# Portfolio

Selected Works (Medical, UX, Speculative)


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Hi, I'm Tanvi,
... a product designer who isn't just about about making things pretty and more about making them work better.

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I’ve worked on forklifts, battery operated pallet stackers, mobility aids, locking systems, and everyday tools that make life easier. I’m now in Germany doing my Master’s, looking for projects that actually solve real problems.

# About me

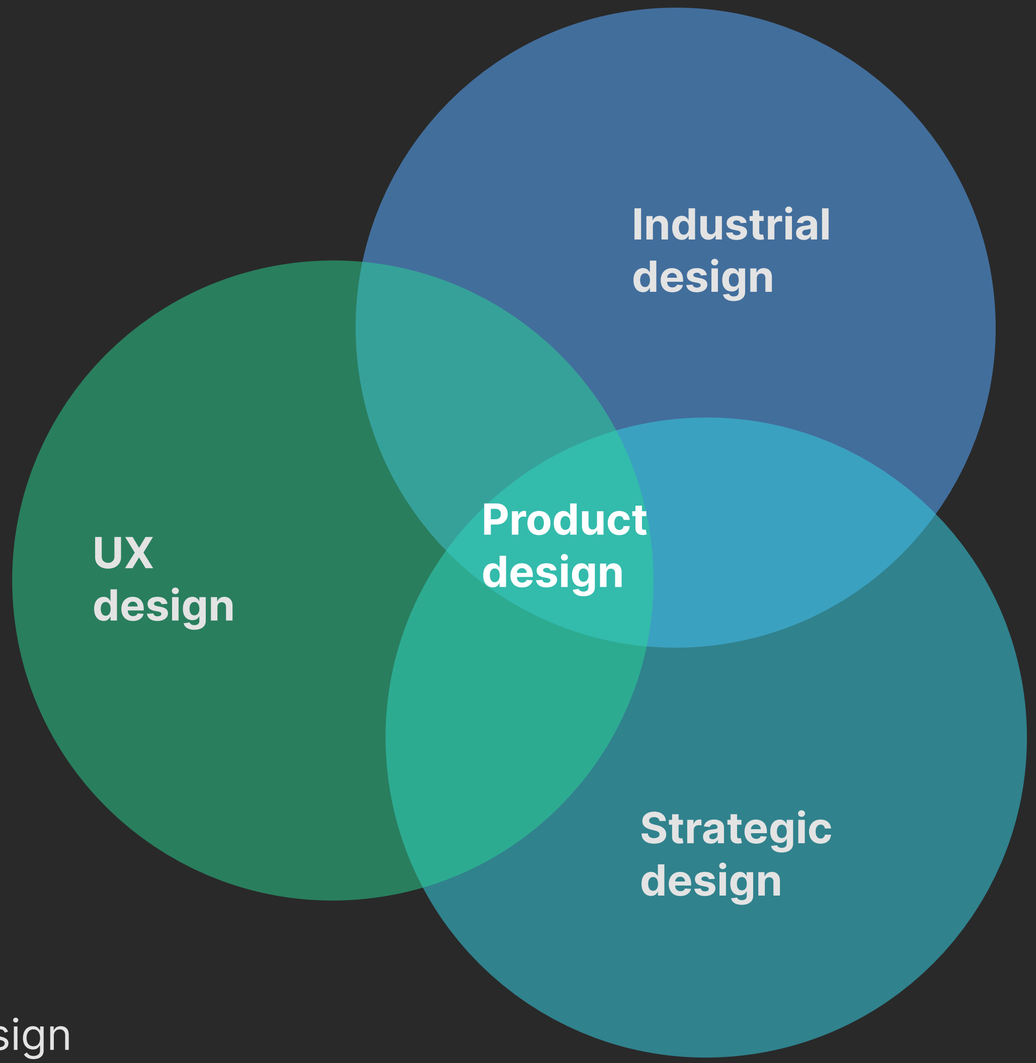
I’m a designer from the valley metro city of Pune, India, blending industrial and UX design to create seamless, human-centered experiences.
Currently based in Dessau, Germany, pursuing a Master’sin Integrated Design at Hochschule Anhalt.
My work sits at the intersection of physical products and digital systems, shaped by years of industry experience and a passion for strategic thinking.

# What I Bring to the Table:

**Holistic UX & Product Design** – Combining strategy with usability for intuitive experiences.

**Bridging Physical & Digital** – Crafting impactful solutions that connect the tangible and virtual.

**Business-Driven, User-Focused** – Aligning design with real-world needs for scalable success.



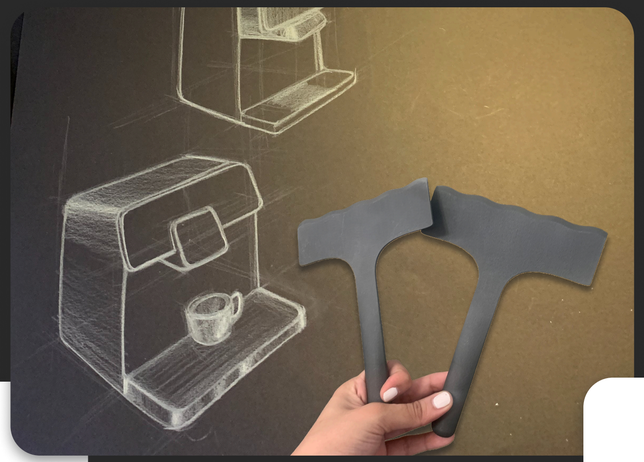

# What I Can Do for You

I help businesses identify the right products and features, design holistic interventions, and bring ideas to life through iterative prototyping.

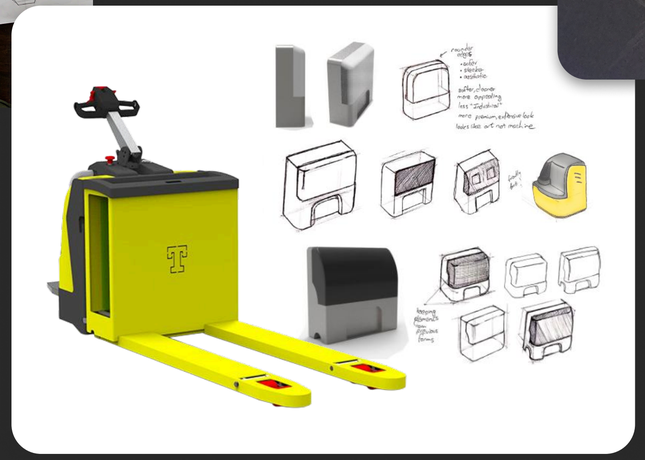
# Areas I’ve worked in:

Most of my projects are under NDA:) I cannot show my best work on my portfolio

**Electronic locks and locking systems**



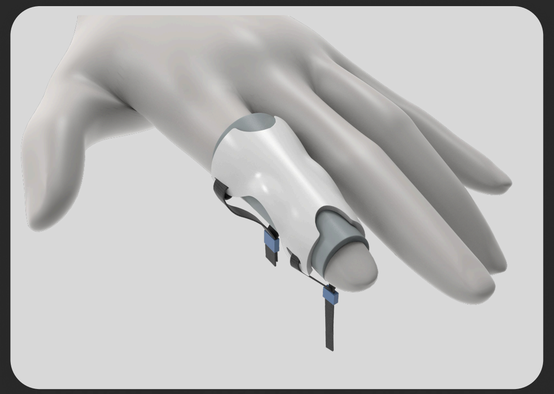
**Kitchen appliances and accessories**



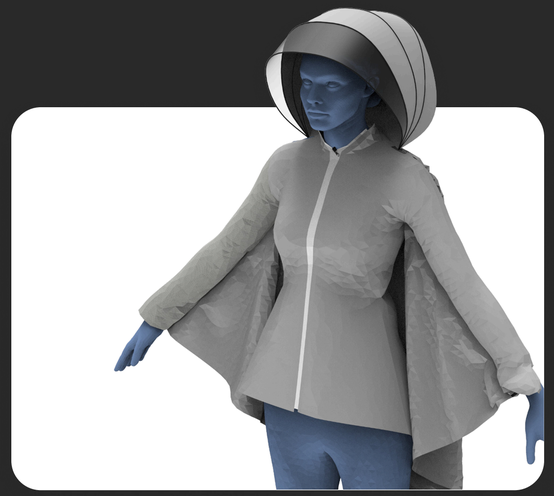
**Industrial machinery**
Articulated forklifts,
Battery operated pallet stackers

**medical devices and pharma machinery**

# Case Studies

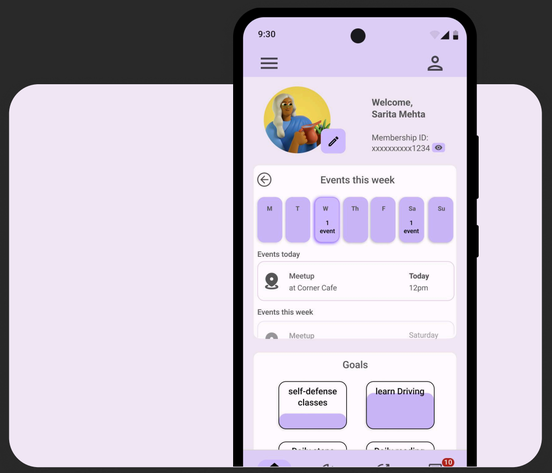


**Dynamic Finger splint**
Product Design
Healthcare

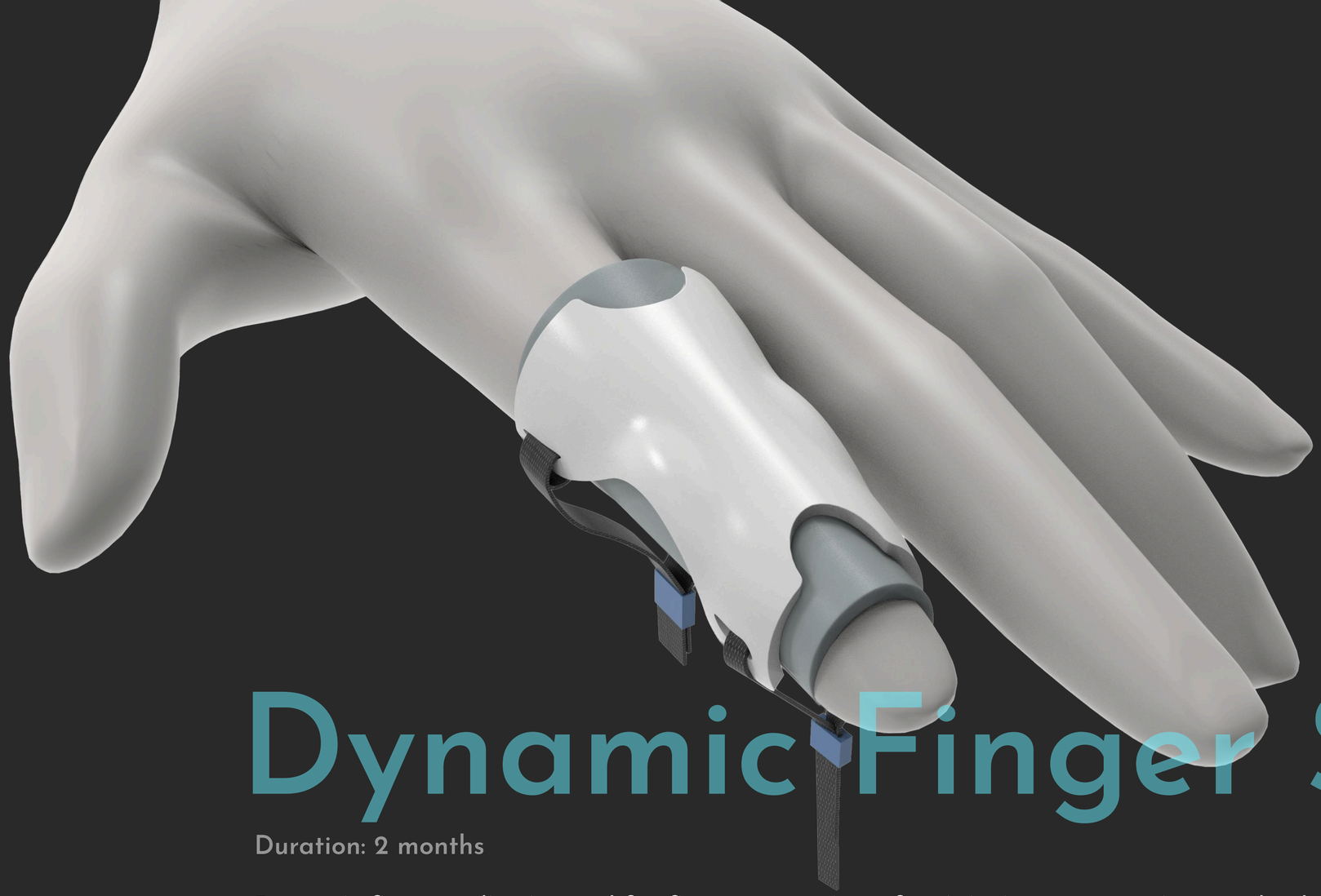


**Rain Protection**
Industrial Design
Bachelor Thesis 2020

**Learning Management System**
UX and Systems Design
b2b SAAS product for startup




**App for Empowerment**
UX and systems Design
Speculative Project



# Dynamic Finger Splint

Duration: 2 months

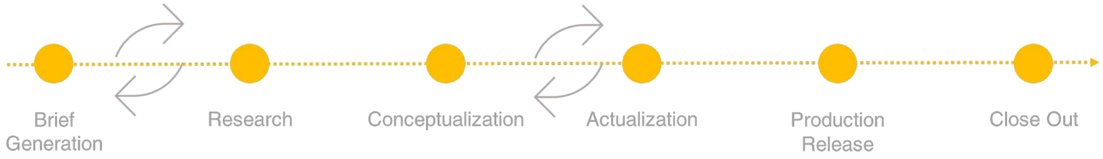
Dynamic finger splint is used for finger extension after injuries or surgeries, to slowly and progressively straighten bent fingers and regain normal usage.

A well know surgeon in Pune would make these at home to distribute for free to low income patients. The aim was to redesign his functional crude version into one that could be sold as a commercial product.

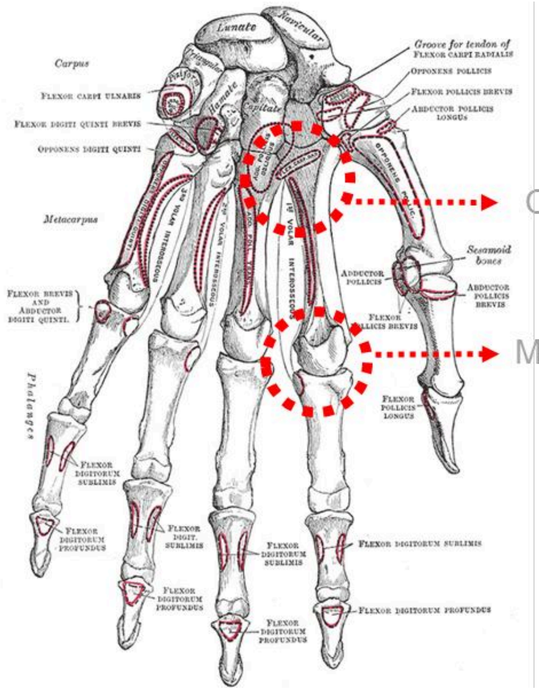
# Dynamic Finger Splint

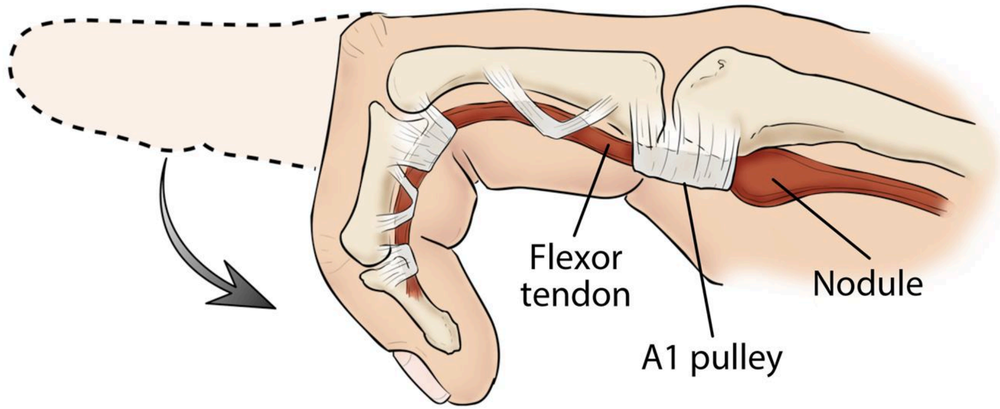
## Process


As part of a design consultancy, I generated concepts based on research and technical inputs from the surgeon. Most viable concepts were presented based on business goals of consultancy and client's idea for new product based start-up.




## Research



# Dynamic Finger Splint

## Current Solution:

Cost effective but does not look like a commercial product to be sold

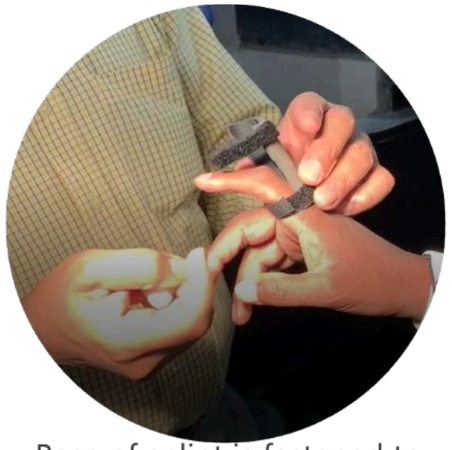
**Velcro fasteners**

**Rivets**
to join fasteners to rubber

**Rubber**
Optimum rigidity to provide straightening without damaging finger

**Soft padding**
between rubber, rivet and finger

In use:



Base of splint is fastened to finger using Velcro straps.

Cotton insterted to act as fulcrum and padding between rubber and finger

Top velco strap fastened last, finger acts as lever

User said he needed to ask for help to wear the splint

# Dynamic Finger Splint

Due to the limitations , splint sizes were decided based on research on competitor splint sizing

**Small**: 38 to 64mm, Band for fastener less than 10mm, assume 7mm
**Medium**: 70mm ,10mm band
**Large**: 76mm ,12mm band
**XL** 83- 86mm , 15mm band

Opportunities for design of product :

Single hand operation

Customization for finger sizes, forces applied and degree of straightening

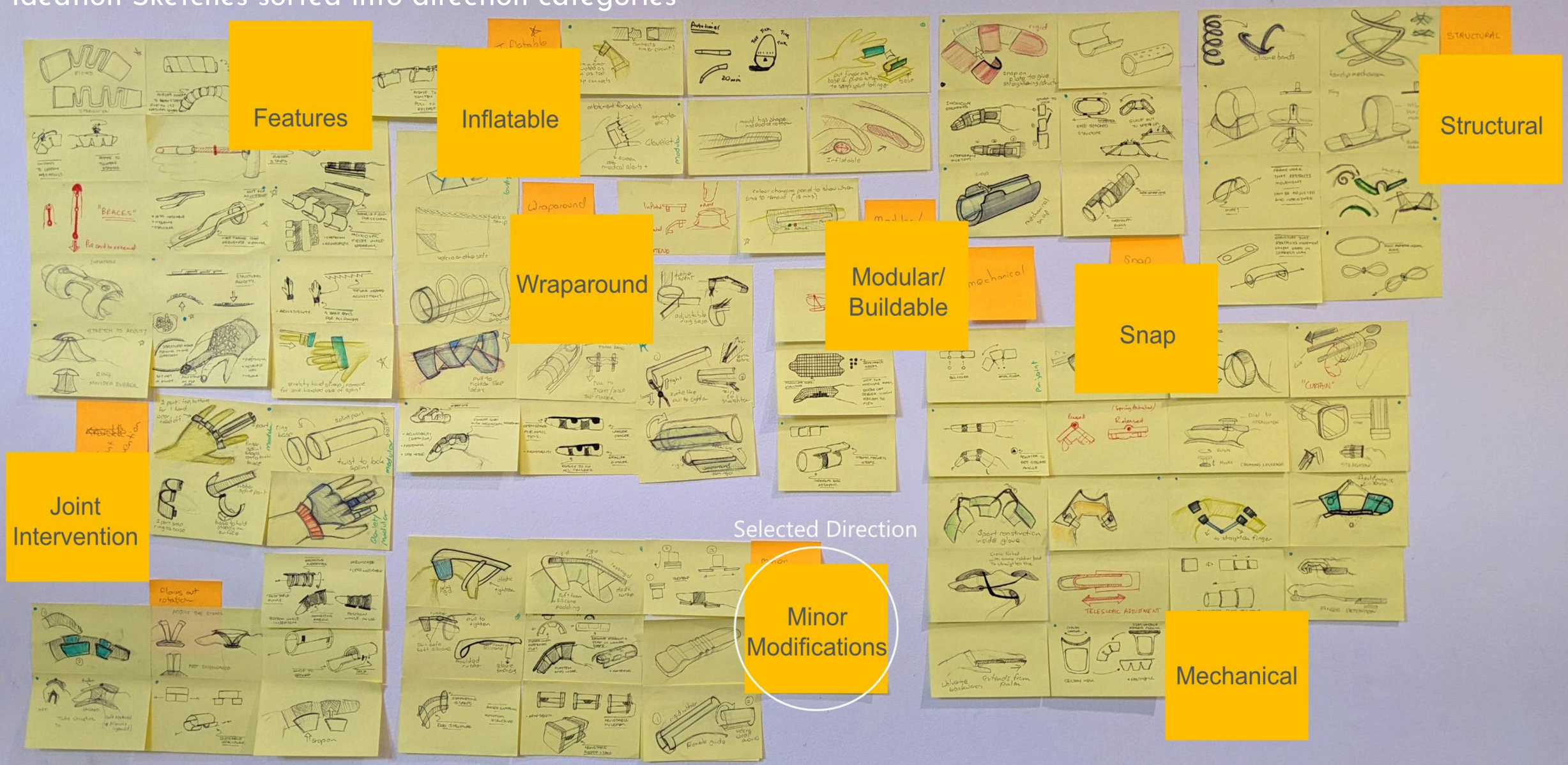
Use with damaged fingers

Solve for issues caused by wearing splint such as cuts, material-related issues, pressure on other areas


Scary looking existing products

# Dynamic Finger Splint

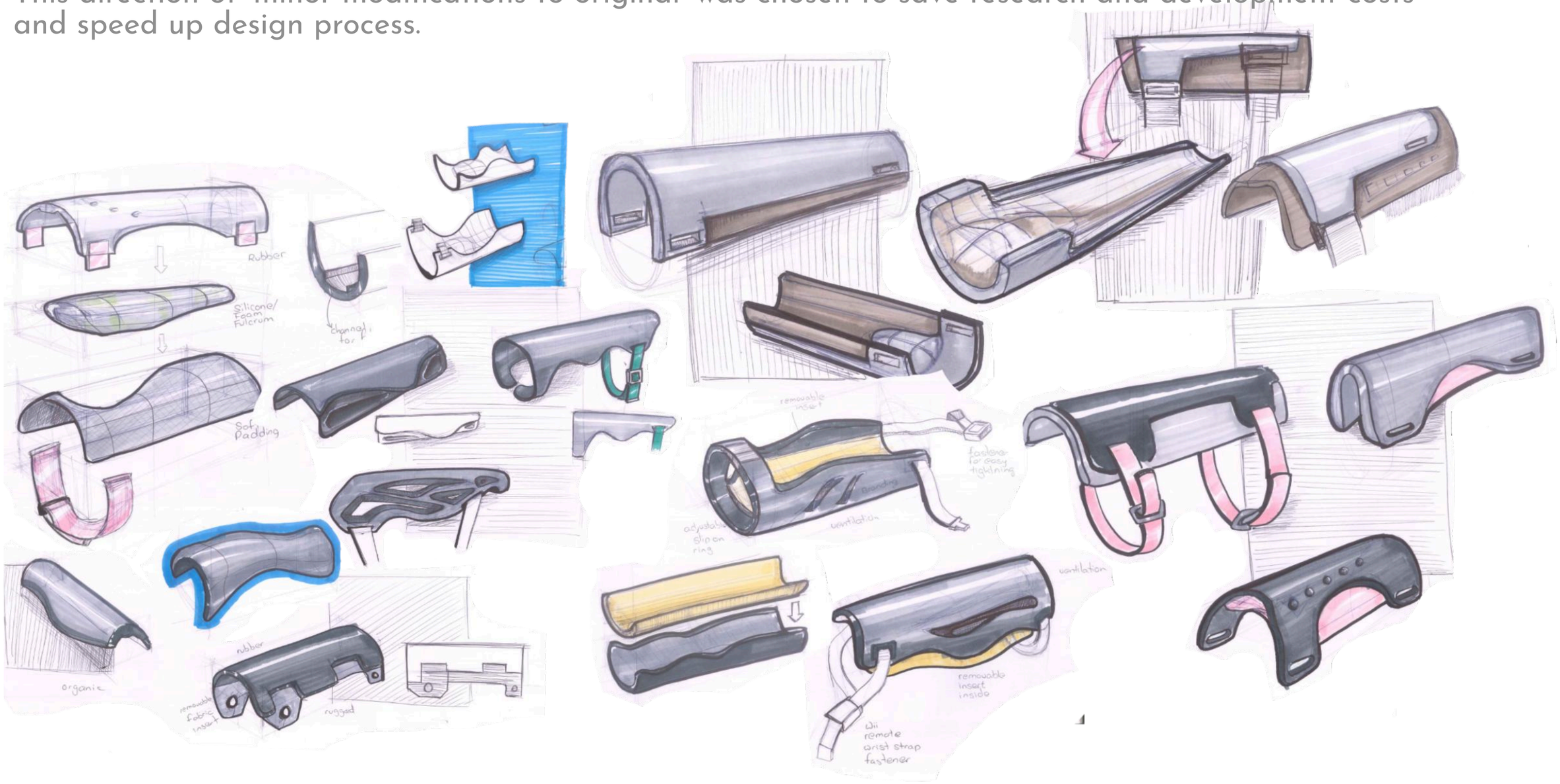
Ideation Sketches sorted into direction categories



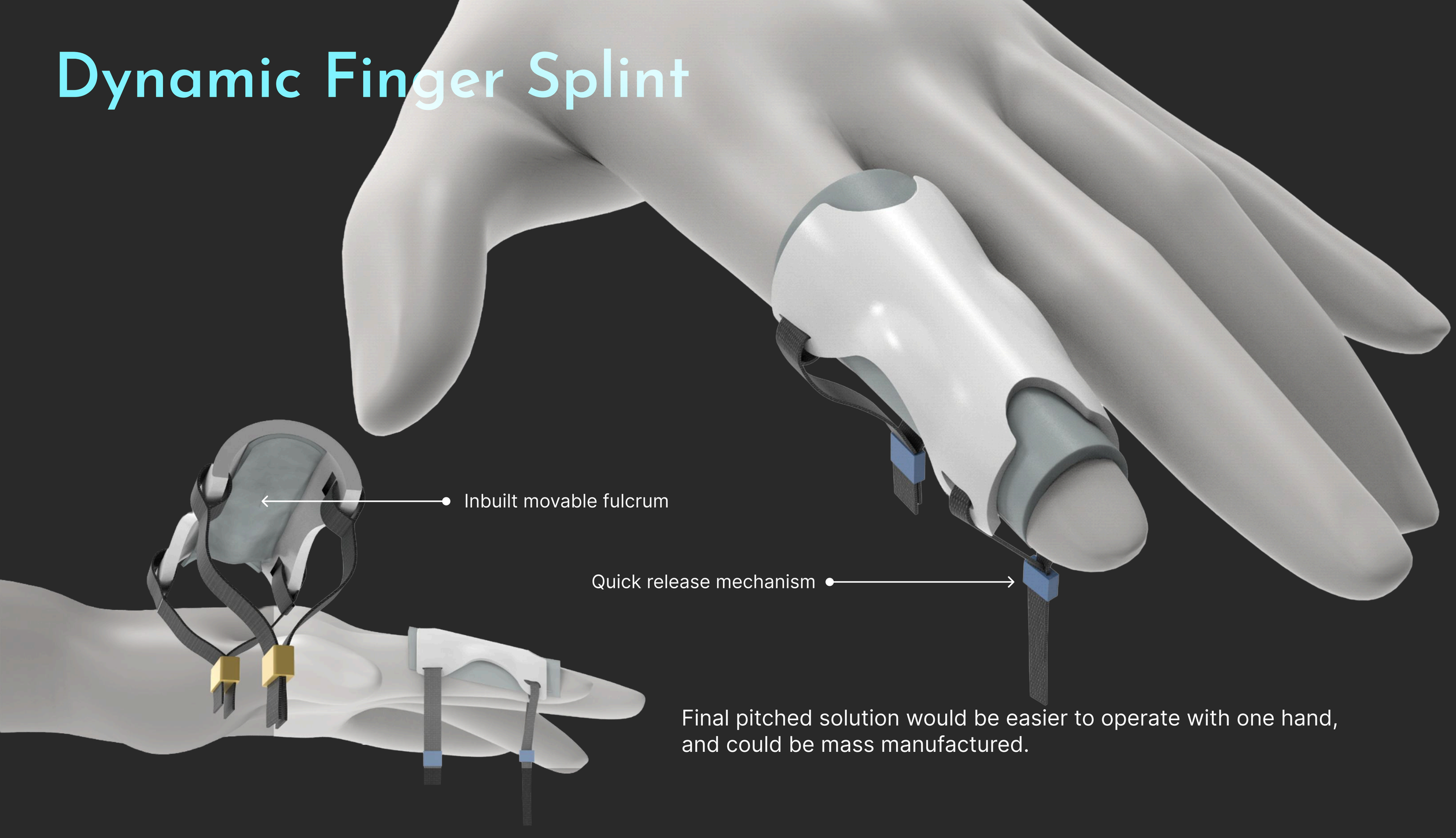
# Dynamic Finger Splint

## Ideation Sketches

This direction of 'minor modifications to original' was chosen to save research and development costs and speed up design process.



# Dynamic Finger Splint

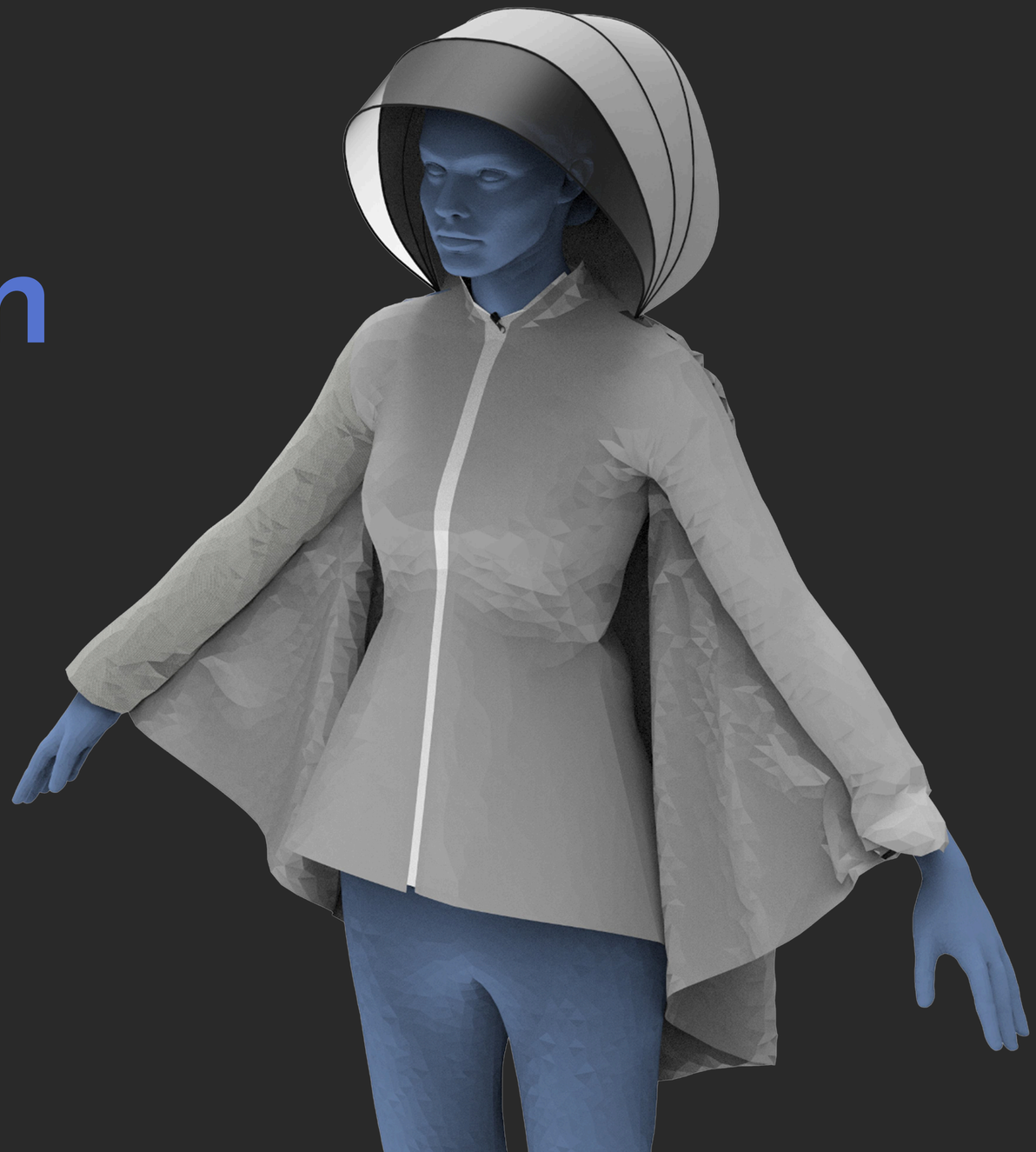



Final pitched solution would be easier to operate with one hand, and could be mass manufactured.

# Rain Protection Thesis Project

**Duration:** Dec 2021- May 2020 **(6 months)**

Umbrellas havenˈt been redesigned almost since they were invented....
and rain coats have their own drawbacks.
A midway solution does not exist.
I was drawn to the novel challenge of redesigning one specific product to fit the urban commuterˈs lifestyle.
Where speculative design can be used as a conversation starter rather than just a means to an end.



# Rain Protection Thesis Project

## Process

Dynamic Process:

After analysing multiple distinct areas such as customization footwear, learning aids, I decided on Rain Protection after dipstick research showed that most people were unhappy with their umbrellas and raincoats as they were inconvenient and inefficient.

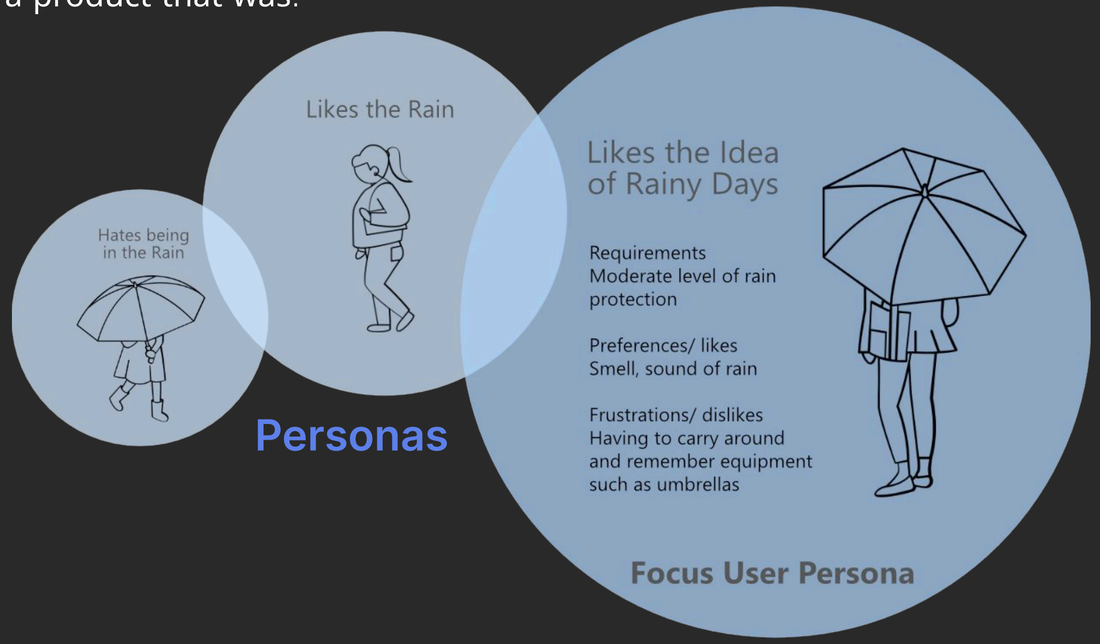
Research and priority mapping helped find pain points to solve for, which resulted in a product that was:

−a wearable umbrella replacement

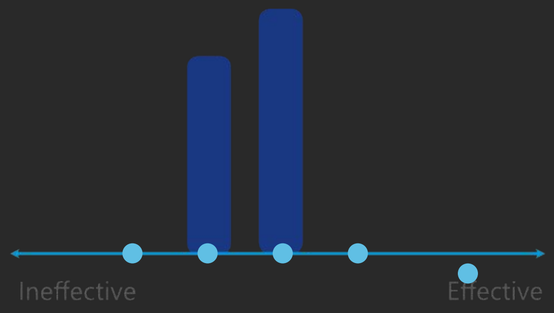
−could be worn anywhere like a jacket

−and a statement conversation starter

−would use waterproof and breathable materials




**Most users surveyed said umbrellas and raincoats were ineffective at solving their needs**




Effectiveness of raincoats and umbrellas

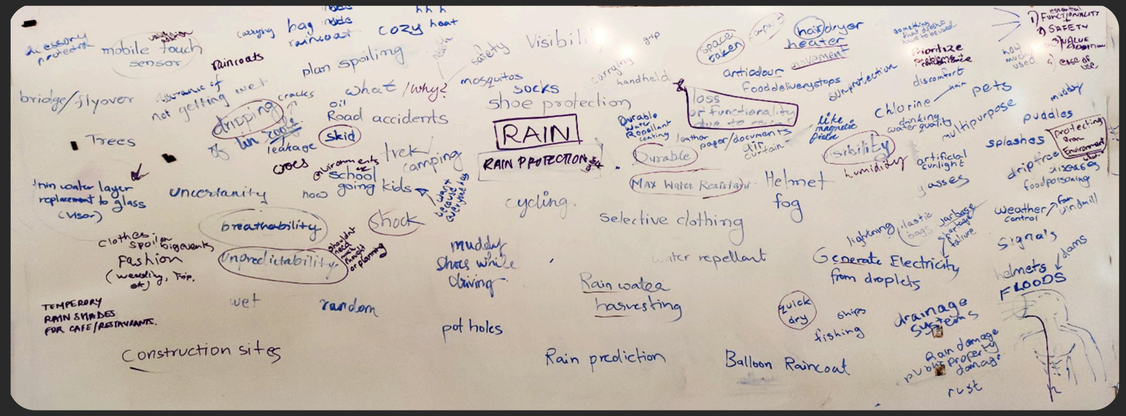
# Rain Protection Thesis Project

## Competitors


Nu–Brella: “worlds first truly hands–free umbrella”
Backpack–like design inconvenient, cant be used with backpacks

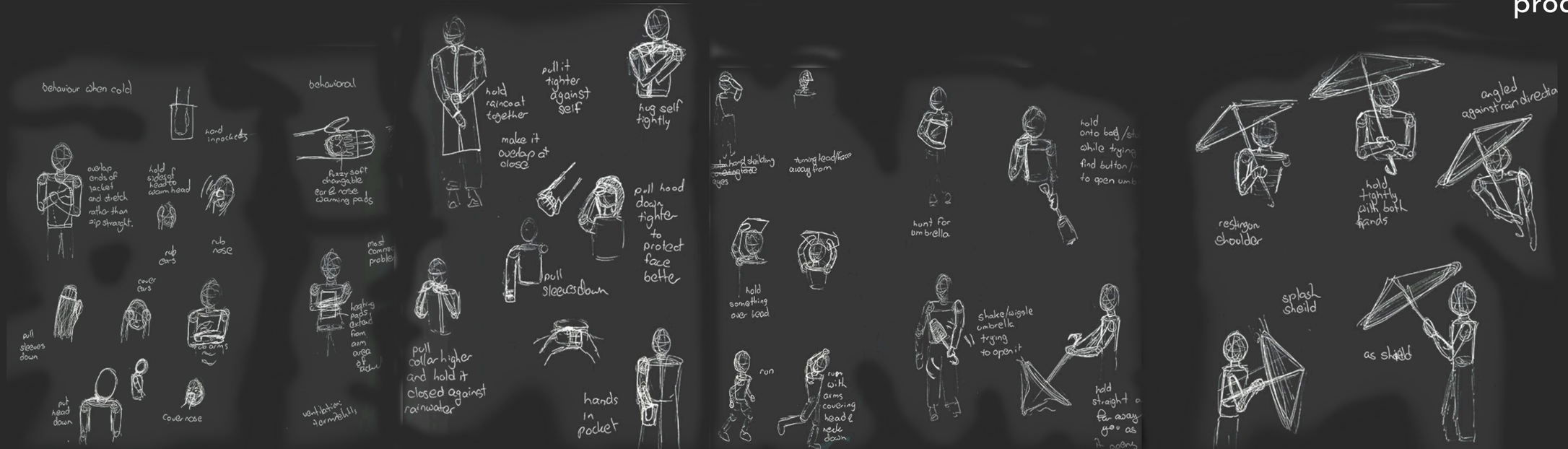
PhoneBrella
Accessibility and hands free usage.
no more protection than umbrella

## Analysing use cases




## Target

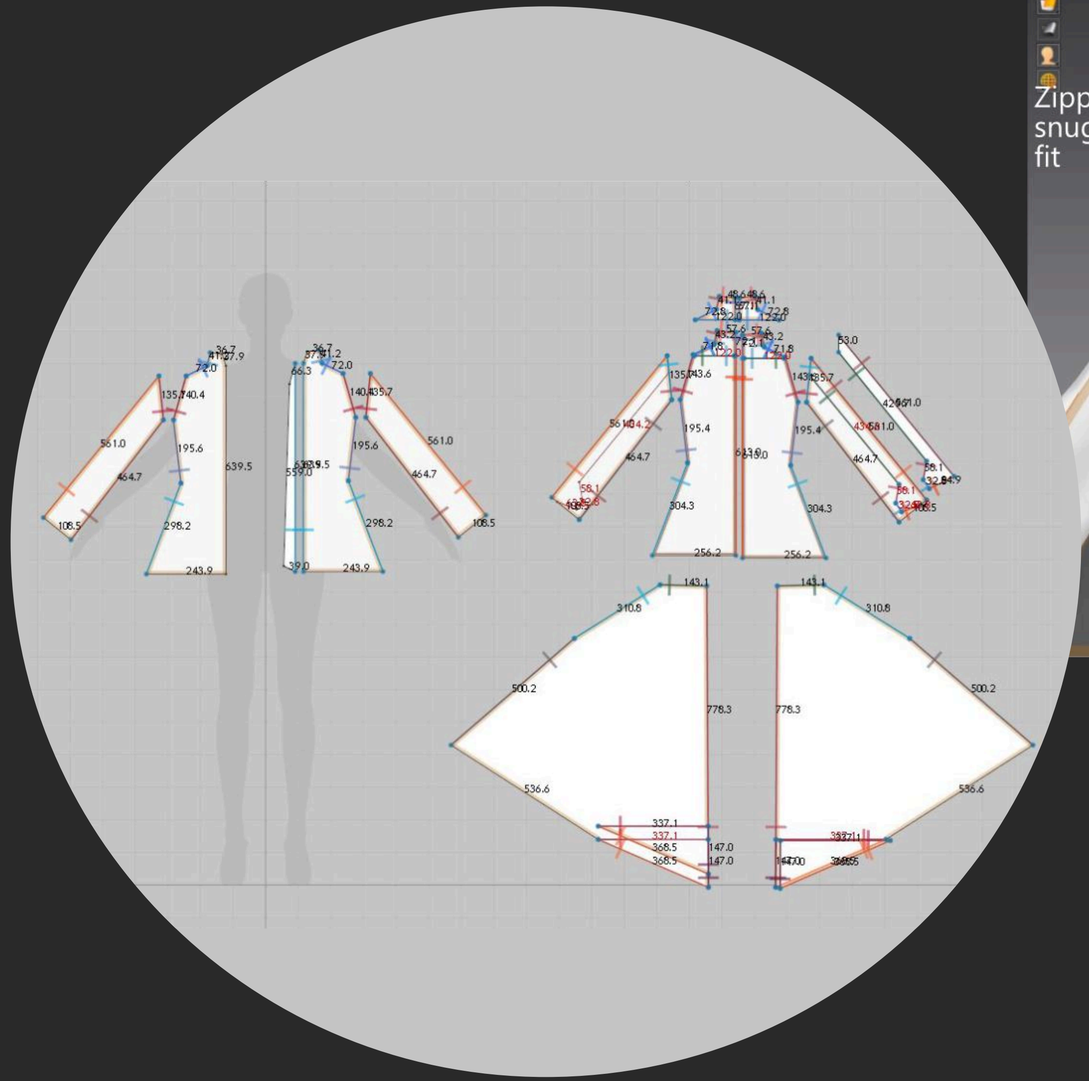
Moving from need-driven to “want-driven” product

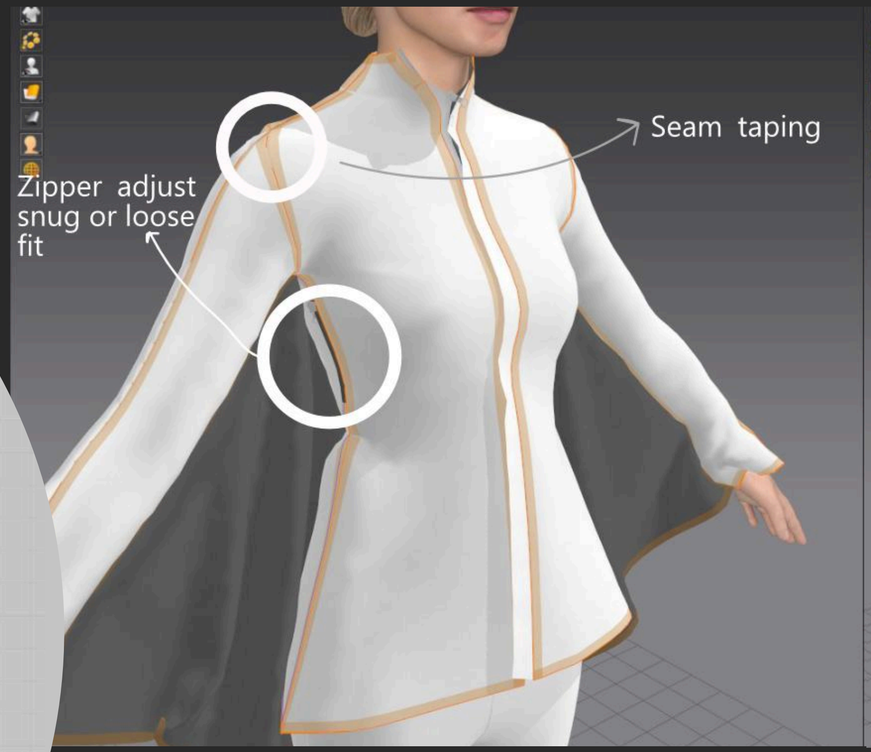



75%
Would buy a new product
that offers rain protection

# Rain Protection

## Making the model







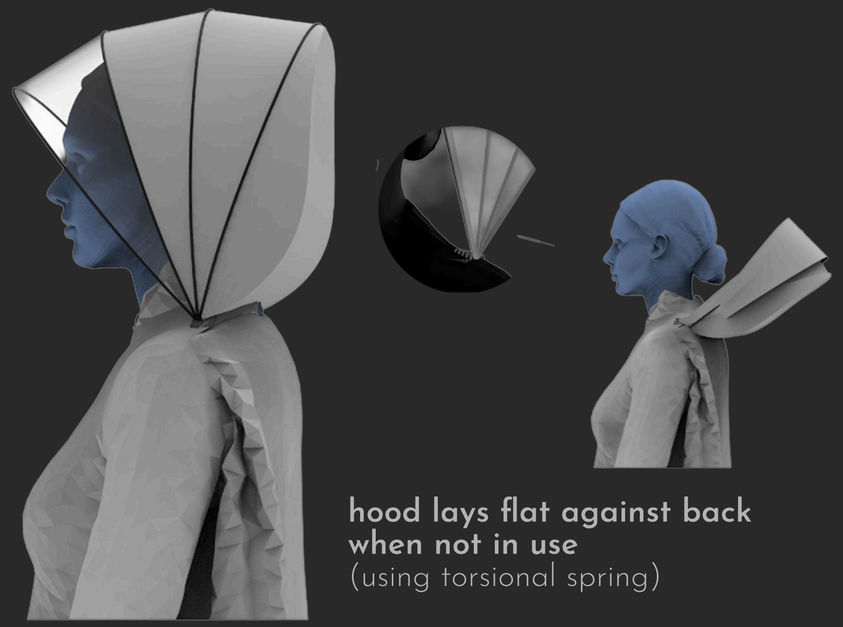
Due to limitations in traditional product design CAD tools for modeling fabrics, I learned Marvelous Designer to simulate construction and material behavior.

The final design was modeled digitally to illustrate fit, seam taping, and other details, especially important as the pandemic made material prototyping difficult.

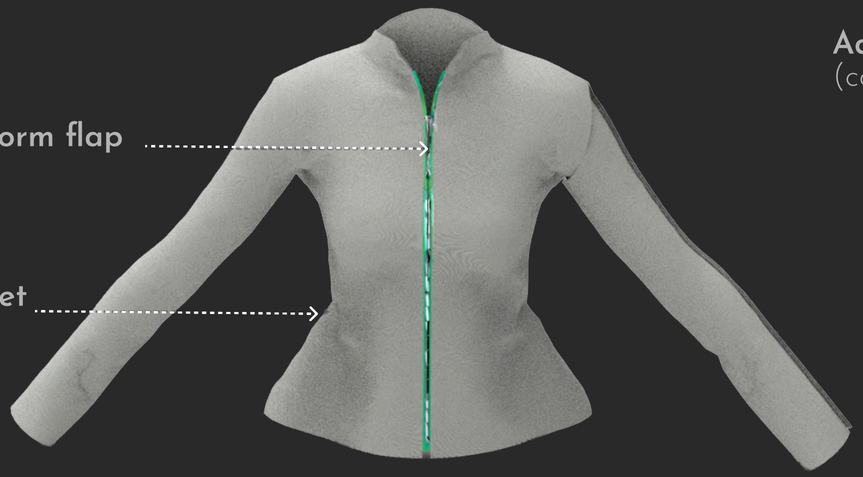
# Rain Protection

## The Product:

Designed for human behavioral study of actions like raising arms to shield from splashes, hugging self when cold, the cape attachment adds a playful, fun yet useful element.
Material used Futurelight, HyVent or Polartec Neoshell which are breathable yet waterproof fabrics.



**hood lays flat against back when not in use**
(using torsional spring)



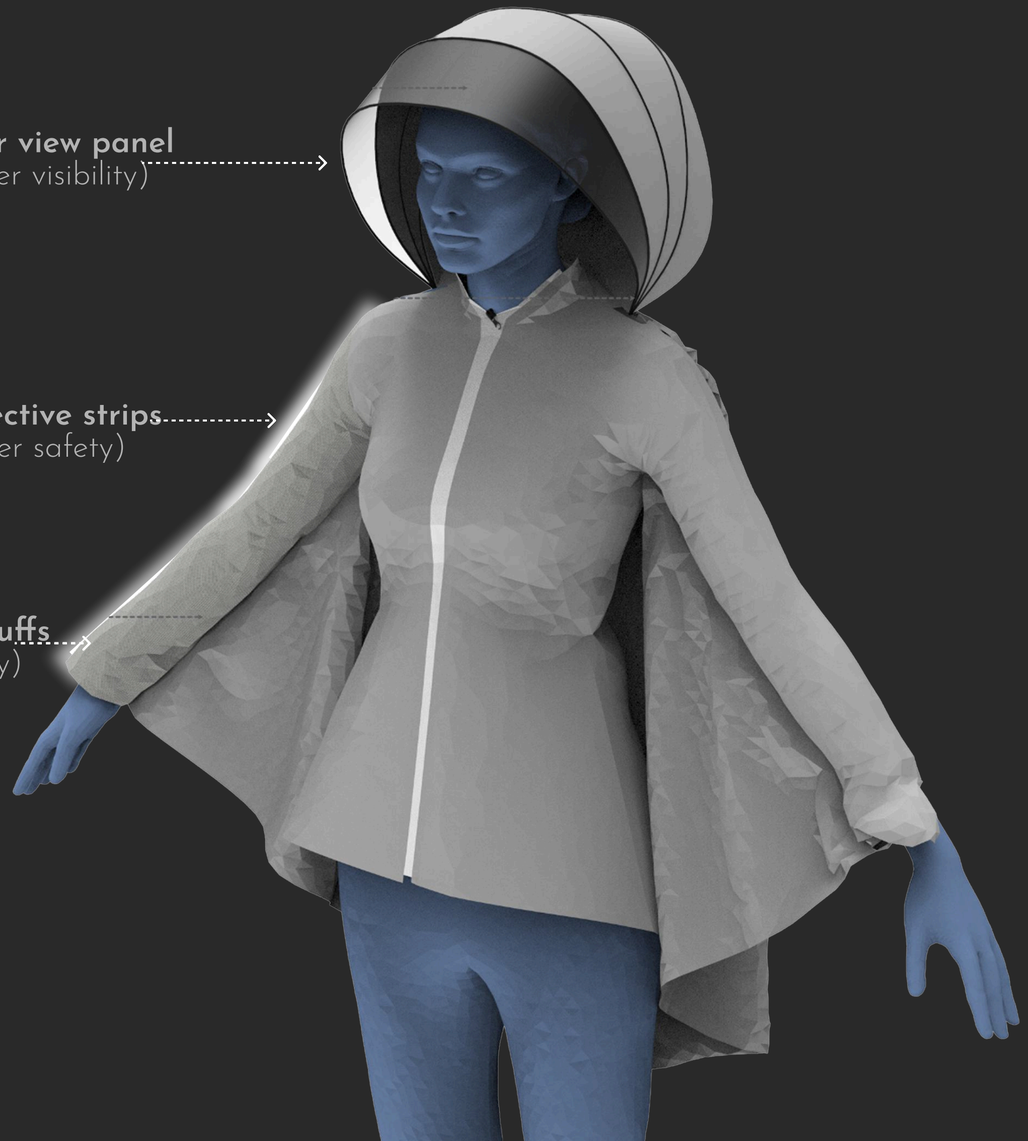
**Zipper covered by storm flap**
(no leaks through zip)

**Side zip on jacket**
(customizable fit)

**Clear view panel**
(better visibility)

**Reflective strips**
(better safety)

**Adjustable cuffs**
(comfort + dry)



# Learning Management System (LMS)

Duration: May-July 2023 (2 months)
Tools: Figma, Miro, Zoom, Excel

# Redesigning an LMS for Aviation Professionals:
## Rapid UX intervention to replace Moodle in 8 weeks

Designing a b2b SAAS system for e-learning with three separate pathways for students, instructors and system admins.

## How do we make a better e-learning platform?

## (in less than a couple months)

A company specializing in creating e-learning solutions needed to quickly shift from their current paid moodle-based platform to an in-house version, catering to the aviation industry.

Due to time constraints, one version was implemented while a roadmap for features to be included in the next version was designed simultaneously

# LMS
## Process

To design the LMS, it was essential to first understand the system, stakeholders and define the project goals.

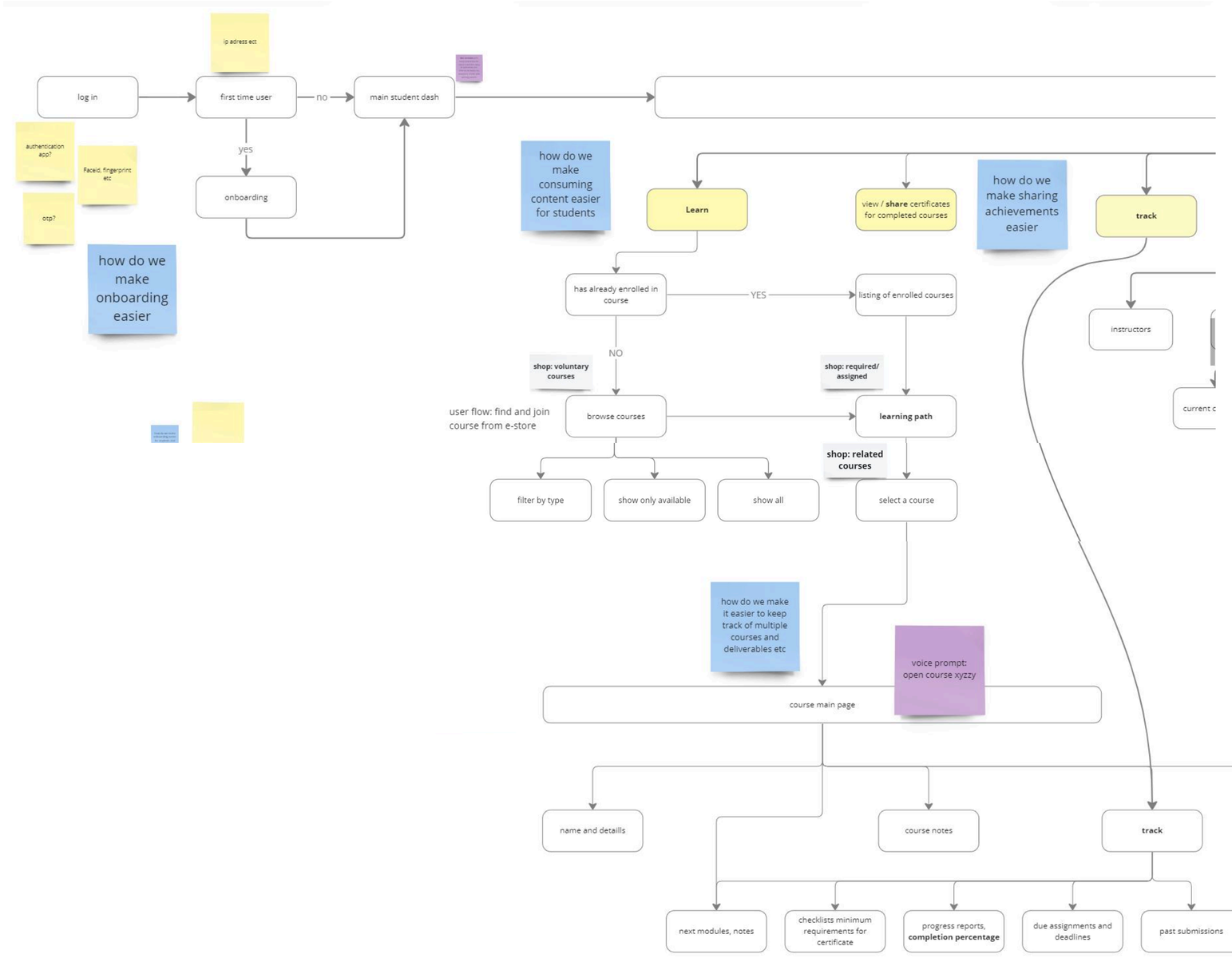
**Research & Scope**
Interviewed 3 stakeholders, defined MVP

**Flows & Info Architecture**
Mapped key user flows for learners, instructors, admins

**Wireframes + Prototype**
Built interactive dashboards in Figma

**Parallel Delivery**
MVP delivered in 8 weeks; future roadmap created

### Snapshot of User Flow for Learners



# LMS
## Personas

### Instructors (Instructional Designers)

Pain Points:

- Complex process for uploading and editing course material
- Limited visibility into learner performance
- Inability to customize the learning flow

### Administrators (often internal developers or stakeholders)

Pain Points:

- Manual enrollment and permission-setting was time-consuming
- No consolidated view of learner or instructor activity
- Poor interface for managing backend data efficiently

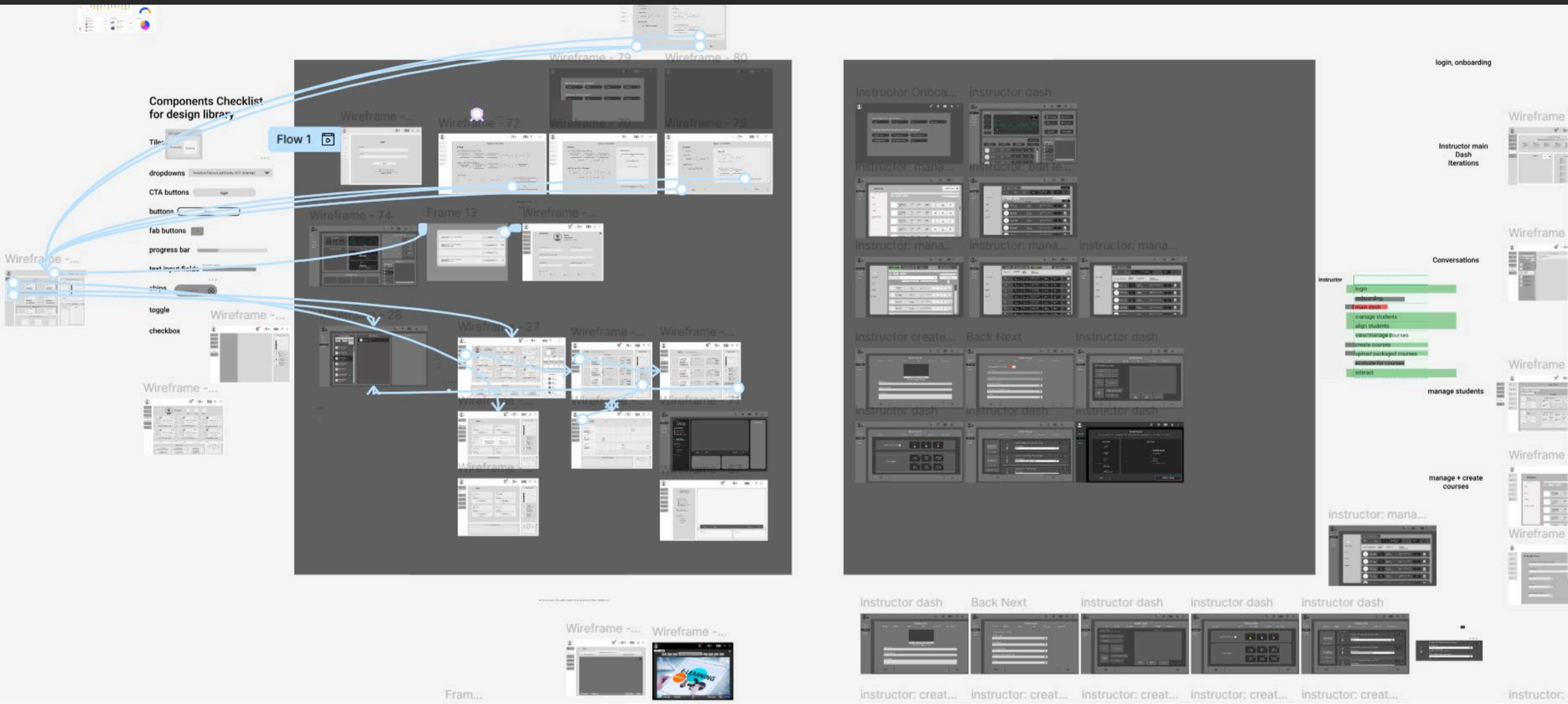
### Target Users: Aviation professionals undergoing certification

Pain Points:

- Difficulty tracking progress across multiple modules
- Lack of timely feedback or reminders
- Confusing navigation across learning resources

# LMS

## Protoype snapshot



# LMS
## Process

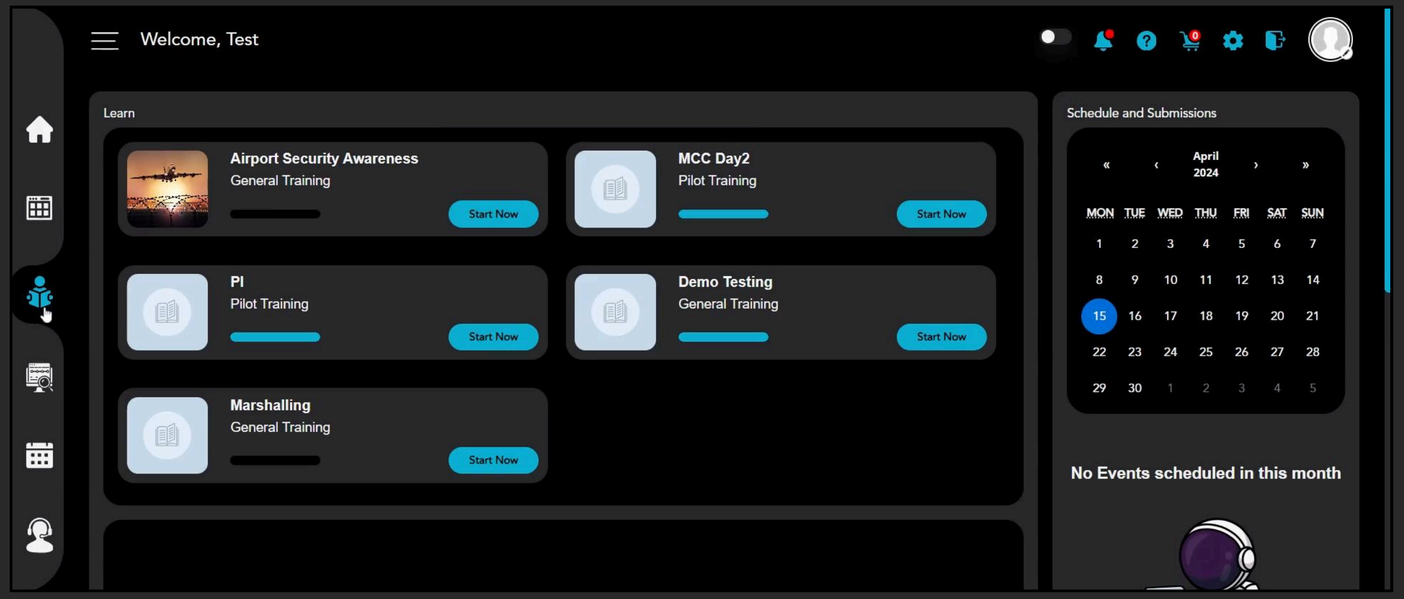
### What Was Achieved:

- Deployed MVP within 2 months
- Positive usability feedback from instructors
- Roadmap for long–term features implemented into backlog

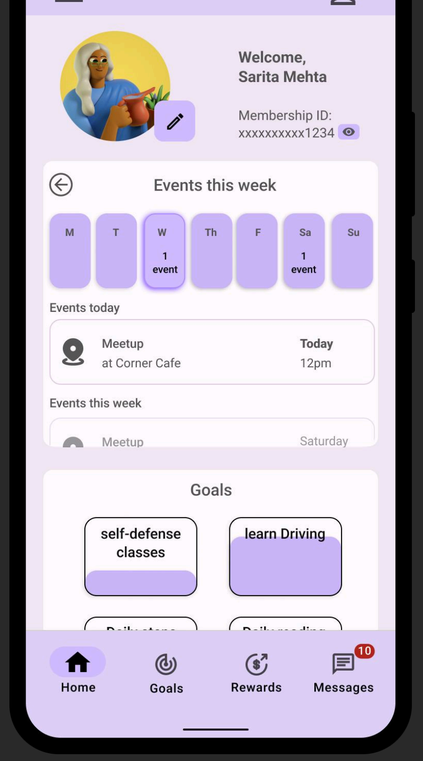
### Reflection:

This project helped me practice balancing short–term constraints with long–term vision.

It was an opportunity to make critical UX decisions with limited time without compromising on clarity or user needs.




Screenshot from live product

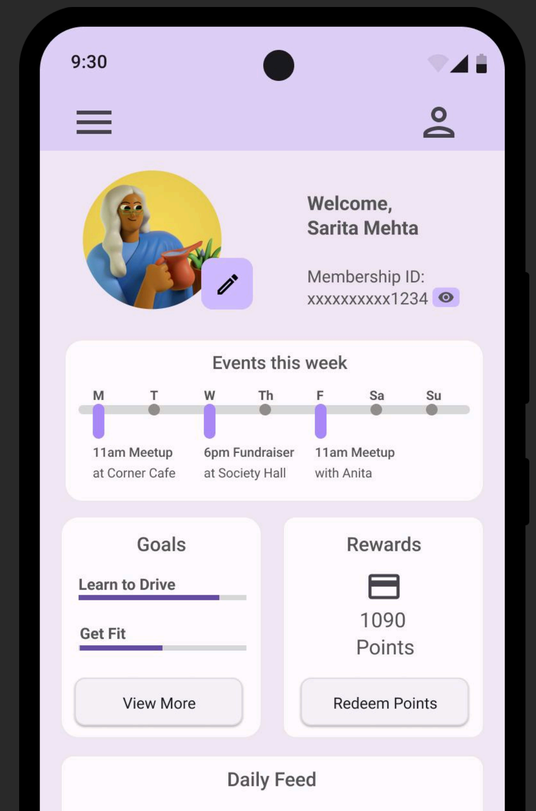



# App for Equality

Duration: 2 months

The brief: Creating a system to reduce gender inequalities by enabling women to empower themselves.

Various research tools such as stakeholder interviews, mind–maps, causal maps were used to gather data on  gender inequality, its causes, effects and effectiveness of current solutions. These insights were used to imagine an app–based grassroots systems design solution for Indian Tier 1 cities.

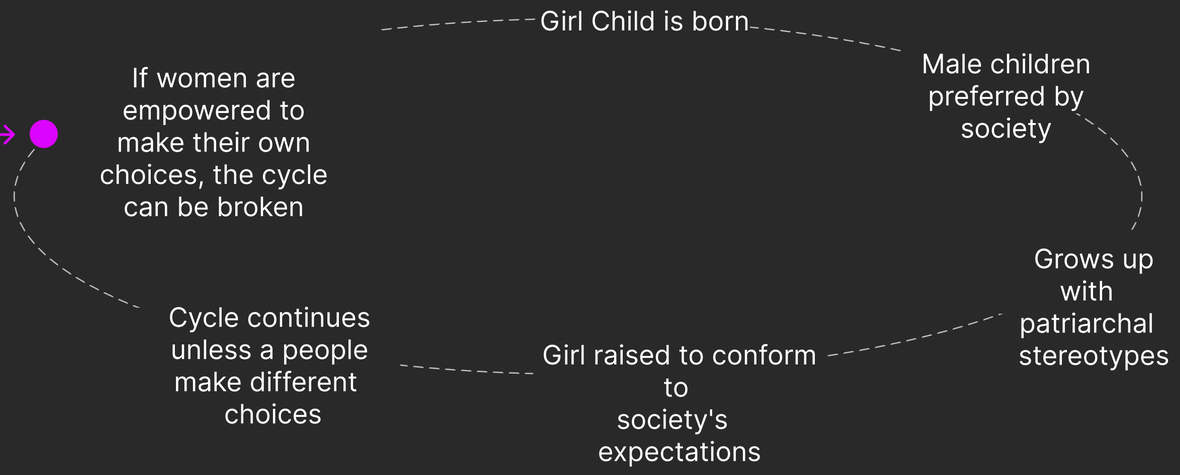


# App for Equality

## Process

After research with various stakeholders, it was clear that
**there can be no equality when the balance of power to make decisions is skewed.**
This means having the freedom, knowledge and resources to do what is best for them, and not giving in to societal pressures and expectations.
The governments has schemes including education, reservations for women. Many organizations are also working towards this from grassroots levels.
For this project, I conceptualized an intervention where a woman wants to change her life, but needs resources and infrastructure to make progress.

**“there can be
no gender equality when
women
are not empowered to
make decisions for themselves”.**



# App for Equality

## Target Persona

Anita is a urban homemaker with an empty nest who is great at baking.
She always wanted to set up her own cake business but was never given the opportunity as she was always busy looking after her family.
She never learnt how to drive, and must depend on her husband to drive her to her favourite baking supplies store.
She **now has the time and motivation** to set up her own cake-making studio. She lacks infrastructure and know-how to start her business.

Frustrations

Does not know **where to start** or how to **stay on track** with personal goals
Does not feel like her family **understands her** frustrations.

Goals

Wants to be more **independent**
Wants **help, resources** to help her achieve her dreams

by Tanvi Kulkarni

# App for Equality

## Anita's User Journey map

Setting her first goal towards independence of learning how to drive though a partner driving school that she found on the Empower App

Anita identifies app as a tool

she gets to input a goal for herself

chooses to learn to drive a car in 2 months

App gives her suggestions of driving school partners

she picks the driving school closest to her home and joins

the app helps track her goal progress and lesson timings

the partner school verifies that she completed the course

the app gives reward points that can be spent at other partners

she shares her progress with her community in app

the social and finaincial rewards motivate her to keep using the app

Anita can now drive herself to wherever she needs to go and is no longer dependent on others for transport

accomplishing this task gives her the confidence to take on greater tasks such as establishing her cake business

the app can help her find customers as well as mentors for her new business

# App for Equality

## The System


The system will include tie-ups with businesses, organizations and individuals committed to gender equality and helping empower women.

This will support local businesses as well as provide safe spaces for users of Empower App.

Aadhaar based verification will be used to verify app partners and users for safety and trust. (Aadhaar is a 12 digit individual identification number which serves as proof of identity and proof of address for residents of India.)

# App for Equality

## Process

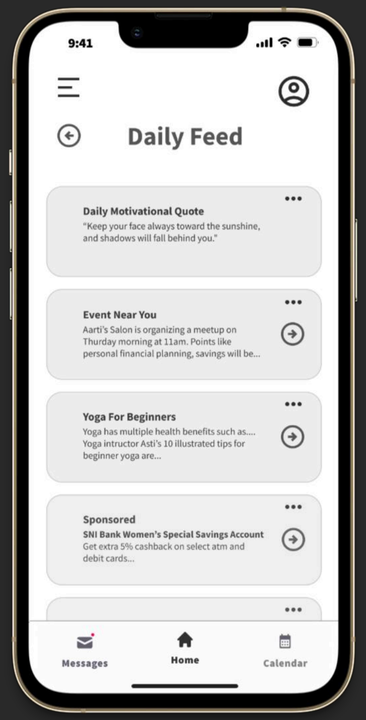
user downloads app → option to select inconspicuous icon to disguise app → user has account

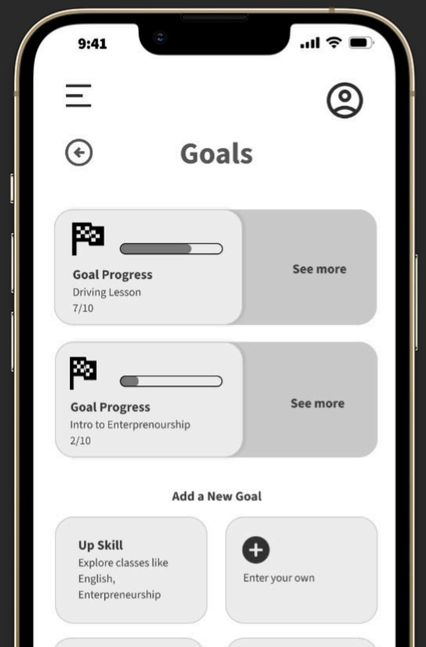
user has account — Y → log in via phone otp

user has account — N → create account via phone number → otp to validate account and option to link email → log in via phone otp

log in via phone otp → homepage

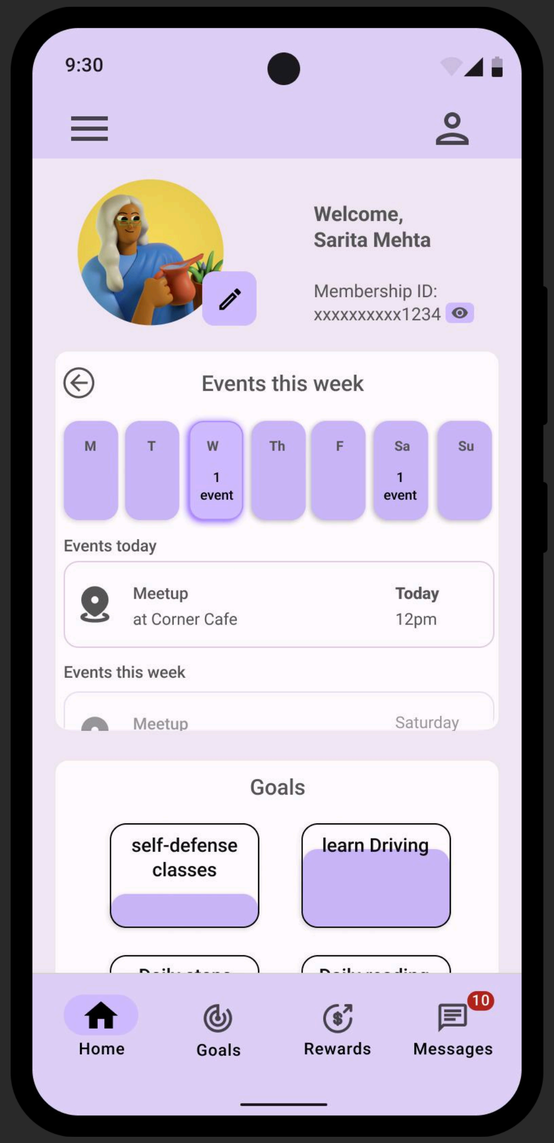
homepage → daily feed, messages, calendar, account details, rewards, events nearby, goals tracker

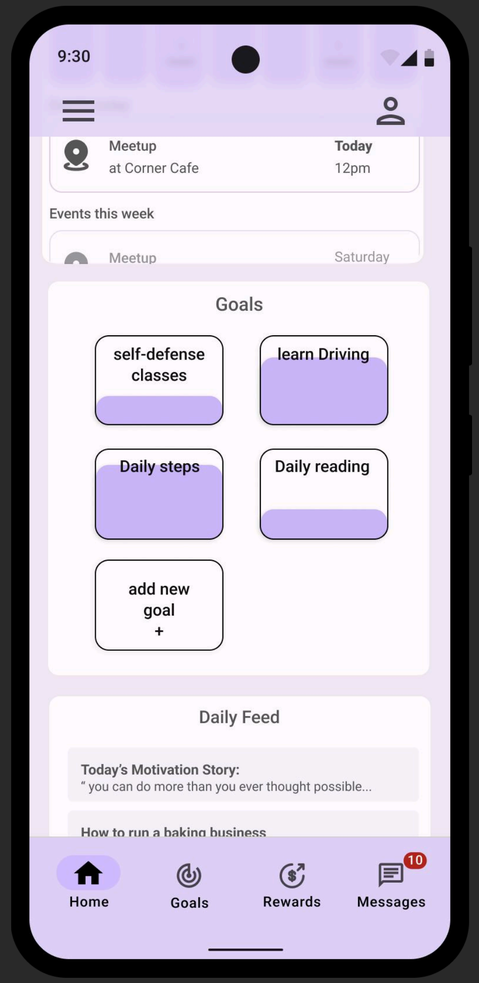



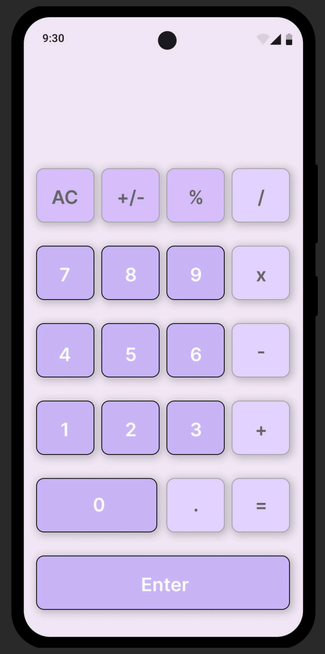
# App for Equality

## The app

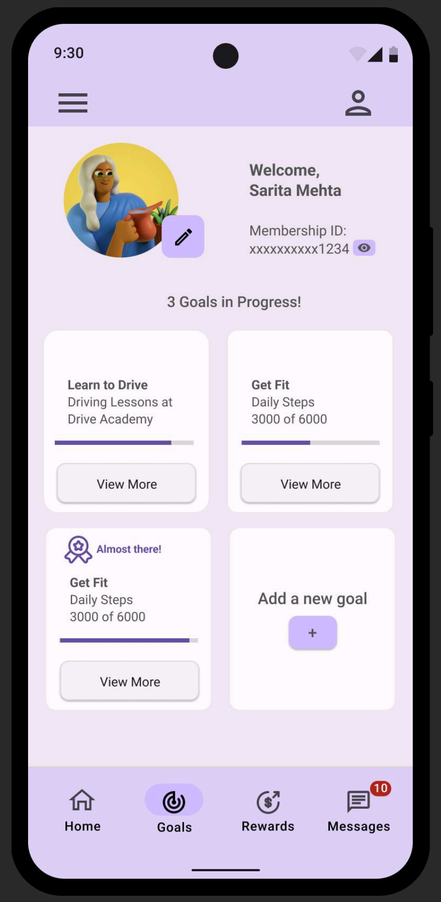


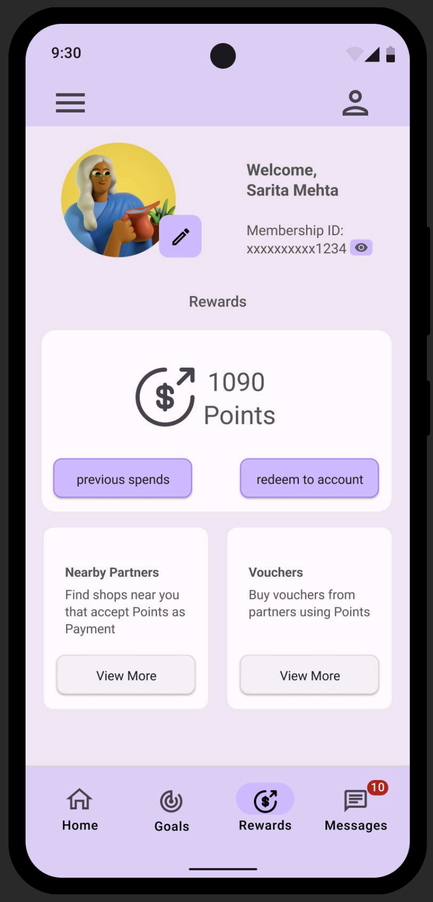

Everything at-a-glance on home page



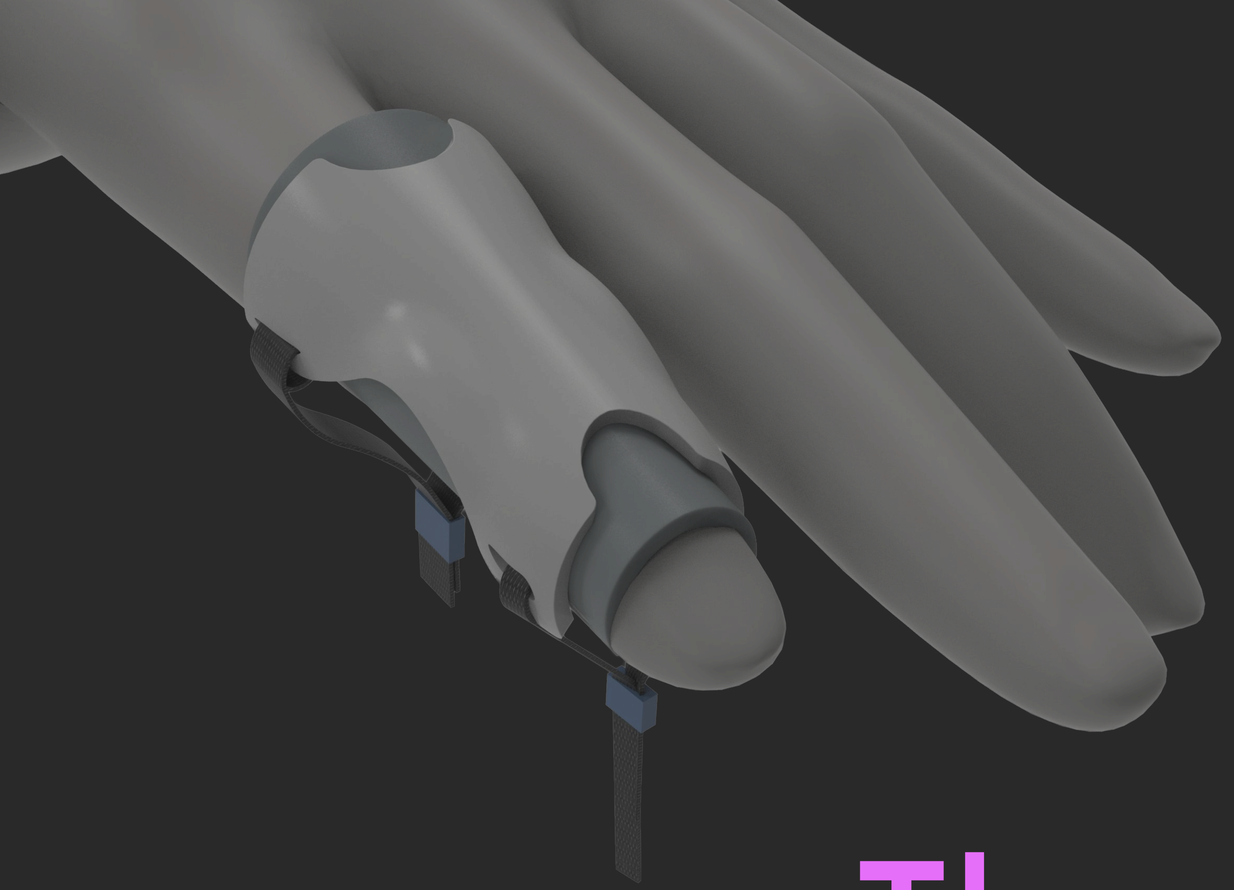

Can be disguised as a calculator till passcode is entered

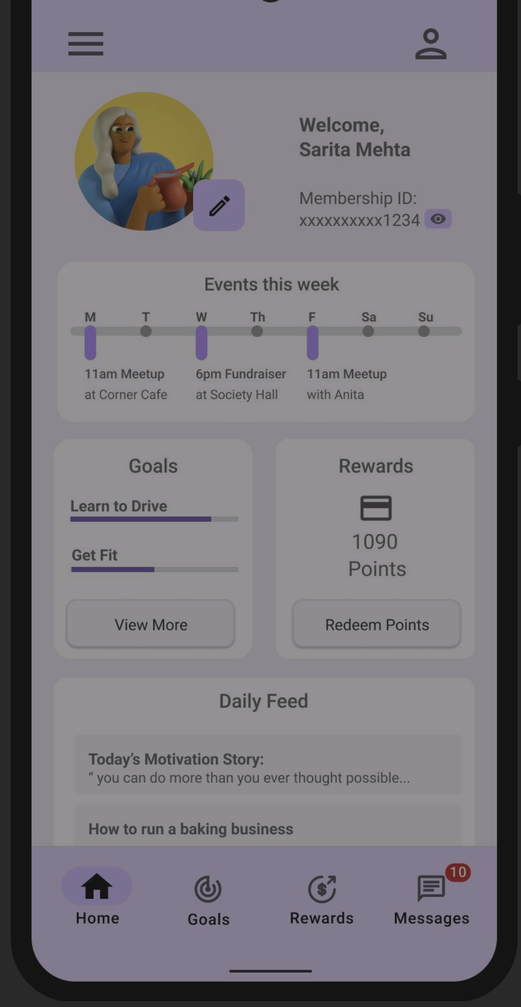



Goal Setting and Tracking




Reward Points Tracking and nearby locations that accept points






# Thank You!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