




Peak Fit.

SPORTING
RESPIRATORY MONITOR

Process

Brief
Vision
Product
Research
Empathize
Define
Ideation
Prototype
Test



A young woman with dark hair tied back, wearing a dark sports top and light shorts, stands on a grassy field. She is holding a worn soccer ball with both hands. The background shows a chain-link fence and a cloudy sky. A semi-transparent green banner is overlaid across the middle of the image, containing the main title and subtitle.

Asthma management suitable for use during sport.

A proactive, confidence building method of
managment.



Vision

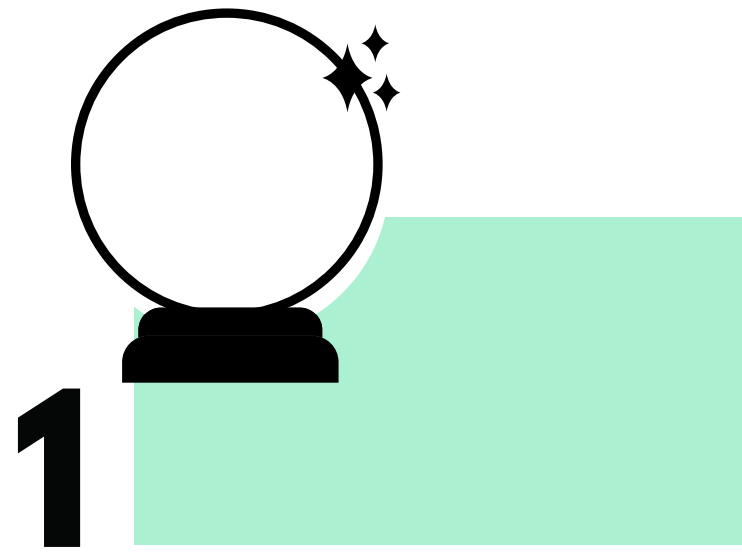
Peak fit is a respiratory monitor that gives asthmatics the confidence to play to the best of their abilities.

It works by tracking the users respiratory rate and notifying them when their respiratory rate heightens more than usual, predicting an imminent asthma attack.

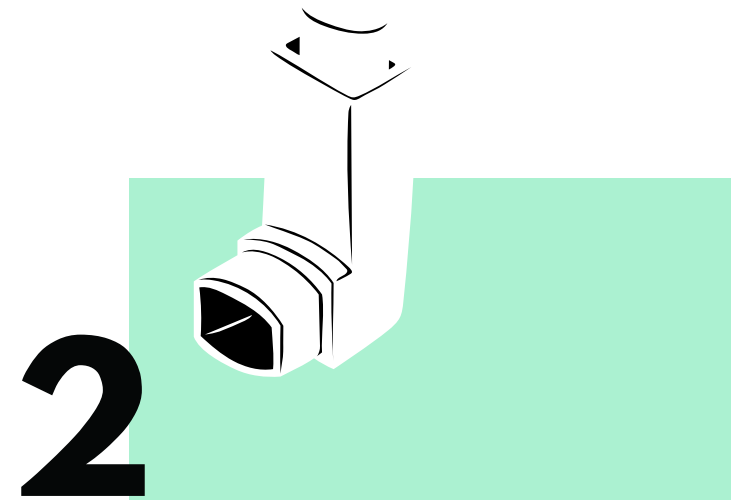
You can predict your asthma attacks, track them and improve your skills.

Key Features

PREDICT → **PREVENT** → **PROGRESS** → **PERFORM**



Tracks respiratory rate and warns you of an possible attack



Once warned take precautionary measures.



Track the frequency of your attacks, and your overall fitness.



Use the data to perform at your best.

Design Process

WORKING OFF THE STANFORD D SCHOOL MODEL.



1

Empathize



2

Define



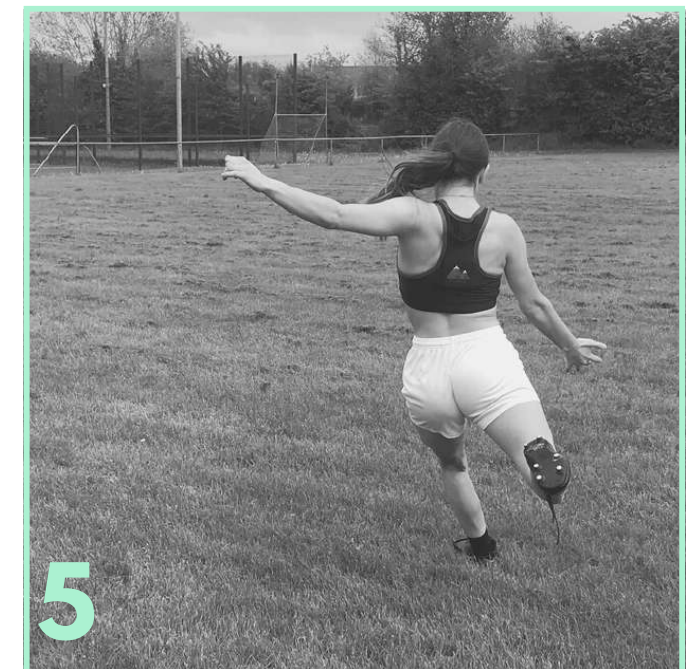
3

Ideate



4

Prototype



5

Test

Work from home

As product design is a human centered and practical process, it is important to highlight the importance of human interaction and testing along with access to facilitates and materials. These are generally taken for granted however in March, this became a distant luxury.

Without access to the college labs, workshops and other facilities creativity inspired make shift work spaces and methods of user testing.

At times like these the appreciation of the opportunities of late must be acknowledged.

Although not the end to four years of study expected it was an incredible experience.



Empathize



Desk research is always a key part of the design process, in order to understand the issue at hand.

It was paramount to realize the impact of asthma in the country. Then an understanding of sports induced asthma could be formed.

The desk research was aided by experts in the field, a number of asthma specialists and doctors.

The idea was to gain insight of sports induced asthma and how it is currently managed. Along with comprehending the market

Market Analysis

380,000

People in Ireland have asthma

60% of asthmatics do not have their Asthma under control & 40% don't know how to use their inhaler correctly.

40%

of athletes have asthmatic symptoms

Of these a further 60% did not know they had sports induced asthma.

Market Trends & Drivers

DRIVERS

TRENDS

There has been a recent spike in using technology for tracking drug usage and data in order to best manage your asthma.

Increased awareness in general asthma, still lack of knowledge surrounding sports induced asthma.

Advanced inhalers
Innovation in biological drugs
Rise in death rates
Increasing air pollution
Ageing population
Rise in allergy cases
An increase of awareness surrounding the disease is likely to drive the market..

RESTRAINTS

Patent expiration of drugs.
This leads to a rise in generic drugs and the use of these drugs.
High cost of treatment.

User Investigation

Interviews

Identifying unmet needs..

Observations

Observing the relationship with inhaler & asthma. On and off the pitch.

Surveys

Understanding what users know about their asthma and what they want.

Experimentation

Conducted experiments to assess the reasons for forgetting inhalers and to test correct compliance.

Insights

"It can be difficult to take my inhaler properly when I'm out of breath."

"Sometimes coaches don't notice you are down and need the inhaler, then someone else has to notice and shout over so you're waiting ages for the inhaler. "

" I wish I knew when I was going to have an attack before I had one"

"I didn't know you could have asthma from sports, I could never understand why I was still out of breath even after all my training"



Define

A method of managing asthma during sports.



Age: 22

Interests:



Goals:

Play football without being affected by her asthma. To take her medication correctly every time.

Frustrations:

The taste of her inhaler.
The time it takes for managers to notice
...to it herself.

- 58% of those surveyed had shared an inhaler when they needed it.
- Inhalers are inconvenient when running as it must be held
- 54% find it hard to tell if they have used their inhaler properly.

Exercise induced asthma and allergic asthma is the most common type of asthma.

75% admitted to not using their preventative inhaler regularly.

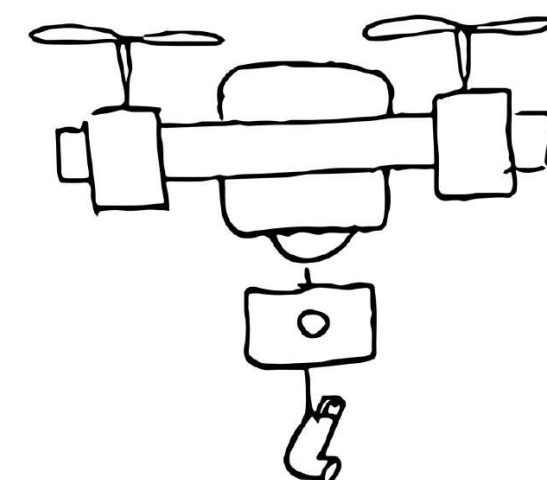
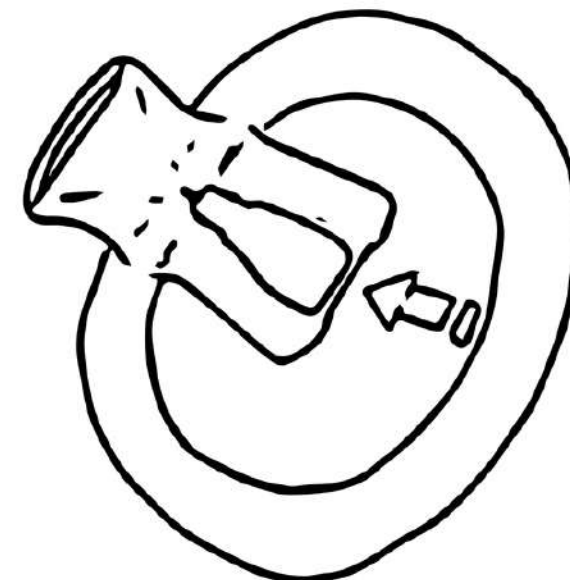
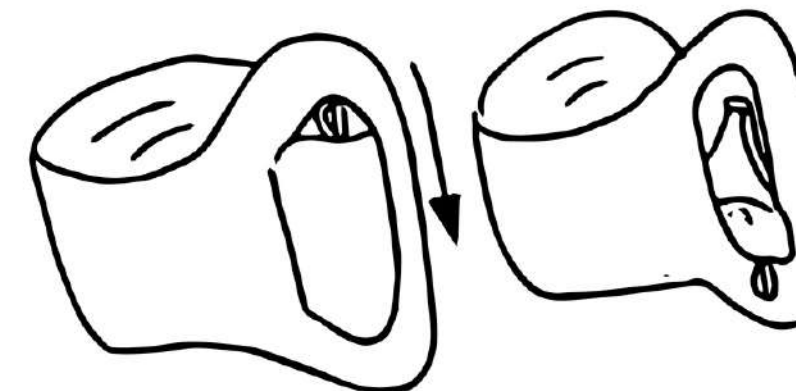
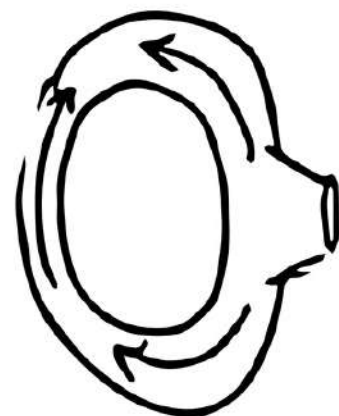
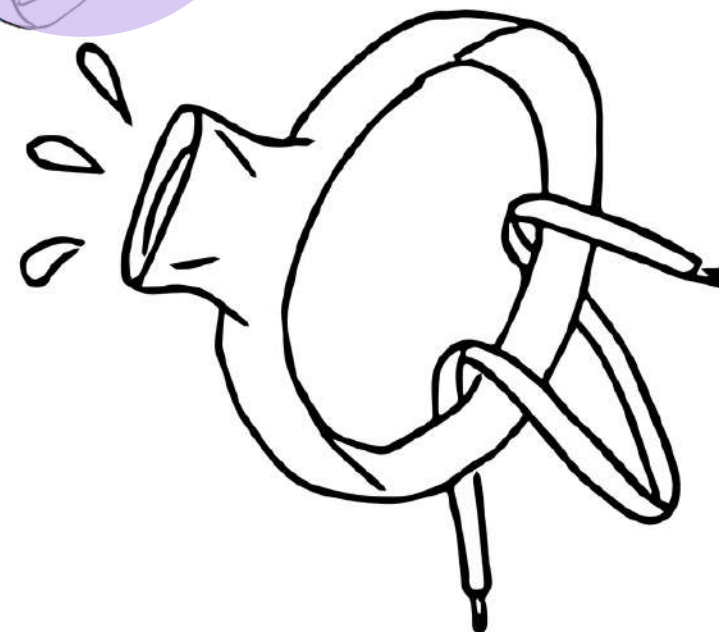
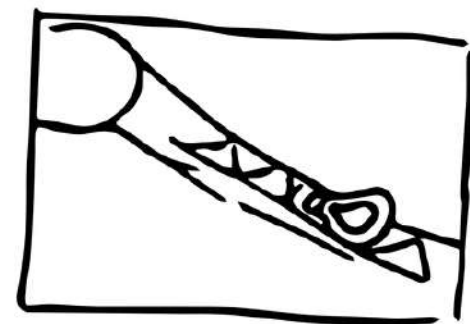
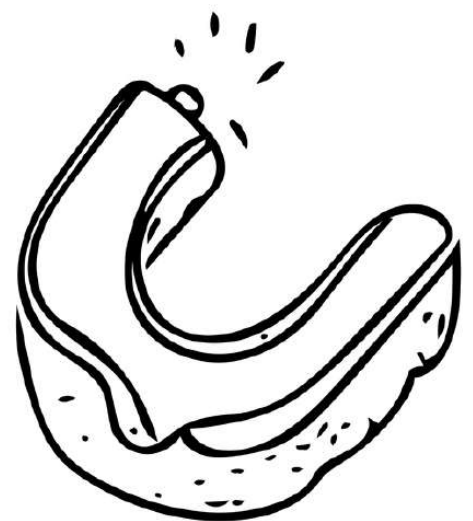
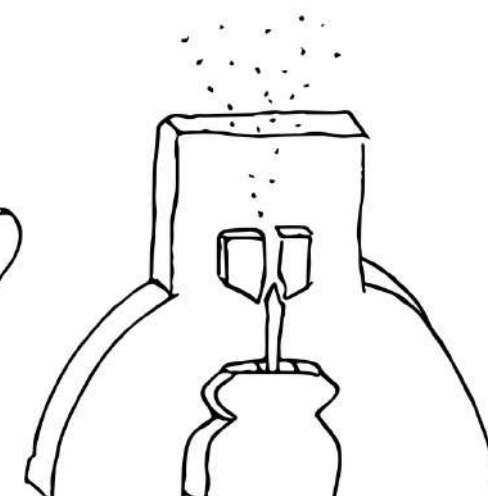
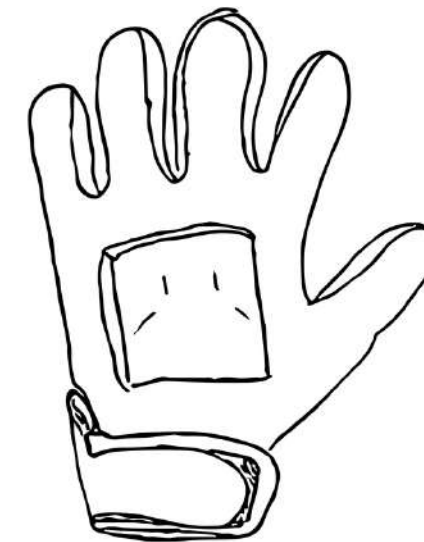
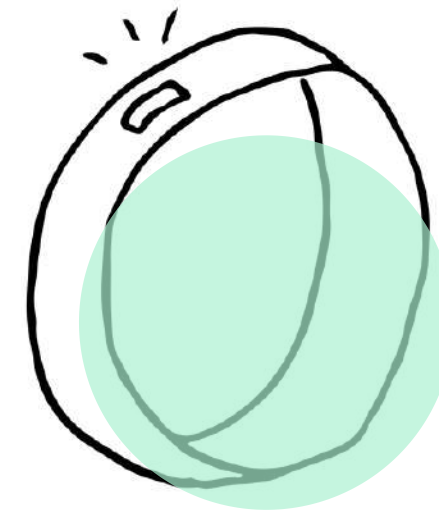
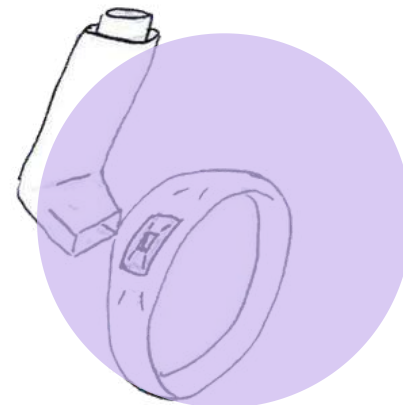
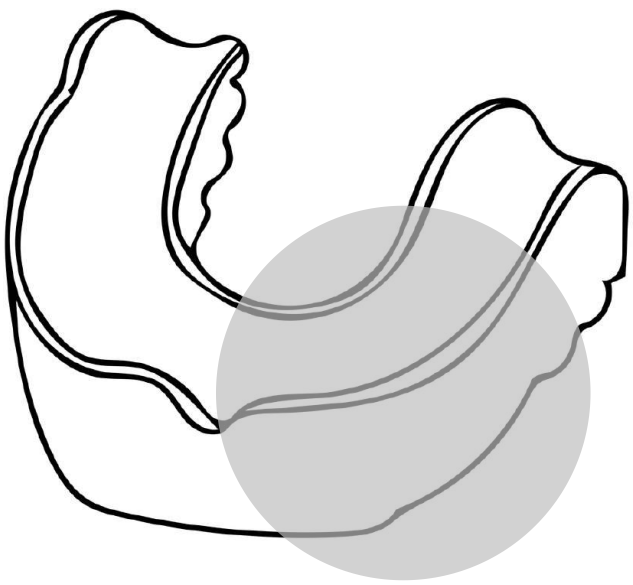
- People are embarrassed to use their inhalers.
- They forget their inhaler because it's small and falls to the bottom of bags

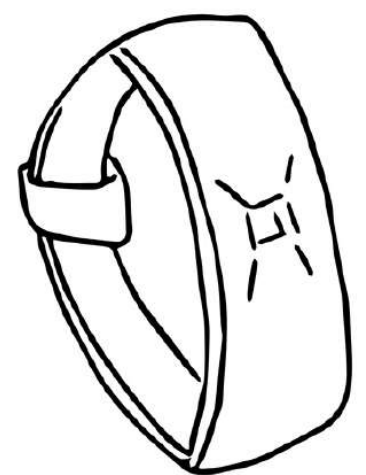
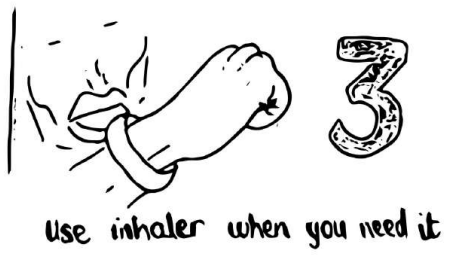
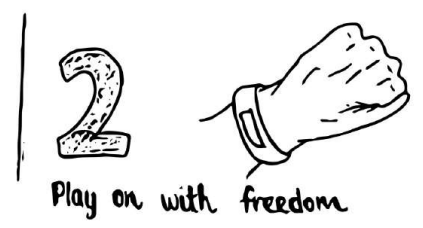
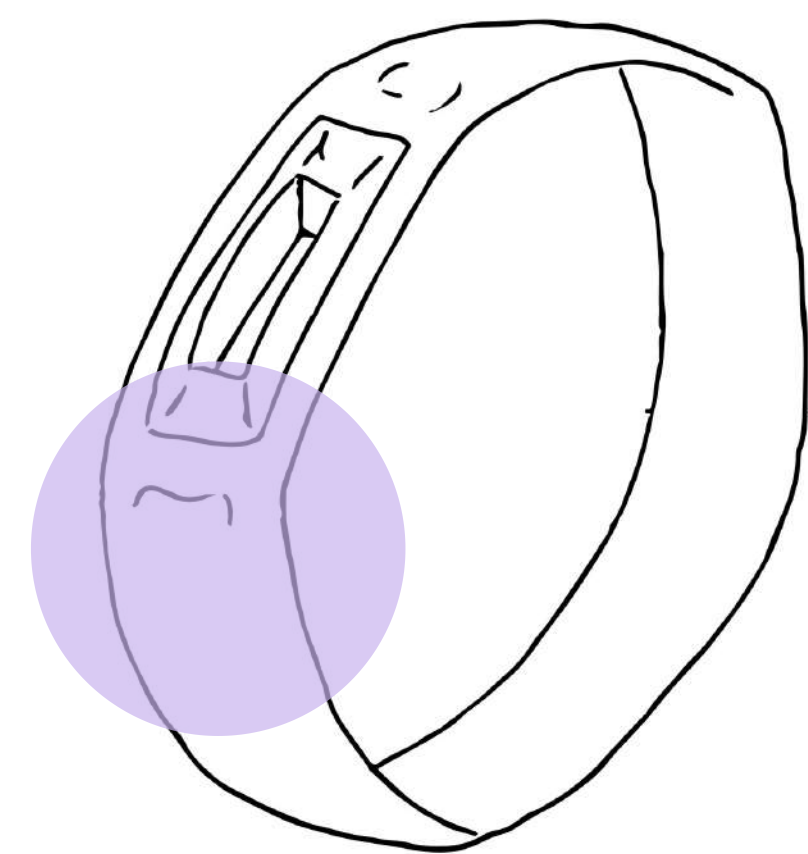
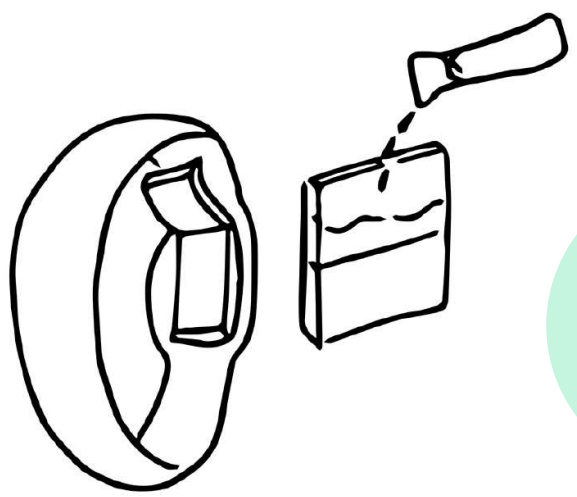
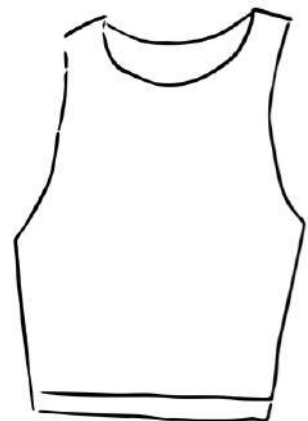
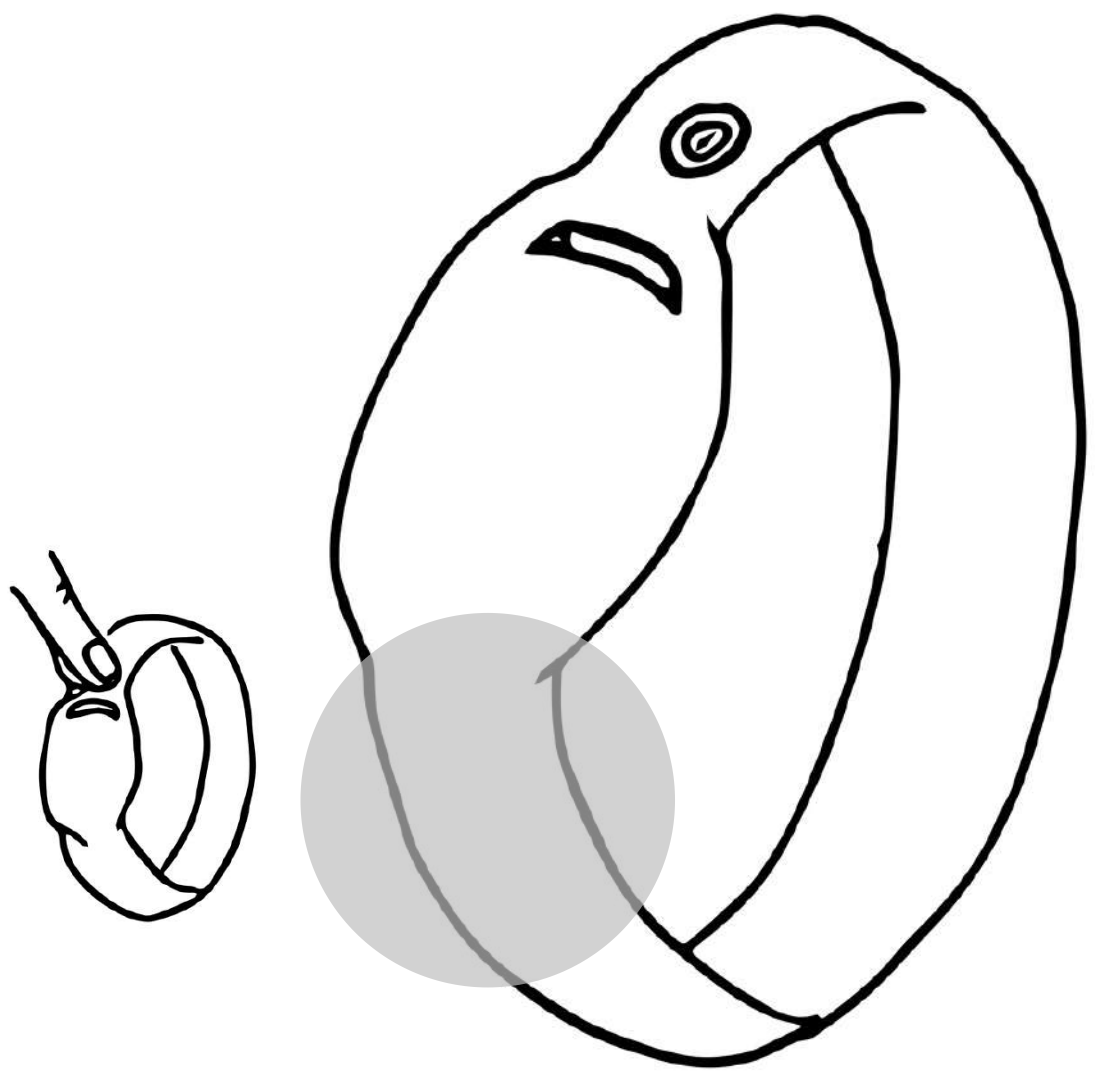
KEY

OBSERVATIONS

THE LIFE

Ideate







Prototyping the unit

The final prototype was 3D printed. This unit was then sanded, primed and sprayed with neo mint spray paint.

Prototyping the bra

The bra shape was cut a sewn and then the PeakFit logo and the sponsors logo were ironed into place.





Print



Sand



Spray



Cut



Sew



Final Prototype

User Testing

The testing phase was of extreme importance, at every opportunity the prototypes were tested by the end user.

The end users interaction was monitored, and adjustments were made in accordance.

Variables such as comfort, desirability, aesthetics and whether or not the prototype actually worked were being assessed.

It was important to assess the user in an active environment as this would be the case with the product.



User Testing

It was imperative to continuously check in with end users in terms of the desirability of the product.

Numerous desirability tests were conducted along with surveys to determine anonymously how people felt about the product and if there were anything they felt was missing.



Companion App

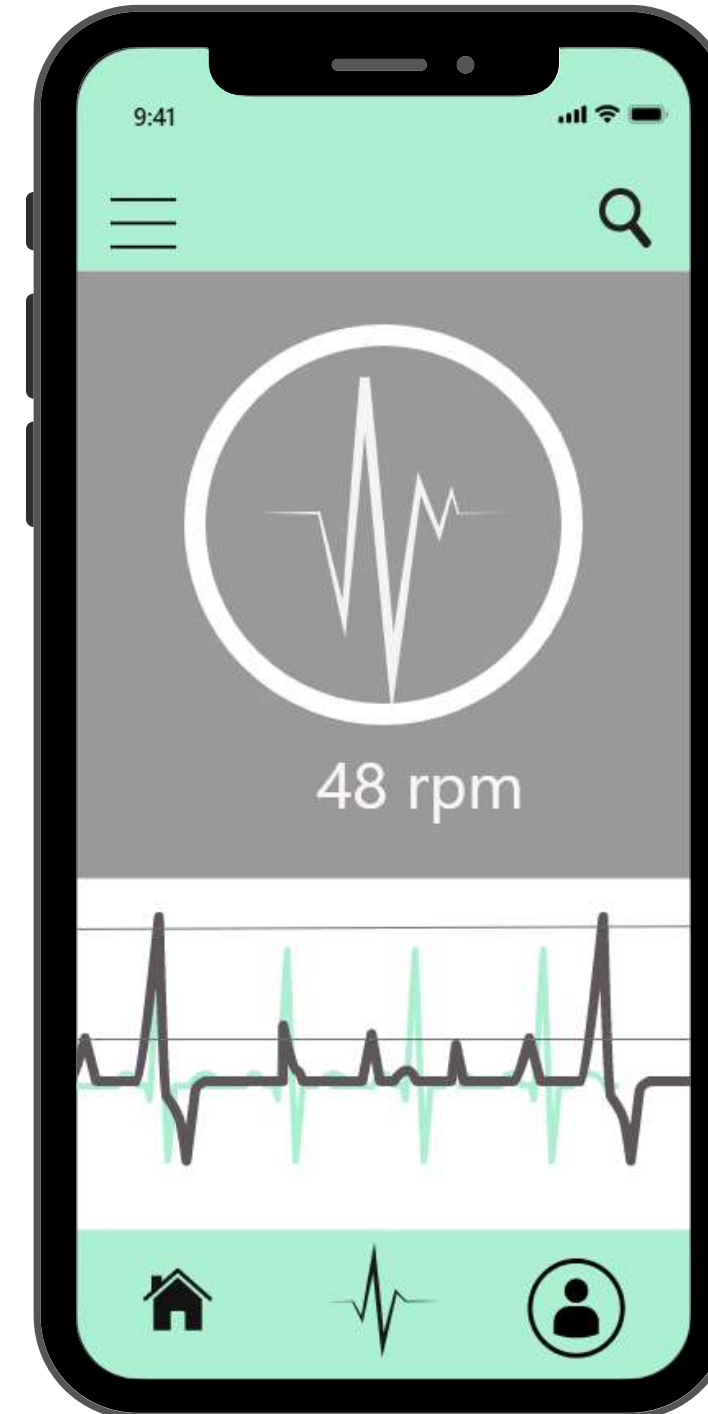
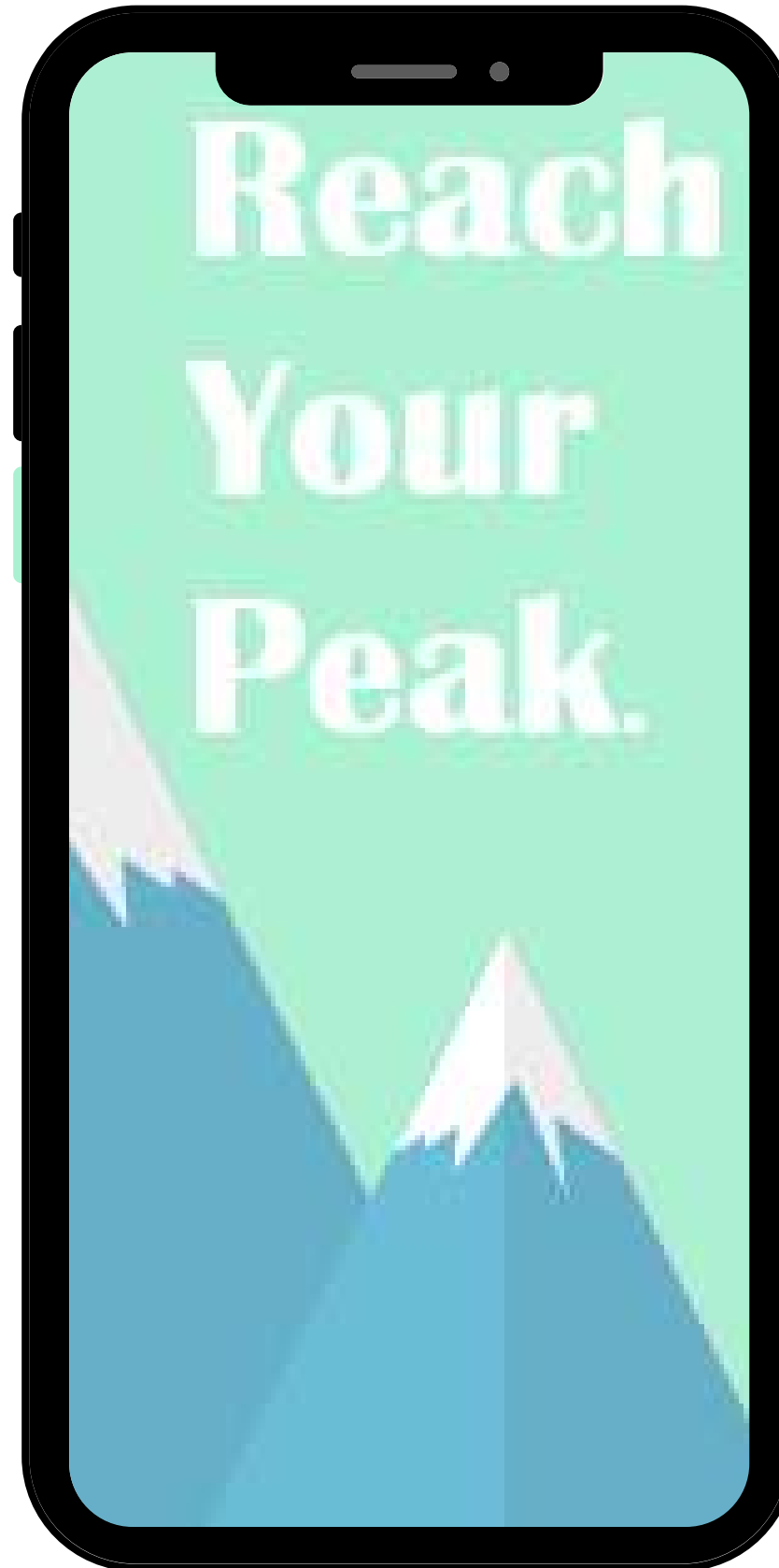
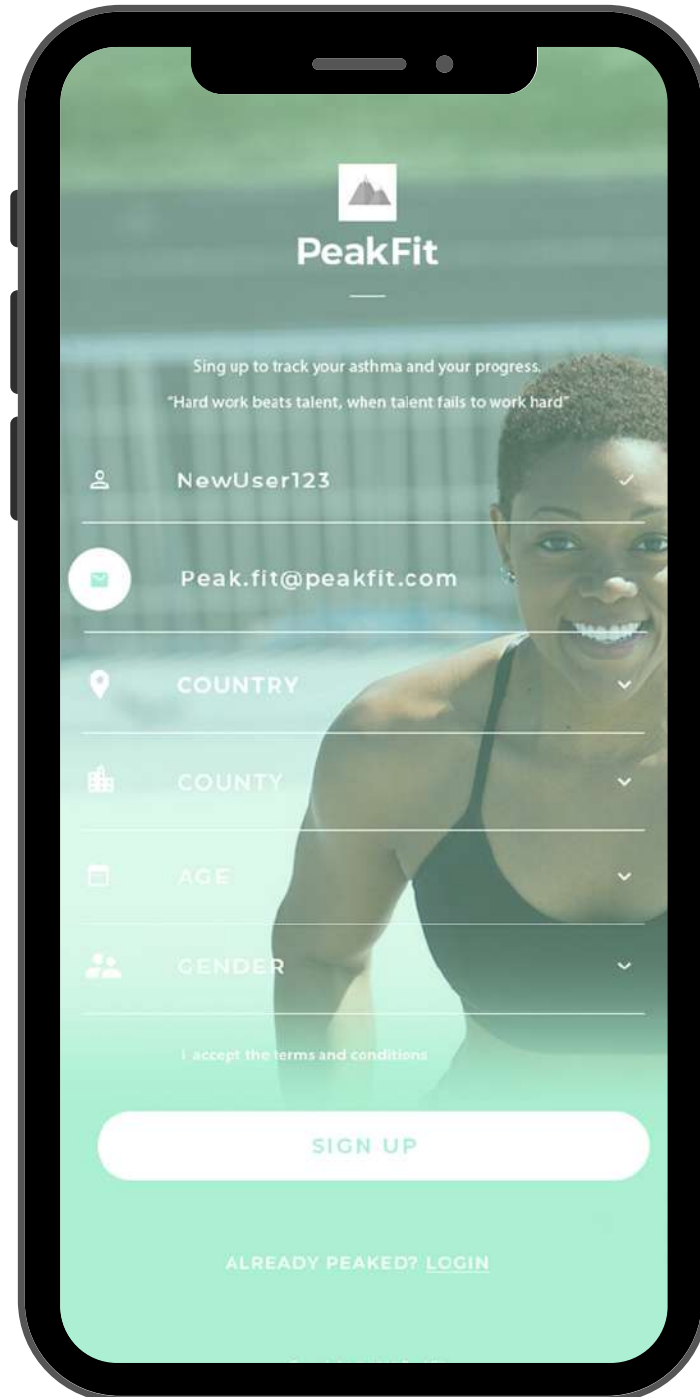
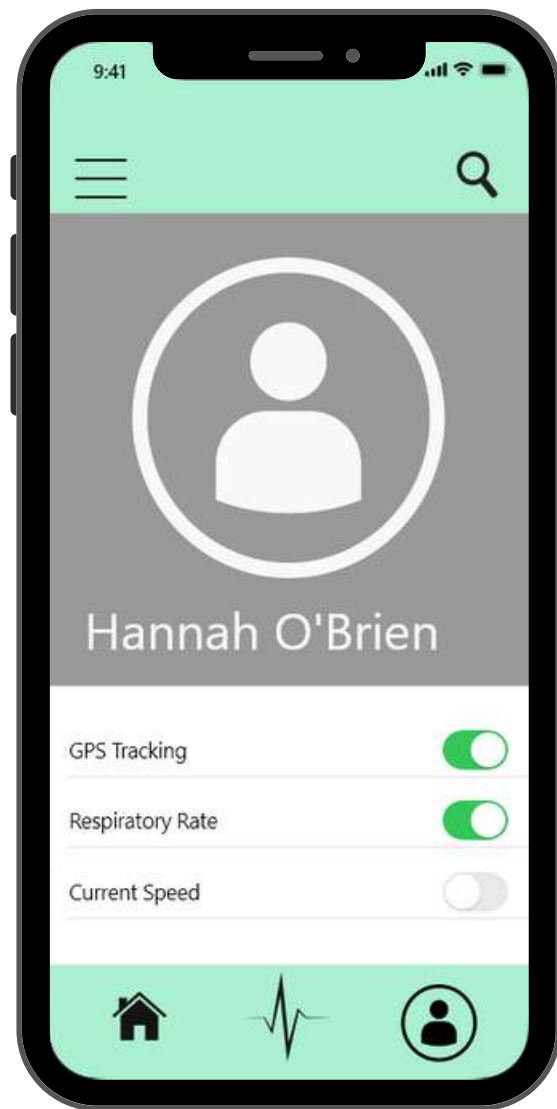
The companion app is a key element of the product. It enables the user to track their progress and to receive notifications when their respiratory rate spikes.

The user can track steps, speed, VO2 max, distance and of course respiratory rate. With the ability to measure these factors players can up their game.

Again, testing was carried out with end users and coaches that might use the app to track their team.



Companion App





Thank you.