



Design of an Assistive Fitness Patch System Based on Electronic Biotechnology

CPT208

By Xinyuan Zhang, Ziyang He, Tianxing He, Xi Kong, Jingcheng Li, Yifei Shen



Kong's story

"New to GYM"

Barrier encountered:

- Inefficient fitness by himself
- Inaccurate muscle force
- Costly to hire a coach
- Shortage of professional coaches

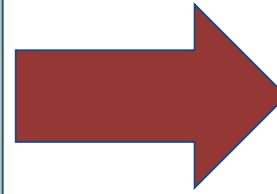


How can we help him improve his fitness efficiency through technology?



Motivation

- Inefficient fitness by himself
- Inaccurate muscle force
- Costly to hire a coach
- Shortage of professional coaches



- Effective workout
- Targeted training muscle
- Have a smart personal trainer
- Create a bespoke workout plan



Target User

- New to the gym
- To improve in terms of fitness skills
- To shape muscles
- To get professional guidance
- Prefer technology product





Previous work



- Summarize main drawback:
 - the product function is too single
 - cannot detect muscle
 - can not meet the demand of correction (actual vs ideal)
 - Only watch
 - complex interface



Questionnaire

1. Do you use any of the following features on your smart device? (Multiple choices)

A. Heart rate monitor B. Pedometer C. Sleep monitor D. Diet record

2. Do you think using smart devices for fitness is good for health and fitness?

A. Yes B. No

3. When you use your smart device for fitness, do you find that your device's capabilities are limited?

A. Yes B. No

4. Do you think the fitness function of smartwatches and smartphones is similar?

A. Yes B. No

5. Would you like more professional guidance as you work out?

A. Yes B. No

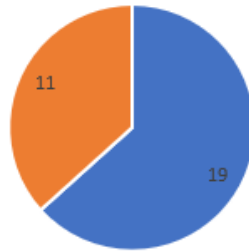
6. Do you think the lack of professional guidance will affect the fitness effect of smart devices?

A. Yes B. No

Result of questionnaire

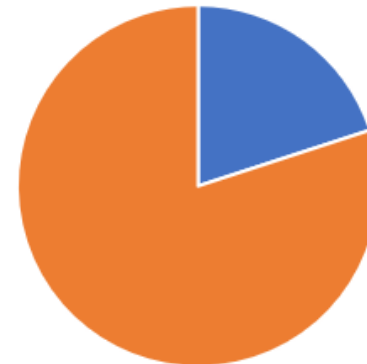
- Similar equipment limited (watches, mobile phones)
- Function (heart rate, pedometer, sleep)
 - heart rate, sleep, measuring steps, diet
 - Lack of professional guidance of fitness

Customer satisfaction with existing products



- Single function, can not have accurate real-time feedback in fitness
- Functions are basically sufficient

Whether you need professional help when fitness by technology?

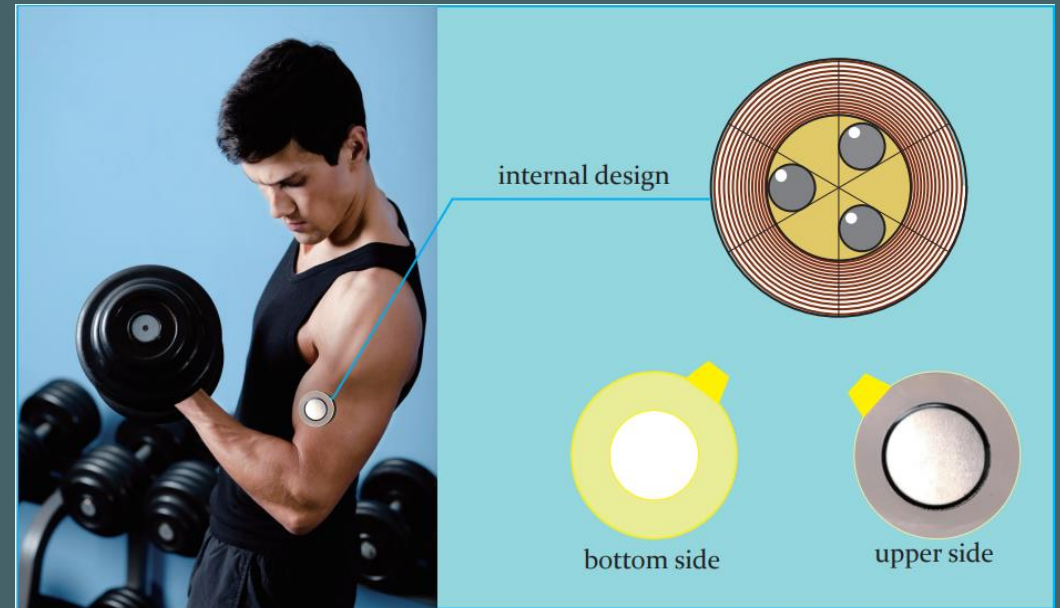


- Don't need professional help when fitness by technology
- Need professional help when fitness by technology

Prototypes

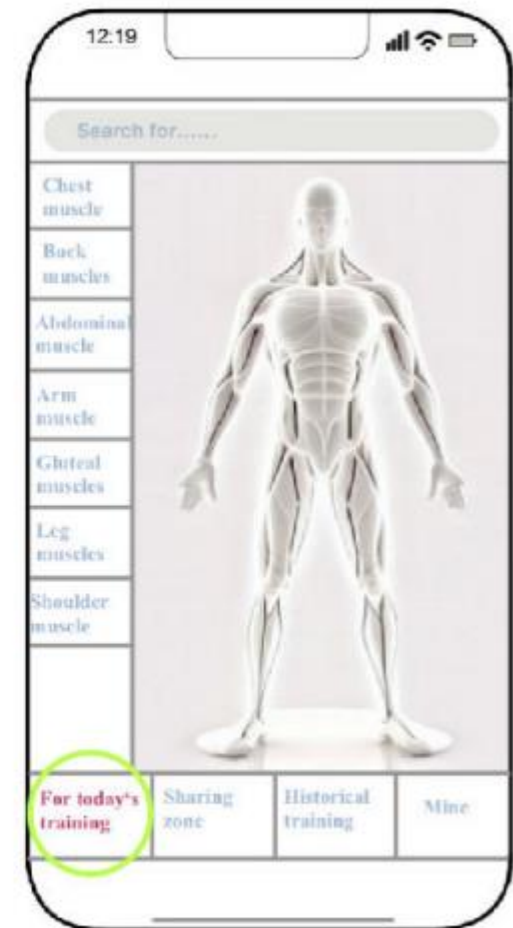
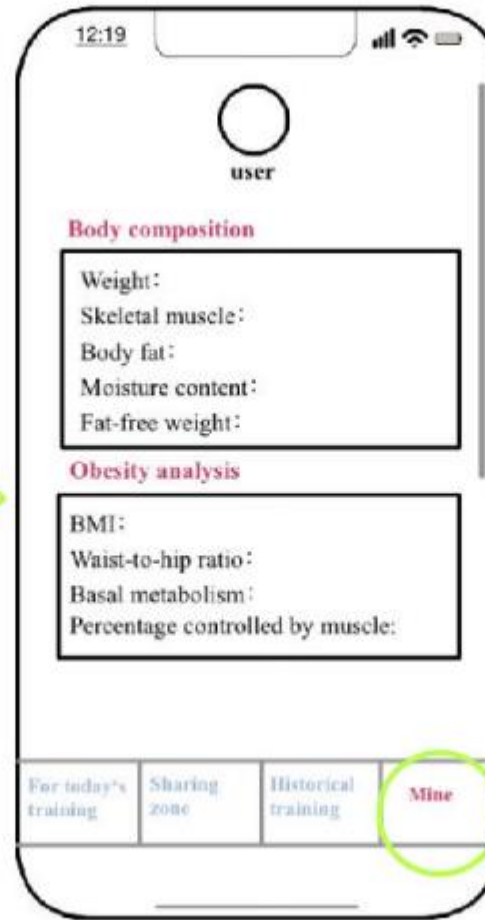
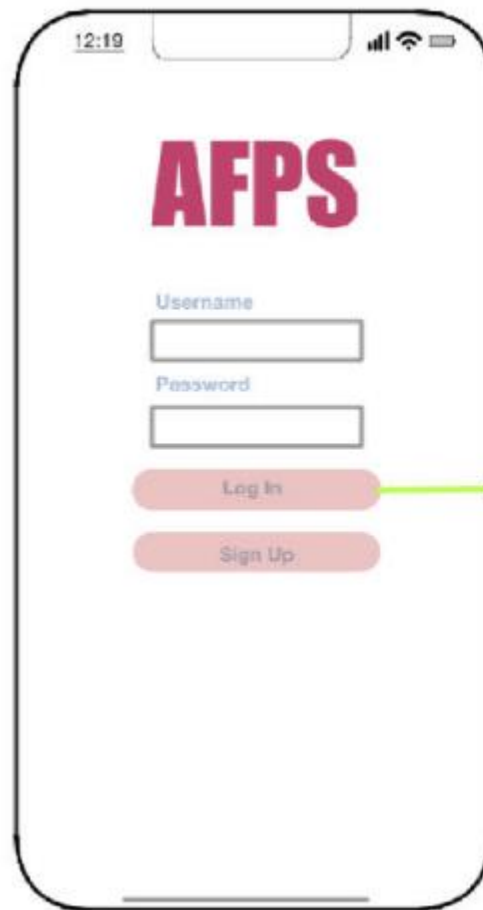
1. Patches

- current fitness tracking products have limited functionality
- wearable fitness patches for more comprehensive tracking
- attachable to various parts of the body, real-time monitoring of body movements, posture, and muscle exertion



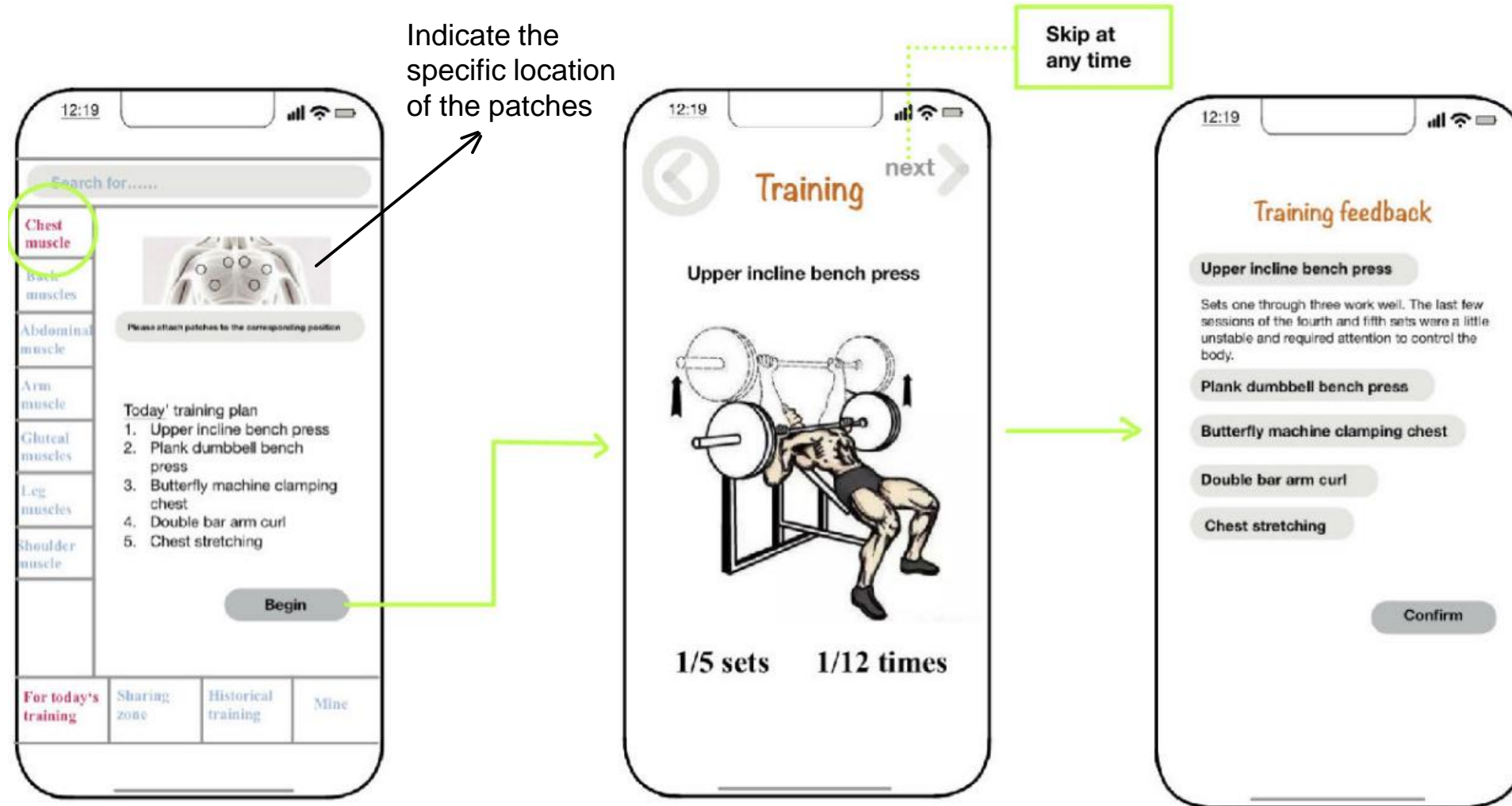


2. User interface





2. User interface (cont.)



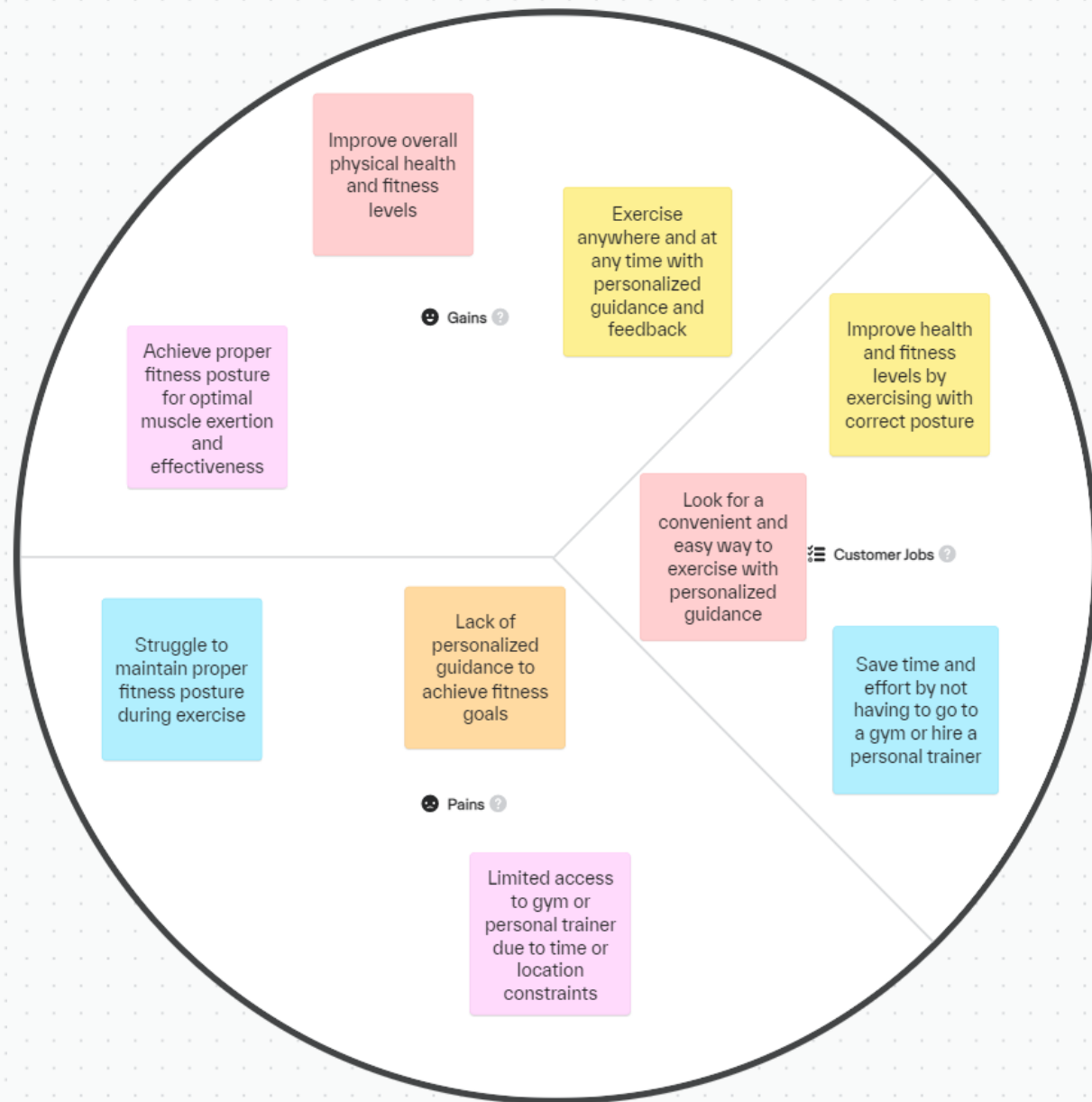
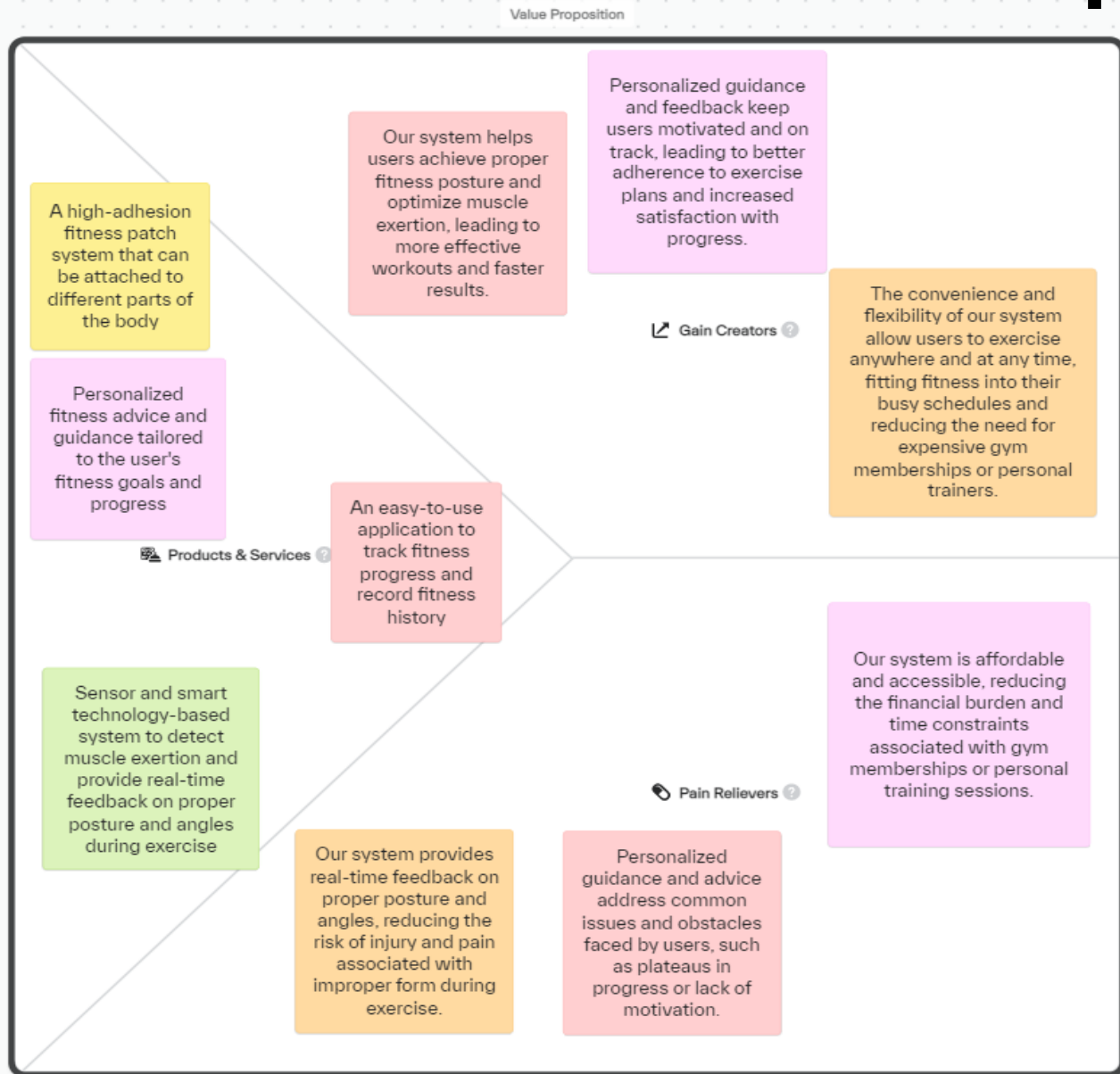


The main issue that our product focus on

- How to deal with the signal returned by the patch.
- How do very muscular people put stickers where they can't reach the place.



The Value Proposition Canvas





Thank you

Q&A