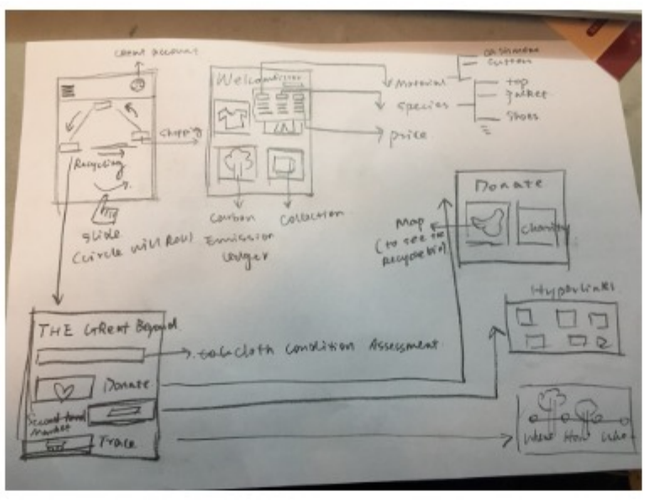
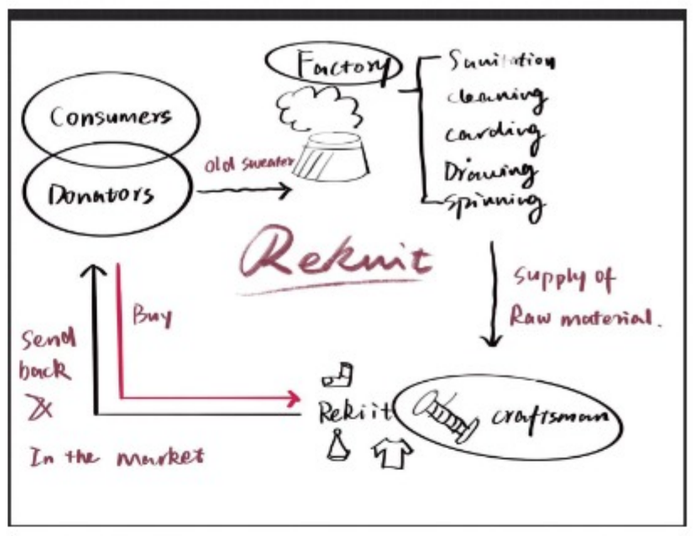
Version 1.0





Our Design Principles:

Consistency

In order to create a design which is easy to navigate and understand, we will incorporate consistency throughout our design. This will include using the same colours/ typography and placement of buttons and images in order for the user to navigate around the app. This will also limit confusion to potential users who are less new to using technologies such as the craftsmen we intend to incorporate within our app.

Feedback

Due to the nature of our app fulfilling many tasks such as donating, purchasing and designing, we will need to have an app that provides a lot of feedback. Consumers need to know when an action has been completed and gone through. We will do this by incorporating sounds when an action such as purchasing/payment has completed and as well as a message on the screen which lets the consumer know what's happening.

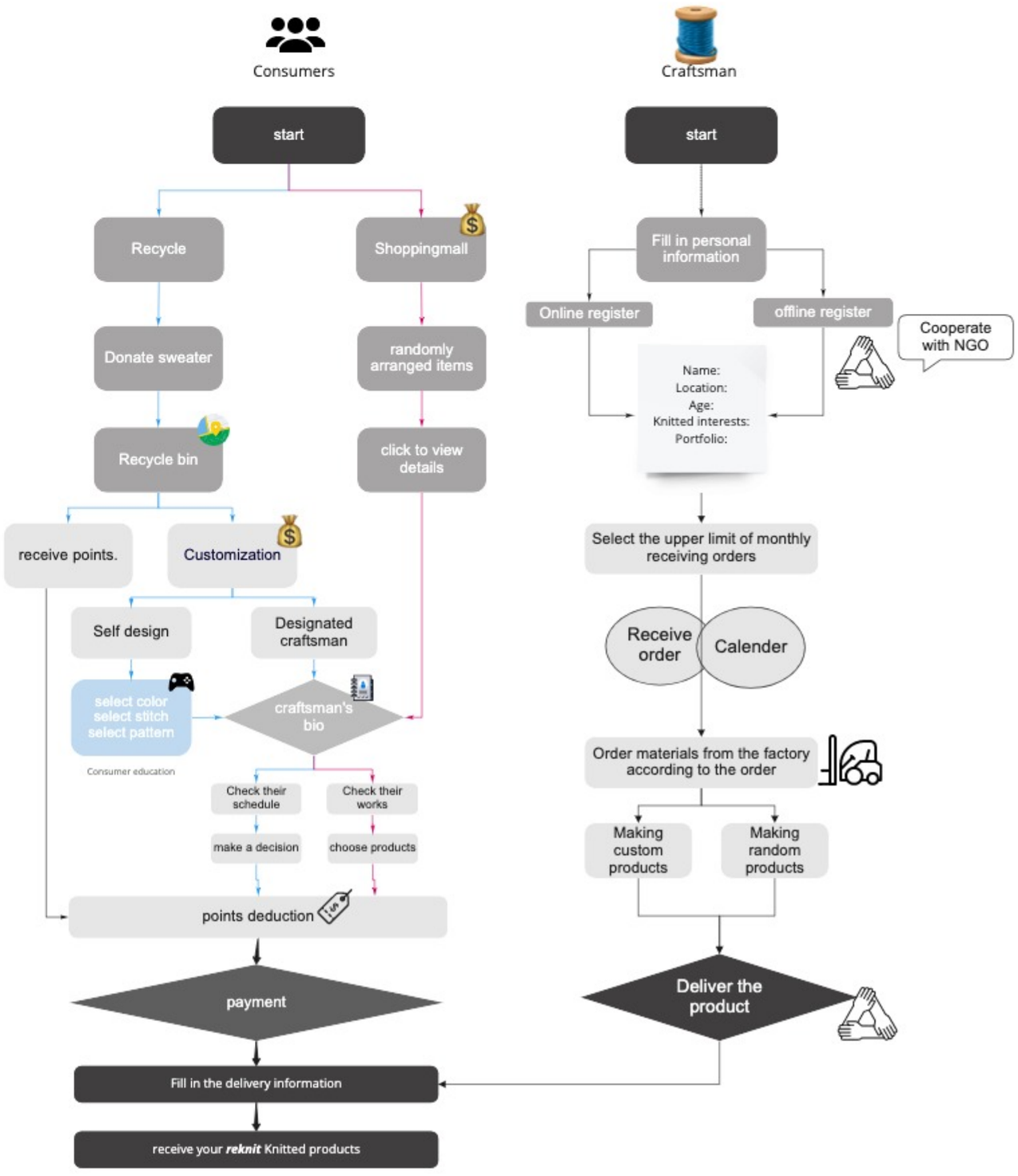
Engaging

We want our app to be engaging so consumers will continue to use the app and find information helpful and useful. We will use a points system when they have shopped with us.

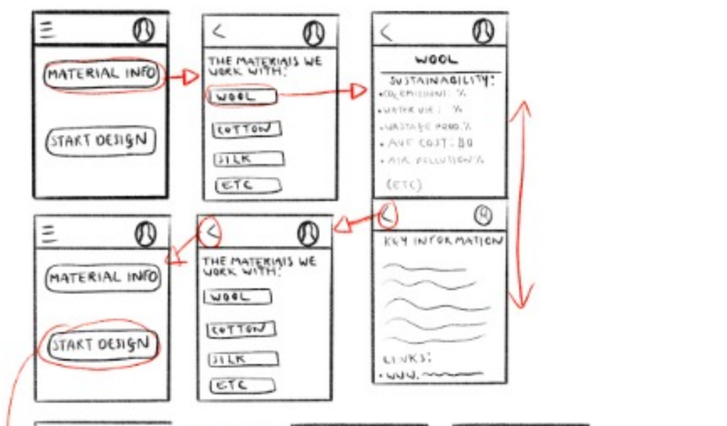
User control

As our app has multiple functions, it is important for the user to have control and the ability to undo certain actions they have made. We will incorporate buttons to always be able to go back to the last step and leave the current page they are on without having to go through a long process

Version 2.0:

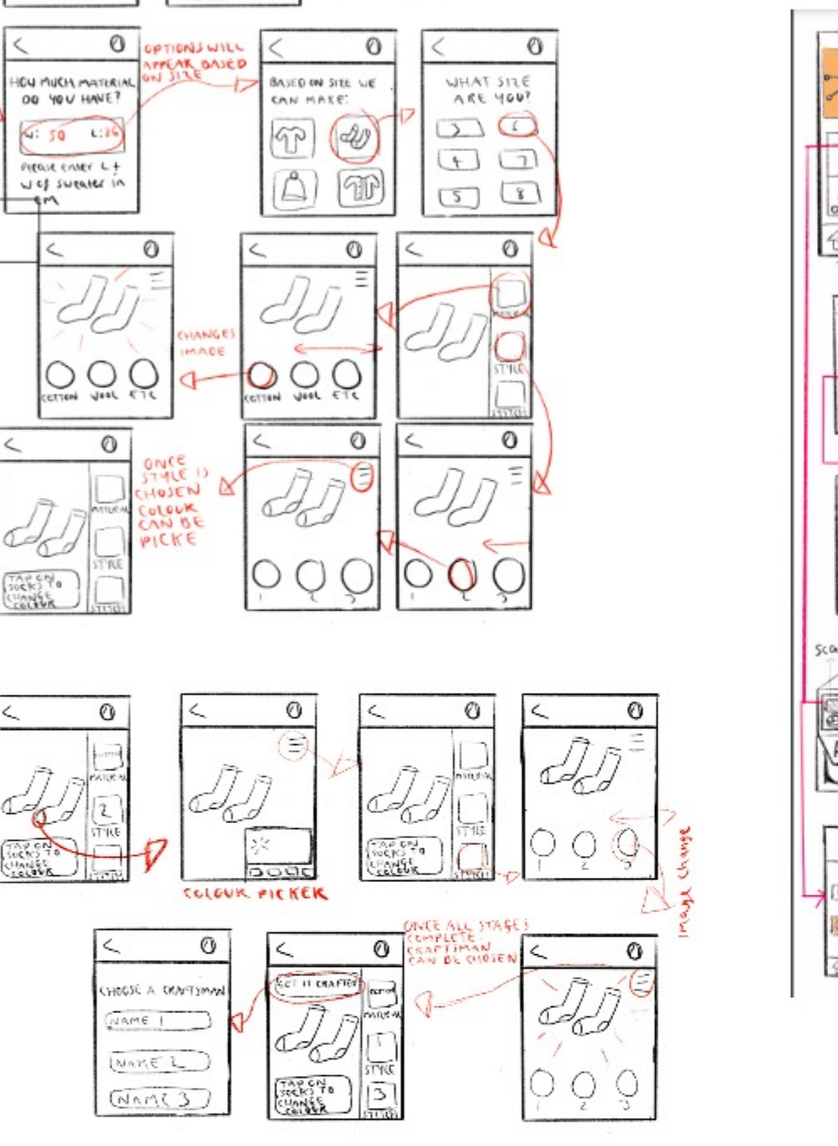


Design/ educate



Donate

Purchase



Following on from our meeting, we have decided to focus on the 'donate' section of the app as we believe that's where the most innovative idea is.

Following on from week9's meeting, we have decidede to create a wechat plogin version to reduce storage. Besides, we also plan to add a confidentially agreement to guarantee their privacy. Lastly, we would provide alternative photos for people who don;t want to put their own porfolio on the app

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Background Research

Competitive Analysis

Category	Recycling APP	Shopping APP	Educational Website
Products	ReGain	ZARA H&M	Seafood Watch
👍	Users just need to pack up their unwanted clothes into a sealed bag or box, and take it to the drop-off location. No need to print off a label at home just need to show the app to the shopkeeper then he or she will print off label attaching the parcel and send it to Regain. Then the user can unlock the discount they want.	They both go sustainable with 'Join Life' and 'Sustainability' initiative. They are working with monitoring programs that help them to guarantee the quality and safety of their garments and reduce their environmental impact. What's more, they are collaborating on social projects aimed at supporting the community.	Provides users with clear information on sources of the fish. The information is clear and summarised/colour coded so it's easy to understand what's bad and what's good. They have lots of filters where you can look at different options/ alternatives to types of fish. also has 'best choice' option based on their evaluations/information
👎	Users know nothing about the recycling part and where their clothes go and how to deal with them. The discount it offers might incentivizing people to buy more.	Technology today only allows the textile recycling of garments that are 100% cotton, wool or polyester. Customers cannot track their donated clothes.	They no longer have the app they once did so the information is harder to access from mobile device.
💡 Key Takeaway	App is made simple and easy to use, rewards are a good incentive to get consumers to recycle	More variety of materials should be considered when being recycled and it would be better if consumers can track their items	Key information about sustainability is more noticeable/easy to take in when made obvious with colours etc. recommendations based on sustainability is also helpful

Insights from our literature review

Recycling Status quo

1. Within China, they haven't received good results on their mission to get consumers to start recycling their clothes, many consumers are unaware of how to recycle their clothes and how to access recycling methods. (statistic)
2. There is a rising second-hand economy in China, the secondhand e-commerce platform plays a leading role in second-hand market.
3. The second-hand platform and donate to charities is the most-cited recycling method being used by the Chinese.
4. Over 50% of consumers within China don't like to throw their clothes away, rather to store them at home.
5. Recycling apps don't have much transparency about where their clothes are going to, which is the leading reason for why people not willing to recycle their clothes.
6. The consumer in China has a lack of knowledge about the pollution caused by different clothing fabric production and the distinction between different fabrics.

Production Status quo

From the perspective of garment industries

1. 80% of the garment factories indicated that they're willing to introduce recycling facilities and reclamation facilities.
2. "Recycling clothes into new textile or yarns" becomes the best way for factories to reproduce used clothes.
3. While some garment companies have publicly said they are capable of recycling textile fertilisers, they remain a minority.
4. In the past 5 years, the output of regenerated fiber in China has continued to increase. In 2018, the total processing volume of the regenerated fiber in China represented more than 10% of total production.

From the perspective of craftsmen

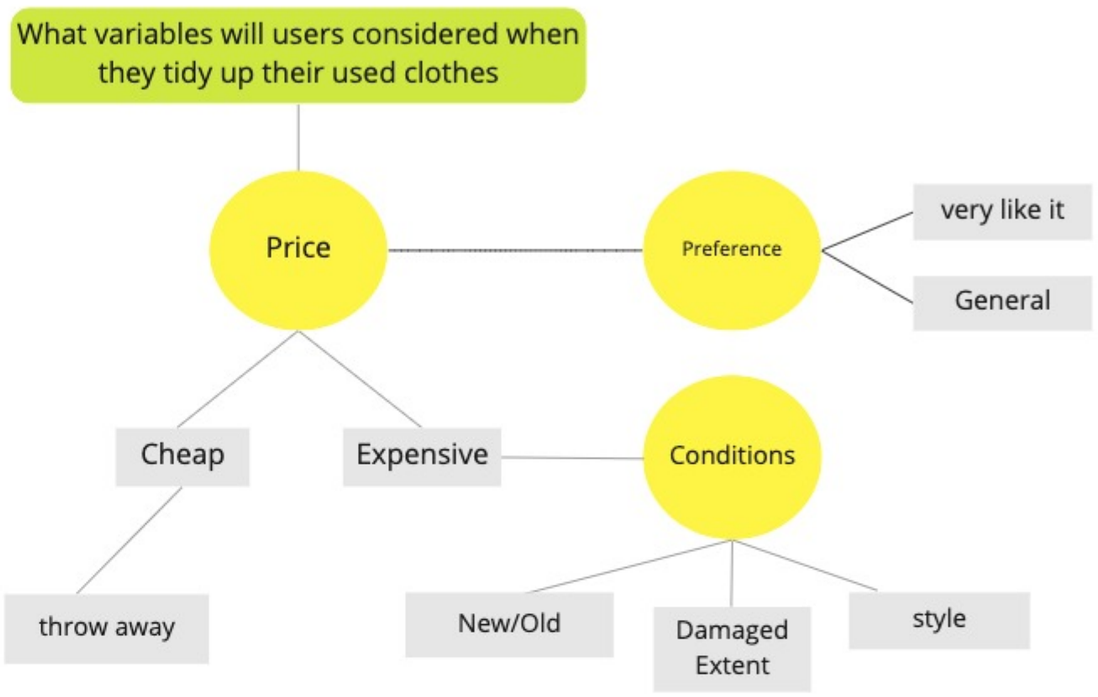
1. Until now there isn't an established market for craftsman in China. Craftsmen are scattered in different stores and e-commerce platforms, with a low degree of concentration.
2. The scale of enterprises is generally small, and the market competitiveness is weak.

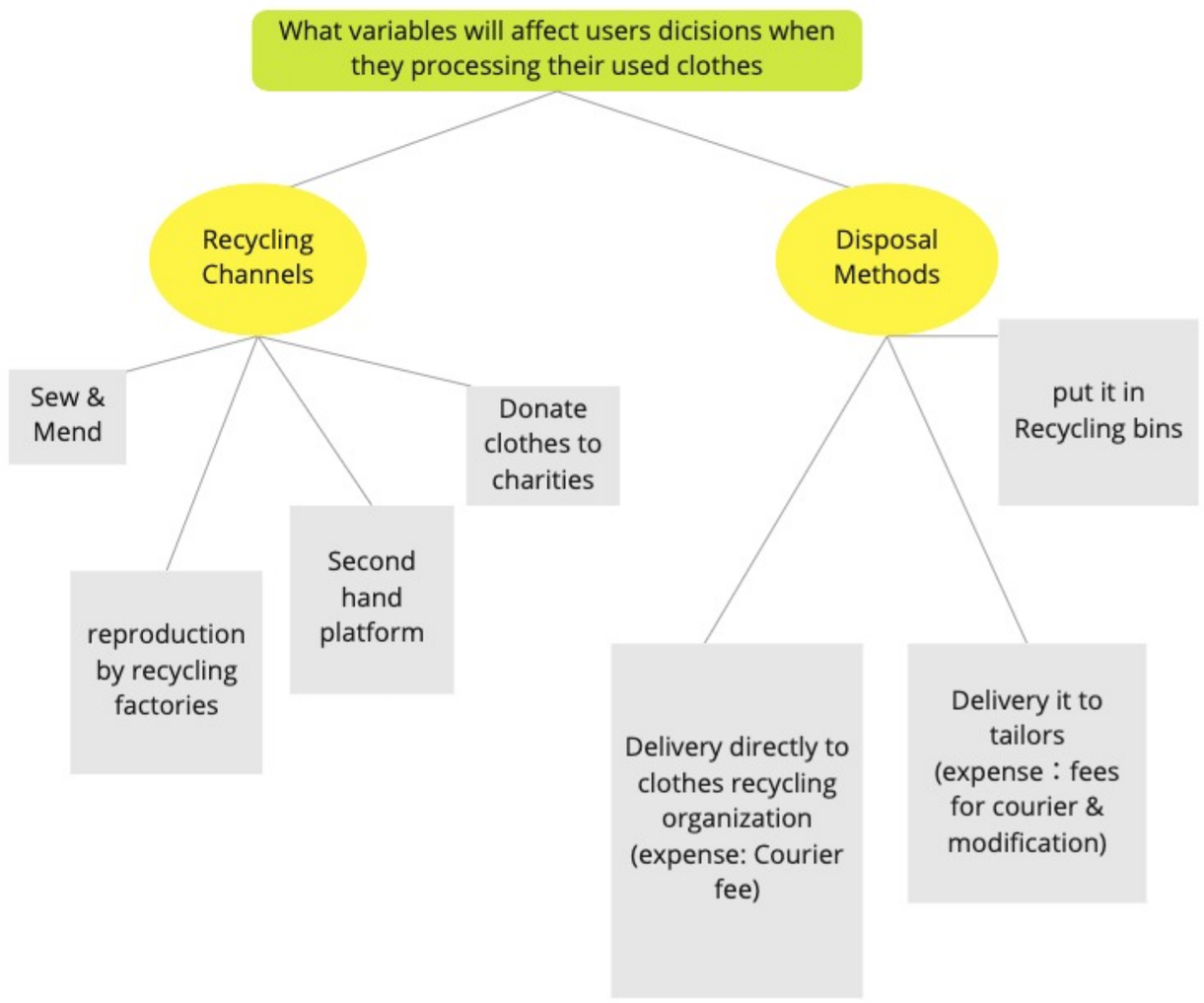
Purchasing Status quo

1. 75% of the consumers said it is important to consumpt in a sustainable way.
2. There is a growing consumption of knitted garments within recent 2 years in China due to the upgrading of per capita consumption and the attractive styles of knitted garments.

user research

We conduct a semi-structured interview and a focus group to gain in-depth insights into the unique experience that our target users have when they addressing used clothes. Particularly, we'd like to know their user characteristics, preference on using recycling apps, what's their goals and frustrations when using the apps, and their attitude towards clothes recycling.
Through the research, we find that the way consumers addressing their used clothes is affected by four variables in consists of the following two phases.





Key insights from user research

1. **An "expensive" burden**：Used clothes with high purchasing price will become a burden since users have a low willingness to throw them away and they don't know how to recycle them. Used clothes with high purchasing price will be stored at home, occupying storage space
2. **An Emerging Way**：Sewing & mending used clothes becomes an emerging sustainable way for clothes consumption. 59% of people saying that they are willing to redesign or mend their old clothes which were purchased at a high price. (statistic)
3. **Additional cost**：The cost incurred in the clothes recycling process is an important reason that hinders users from continuing to conduct sustainable behaviors.
4. **A Chaotic Market**: Craftsmen from e-commerce platform said that chaotic price negotiation, coordination difficulties in consumers requirements, the security of transactions and the time schedule are the Main problem during their course of dealing

From the perspective of craftsmen in stores:

1. **Acquaintances Business**: Most of their customers are introduced by acquaintances and have their own network of relationships.
2. **Middle-aged and elderly customers**: The age of customers is mainly between 40 and 65 years old.
3. **Customisation**：They will provide customers with the knitwear they need according to their description.
4. **Single online channel of publicity**: WeChat Moment is the only way they expand their business.
5. **Source of raw materials**：Their wool (raw material) comes from wholesale markets or sweaters brought by customers.
6. **Low profit**: They mainly earn manual fees.

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Male consumers

Chu Lu

Demographics

Age 24

Location Shanghai

Occupation Project manager

Income: $40,000/year

Recycling Characteristics

Chu is a project manager based in Shanghai. Never heard of any sustainable brands in China and from his point of view, he won't considerate environmental factor when buying a sweater because he thinks the materials won't be harmful to the environment. When he chooses a sweater, he prefers 100% cashmere but if he really likes the design, the materials become the second consideration. And he uses clothes recycling app to donate his unwanted clothes to people in poor areas or just gives his relatives the unwanted clothes.

When using the apps...

Goals

- Can donate unwanted clothes to people in need
- Can collect points when finishing donation and use those points to do something good to the environment such as planting trees or feeding stray cats and dogs

Frustrations

- It is too cumbersome to operate the app
- The home page is a little bit messy and they put too much information on it

Preference

Favorite apps

Recycling method

Donation

Second-hand platform

Sew & Mend

Reproduction

Values/Motivation

charity

Attitude towards clothes recycling

He uses recycling apps just to donate unwanted clothes for charity. But he would like learn more about the benefits about recycling sweaters.

Female consumers

Cindy

Demographics

Age: 35

Location：Nanjing

Occupation: Journalist

Income: $35,000/year

Recycling Characteristics

Cindy is a journalist in Nanjing. Never heard of sustainable brands and she doesn't specifically look for sustainable clothes because comfort is all she cares. For unwanted clothes, she used to just throw away but since she learned that some platforms can recycle these clothes, she chose to donate because it feels more meaningful to do so. As for those flawed but expensive sweaters, if it is cheap to repair, she'd love to give them a second life

When using the apps...

Goals

- Easy to donate or recycle unwanted clothes
- Would love to spend less than 10% of the purchase price to repair but only for her favourite clothes

Frustrations

- Prefer buying new trendy clothes than refurbished clothes
- Unwilling to spend more than 10% of the purchase price to repair clothes

Preference

Preferred apps

Recycling method

Second-hand platform

Donation

Sew & Mend

Reproduction

Values

comfort

meaningful

Clear to use

Attitude towards clothes recycling

She thinks it is more environmentally friendly to donate or recycle unwanted clothes.

Negative Users

Laura

Demographics

Age 25

Location Hangzhou

Occupation office worker

Income $23,000/year

Recycling Characteristics

Laura is an employee who has just graduated and joined a small company. Because of the need of her job, she needs to pay attention to what she wears. But her salary is not high, so she can't afford expensive clothes. She can only buy some cheap clothes online or in fast-moving brand stores. So in terms of clothing recycling, she hopes to complete this move at the lowest possible price.

When using the apps...

Goals

- Convenient and fast handling of old clothes
- Can spend a small amount of money to repair damaged clothes

Frustrations

- If the cost of recycling clothes is too high, she doesn't feel it's a good deal.
- She doesn't understand why some people spend money on second-hand clothes.

Preference

Favorite apps

Recycling method

Second-hand platform

Donation

Sew & Mend

Reproduction

Values

be economical, save money, organized

Attitude towards clothes recycling

She hopes that recycling will help with her wardrobe, but she doesn't want to pay extra.

Skateholders

Xiao Xia

Demographics

Age：55

Location：Chongqing

Occupation: Tailor

Income: $10,000/year

Recycling Characteristics

As a skillful tailor, Xiao Xia is good at mending general clothes, like a hole on the old T-shirt or tailoring the length of trousers. However, fewer and fewer young people choose to mend their used clothes nowadays, most of her business are introduced by acquaintances and repeat customers who are at a similar age like her. Besides, most of the transactions are sweetheart deals, there is no unified standard for pricing, so she gains little revenues.
In order to increase the business scope to meet the taste of young people, now she is learning pattern making for costumes like JK, Hanfu, Lolita dresses, and start to learn how to dealing with fine fabrics.

When using the apps...

Goals

- A transparent trading market
- Easier to communicate with consumers to coordinate with their requirements

Frustrations

- Difficult to determine what exactly customers want to change on their clothes, particular for the expensive clothes and costumes.

Preference

Favorite apps

Recycling method

Second-hand platform

Donation

Sew & Mend

Reproduction

Values/Motivation

transparency, communicative

Attitude towards clothes recycling

she is glad to see more and more people willing to mend their used clothes

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Our Group members

Zhuoman Li **Ruinan Ding** **Faye Schuster** **Yingni Qu** **Minglu Huang**

REKNIT

Focusing on SDG's 12/13/16

Our research scope

How can we create a service in China that provides the consumers with knowledge about their clothes and encourages them to buy sustainably and recycle?

After completing a literature review we found that many people in China are unaware of ways to recycle their clothes and also their unused clothes are too expensive and they are reluctant to throw them away. More importantly, we found that people around the age of 20 within China, over 80% of them are willing to buy sustainable products. Therefore we want to create a service through an app that will inspire and allow people to repurpose and recycle their unwanted clothes

Our research problem

How might we create an app that allows consumers to repurpose their unwanted clothing as a way of recycling?

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Phase of journey	Stage 1	Stage 2	Stage 3
Actions What does the customer do?	Cindy found her sweater is old CIndy saw Reknit's ads on the recycling bin outside the neiborghood Cindy decided to recycle her sweater by giving it to **Reknit**	After learning about reknit, Cindy decided to recycle his old fast fashion sweaters, and planned to customize a hat with a shrunken cashmere sweater Cindy registered in the app and put her old sweater in the recycling bin near her home Cindy made an appointment in the app with a craftsman she likes to recycle her old cashmere	Two weeks later, Cindy received the customized hat Cindy used the coupons she got from recycling old sweaters to buy some lovely pieces by craftsmen
Touchpoint What part of the service do they interact with?	• Cindy downloads the application from App Store or uses Reknit in the WeChat plugin. • Cindy begin to learn about Reknit's recycling pattern from the homepage of Reknit • explore the application	• Cindy spent some time registering, and finally, she found out that she could bind the account to the Taobao account • When putting old clothes in the recycling box, Cindy needed to enter password and print vouchers in the recycling box because she forgot to bring her mobile phone • It takes too long to wait for a custom project, besides that, she can't get in touch with the craftsperson	• Private information protection • after-sales service • The craftsman's products varied from good to bad
Customer Thought What is the customer thinking?	I can't wear my old sweaters out and I don't have anywhere to put them at home I saw a Reknit AD on the recycling bin outside the neighbourhood door. It would be nice to have this sweater recycled However, I don't want to spend too much money to recycle this sweater, this is just a fast-fashion brand	I hate registration. Forget it, I don't need this app anymore. It turns out that it can be tied to a Taobao account, so let me give it a chance. I forgot to bring my mobile phone, and I have to enter my password in the recycling box. It's really troublesome, and I have to take a trip. Oh, I got a rebate for my sweater. That's great. Why don't you make a hat out of my shrunk cashmere sweater This craftsman's hat is really good-looking and the price is very affordable, but it takes half a month to wait, and there is no craftsman's contact information	I recieced the hat, the quality is very good, but I'm a little bit concern about my private information Because I have some coupons, I bought some cute woolen products and received them quickly, but their quality varies.
Customer Feeling What is the customer feeling?	😕 🥳 😐	😕 😐 😕 🥳 😐	🥳 😐
Ideas & Opportunities	• Advertise in places like recycled bin or elevators • make sure the app is available in different mobile phone brands' app store, meanwhile, provide the Wechat plugin. • In the main interface of the app, inform users of the main functions of the app, how to use it, and the recycling process	• Simplify the registration process, first provide users with the option to bind Taobao accounts in the registration interface • add the door-to-door recycling service, simplify the log-in process of the recycling box, and provide scan-face login • Provide the users with intelligent dialogue robots to answer theri questions	• Provide user information confidentiality agreement • Introduce a craftsman evaluation system

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Scenarios can help us consider the user's motivation and record the user's possible process of using the application on the entire timeline. Based on our four main users, we designed real scenarios to illustrate the possible uses of our app.

Chu Lu collected a batch of clothes he didn't want and wanted to donate them to people in need or charities. But he didn't know how to contact the agencies that needed the clothes. To donate the clothes, he downloaded and opened the **Reknit** app. He found that he could donate his clothes to the company through a nearby recycle bin and get discount coupons for use in shopping malls. At the same time, he can also know where his clothes are transported for reprocessing. This transparent way makes him feel more meaningful about his donation.

Chu Lu has a sweater that has shrunk in the washing machine. Although the sweater was no longer wearable, he was reluctant to throw it away. Because this sweater is his favorite style and style in terms of color and material. He found the customization part in the **Reknit** app, and found that he could customize knitted products by choosing his favorite craftsman's sample clothing, or even redesign his own clothing in the game part. He sent the sweater, and the craftsman helped him to change it into a wool hat. He likes this nice and comfortable hat very much.

Cindy has gained some sustainable knowledge in her work and wants to support the industry by buying environmentally friendly clothing. Noting the **Reknit** app in app store, she found that the product's shopping section recommended some environmentally friendly sweaters and knitwear. So she downloaded the app. Because the operation is similar to general shopping software, she can operate smoothly. According to the filter, she chose the category she needed and selected the right sweater. At the same time, she also looked at the craftsmen who made the sweater, so she was very relieved about it.

Cindy has a sweater that she likes very much, but it is damaged to some extent due to its age. She checked the version of **Reknit**'s wechat app and found that there were many cheap sweater repair shops in her area. She chose a shop according to distance and price to send her broken sweater to repair. She was very satisfied to find that she only used a small repair fee to get a basically flawless sweater.

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Visibility

This version of prototype could not show users system operation with highly visible status displayed on the screen.

Match

The system is designed to mirror the language and concepts users would find in the real world and all information is presenting in logical order to reduce cognitive strain and make system easier to use.

User Control

For some parts of functions, users can undo or redo previous actions.

An option to go back isn't present on every page, therefore, cannot undo certain steps.

Consistency

As it is one of our design principles, we use the same graphic elements and terminology across similar platforms.

Error Prevention

In order to help users to avoid making mistakes, we set 'Go Back' & 'Cancel' buttons to help them undo their previous actions.

Recognition

We use simple and recognisable icons in order to giver users direct guidance and minimize cognitive load by maintaining task-relevant information within the display while users explore the interface.

Flexibility

This version is not so well-developed, so we decided to reduce the functionality of the system and focus on the donation part of our service to improve flexibility and efficiency of use.

Minimalism

We tried to keep clutter to minimum by only presenting necessary components for the users' limited attentional resources as well as providing clearly visible and unambiguous means of navigating to other content.

Menu at the bottom of the screen might take up screen space and can maybe be changed for a toggle menu.

Error Recovery

We design the system with an assumption that users are unable to understand technical terminology, therefore, our error messages are always be expressed in plain language to ensure nothing gets lost in translation.

Help

We featured a live chat support to help to ensure it is easily located, specific to the task at hand and worded in a way that will guide users through the necessary steps toward a solution to the issue they are facing when users require help.

The heuristic evaluation is summarized by Euphemia Wong of Nielsen and Molich's 10 User Interface Design Heuristics.

Potential things to consider for next prototype:

1.More clarity with 'back' buttons and where they navigate too, as different buttons can take you to the same page.

2. Design could be more minimalistic with an easy access menu as maybe a toggle instead of taking up the whole screen

3. A button for the 'help' feature to be visible on all screens.

4. Accessibility elements

5. Sustainability elements

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Interview：
What factors influenced their decision to recycle?

Price

Degree of damage

level of preference

green reward | traceable & transparency | educational

easy to use | easy to understand | consistency

Competitive Analysis

age18-65; Tier 1-3 cities | ¥375×10^10: Rapid growth in secondhand market | Current methods: second-hand platform & donation

47%：Users lack of knowledge and accessibility | 54.58%：Unwilling to throw away old clothes | Recycling apps: lack of transparency

Recycling Status

Garment industries

80%: Willing to introduce a recycling program | 85%：Recycle clothes into new textile or yarns

70%：No recycling capacity | 19%：Increased production of regenerated fiber

Research

Literature review

Production Status

Consumption Status

The growth of knitwear consumption | 75%: sustainable consumption is important

User Research

Key insights: Craftsman

Middle-aged and elderly customers; underdeveloped area | Acquaintance business | Customisation | No established market: low concentration

Single online channel of publicity | Low profit | A chaotic Market | Small scale & weak competitiveness

Key insights: users

1. An "expensive" Burden

2. An Emerging way | 3. Additional cost

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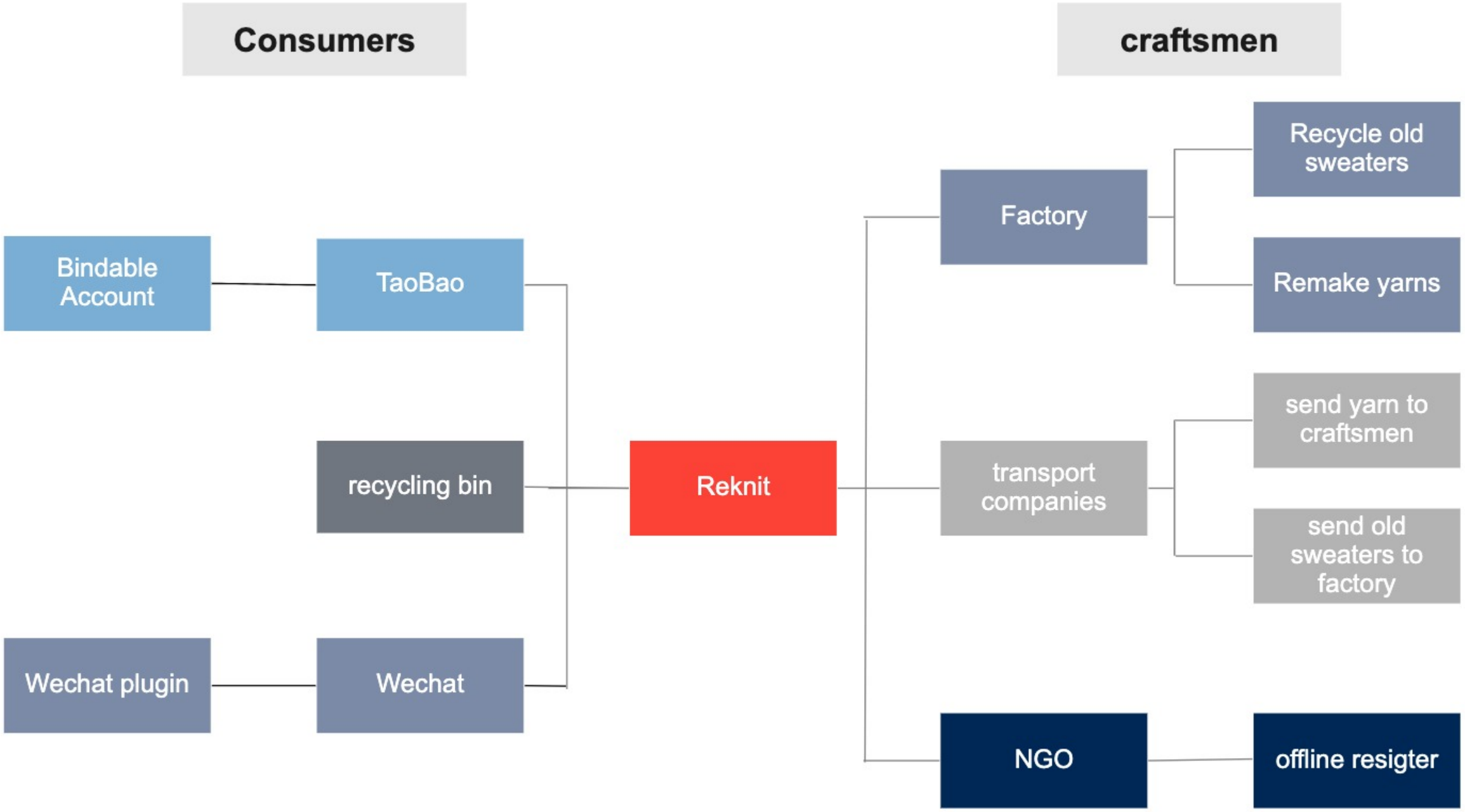
Stakeholders map



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