Week 1
Design Challenge Explained

**School of Computer and
Communication Sciences**

EPFL

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WE PROPOSE 3 DESIGN CHALLENGES

- All about music

- Change

- Empower

- Design challenge
  - Vague and abstract - you need to re-frame it
  - Overwhelming - only the interaction and visual part matter so don't worry about programming and database management

RE-FRAME THE DESIGN CHALLENGE

- To do that, you have to iterate the follow steps
  - Pick a design challenge
  - Add details so the challenge becomes more specific
    - Domain analysis
    - Competitive product analysis
  - Add insight
  - Formulate the initial challenge into a DPS (design problem statement)

- Can technology help people and communities change their behaviors to meet their goals?

- Google "change" - likely too vague

- Google "behavior change" - some results

- More research on the internet reveals
  - Change -> More physical activities
  - Change -> Stop smoking
  - Change -> Buy less clothes
  - Change -> Stop procrastination

- Pick and choose
  - e.g., physical activities

- More domain research reveals
  - Physical activities can be increased by
  - Keep a record
  - Put it in your calendar
  - Make it fun
  - Find a friend
  - Figure it out
 - If you drop the ball, pick it up
  - Reward yourself

- Researching the domain where your product operates (internet, books, scientific facts)

- Consider the following examples:

  - How can we help people become physically more active?

- Why it's harmful if we don't regularly exercise

  - Risk of disease (purpose of the product)

- Theories on goal setting

- Theories on making it fun (gamification)

- Theories on persuasion with social influence

- Theories on rewards (badges)

- Theories on self-efficacy

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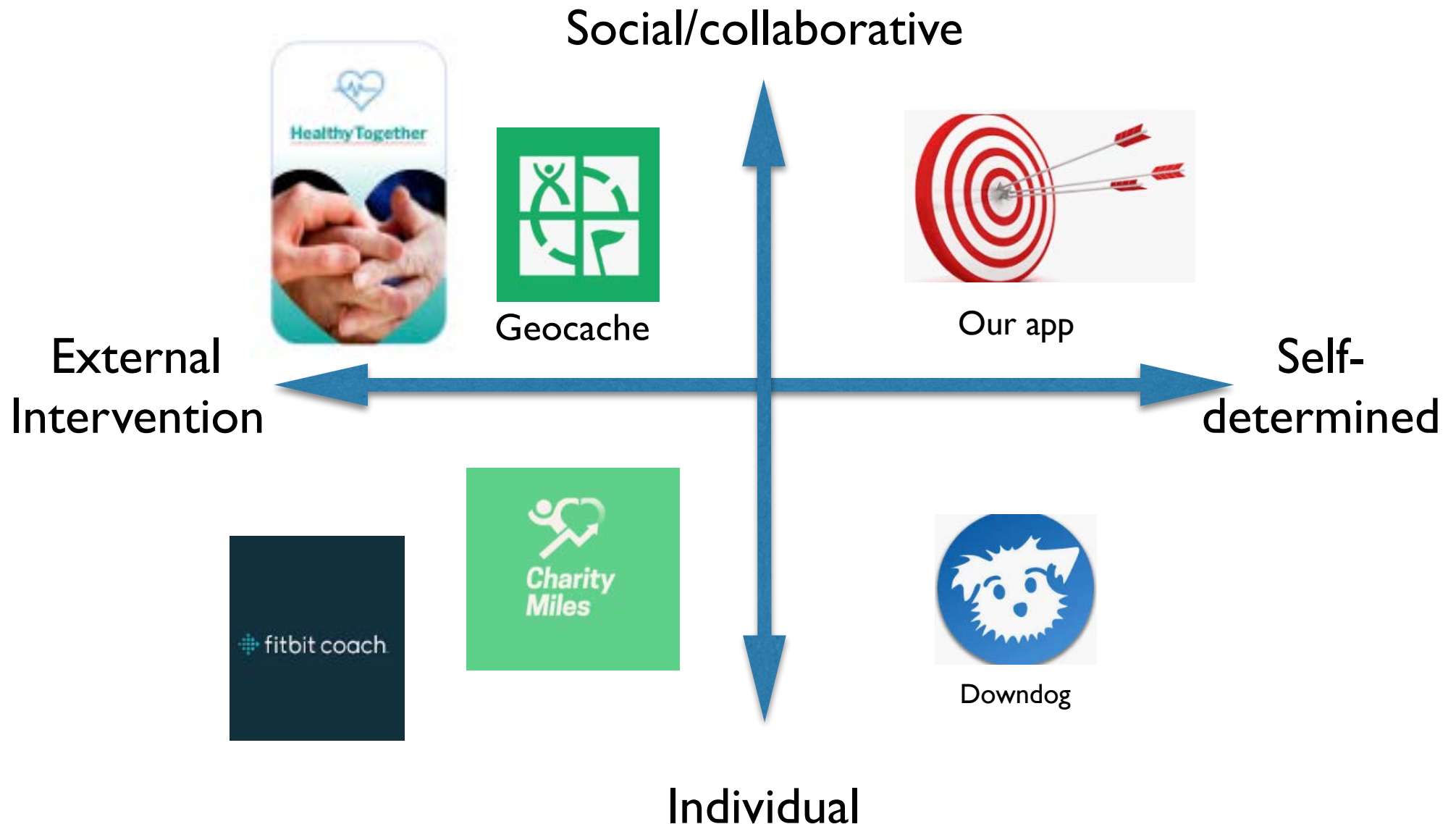 - Formulate the initial challenge into a DPS (design problem statement)
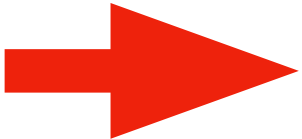
- Survey existing products

- Avoid re-inventing the wheel

- Important: try to use one or two competitive products yourself

- Final step: build a competitive analysis map

- Geocache

- Fitbit Coach

- MyFitness Pal

- Runkeeper

- Zombies, Run!

- Charity Miles

- 8fit

COMPETITIVE ANALYSIS MAP

Social/collaborative

Geocache

Our app

External Intervention

Self-determined

Charity Miles

Downdog

Individual
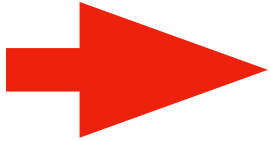
Re-frame the design challenge

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- An insight refers to how the solution you are seeking is likely to address users' unmet needs successfully

- An insight comes from domain research and competitive analysis

DESIGN PROBLEM STATEMENT (DPS)

- A **DPS** is your reframing of the design challenge into an actionable problem statement that will launch you and your group into an ideation of solutions.

- A DPS has a template: the user, their needs, an insight

  - (users) need (product)

  - to (challenge)

  - because (insight)

  - A DPS should not discuss specific solutions but sets the general direction

Examples of DPS

Users need a mobile app to help them change behaviours and become physically more active because if they don't change, they will face many health risks.

The phrase after "because" is not an insight, It's a pain point

Users, who are prone to injury while exercising, need a mobile app to help them achieve fitness goals while avoiding genetically pre-disposed injuries because such information can shed light on how and the pace with which they these goals.

First iteration

Users need technology to change their current habits and become physically more active.

This DPS is motivating, but too vague

New insight - Most apps use social and peer group as incentives, but self-efficacy is a less explored area.

A new version of DPS: A sedentary person needs an app to find inner strength and self-efficacy to increase his activeness, because when someone is determined to change, it's a much easier journey to overcome barriers and setbacks that may undermine motivation.

First iteration

Users need a mobile app to stop buying clothes impulsively because it is a waste of money, space, and it harms the environment.

This DPS is motivating, but too vague

New insight - people can have more fun with their old/existing clothes with an app that help them wear clothes differently.

A new version of DPS: compulsory shoppers need an [...] hem experience their clothes in a different way for every seas[...] eing bored with their clothes is the main reason they go on sh[...].