

Charles Hu

Design For The Real World



Who am I?

Entrepreneur

Designer

Traveler

Presenter

Researcher

Compere

Athlete

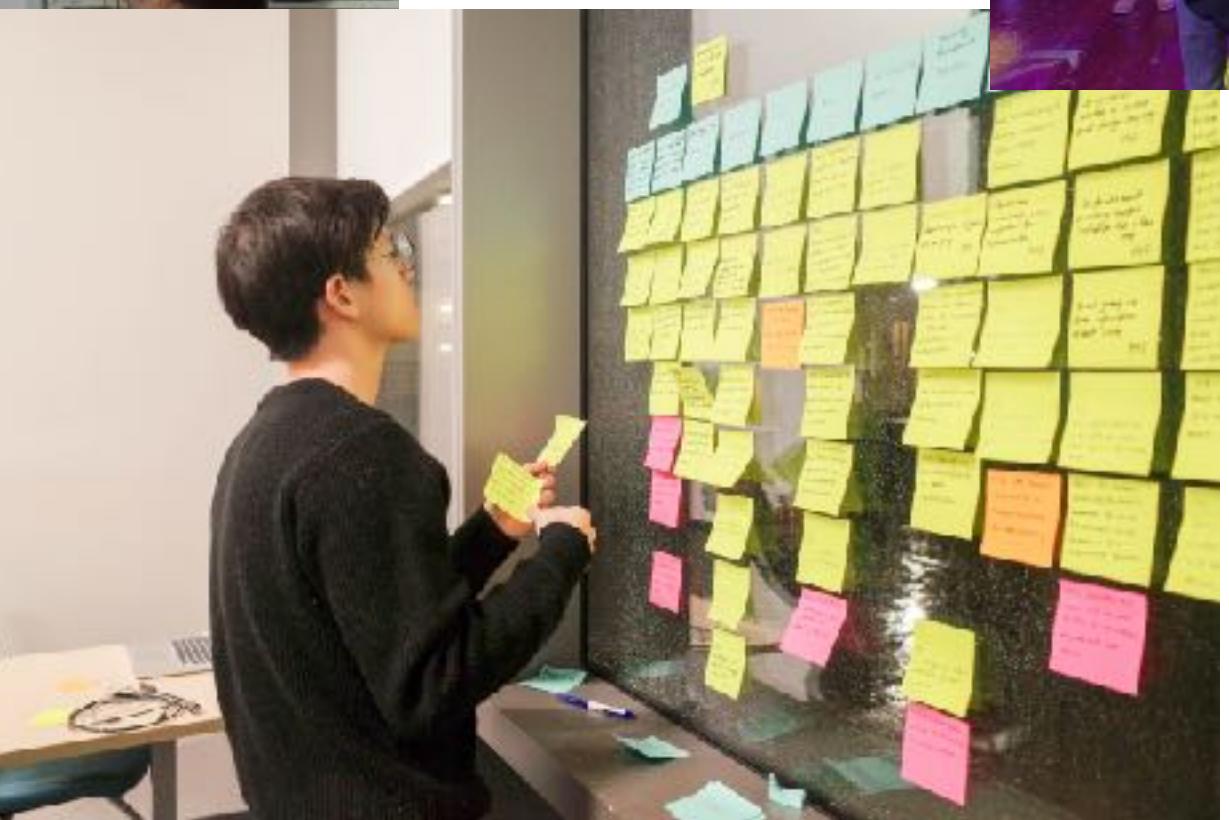
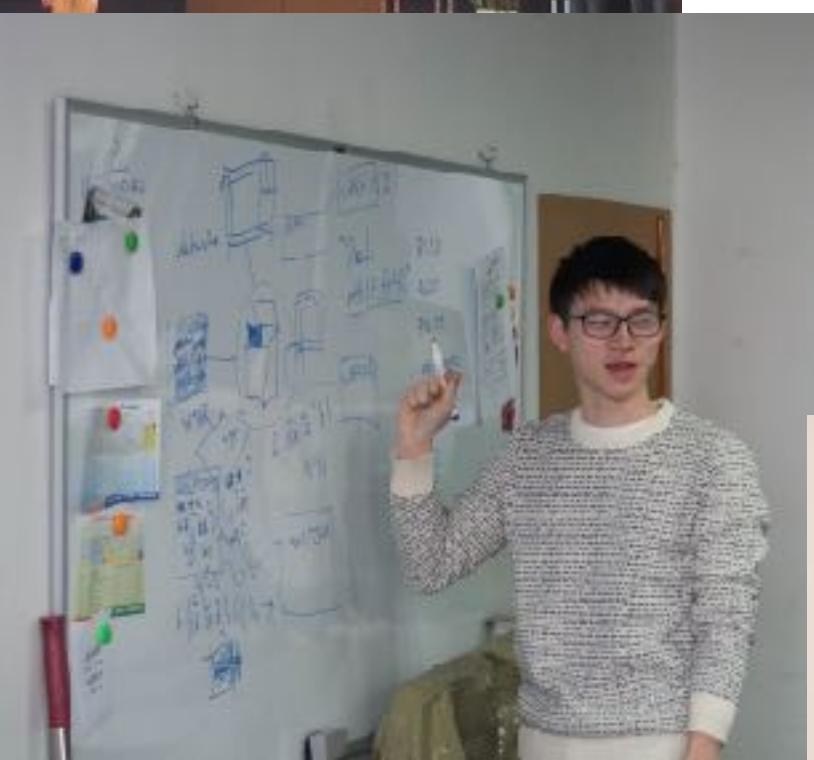
Teacher

Prototyper

How did I get into design?

Who am I relative to you?

Who will I become?



Who am I?

How did I get into design?

Who am I relative to you?

Who will I become?

Creative Problem Solver

Who am I?

How did I get into design?

Who am I relative to you?

Who will I become?

Empathy

Who am I?

How did I get into design?

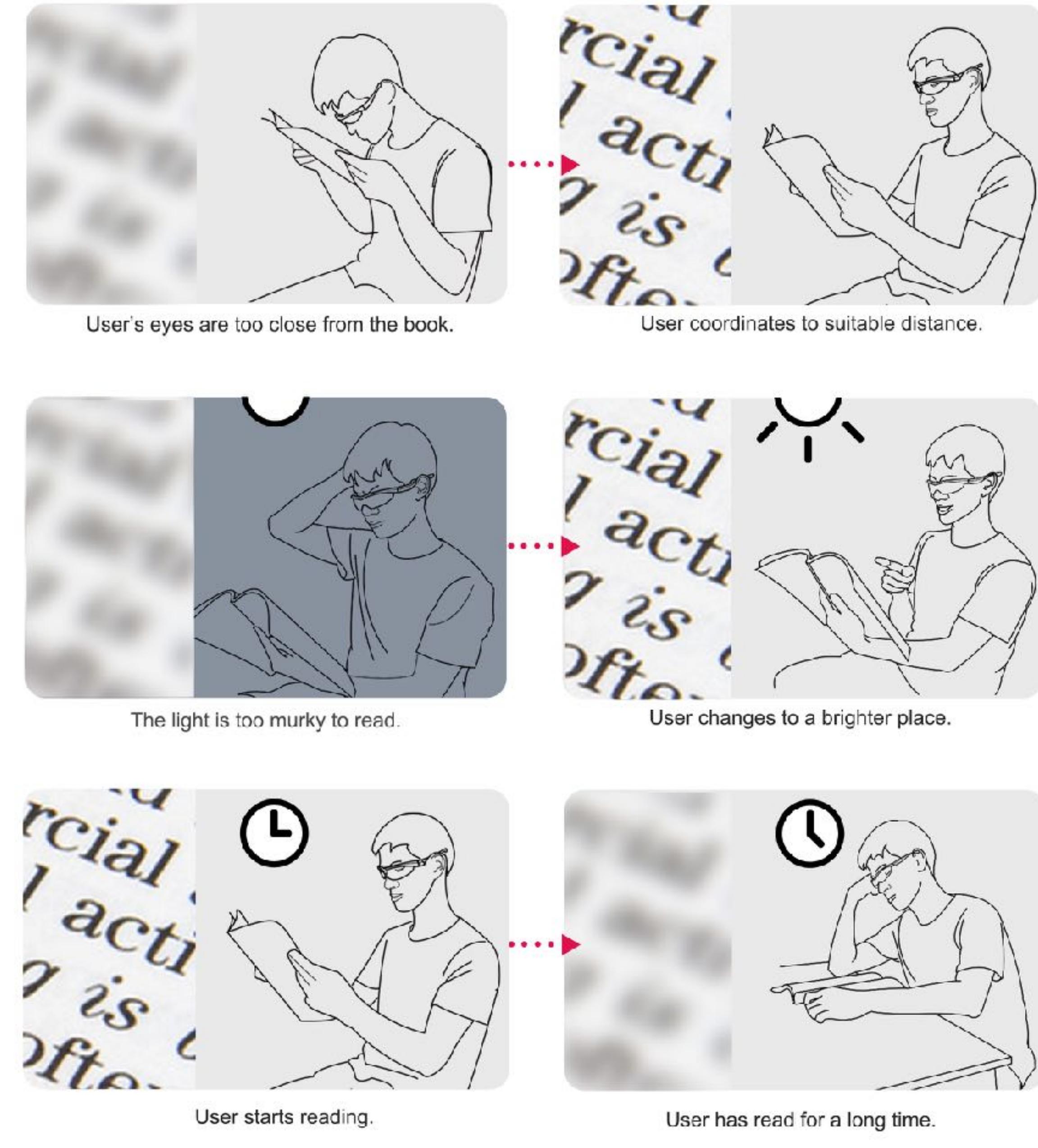
Who am I relative to you?

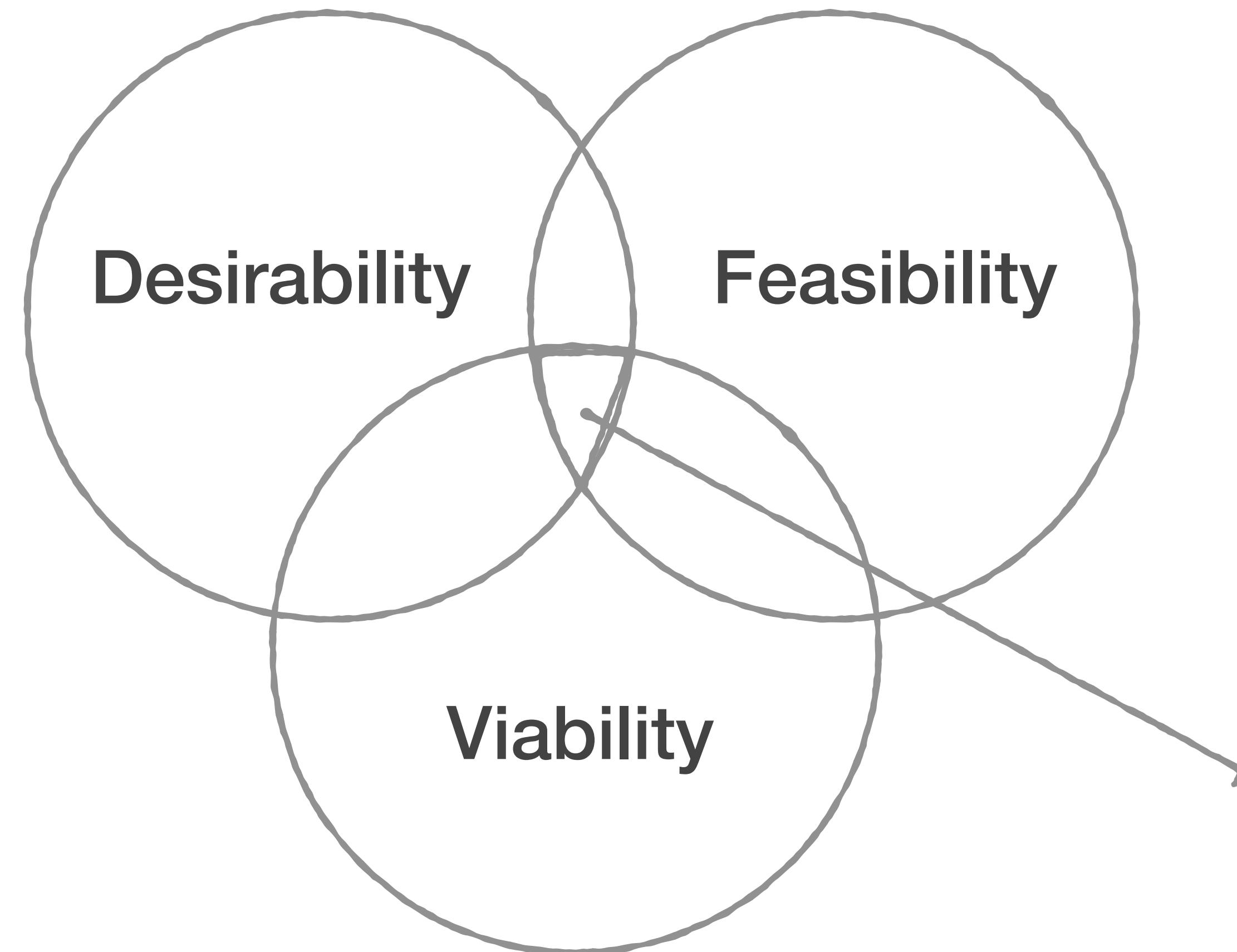
Who will I become?



reddot award 2015
winner

Insight Glasses





Who am I?

How did I get into design?

Who am I relative to you?

Who will I become?

Innovation

My Mission

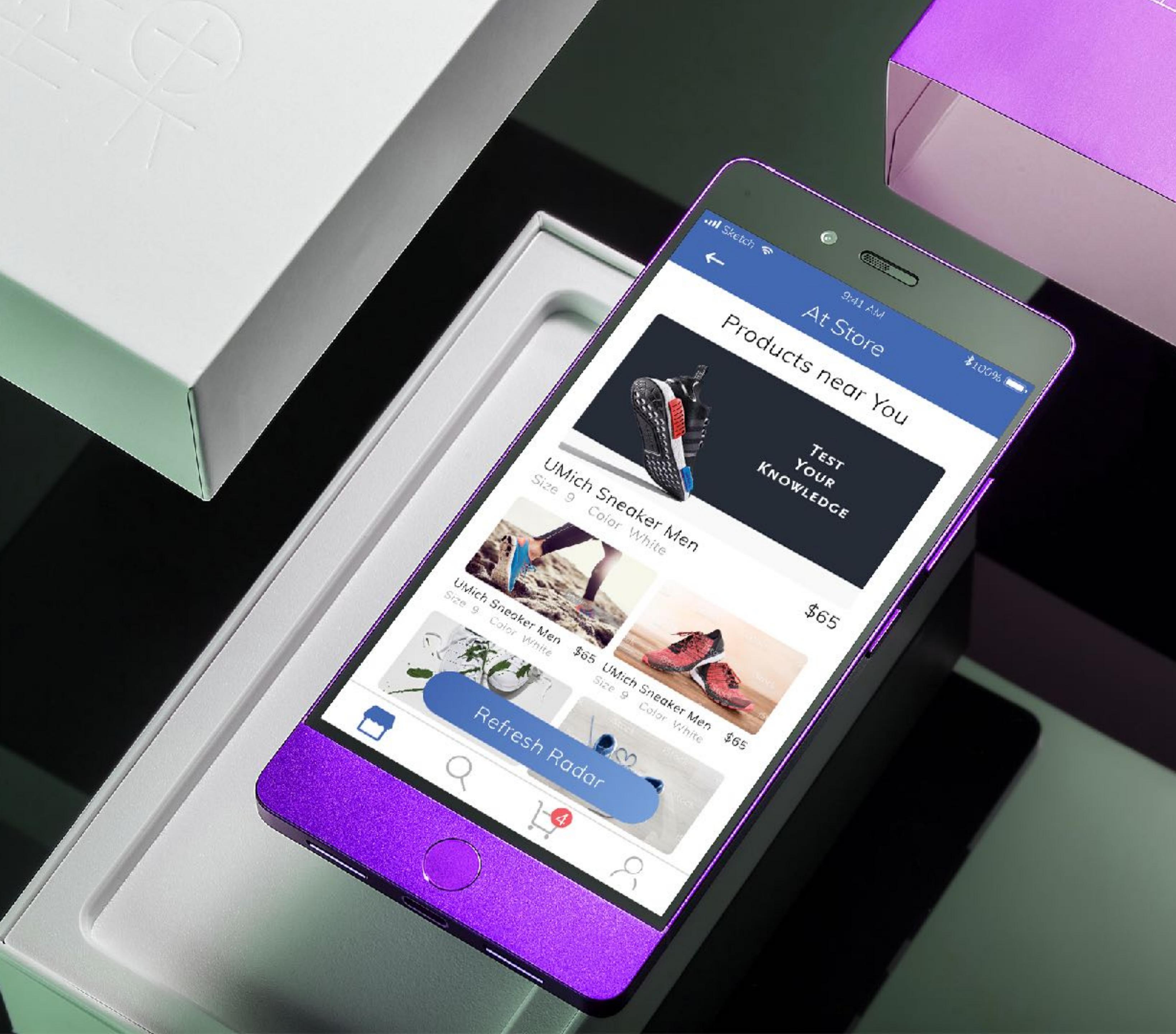
“To empower more people to enjoy a better life through accessible information products.”

Who am I?

How did I get into design?

Who am I relative to you?

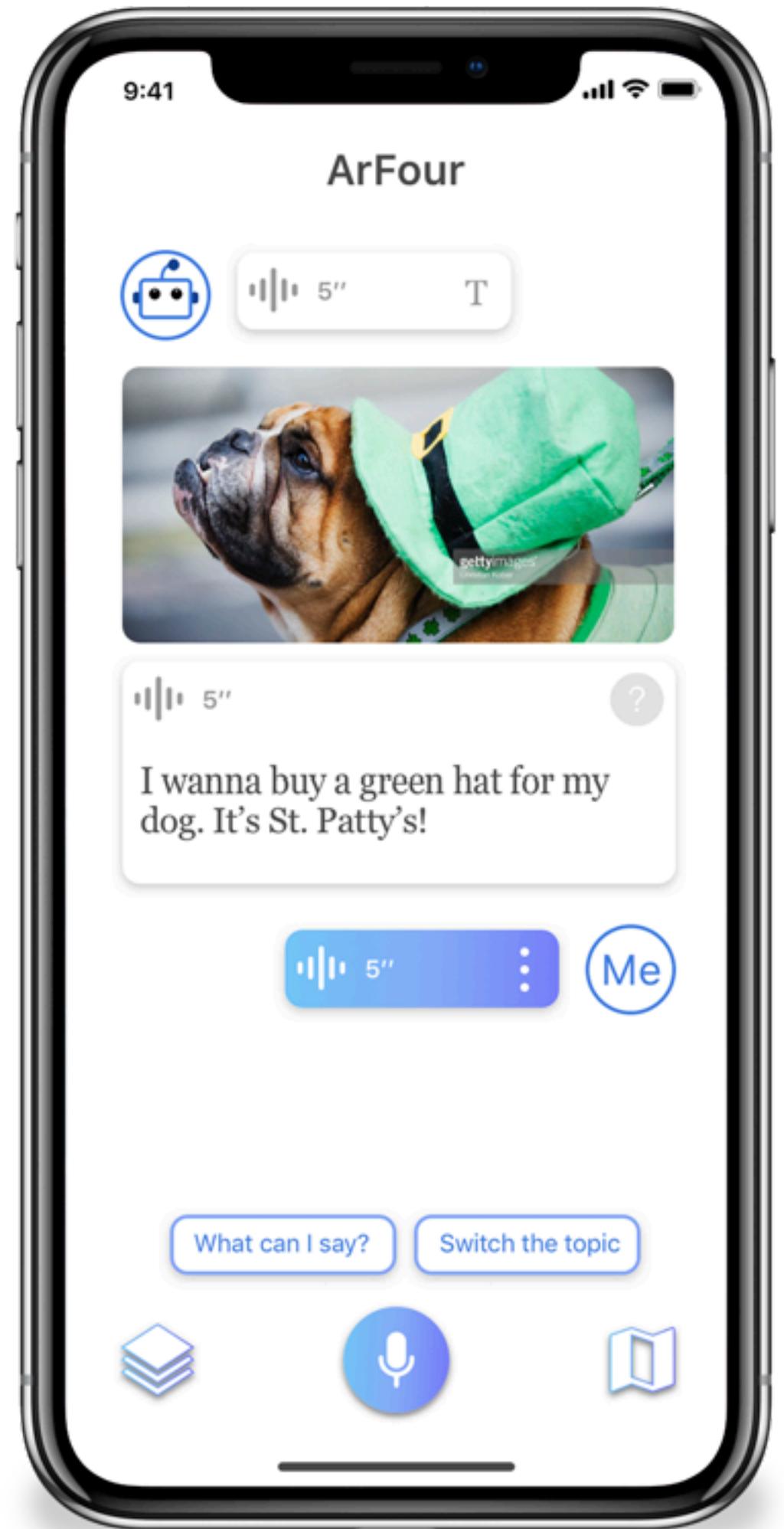
Who will I become?



Future Retail Experience Individual Project

My Role: UX Designer, Product Strategist,
Choice Architect

<http://www.xushenghu.com/copy-of-shijing>



Fluence

Personal Informatics Design/
Design for Behavior Change

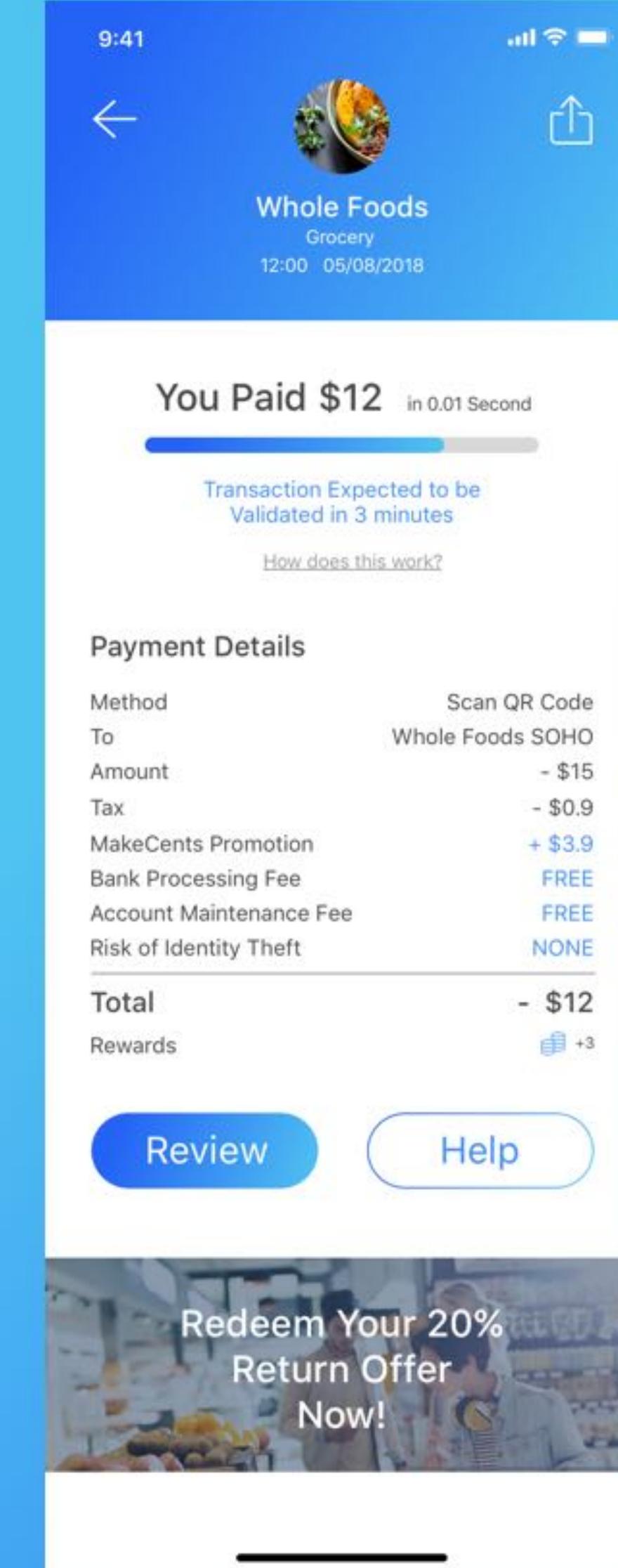
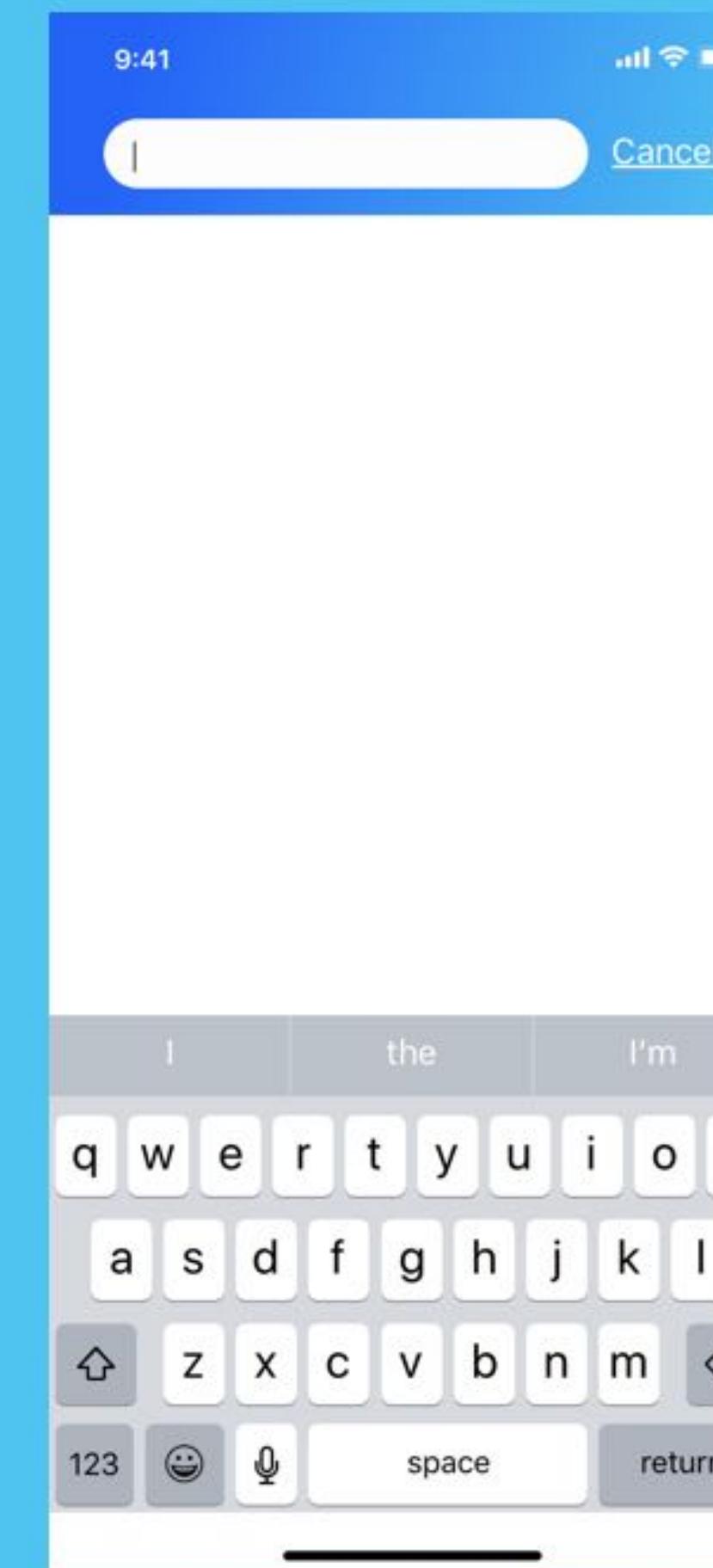
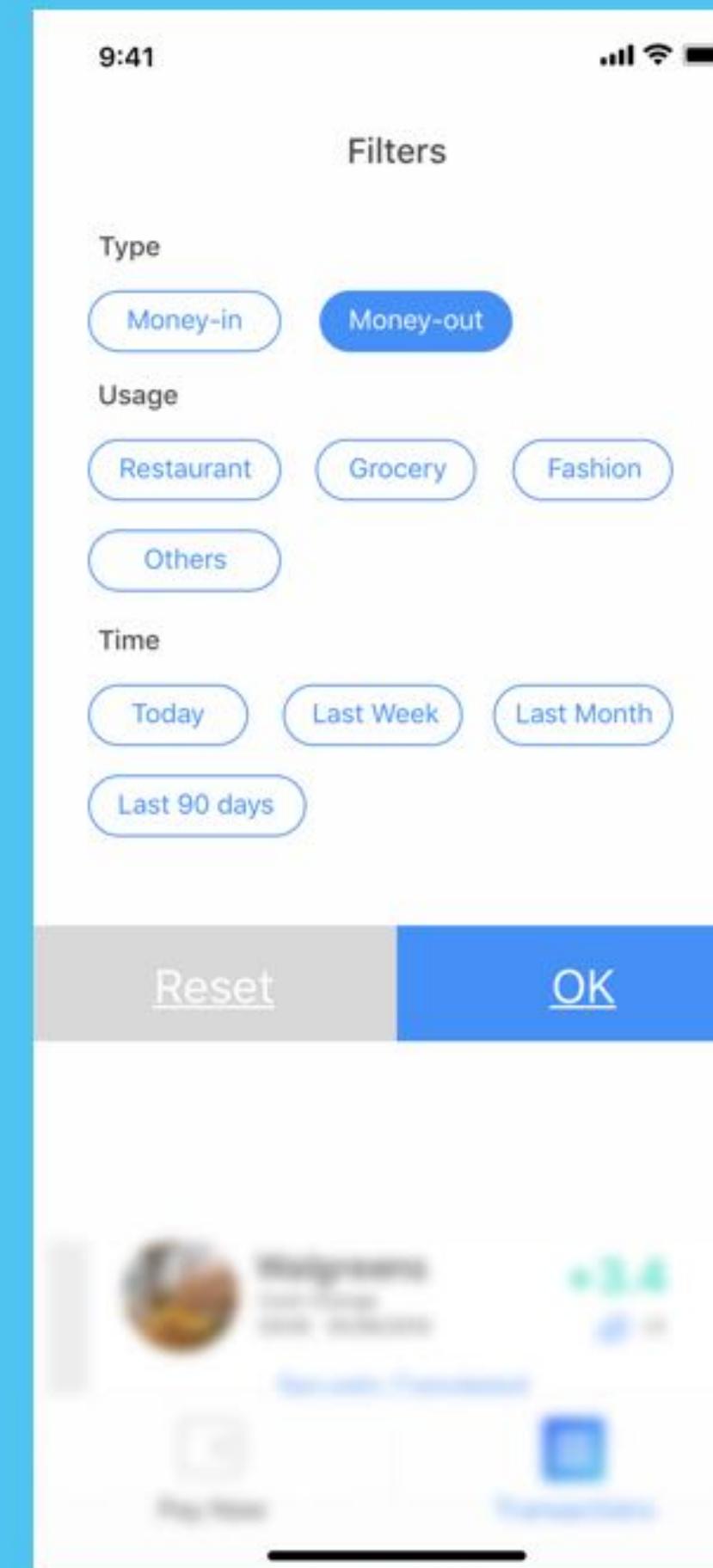
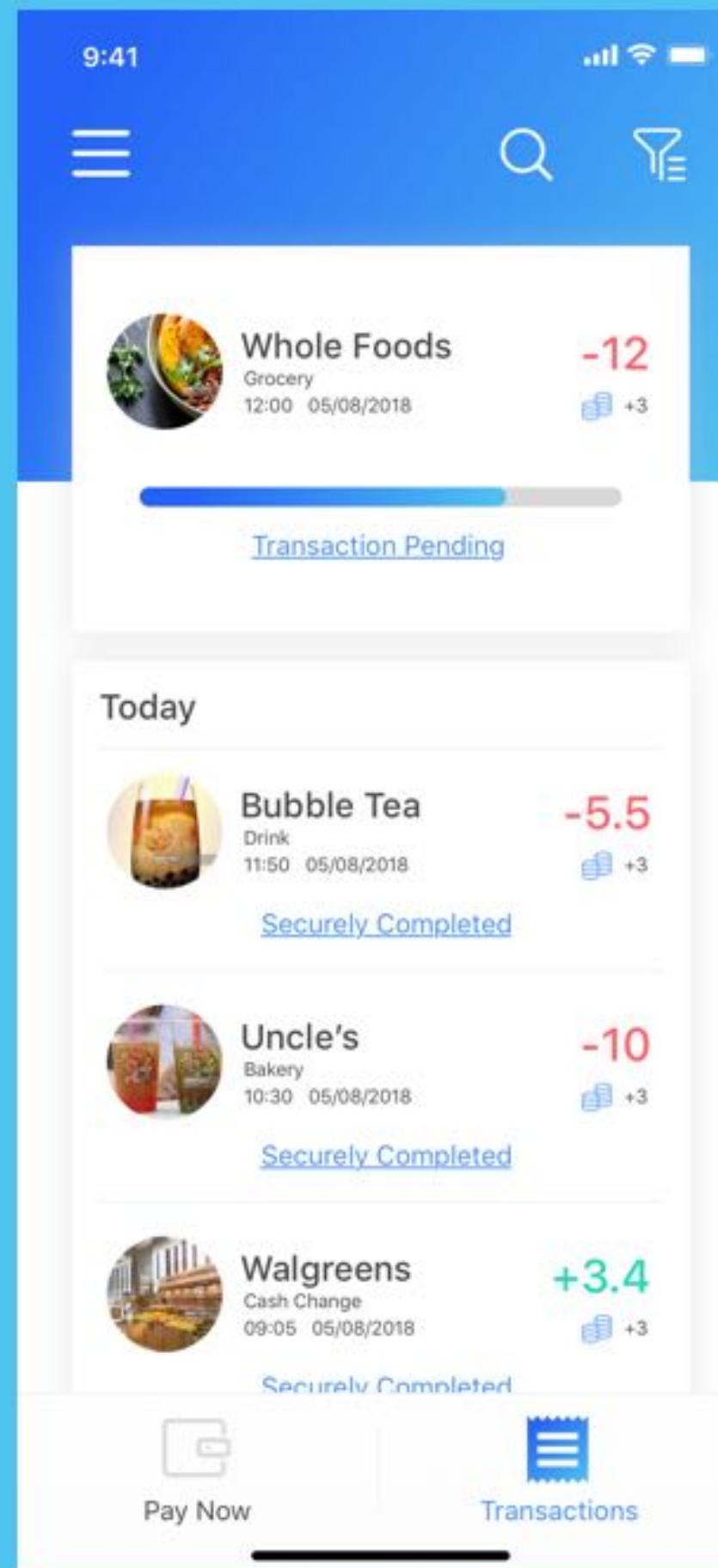
My Role: UX Designer



MakeCents

Distributed Blockchain Platform for
Simple, Everyday Payments

My Role: UX Designer





MakeCents

Distributed Blockchain Platform for
Simple, Everyday Payments

My Role: UX Designer



Household Nail Printer

My Role: Product Designer and Prototyper

<https://vimeo.com/241634573>



是
鏡

Shijing

Glasses Virtual Try-on
Team Project

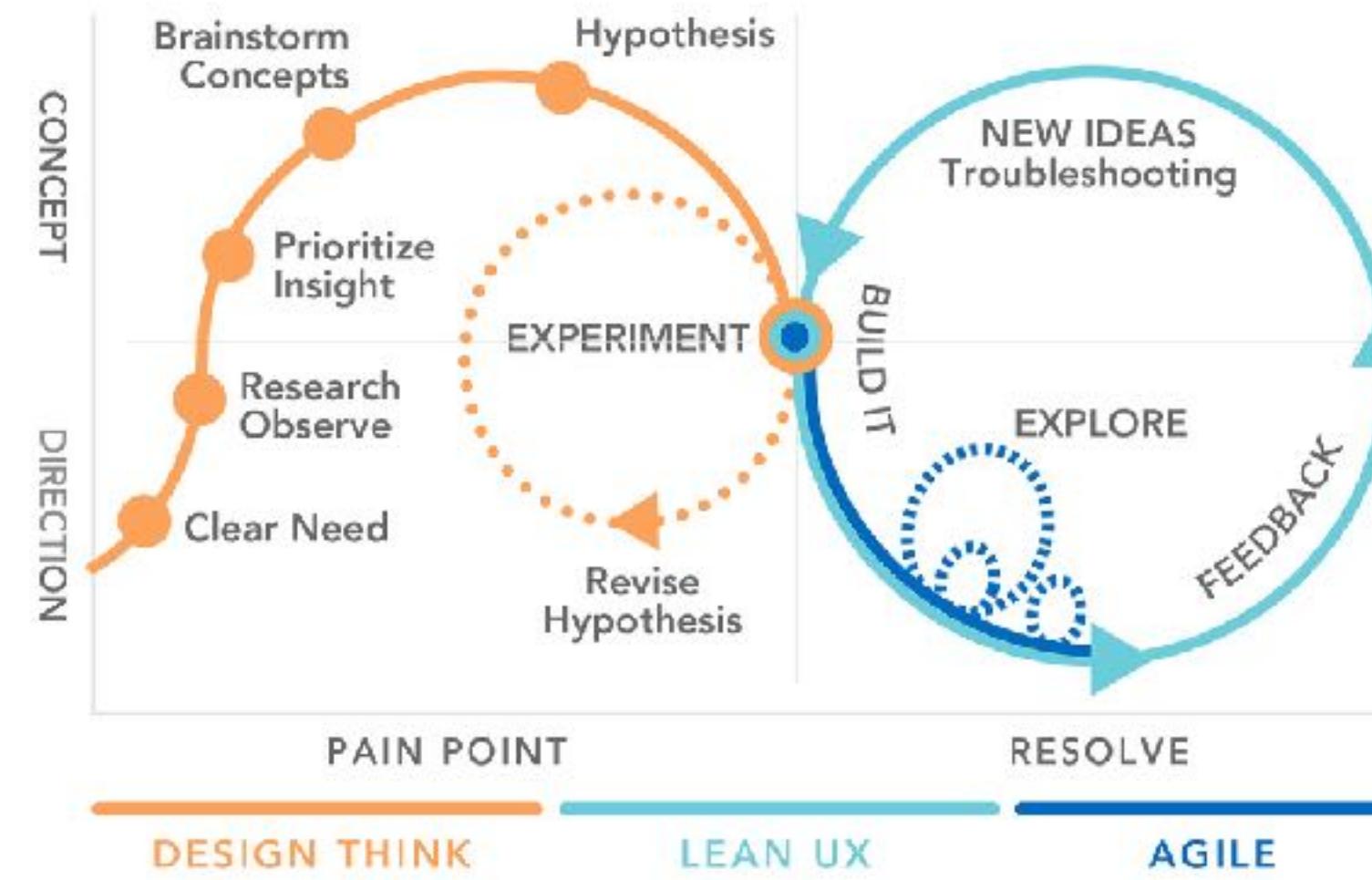
My Work: Product Manager, Opportunity
Identification, Value Proposition Design,
Business Model Design, UI Design,
Prototyping, Testing



<https://vimeo.com/202723619>

Opportunity Identification

Process & Core Methods



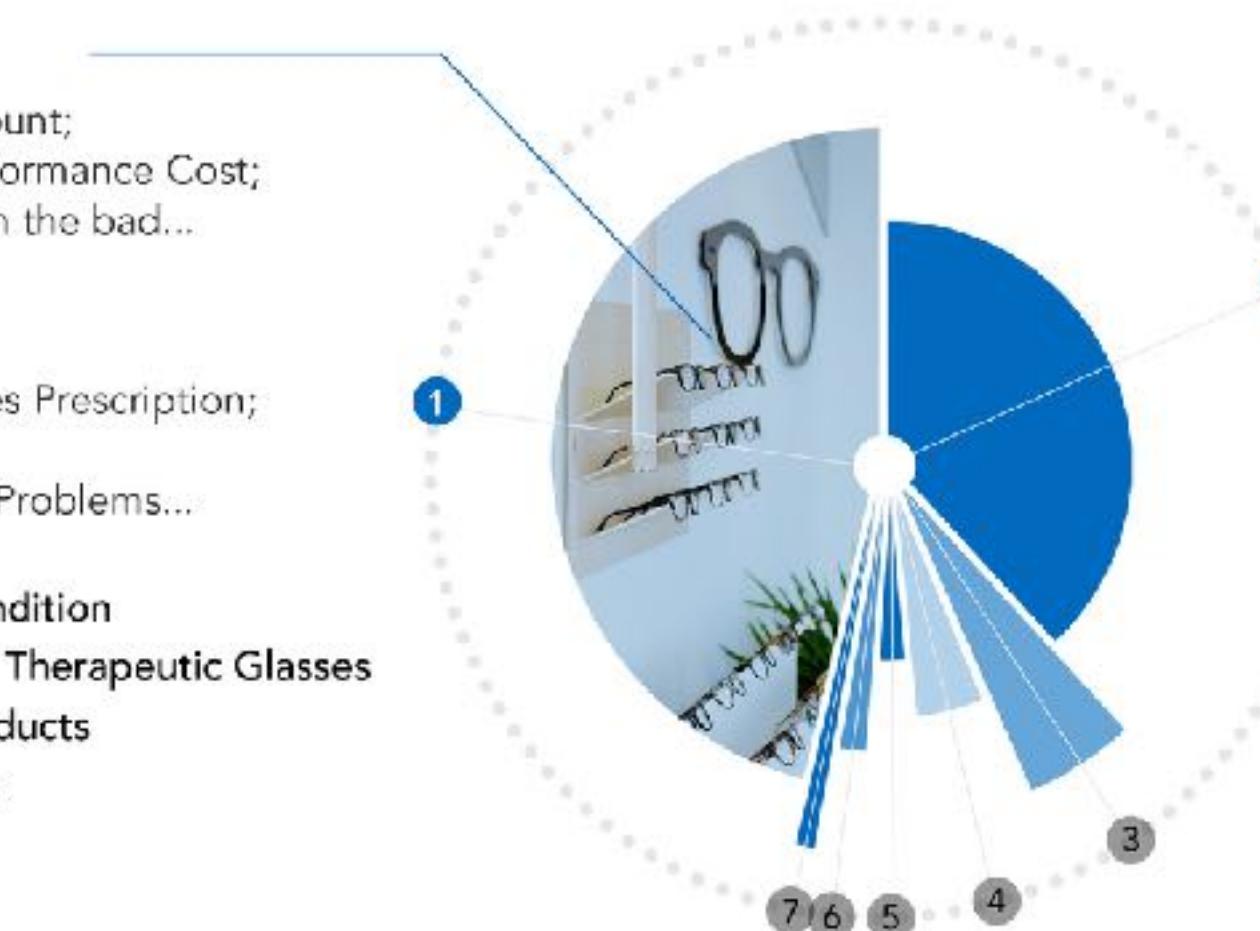
Problem Definition

Customer : It's so troublesome when I want to buy a new pair of glasses.



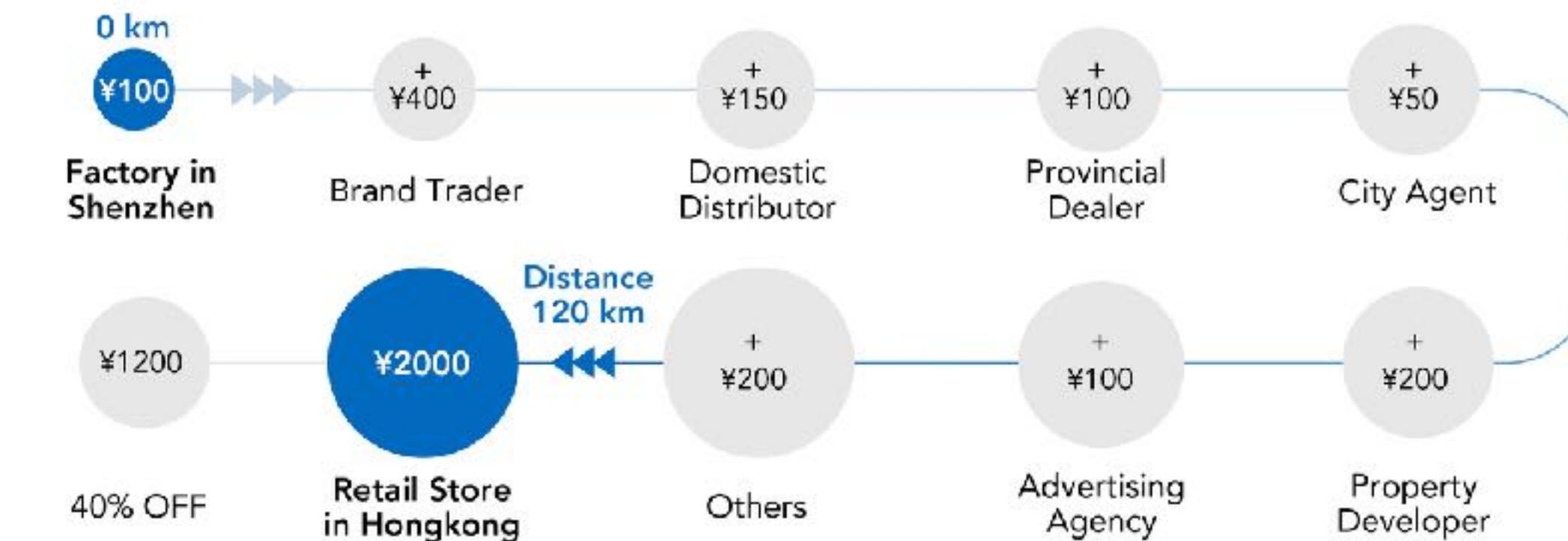
Research Data - What are the problems that glasses customers are faced with?

- ① **44.8% Unreasonable Price**
Virtual-high Price, Fluctuant Discount; Vague Pricing Standard; Low Performance Cost; Hard to distinguish the good from the bad...
- ② **38.4% Unprofessional Service**
Lack of Standardization Eyeglasses Prescription; Optometry Mistake; Irresponsible for Product Quality Problems...
- ③ **5.7% Disqualified Sanitation Condition**
- ④ **5.1% Misleading Propaganda of Therapeutic Glasses**
- ⑤ **3.4% A Mess of Counterfeit Products**
- ⑥ **2.0% Difficulties of Maintenance**
- ⑦ **0.6% Other**



Joint investigation by Minister of Public Health and Minister of Education of China suggests: over 400 million Chinese people have shortsightedness; the shortsightedness rate among Chinese teenagers is 50%~60%. The market demand of eyeglasses is estimated to be over 120 million pairs, which indicates an industry value of 4.5 billion USD.

Product Price of A Typical Glasses Brand



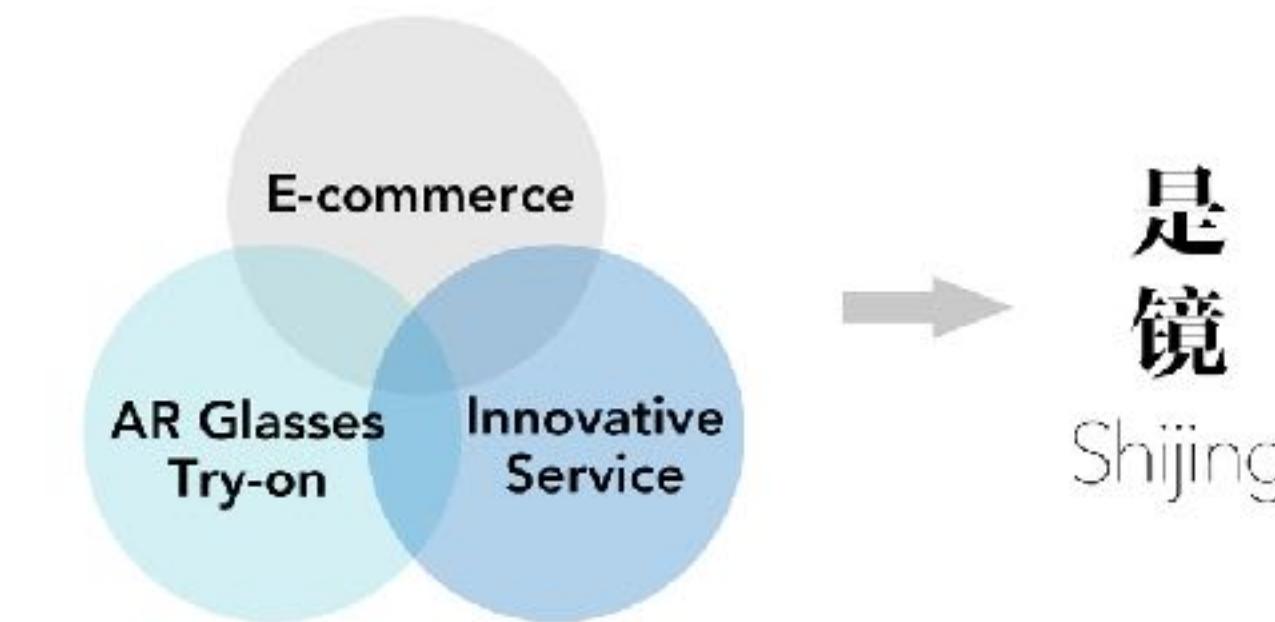
Competitive Analysis

	(R) Brand	(G) Object	(A) Assumption	(S) Strategy	(C) Capability	(B) Benchmark
JINS	To cover all classifications in the middle-end market	Customers have diverse demands and value cost performance		Multiple product lines & Own Brand & Components simplification	Excellent design strength & International marketing strength	Flat process from factory to customers and building its own brand worth learning.
	To increase sales of physical stores	Customers rely on special offers information of online channels		Online to Offline by providing coupons on group-buying sites	Mature store management & strong suppliers support	Marketing communication through new media worth learning
	To increase sales of online channels	Customers value try-on service of physical stores much		Search glasses online and try them on at stores & At-home optometry service	To build a nationwide chain store network	There is a huge price paid when we build a nationwide chain store network.
	To promote its new Internet glasses brand	Middle-end Customers are willing to pay for high-performance services		Pay a high fee to get at-home try-on service in return	Excellent design strength & thoughtful service	A new but high-price brand don't cater to middle-end customers' interest
	To cut rent costs and get profitable	Customers are price-sensitive and eager to buy high-end		Dump knock-off glasses at below-market price	Fast coping, low price	Knock-off products cannot foster customer loyalty

Strategy Positioning



Ideation



Shijing greatly reduces labor and rent costs by building a new Internet glasses brand, compared with physical stores; AR Glasses Try-on technology is used to make up for the shortcoming of traditional e-commerce platforms, namely no try-on experience; Shijing customized suitable glasses to users based on face recognition, and provides lifetime reliable services.

Value Proposition

Customer Profile



The set of customer **characteristics** that we **assume**, **observe**, and **verify** in the market.

Target Customers 1

Students and young professionals aged at 16-30 who are sensitive to price and have an open mind for trying new things.

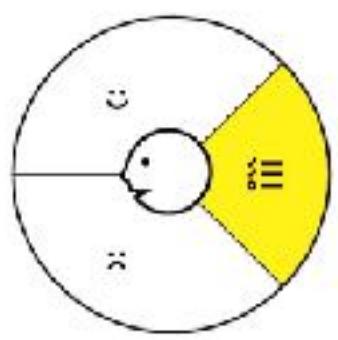


2 Map Customer profile

Visualize what matters to our target customer in a structured and detailed way based on research. It breaks the customer down into its jobs, pains and gains.

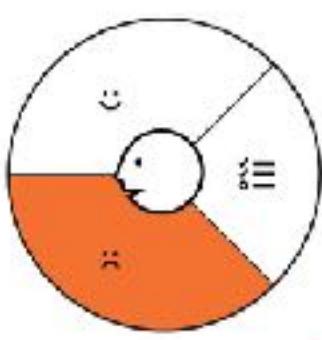
Prioritization 3

Ranking jobs, pains and gains in order to design value proposition that address things our customer really care about.



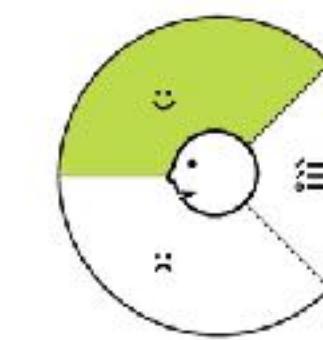
Jobs Importance

Rank jobs according to their importance to customers.



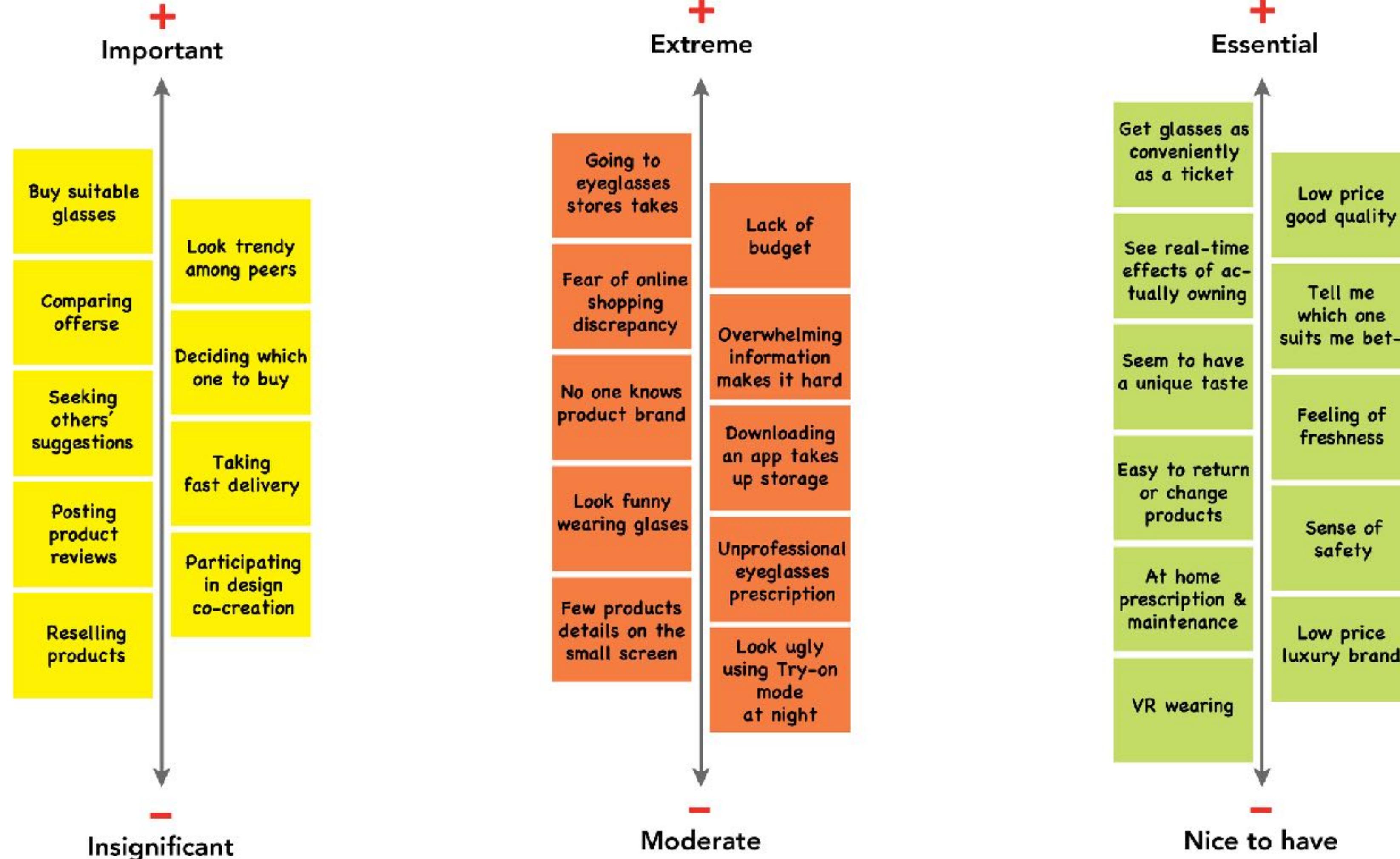
Pain Severity

Rank pains according to how extreme they are in the customers' eyes.



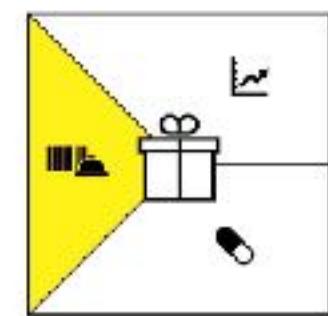
Gain Relevance

Rank gains according to how essential they are in the customers' eyes.



Value Proposition - Value Map

The set of value proposition **benefits** that we **design** to attract customers



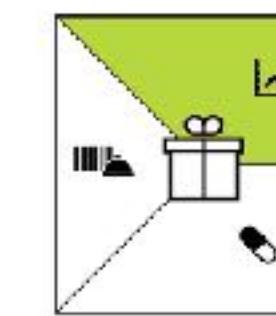
Products & Services

These helps our customers complete either functional, social, or emotional jobs or helps them satisfy basic needs.



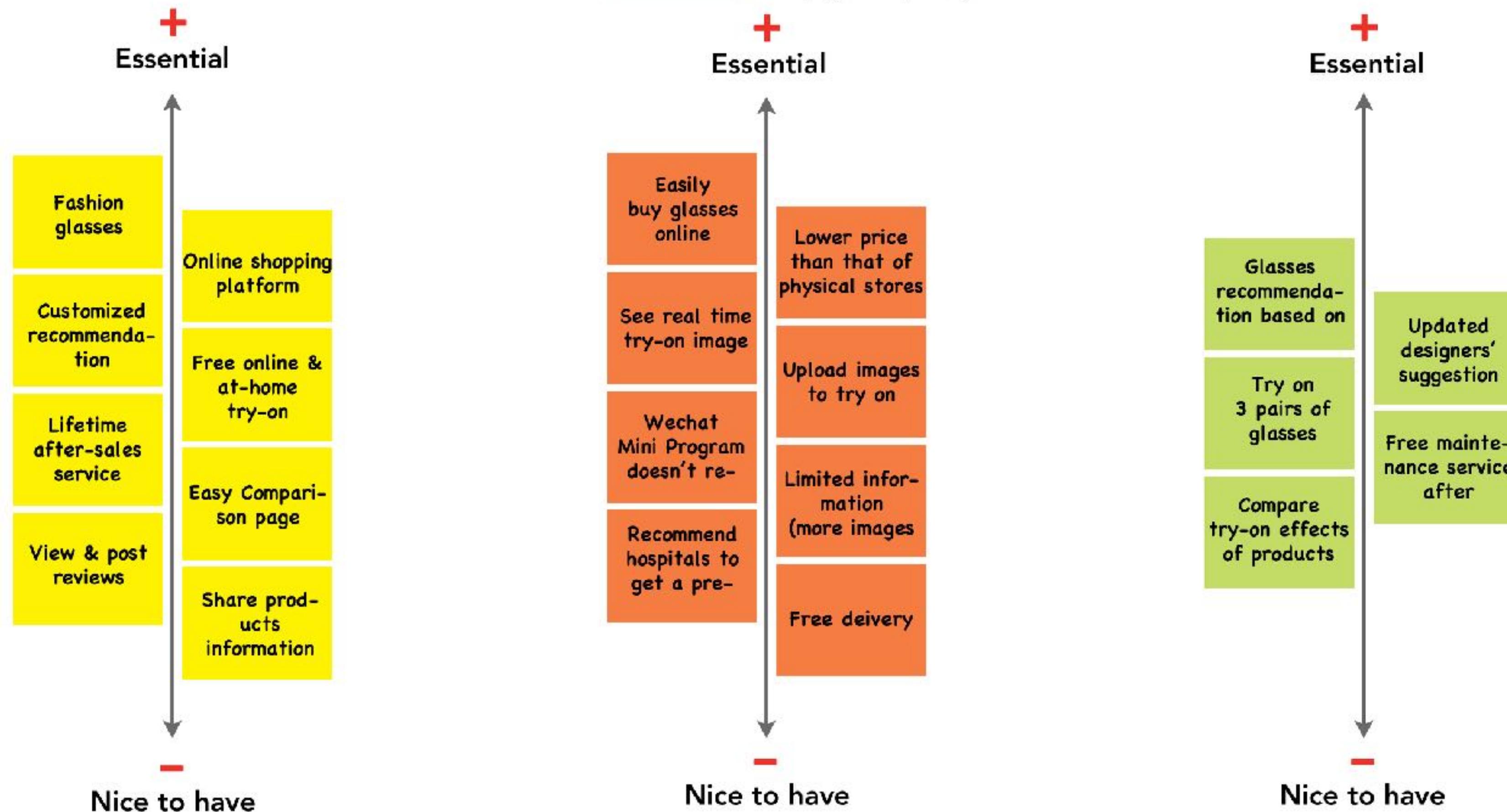
Pain Relievers

They explicitly outline how to eliminate or reduce some things that annoy our customers before, during, or after they are trying to complete a job.



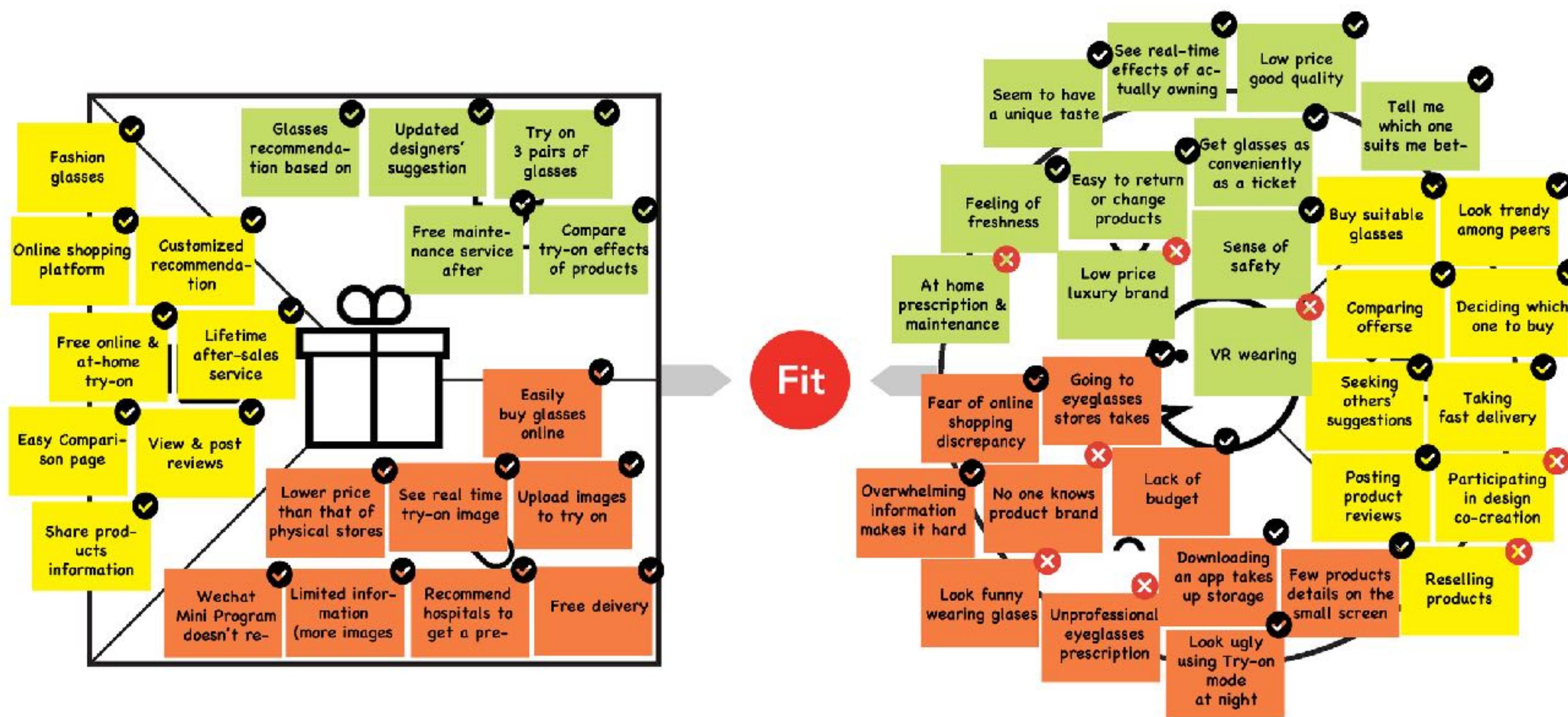
Gain Creators

They explicitly outline how to produce outcomes that our customers expect, desire, or would be surprised by.



Validation - Problem-Solution Fit

Searching for Fit is the process of validating products and services that meet jobs, pains, and gains that customers really care about. Three stages: Problem-Solution Fit, Product-Market Fit, Business Model Fit



✓ Addressed

✗ Not Addressed

Validation - Product Market Fit

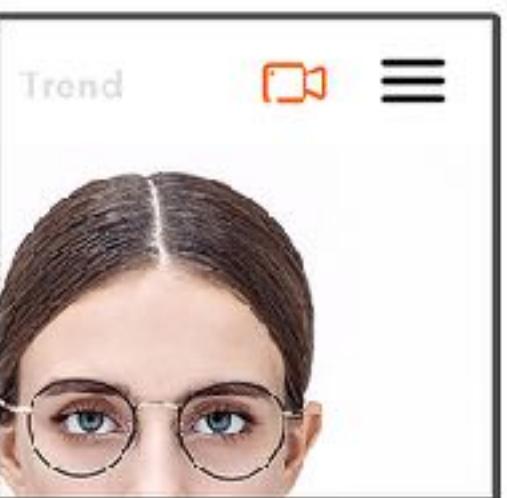
During this second phase, we strived to validate or invalidate the assumptions underlying our value proposition. We found evidence that our products and services, pain relievers, and gain creators were actually creating customer value and getting traction in the market.



Core Assumptions



Customers are sensitive to outrageous price at glasses stores.



With AR Try-on, customers believe that online glasses shopping is more convenient than in-store shopping.

Minimum Viable Product



Landing Page through Wechat Moments

Through Wechat, the most far-reaching social media in China, we built our landing page describing the [value proposition](#) of our product and service to figure out if our potential customers are interested in it.

[Call For Action:](#) They needed to leave their phone number to get coupons.



Wizard of Oz through Wechat Media Platform

We used Wechat Media Platform as front that looked like a real working value proposition and [manually](#) carried out the [AR Try-on](#) service.

We would deal with the portraits the potential customers sent and send pictures with glasses back.

Result

0
Code
0
Money

1
Week

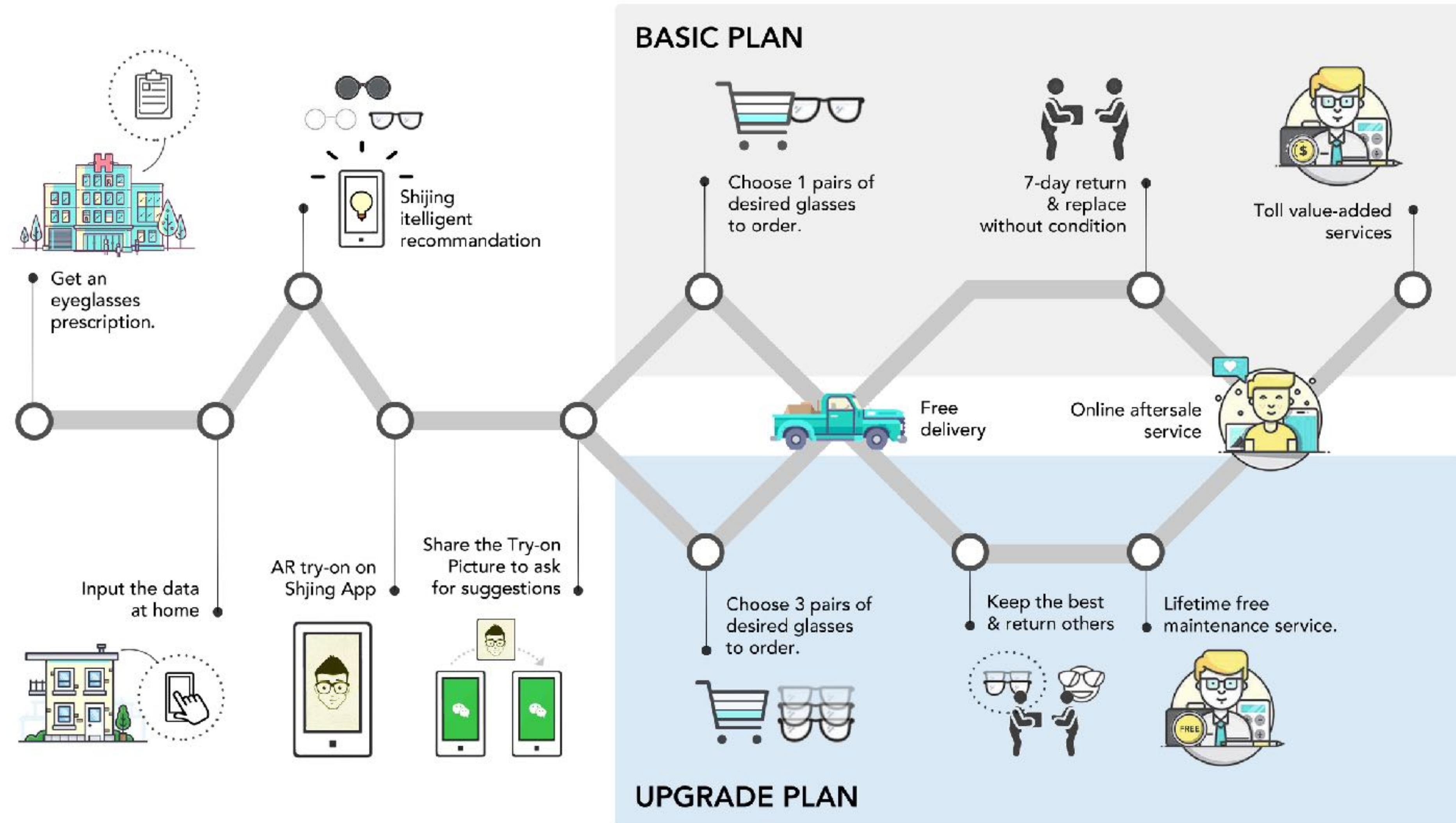
524
Potential customers viewed the landing page

41%
Potential customers left phone number to get a coupon

27%
Potential customers tried fake AR Try-on service

69%
Non-negative comments

Service Process Design

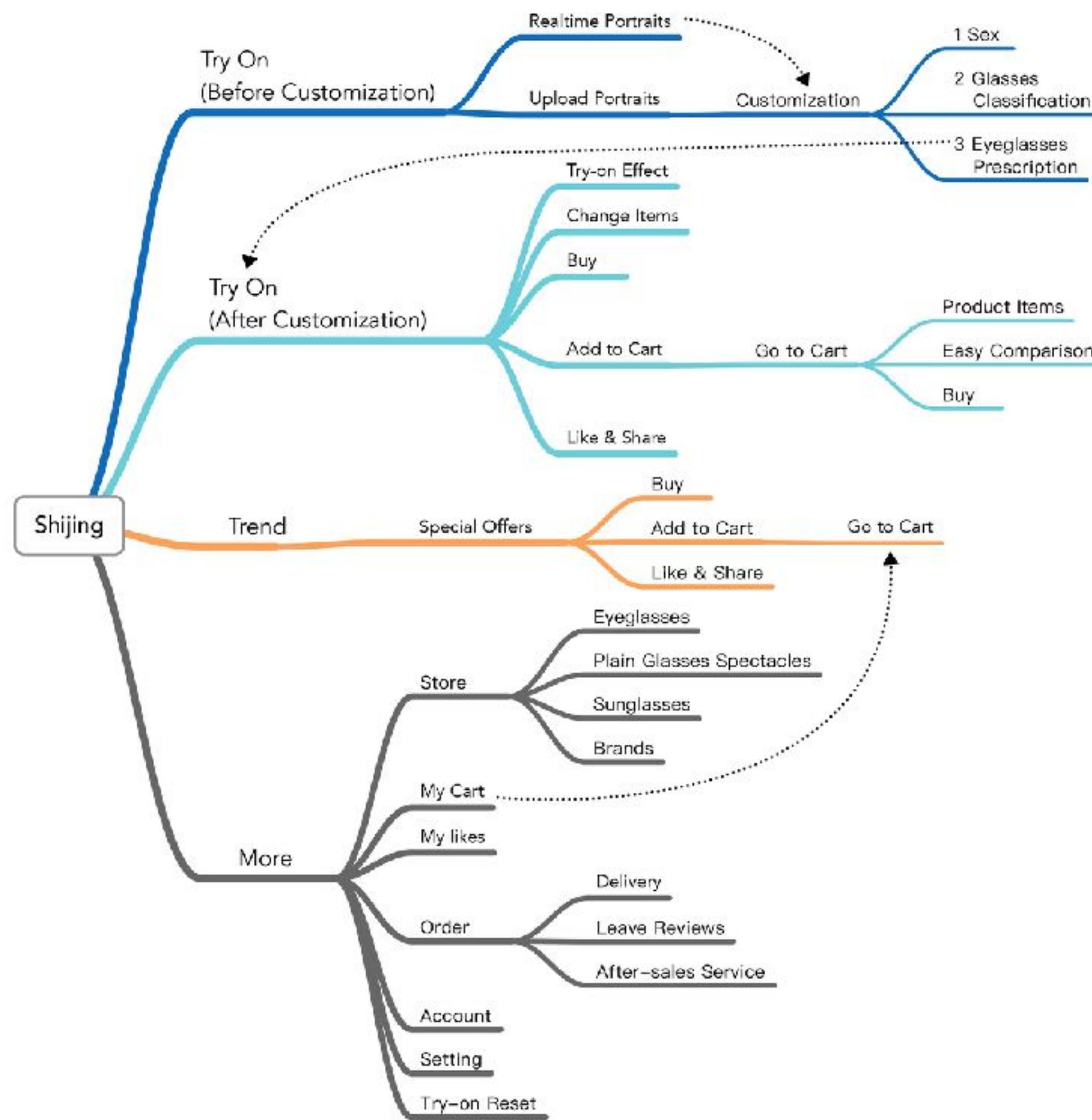


Validation - Business Model Fit

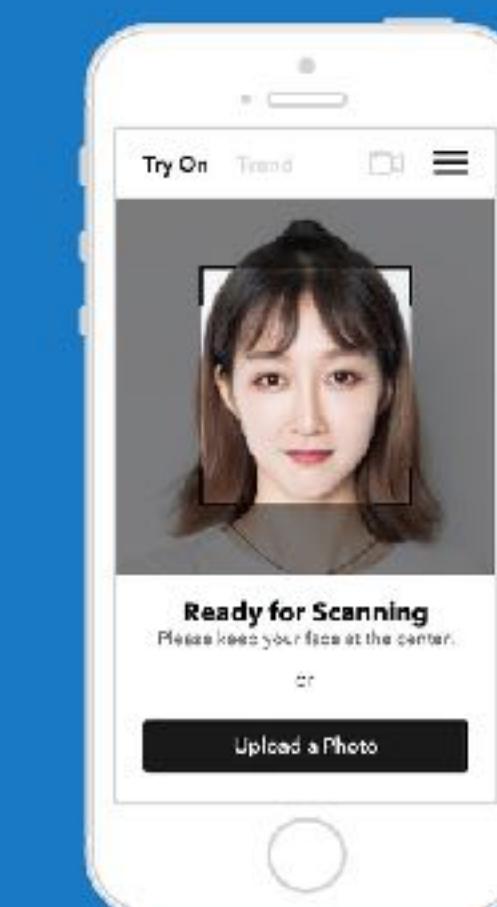
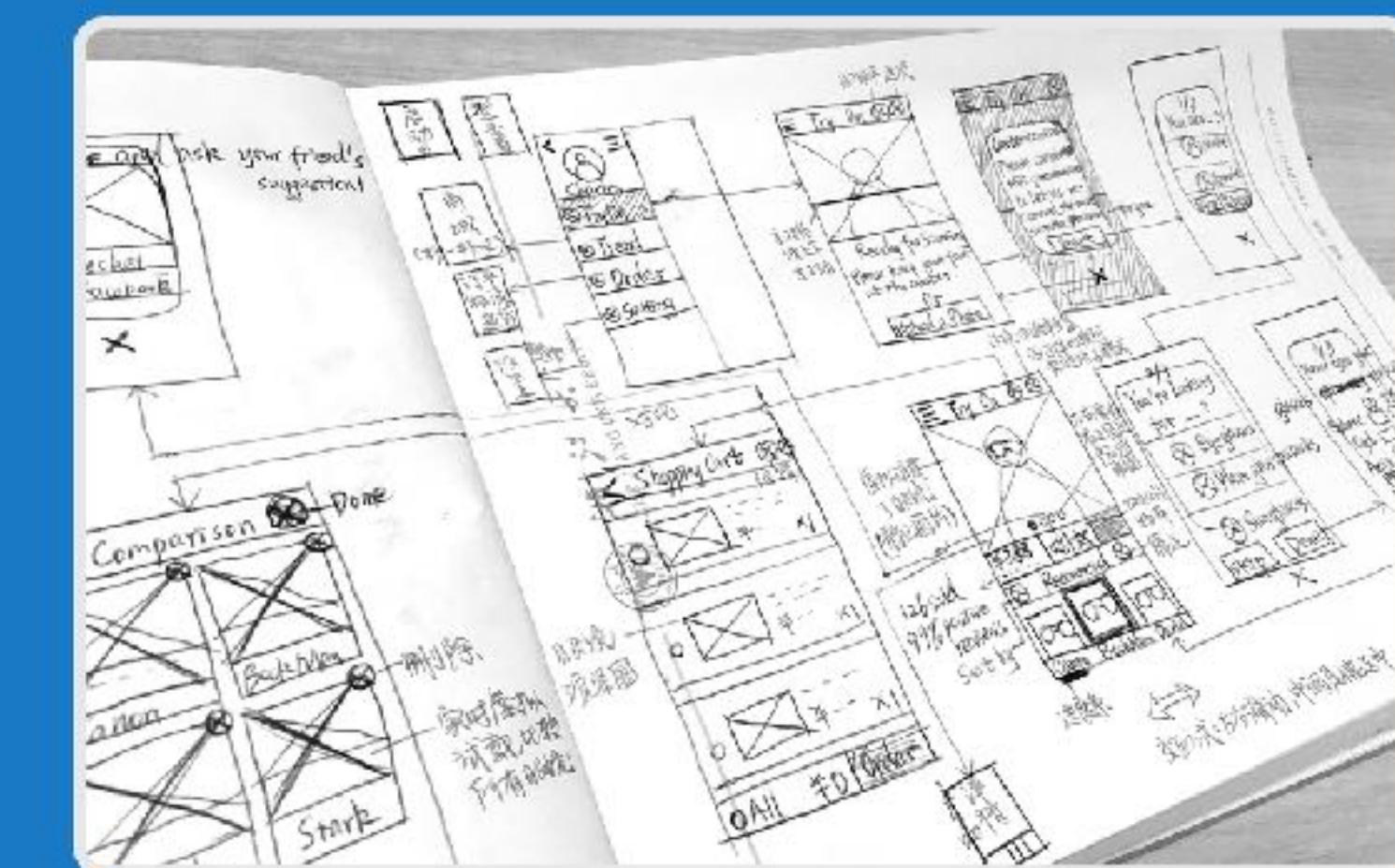
<p>Key Partners</p> <ul style="list-style-type: none"> ● Glasses factories ● Other glasses brands selected to sale on the platform ● Delivery companies ● New media ● Web forum leaders ● On-campus organizations 	<p>Key Activities</p> <ul style="list-style-type: none"> ▲ Design glasses ▲ Provide customized glasses shopping solutions with AR try-on experience ▲ Lifetime aftersales services ▲ Introduce and promote other selected brands <p>Key Resources</p> <ul style="list-style-type: none"> ▲ AR glasses try-on technology ▲ Young team members with insights on young customers' needs ▲ Valuable relationship with glasses suppliers 	<p>Value Propositions</p> <p>Online glasses-shopping platform with high performance cost ratio products, customized recommendation and real-time try-on experience.</p>	<p>Customer Relationships</p> <p>Automated service through mobile APP</p> <p>Channels</p> <ul style="list-style-type: none"> ● Social media : Wechat, Weibo, etc. ● On-campus promotion activities ● Web forums of health, education and technology ● Resources from partners 	<p>Customer Segments</p> <p>Students and young professionals aged at 16-30 who are sensitive to price and have a open mind for trying new things.</p>
<p>Cost Structure</p> <ul style="list-style-type: none"> ● Software development and maintenance ● Brand and products design ● Manufacturing ● Transportation and storage 		<p>Revenue Streams</p> <ul style="list-style-type: none"> ● Glasses and accessories sales ● Subscription upgrade ● Other glasses brands' sales brokerage ● Value-added services 		

Product Development

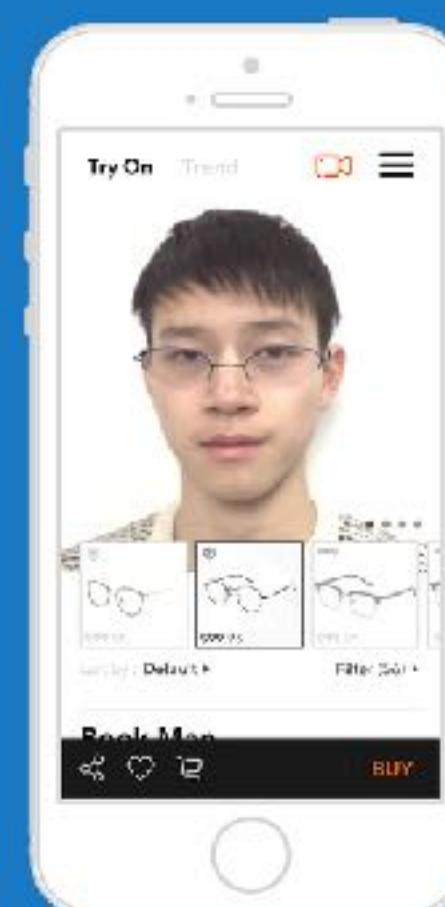
Information Architecture



User Flow Sketch & APP UI



Scanning



Try On



Comparison

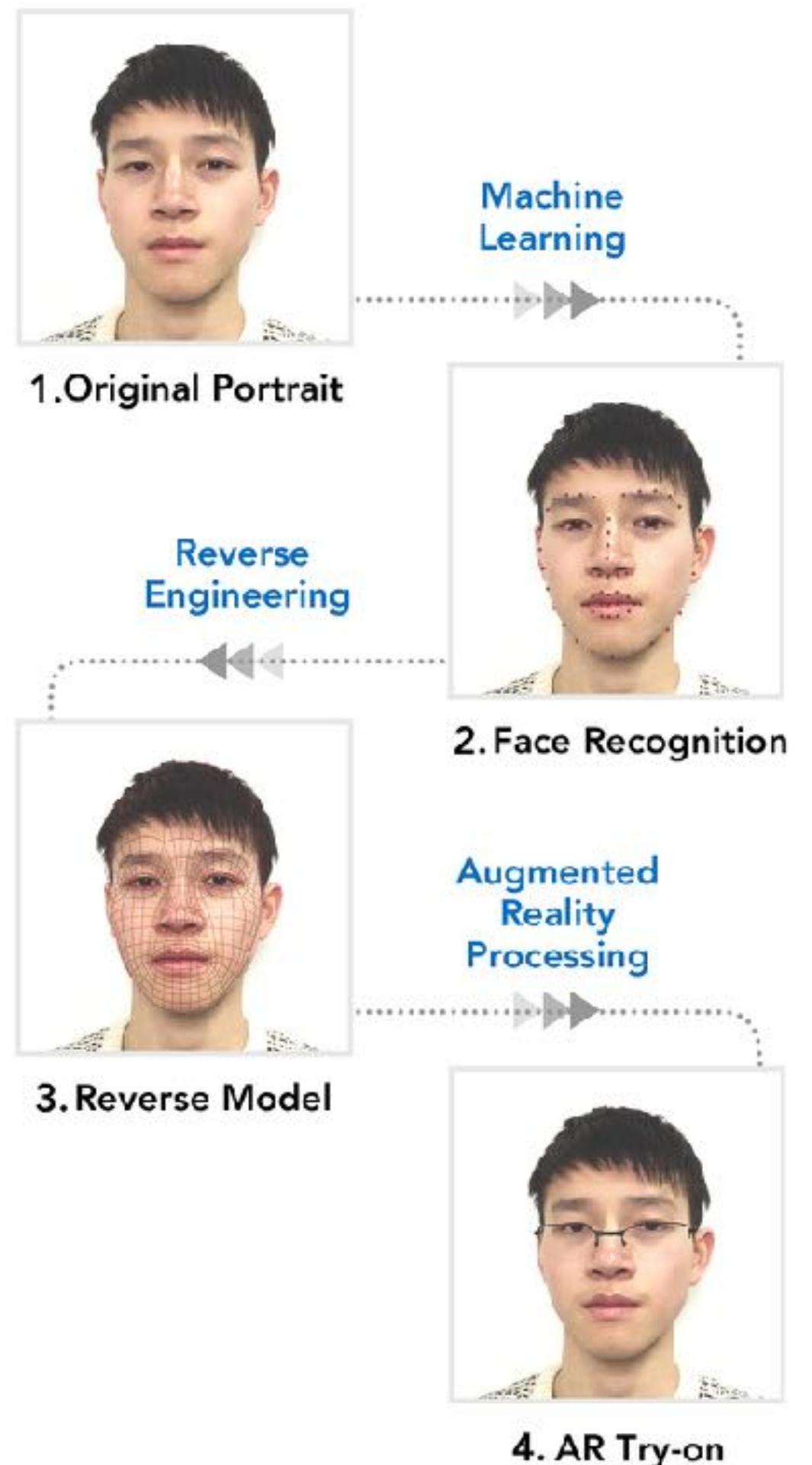
Product Development

Development Framework

Even though the interface fluency of the Wechat Mini Program was poorer than that of the native app, benefits like no download requirement, less development time, the social communication nature of Wechat made us believe the Wechat Mini Program was a perfect choice for us a start-up team and our vertical low-frequency service.

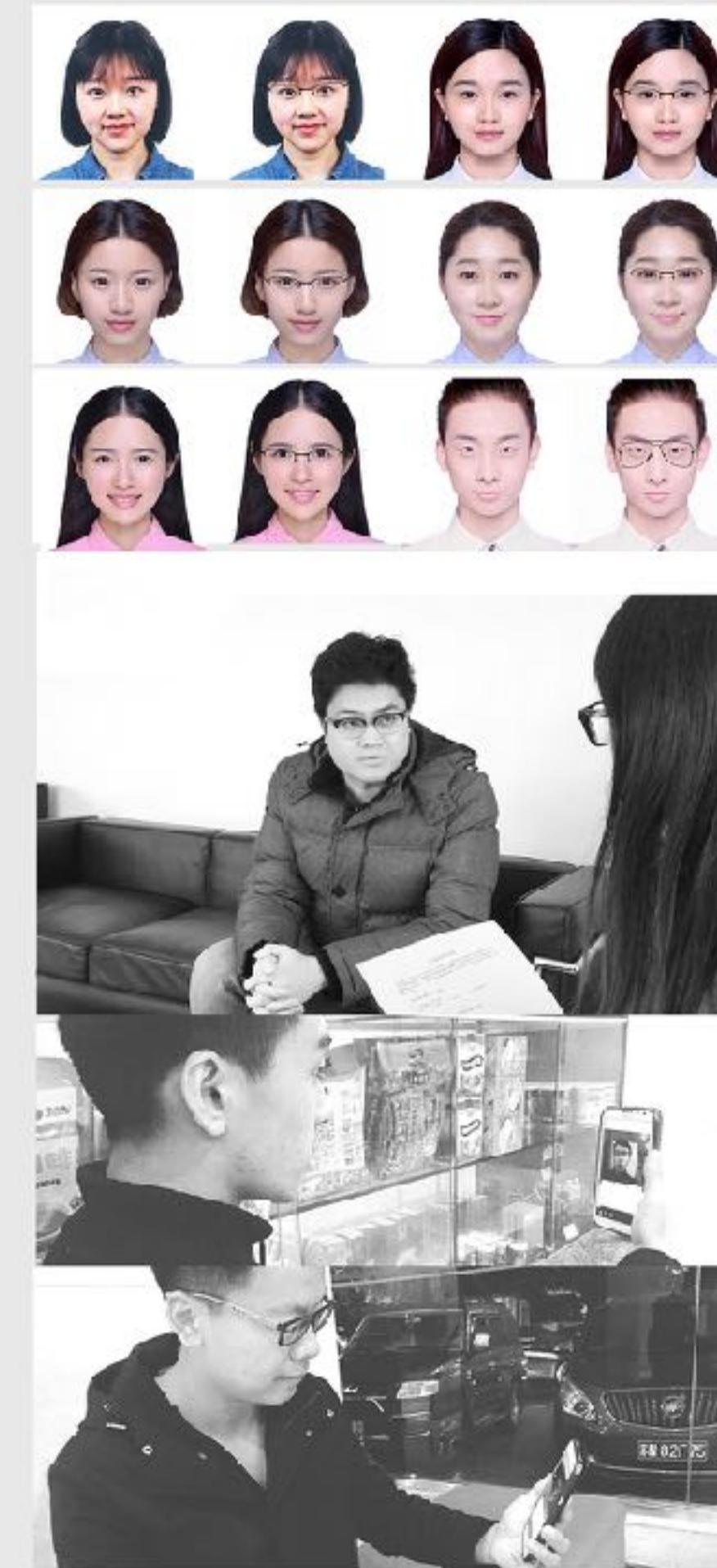
	Native APP	Hybrid APP	Web APP	Wechat Mini Program
Interface fluency	★	★	★	★
Download requirement	✓	✓	✗	✗
Development time	●	●	●	●
New user cost	●	●	●	●
Operations cost	●	●	●	●
Boundedness	Review from App Store/ Google Play	Review from App Store/ Google Play	Only works in browsers	Review from Wechat
Others	Suitable for high-frequency or complex services			Suitable for low-frequency or vertical services

Key Algorithm



Product Development

Tests & Iteration



Problem One

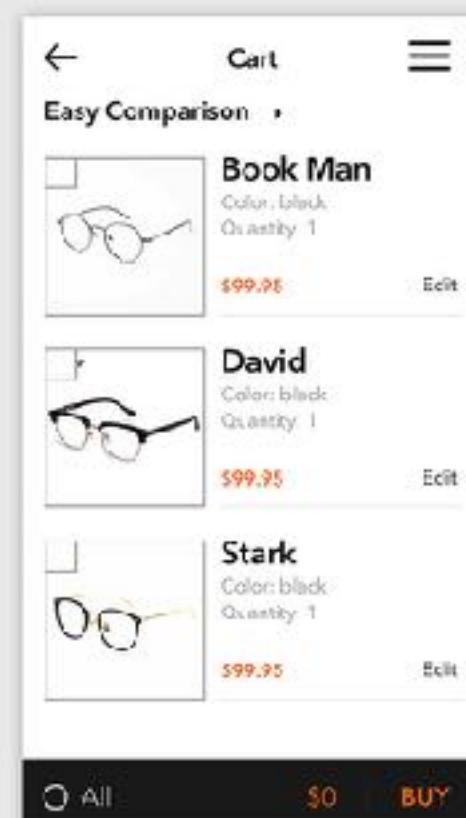
Users spent [a lot of time](#) comparing glasses [to make a choice](#) by iteratively going back to previous glasses they had viewed, because the Try On page displayed the effect of only one pair of glasses.

Solution

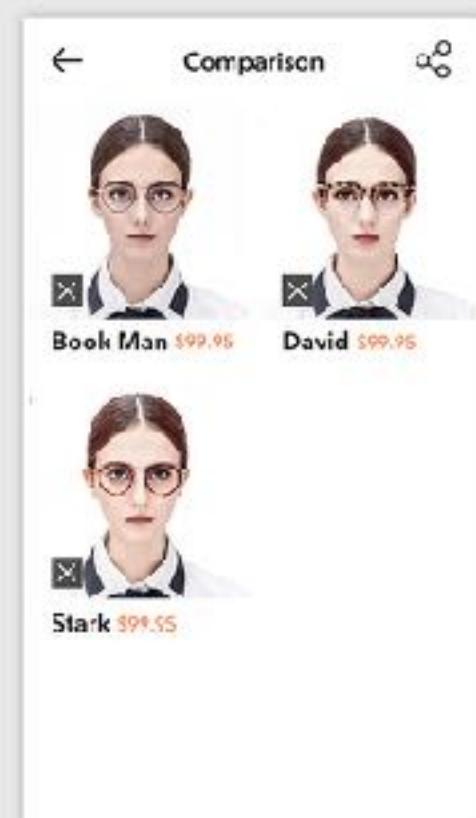
We redesigned the cart: users could add the glasses they like to the cart, then use [Easy Comparison](#) to see try-on effects of all the glasses at the same page and quickly delete those they didn't like.

A/B Test

To find if our new design would really solve the problem, we compared the time spent on the same task of both the old and new versions through A/B tests.



Version A



Version B

Task

Add 4 pair of glasses you like to the cart and buy one.

Version A

[14.6 min on average](#)

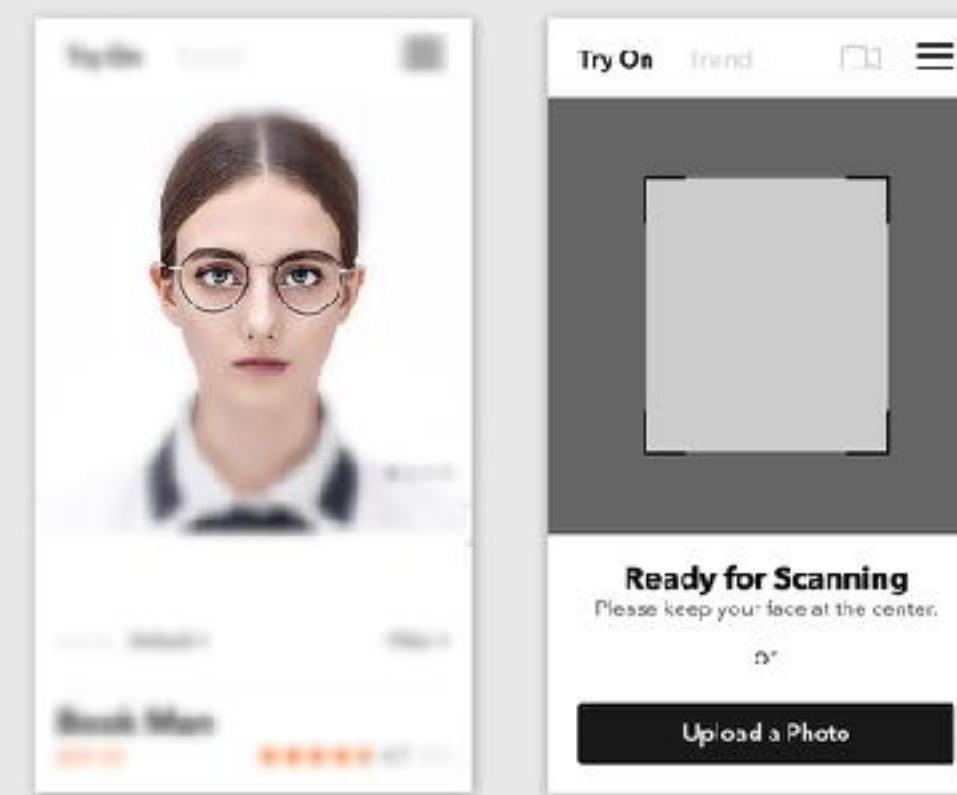
Version B

[12.1 min on average](#)

Problem Two

The real-time selfie try-on mode required users to take off their glasses for face recognition, but users who had shortsightedness [cannot clearly see images](#) without wearing their glasses.

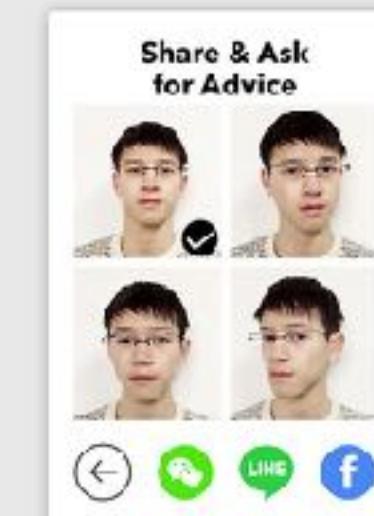
Solution



Besides the real-time selfie try-on mode, we offered another option: "[Upload a Photo](#)".

It enabled people who couldn't read without glasses or were in an environment unsuitable for using camera to use the APP.

Other Iteration



We also found when user wanted to share the try-on image using real-time selfie mode, the user would click the share button for times to take a best selfie.

Our solution was to automatically take selfies before user actually clicked the share button. Then the user just had to choose one to share.



Homeschool Learning Experience Group Project

My Work: UX Research, Affinity Diagramming,
Concept Generation, Wireframing, Hi-Fi
Prototyping, Testing



What is Homemade Genius

Homemade Genius is a web app that aims to provide a better homeschooling experience. It helps homeschoolers easily find learning resources that best fit, plan and share their own courses with others in the community, and keep a detailed record of the learning processes.

Introduction



<https://youtu.be/WEDMW9wmDbA>

Secondary Research

The number of homeschoolers has increased **53%** in the past ten years. As of 2016, there were about 2.3 million homeschoolers in the United States (Ray, 2015). According to our preliminary research, we found that most studies casted doubts on the following issues:

- **Socializing skills for homeschool kids**
- **Education quality**
- **Efficiency**

Carrying with these ideas, our group reached out to a total of eight individuals from four different states, hoping to corroborate the literatures and gain more insights into the homeschooling community.

Community is crucial
for us as homeschoolers.



My son is so into Ancient Rome, but he cannot find other kids to share his passion.



I have to go to multiple websites for resource when planning curriculum.



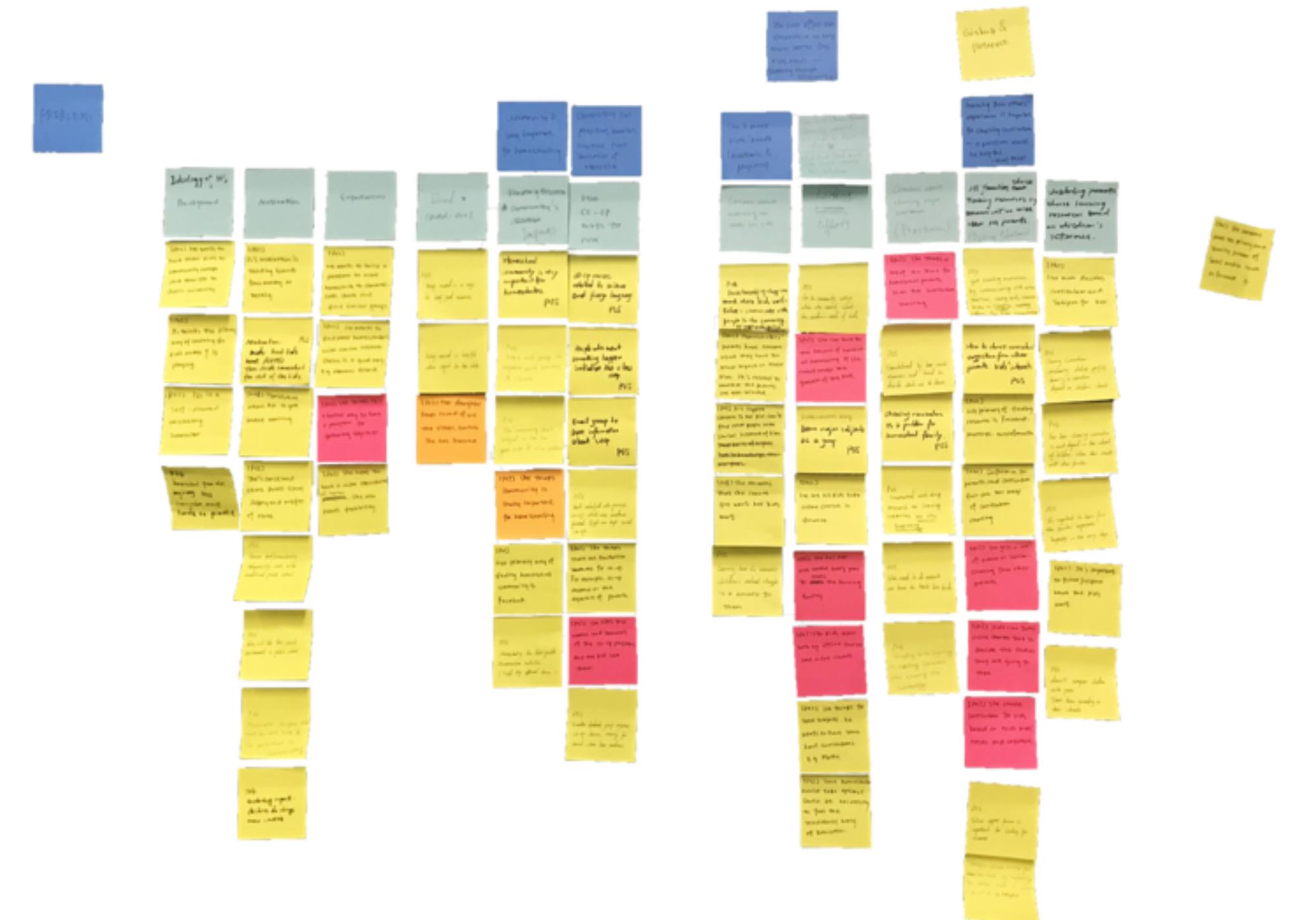
“ We make sure our kids have the opportunity to interact with people from all ages.



We go to co-op classes regularly, where we could meet other homeschool parents and share information.



My daughter has reading disability and we were struggling to find learning resource that best fit her.



Problem



Community plays an important role for homeschool families, in which homeschool parents can share resources and suggestions with each other. Yet local communities are most too small to find ideal resources.



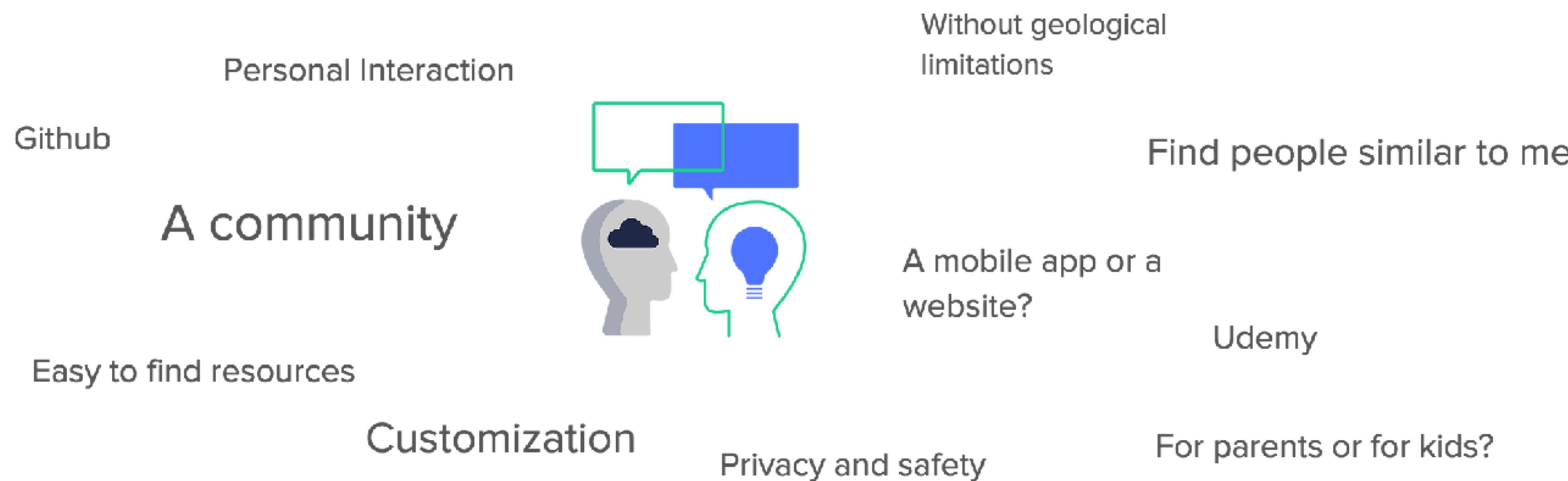
Finding learning resources is problematic for some homeschoolers for that it is often time-consuming to locate the right fits



The current way for homeschoolers to **find kids that share similar interests** is through Facebook posting or in-person communications in the local homeschool community, which could be constrained sometimes and is not particularly efficient.

Ideation

An **online community** that allows **resource sharing and curriculum building**. A platform that parents use to build and manage the learning path for their homeschooling kids.



Solution



Curriculum Exchange

Homemade Genius is a platform where homeschoolers' guardians could easily write learning plans and share curriculum with other members in the community. They could refer to others' curriculum and incorporate these resources into their own ones.



Peer Learning

Homeschoolers' academic needs cannot solely be satisfied by their guardians. Homemade Genius helps them overcome the geographical barriers and interact with other learners with similar interests.



Keep Record for Future

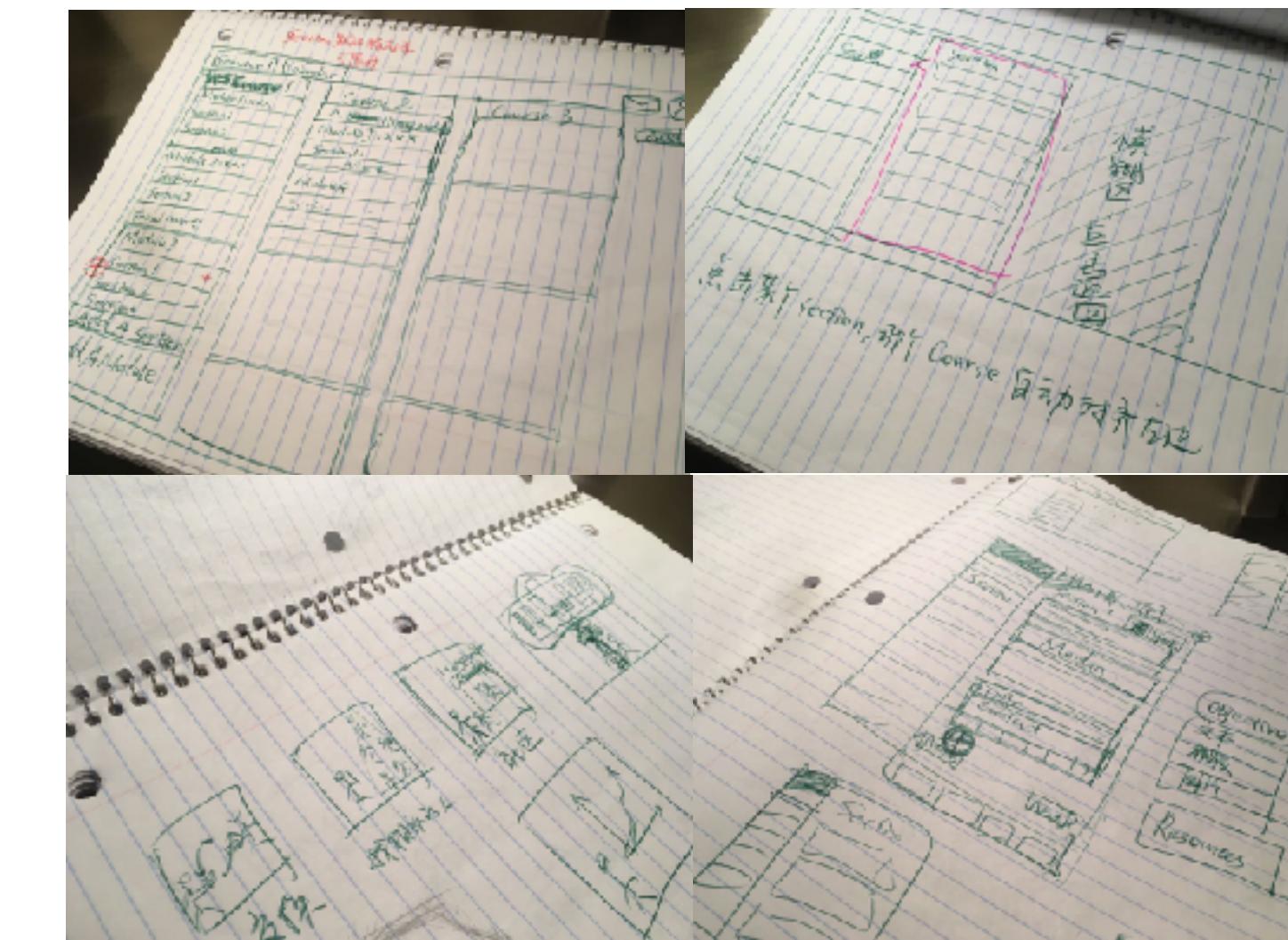
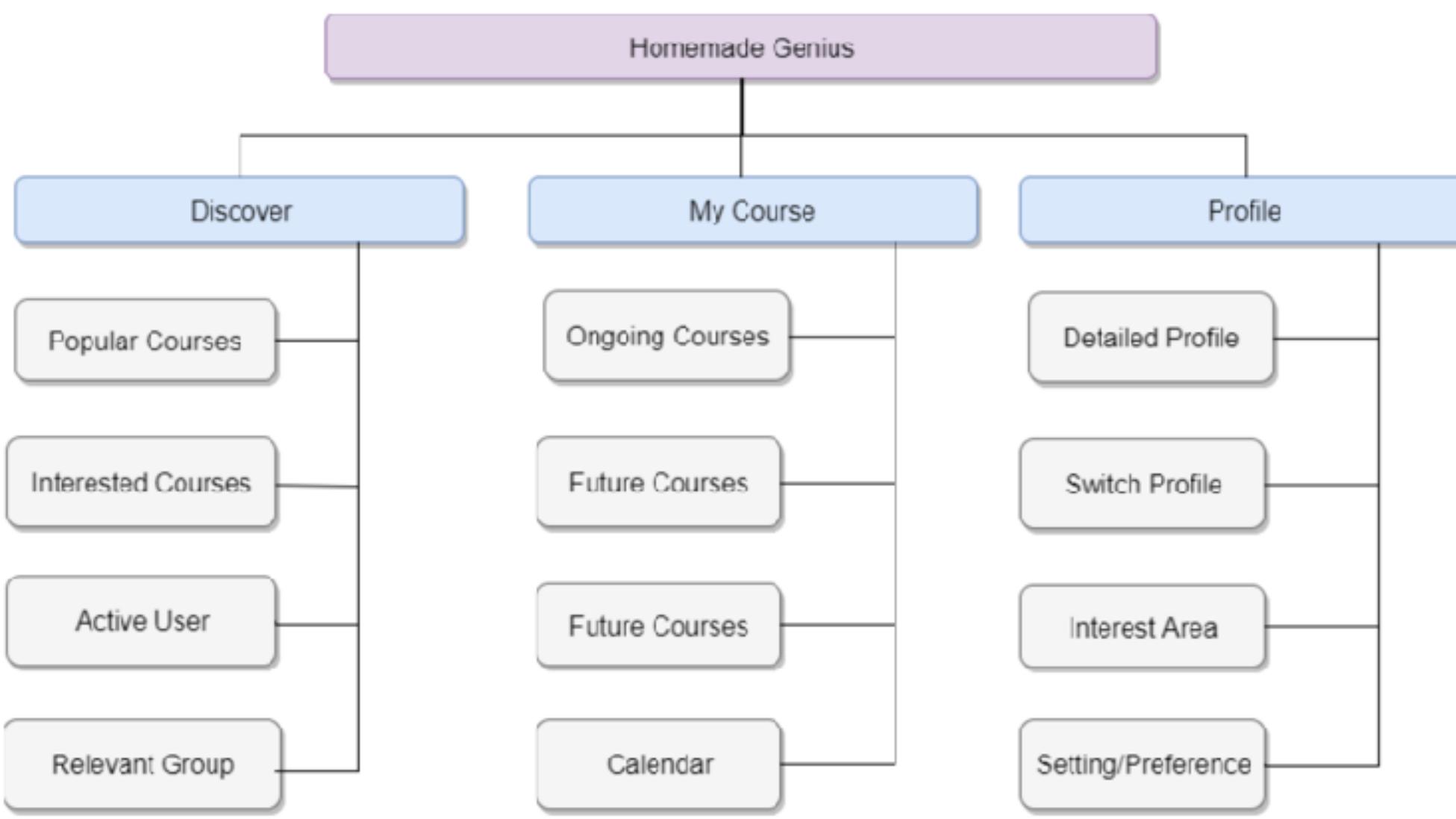
Now, homeschoolers' guardians rely on their community and spend a lot of time doing research when they enter the community. Homemade Genius would make this much easier by enabling them to search other homeschoolers based on location and interests.



Community at A Click Away

Homeschoolers' learning record is valuable for their future success. Homemade Genius could track their learning path confidentially and generate transcripts which could be used to apply for universities.

UI Design





DISCOVER

People are taking these courses...

Psychology 

Lindsay Johns
Age: 12 years old
Duration: 12 Months



Arithmetic 

Tyler John
Age: 5 years old
Duration: 6 Months



Geometry 

Billy Lloyd
Age: 13 years old
Duration: 3 Months



Calculus 1 

Jimmy
Age: 5 years old
Duration: 3 Months



Basic Writing 

Emma
Age: 7 years old
Duration: 6 Months



Psychology 

Lindsay Johns
Age: 17 years old
Duration: 12 Months



[View More](#)

Give You What You Want

Fill your profile and we will recommend courses, people, and groups based on your profile and interests.

The screenshot shows a user interface for a learning platform. At the top, there is a purple header bar with the "Homemade Genius" logo on the left, a search bar in the center, and three navigation icons on the right: "My Courses", a calendar icon, and a user profile icon.

The main content area displays a course template for "Psychology". The template has a dark brown header with the course name and a star icon. Below this, there are two sections: "Module 1" and "Module 2", each containing three sections: "Section 1", "Section 2", and "Section 3".

To the right of the template, a detailed view of the "Psychology" course is shown. It includes:

- Course Title:** Psychology
- Start Date:** from 04/17 to 07/17
- Instructor:** Linya Li (represented by a small profile picture)
- Description:** A placeholder text block: "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut vestibulum ligula ante, ut commodo nunc accumsan ac. Cras et commodo sapien. In orci felis, venenatis ac nisl et, vehicula consectetur nulla. Aenean nec faucibus ipsum, non congue orci. Suspendisse vehicula, tellus ac commodo vulputate."
- Star Button:** A button with a star icon and the word "STAR" in white.
- Discussions:** A section showing several comments from users:
 - Lindsey Johns:** "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut vestibulum ligula ante, ut commodo nunc accumsan ac." (commented on 2017-10-01, Reply)
 - Lindsey Johns:** "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut vestibulum ligula ante, ut commodo nunc accumsan ac." (commented on 2017-10-01, Reply)
 - Brooks:** "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut vestibulum ligula ante, ut commodo nunc accumsan ac." (commented on 2017-09-20, Reply)
 - Tyler West:** "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut vestibulum ligula ante, ut commodo nunc accumsan ac." (commented on 2017-09-20, Reply)
 - Linda:** "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut vestibulum ligula ante, ut commodo nunc accumsan ac." (commented on 2017-09-20, Reply)
 - Johana:** "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut vestibulum ligula ante, ut commodo nunc accumsan ac." (commented on 2017-09-20, Reply)

Learn from Others and Make Your Own

View other people's course plan and easily borrow it by star it. Adjust it based on your preference and add to your plan.

The screenshot shows a user profile for "RANDY". The profile includes a circular profile picture, the name "RANDY", a "FOLLOW" button, and a "CHAT" button. Below the profile, there are sections for "Overview", "Courses Created" (listing "For Homeschooler 1", "For Homeschooler 2", and "For Homeschooler 3"), "Events Created", "Interests", and "Events Created".

Chat with Randy

Charles: Hello Randy! I'm Charles.

Randy: Hi Charles! :)

Charles: I saw you've created a Psychology course.

Randy: Can I know where did you find the textbook? Is it free?

Charles: Sure. Actually, I'm currently looking for someone to join the co-op course I created earlier.

Charles: Wow, that's great! I have never learned Psychology before. But my kid is really interested in it. I'm worried about it. Can I join your co-op, so we can help each other? And|

Build a Community

Easily find people who have similar interests or experience with your kids. Build a community using our chat and discussion features.

The screenshot shows the 'My Courses' section of the Homemade Genius app. At the top, there is a purple header bar with the 'Homemade Genius' logo, a search bar, and navigation links for 'My Courses', 'Calendar', and 'Profile'. Below the header, there are tabs for 'Ongoing', 'Completed', 'Future', and 'Starred', with 'Ongoing' currently selected. A blue 'ADD' button is located in the top right corner. Underneath the tabs, it says 'Show courses for Paul' with a 'Change' link. The main area displays five course cards:

- Psychology** (brown card): Paul, Module 3: Perception, Discuss reading... 04/17, Progress: 30%.
- Algebra** (teal card): Paul, Module 3: Perception, Discuss reading... 04/17, Progress: 70%.
- Physics** (brown card): Paul, Module 3: Perception, Discuss reading... 04/17, Progress: 50%.
- Writing** (brown card): Paul, Module 3: Perception, Discuss reading... 04/17, Progress: 40%.
- Field Trip** (purple card): Paul, Module 3: Perception, Discuss reading... 04/17, Progress: 30%.

Each course card includes a small circular icon with a dog's face.

Easy to Manage

Manage all your course materials, collected resources in one place. Easily plan the learning path for your kids.

The screenshot shows the homepage of the Homemade Genius website. At the top, there is a purple header bar with the "Homemade Genius" logo, a search bar, and navigation links for "My Courses" and a grid icon. Below the header is a sidebar titled "Paul's Courses" with four categories: "Free Creative" (teal), "Math" (red), "Psychology" (orange), and "Literature" (purple). To the right of the sidebar is a main content area. At the top of this area is a calendar for March 2018, showing the days from 1 to 31. Below the calendar is a title "March 9 - 15, 2018". The main part of the content area is a weekly calendar grid from March 9 to March 15, 2018. The grid shows various course sections scheduled throughout the day. For example, on Monday, there are sessions for "Section 5 Basic Geometry" and "Section 12 Wax Drawing". On Tuesday, there is a session for "Section 7 Memory". On Wednesday, there are sessions for "Section 5 Basic Geometry 2" and "Section 13 Renaissance 2". On Thursday, there is a session for "Section 5 Renaissance 2". On Friday, there is a session for "Section 13 Creative Coding". The grid also includes a callout box at the bottom left showing user profiles for "RANDY", "LINYA LI", and "MARIA".

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Interaction



Feedback

1

The product should put more focus on the **interaction between users**.
For example, features like chat and comment could create more interaction.

2

Privacy should be protected on our platform.
Avoid information like name and photo. Use avatar and nickname is a better option.

3

For course materials people uploaded, there should be a **rating** feature.
So that people know the quality of the resource. And resources would be self-sustain.

Next Steps

Usability Testing: Validate Assumptions

Collaborate with developers to implement it

Shortly

Working on UX research project, personal informatics design for international students, design consulting for a client.

Who am I?

How did I get into design?

Who am I relative to you?

Who will I become?

Short-term

1. Read design blogs/learn from experienced designers + Practice UX design skills in real world projects
2. Study what's beyond interface: product strategy and business, behavioral economics, data driven intelligence, emerging technologies, etc..

Who am I?

How did I get into design?

Who am I relative to you?

Who will I become?

Long-term

1. Learn from the best designers and become a better team player
2. Build leadership abilities and learn how to lead diverse team for disruptive innovation
3. Find my next “best day of life”

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Charles appreciates your feedback!