARKISTA VO**



Windshield and Swipe&Touch validations

