

## Week 2

# Design Challenge Explained

School of Computer and  
Communication Sciences

EPFL

Pearl Pu

- We will explain
  - The three themes of design challenge (help you choose)
  - How to reframe the challenge
    - perform domain research
    - perform competitive product analysis
    - develop design problem statement

- All about music
  - How to design a new way to discover & experience music
- Change
  - How to design an engaging experience to facilitate behaviour change
- Empower
  - How to design an app to make technology happen for users with special needs

- 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

- 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)

- How to design an engaging experience to facilitate behavior change?
- Google “behavior change”
  - 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

- 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

- Original
  - How to design an engaging experience to facilitate behaviour change
- Refined
  - How to design an engaging experience to help people exercise using goal setting, social influence, and gamification?

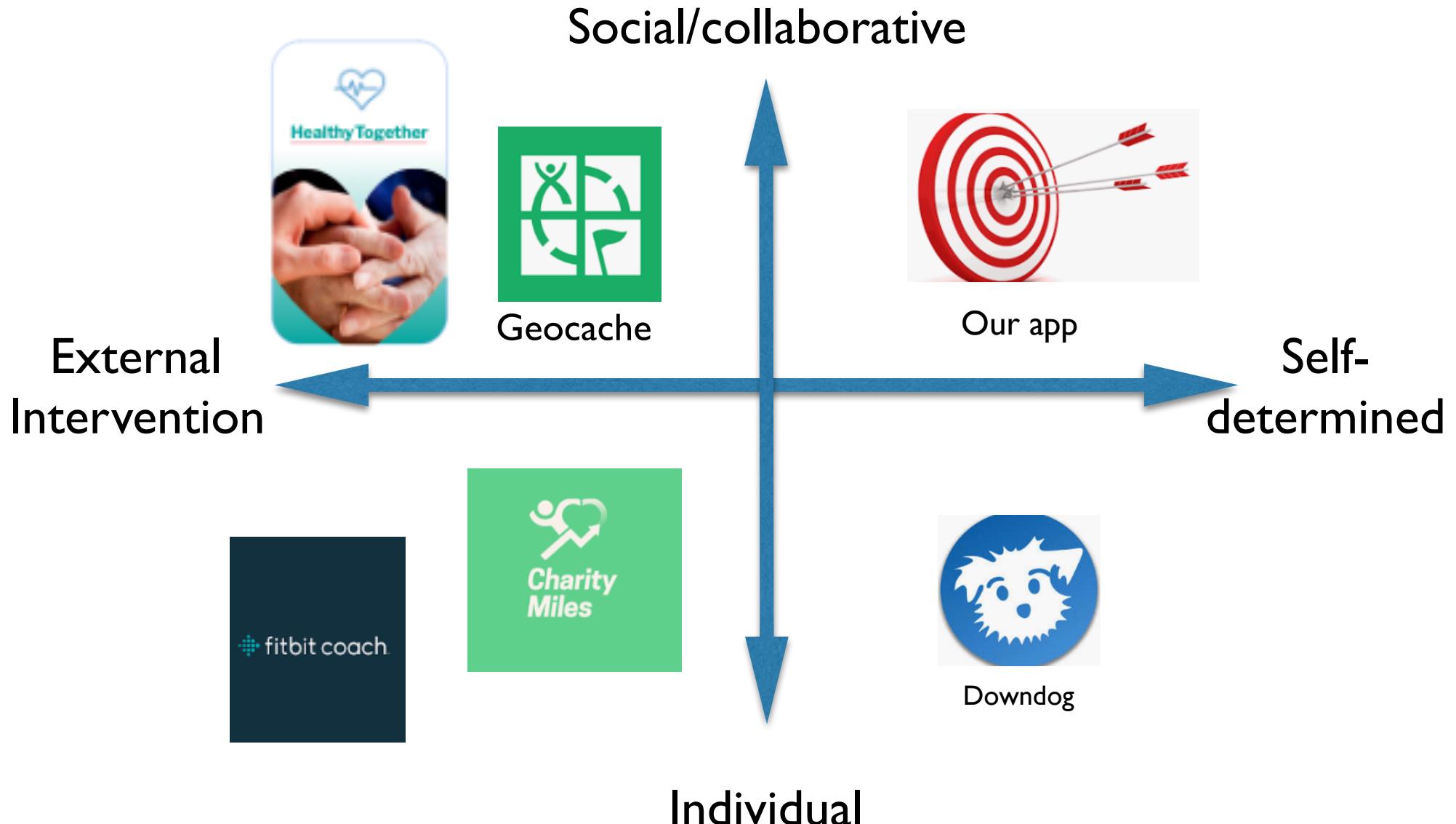
**Now you are ready to find out what exists on the market**



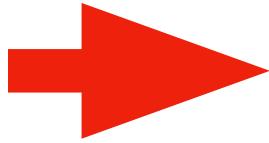
## SURVEY COMPETITIVE PRODUCTS

- Geocache
- Fitbit Coach
- MyFitness Pal
- Runkeeper
- Zombies, Run!
- Charity Miles
- 8fit

# COMPETITIVE ANALYSIS MAP



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# WHAT IS AN INSIGHT?

- 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
- Example : Most apps use social and peer group as incentives, but self-efficacy is a less explored area (coming from CA map).



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## WHEN DO YOU KNOW YOU ARE DONE?

Until you have a DPS you are satisfied with



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# WHAT IS A GOOD DPS?

- Next week!



## 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 can achieve 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 experience their clothes in a different way for every season. Bored with their clothes is the main reason they go on shopping.

