

Active on Wheels

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Stakeholders

- Sunnaas Sykehus HF
 - Matthijs Wouda (project owner)
 - Physiotherapist, Head of Clinical Physiological Laboratory, PhD-Student
- Users
 - Wheelchair-bound people with Spinal Cord Injury
- UiO-IFI
 - Hani Murad (supervisor)
- Project Group
 - Brage Braaten
 - Kaitlyn Hua
 - Mona Andresen
 - Stian Jessen



UiO : **Institutt for informatikk**
Det matematisk-naturvitenskapelige
fakultet

Activity & Exercise apps

- Already exists many many exercise apps, for able bodied people
- Typically measure/calculate (estimate)
 - Pulse
 - Steps
 - Time
 - Expenditure (Kcal used)
 - Distance
- Not very useful for those in wheelchairs
 - Calculations and information given is way off
- That's why we're working with Matthijs to create a design for his



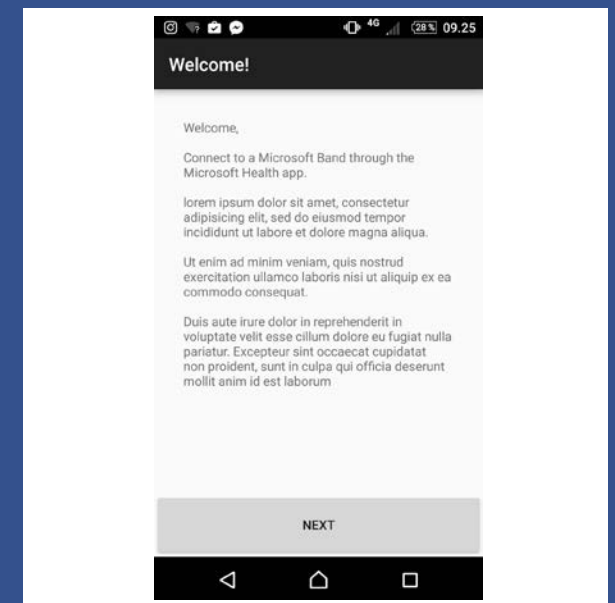
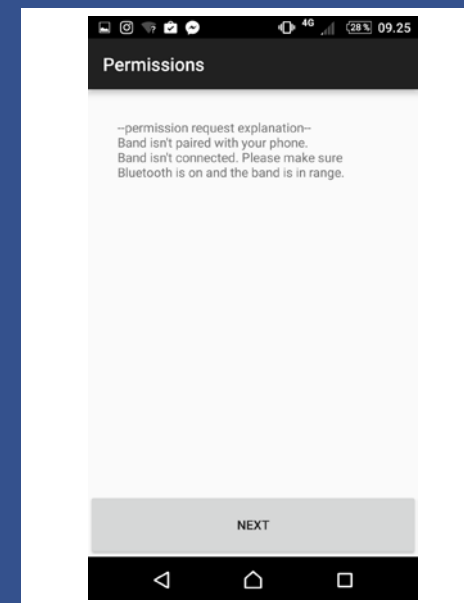
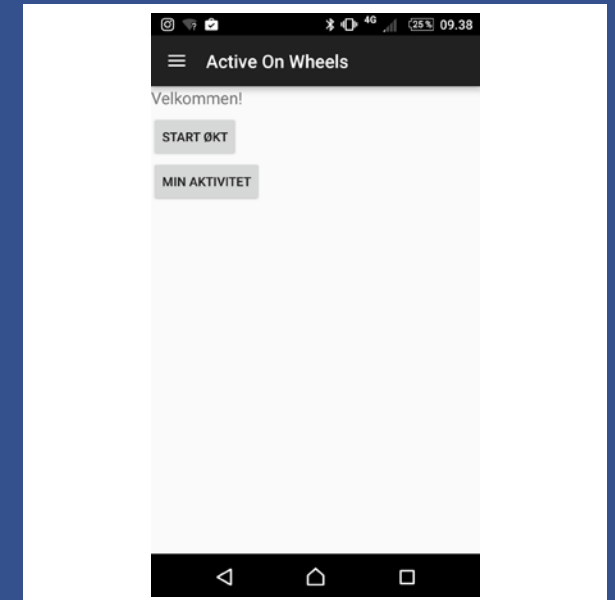
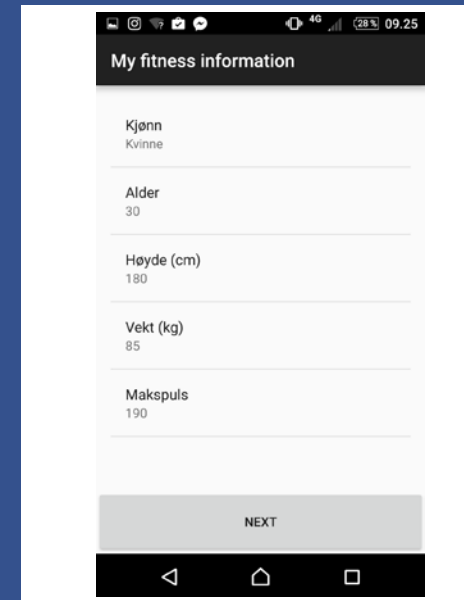
Activity and exercise app for Wheelchair users

- Combines three devices by Bluetooth
 - Android Smartphone
 - Microsoft Band
 - POLAR Heart rate monitor
- Makes it possible to
 - Accurately estimates energy expenditure and workout intensity
 - Provide accurate information during and after workout
 - Track progression and goal achievements over time




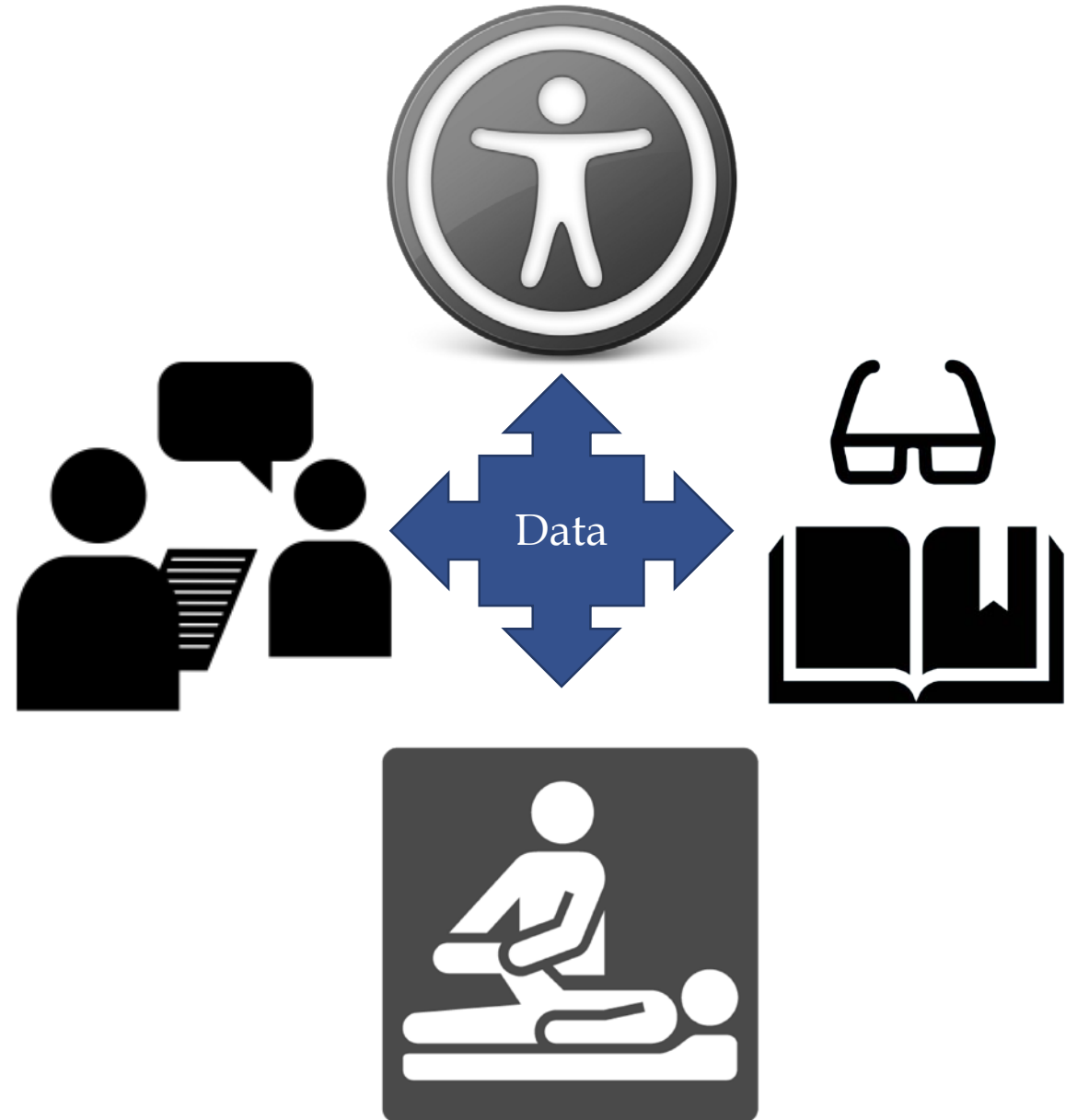
What are we doing?

- Today the app looks like this
- Not really that interesting or cool
- We are changing that by creating a totally new fun, motivating and immersive design for the app



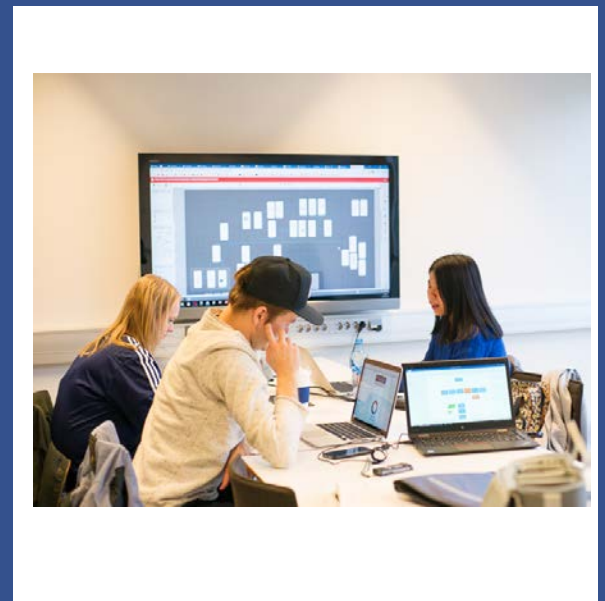
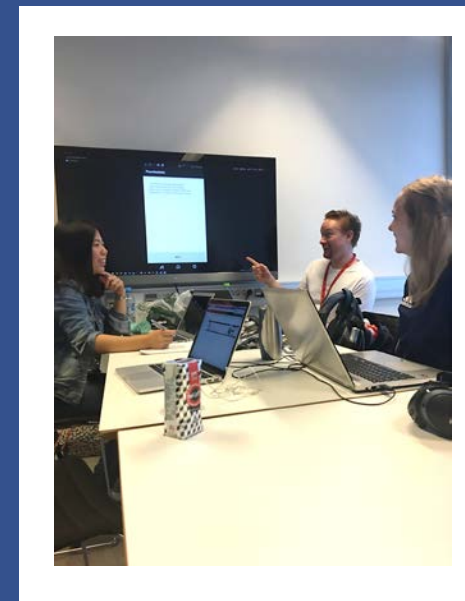
How are we doing this?

- User-Centered approach to design
 - Data
 - Interviews/evaluations with users
 - Literature findings
 - *Universal Design / Design for disabled*
 - Experiences from clinical work at Sunnaas
- 
- Design
 - Fun, immersive, and motivating interface for the Active on Wheels app



What has been done so far

- Meetings with Matthijs (client)
 - We have free reigns
- Design meetings,
 - Brainstorming
 - Sketching
 - Mapping the app
- User Interviews
 - Need and requirements
 - Contexts of use
- Reviewing literature
 - Design for, and working with, disabled people
 - Gamification & motivation theories and ideas



The way ahead

- Right now we're between 1 and 2
 - Delayed by slow recruiting
- Working more on design the next weeks
- Adjust it as we do more interviews with users
- Set up user evaluations of prototype for late October/early November

Phase 1

- Informing the design
 - Literature review
 - User Interviews
 - Clinical experiences
- Weeks 37-42

Phase 2

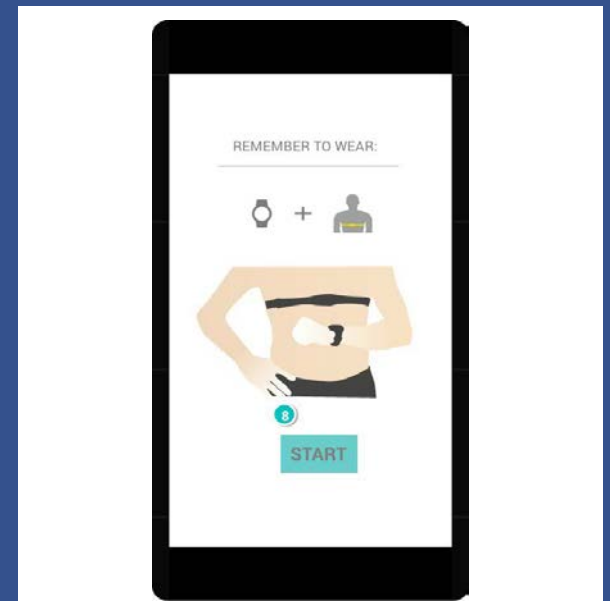
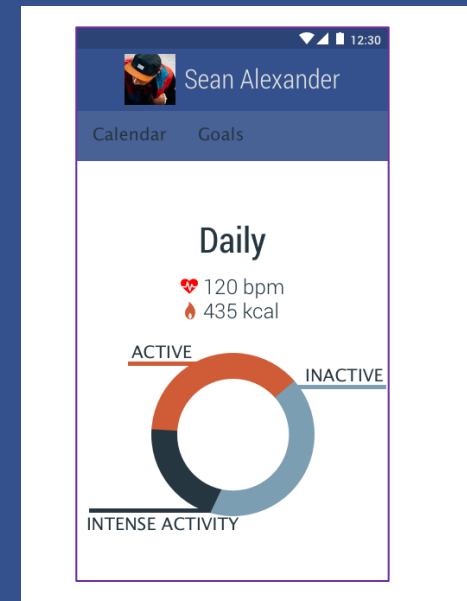
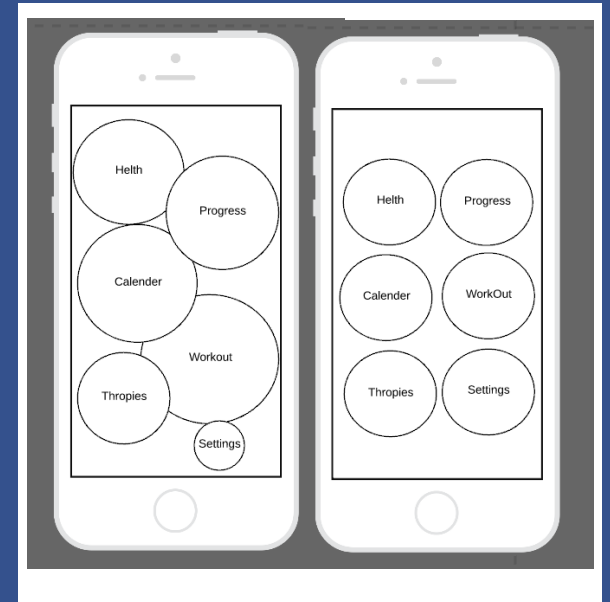
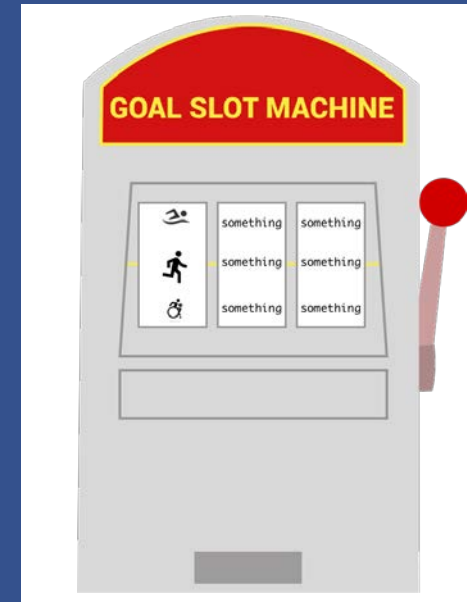
- Doing the design
 - Design meetings
 - Users feedback on Lo-Fi Prototypes
- Weeks 42-45

Phase 3

- Evaluating the design
 - User evaluations of Hi-Fi prototype
- Panic-writing:-)
- Weeks 46-48

Our designs so far

- Many sketches and ideas for implementations of gamified components
- Variations on themes
- Mapped out most of the app



Challenges

- Already defined target group
 - Wheelchair users with incomplete spinal cord injuries
 - Hard to find/recruit users
 - Sample Bias
- How to use the app?
 - Chair often requires two hands to operate!
- Design
 - Designing for users with varying dexterity/abilities
 - How to compete when no one are a like?
- Ethics
 - Working with a vulnerable group

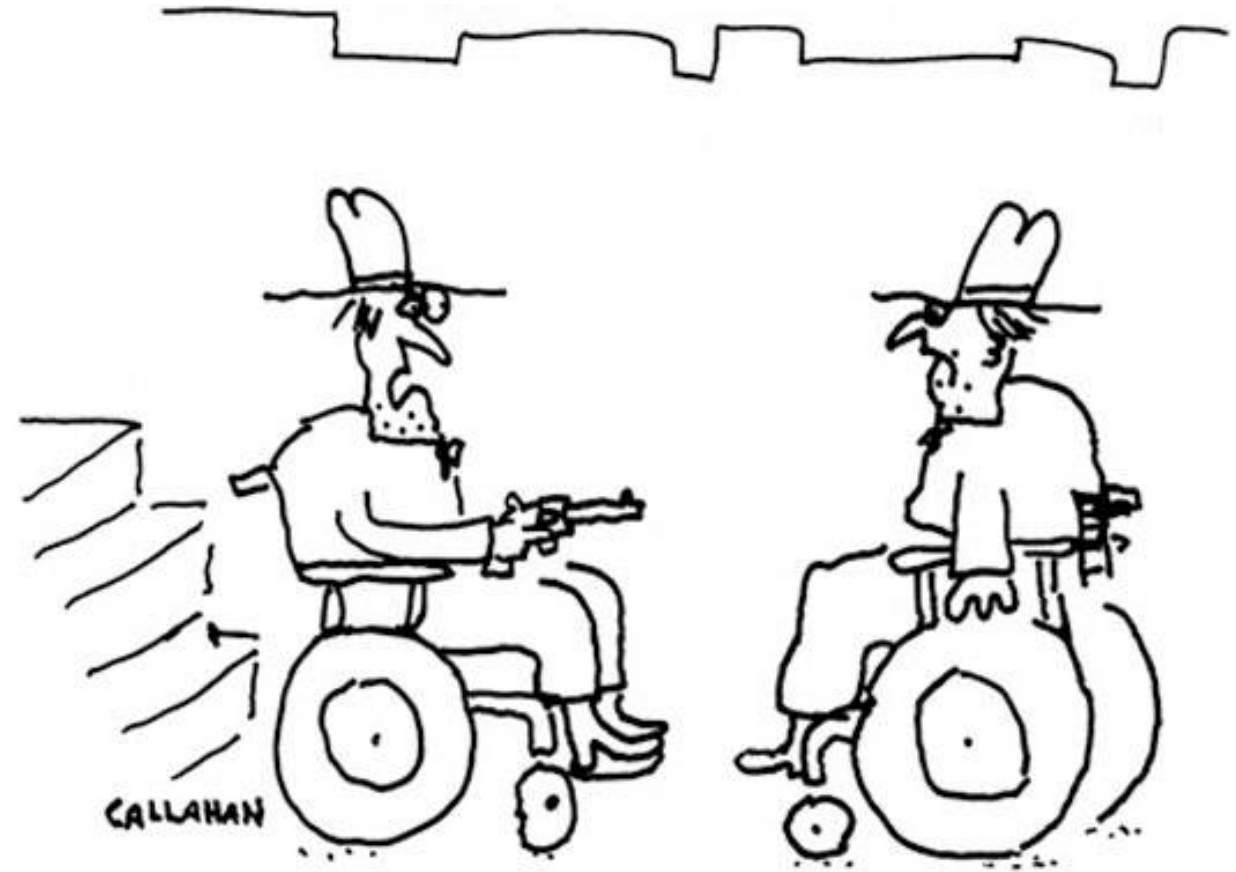


Ideally though

- A more participatory design approach
- Larger User group
 - E.g. work with interest group/organization
 - More heterogenous sample
- Several workshops
- (Much) more time



Thank You!



"THIS TOWN AIN'T ACCESSIBLE ENOUGH FOR BOTH OF US!"