

# Digital Health Intervention Prototyping

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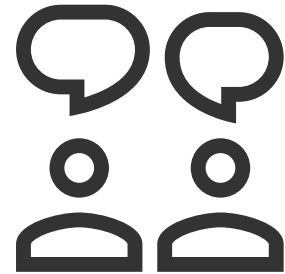


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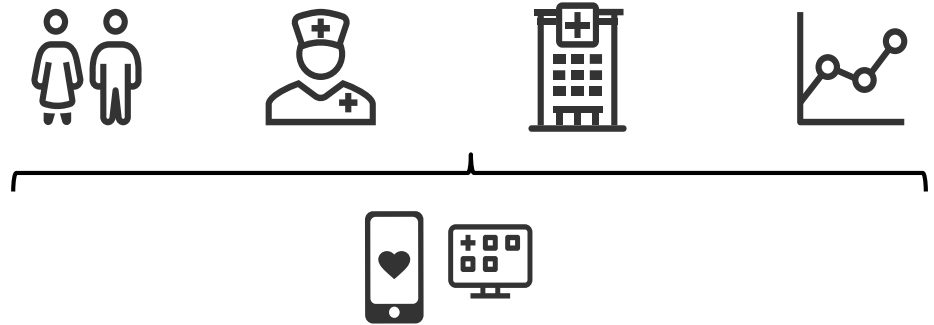
# Agenda

- Gaining a shared understanding
- Introducing example prototypes
- Reflection & Take Aways



# What are Digital Health (DH) interventions?

- Digital and mobile technologies for supporting health system needs
- Digital functionality for clients, healthcare providers, health system managers, data services



# What are prototypes?

- Clear idea of end product in a scaled-down version
- Purpose: Representation of usability, functionality, design  
→ e.g., discussion with different stakeholder groups, proof of concept
- More or less advanced prototypes



# Why do we (LBI) develop prototypes?

- Gain knowledge / new insights (from scientific point of view)
- E.g., self-empowerment, motivation, sustainable behavior change



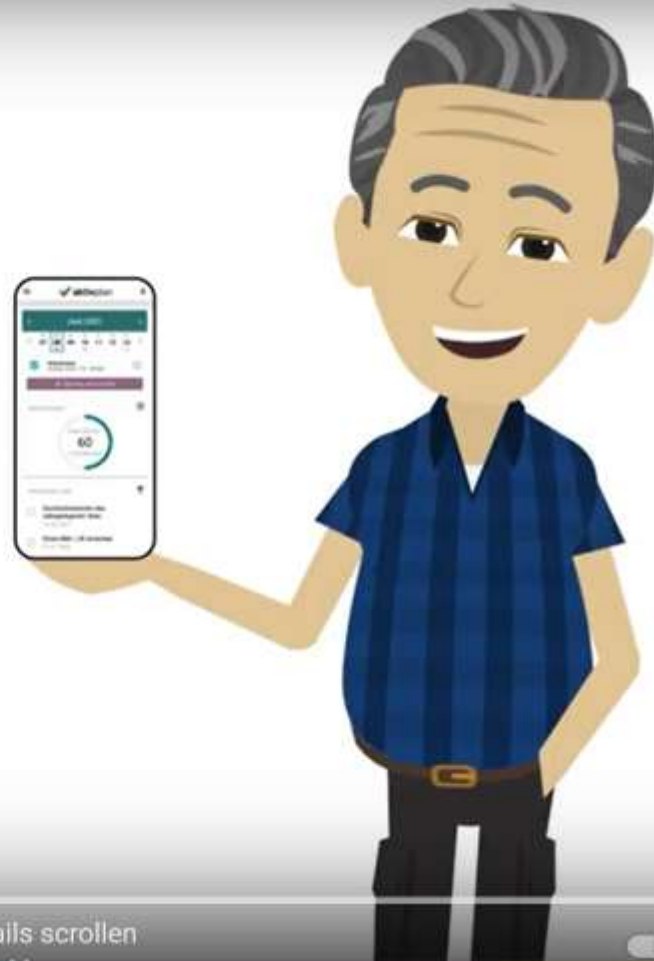
## What did we develop?

- “Rough prototypes“ to “advanced prototypes”, having different foci
- Researching on specific aspects, focusing on specific groups, trying them out, evaluating them, putting them into clinical studies
- Exemplary prototypes



# Aktivplan – concept video

LBI-DHP aktivplan app - concept video



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Für Details scrollen



# Aktivplan

*Plan and document regular heart-healthy exercise together with your health professional!*



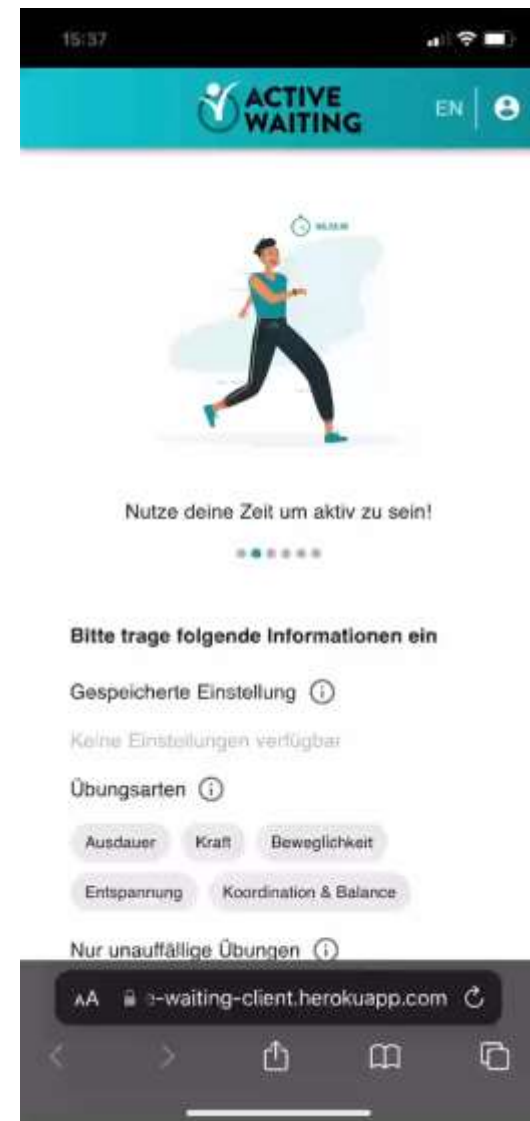
- Encouraging CVD patients to make physical activity part of their daily life, empowering patients to perform exercises independently, supporting shared decision making of health professional & patient
- Long-term engagement, habitualization, digitally supported shared decision making, user empowerment, individually adapted messages



# Active Waiting

*Use waiting times for short exercises – every move counts!*

- Making use of waiting times, integrating physical activity into everyday life, contributing to healthy lifestyle with “exercise snacks”
- Acceptance, barriers, user experience



# Shared Achievements

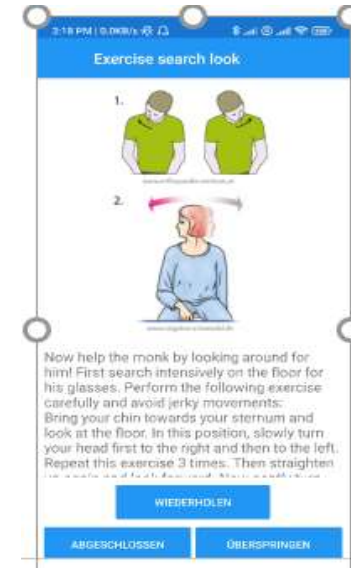
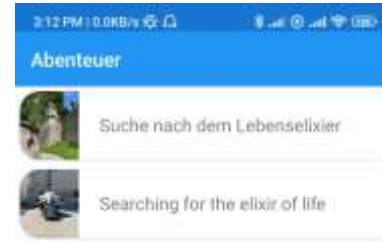
*Form a team, collect your steps and climb the Untersberg together!*

- Increasing physical activity by common group goals
- Social aspects and shared attention, motivators for physical activity



# Active Audio Adventure

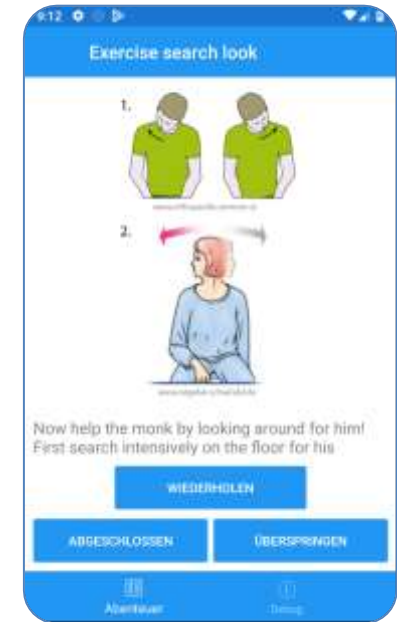
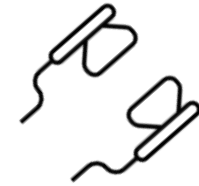
*Be part of an outdoor adventure! Listen to the story and collect hints by performing exercises to master the adventure!*



# Active Audio Adventure

*Be part of an outdoor adventure!  
Listen to the story and collect hints by  
performing exercises to master the  
adventure!*

- Getting up from the couch & out into fresh air, motivating them to explore their environment, performing exercises in a playful way
- Audio games, narrative gamification, exercising, immersion



# MORE

*Set up & manage studies, collect sensor-based and survey data*

- Platform for investigating digital health interventions
- Example of ambitious development with many stakeholders



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# MORE – video of MVP

## MORE

a modular and open research platform



# Reflection & Take Aways

*“It’s a process” – what we have learned along the way...*

## Involve “Real” Users

- User input is always useful!
- Ask about users’ concerns and take them seriously!
- The earlier the better in terms of quality assurance and acceptance..., but trade-offs have to be made in practice, user involvement on different levels
- Keep user burden low – think when and how to involve users (idea and concept generation phase – final evaluation)





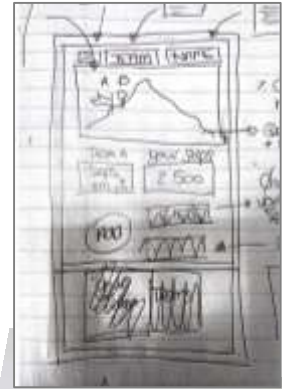
# Understand & Communicate

- Get a context understanding
- Users are not users – empathy
- Group work – a lot of people standing behind one prototype – world and language different
- Communication takes time and patience
- Personas as a means for improving communication
- Question personal biases – throw away pre-assumptions



# Tailor your prototyping strategy to your goals

- Different ways how ideas evolve and prototypes come into life (specific needs, other projects' input, funny ideas, ...)
- Depending on goals, more or less advanced prototypes are needed → from sketches to click prototypes to MVPs
- Challenge: find the right level of detail
  - Working prototype: Errors in interactions are easily recognized, complexity increases, changes difficult, personal attachment
  - Paper prototype: less effort, easy to throw away ideas and generate new ones, triggering initial communication



# Don't aim for perfection

- Don't aim to make it perfect the first time
- Don't reinvent the wheel, use existing
- Avoid Feature Creep (Featuritis) – focus on core functionality  
→ Maintain the balance, keep the focus



## Be open-minded and ask why

- Creativity evolves best in an open-minded environment
- Explore & find out versus thinking in pre-defined solutions
- Positive error culture - errors as important part of process



## Prepare for the unexpected

- Think about potential pitfalls/errors – prepare accordingly (development, studies, human-human interaction, ...)
- You can't always foresee everything - don't take it personally
- Deal with others' expectations, e.g., make clear that development takes a lot of time



## Keep your focus

*You do not have to be everyone's darling ;-)*



# THANKS FOR YOUR ATTENTION!

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