FETTLER

Interaction design Personal project 8 weeks

FETTLER is a sustainable design that provides users with timely maintenance service through an App platform and solves maintenance problems in their daily life so as to increase product utilization rate and extend the service life. Meanwhile, the demands for maintenance can provide workers with more job opportunities.

BACKGROUND

The monthly rent of a suite in Chaoyang District ranges from 4,000 to 5,000 yuan. Therefore, young people prefer to share a house at a monthly cost of 2,000 to 3,000 yuan.

As a core area of Beijing, Chaoyang District is where many young people work and rent a house as well.

Beijing Municipal Government has issued multiple regulations on city appearance and environmental sanitation, old downtown area transformation and urban planning.

Easy to manage and develop, gated residential communities gradually replace traditional living mode and become a new choice for residence.

The sharing economy uses Internet technology to integrate and share a lot of idle resources to meet the diversified demands of economic activities.

DESIGN OPPORTUNITY

There are two problems at present. First, young tenants in the Chaoyang District lack storage space to store idle items. Second, the regulations issued by the government on the rectification of city appearance result in the absence of some convenience service.

RESEARCH

To solve this problem, I started from the three aspects, namely maintenance workers, users and suppliers of maintenance supplies. Research on these three user groups was conducted to learn about the reasons for the decrease in street maintenance workers and the problems behind it.

Interview

Now, my work is not in a stable state.

Name: Liu Qingjiang
Age: 47
Engaged in the maintenance industry for 14 years.

Bio

Now, I am usually evicted by city inspectors because setting up a street stall for maintenance is forbidden in many places.

Goal

Business is doing well when it is allowed. A number of young people will bring items to be repaired.

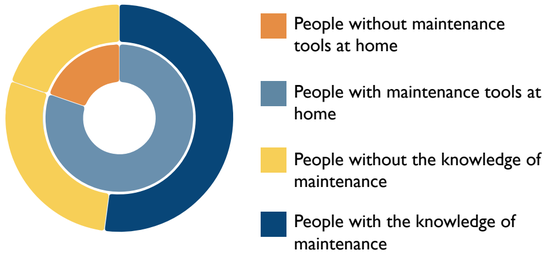
Working state	Stable	Unstable
Working hours	Long	Short
Working enthusiasm	High	Low

Observation

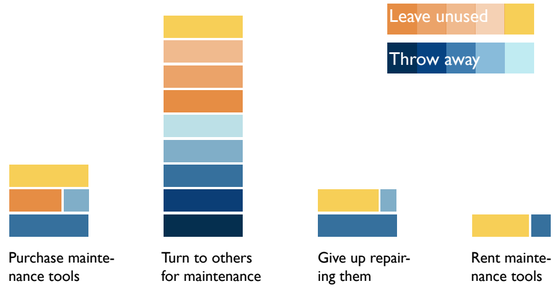
I preliminarily understood the current situation of maintenance workers in Chaoyang District of Beijing through visiting existing mobile street maintenance booths and observing the maintenance workers' working status, maintenance process and communication with customers.

Questionnaire Analysis

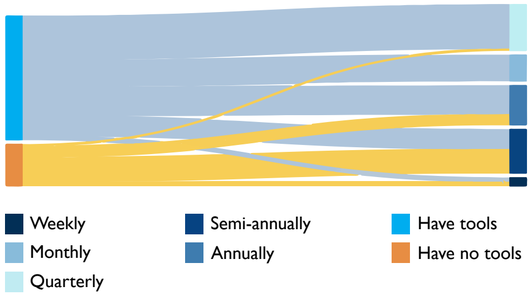
Users' knowledge of maintenance



Users' attitudes towards malfunctioning items



The status and use frequency of maintenance tools owned by users



Insight

- ***Lack of knowledge and skills***
  A large proportion of users have maintenance tools at home, but they are still unable to repair them and even cause secondary damage because of lacking related knowledge and skills.
- ***Maintenance industry has a good market***
  With accessibility to maintenance services, most users will ask professional workers for the maintenance of damaged items, indicating that the maintenance industry has a certain market and is also an effective way to extend the service life of items.
- ***Low useage of tools***
  Maintenance tools are generally used every three to four months, which shows low use frequency. Users lack the initiative to extend the service life of items even if they have maintenance tools.

Brand research

Distribution

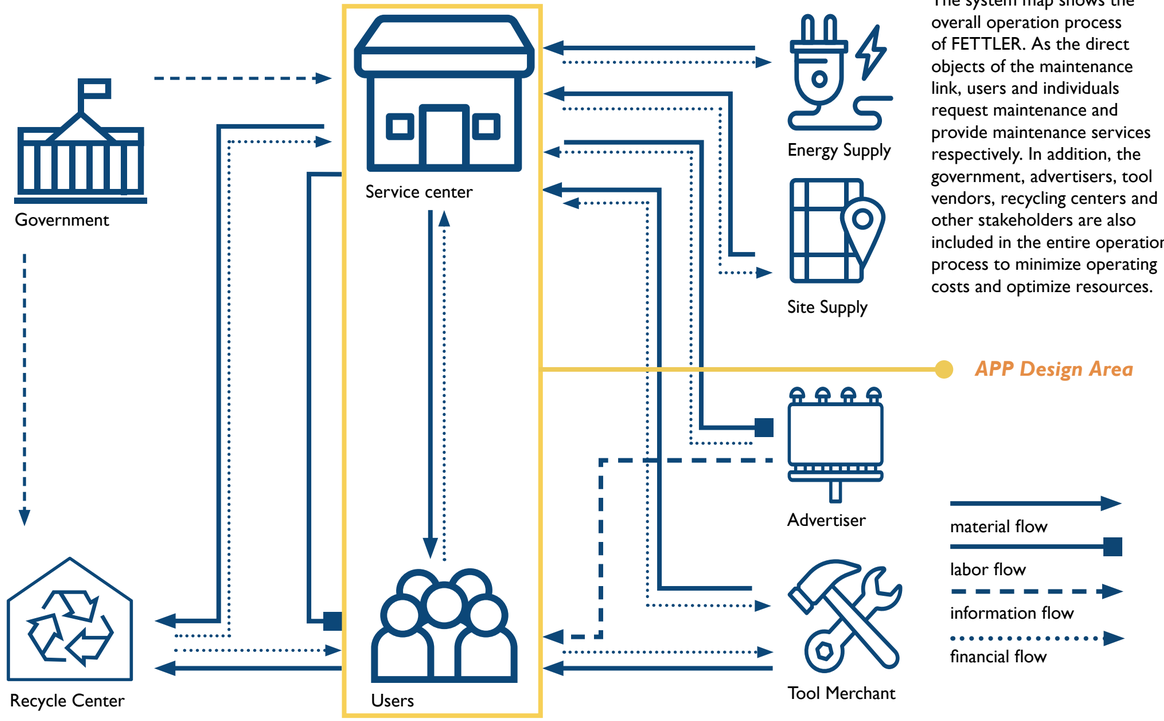
With 217 communities, Chaoyang District of Beijing has convenient transportation and a pleasant living environment, where a large number of citizens settle. According to my design goal, maintenance sites shall be distributed in communities with a high density of residents, which can effectively expand service demands and reduce operation and transportation costs.

SUMMARY

Challenge	Solution
Young People Young people lack space to store maintenance tools and idle items, unable to repair things because of few tools and knowledge.	Maintenance platforms can be established to provide young people with convenient, quick and affordable maintenance services.
Fettler At present, maintenance workers have unfixed working places, unstable working status and few channels of job opportunities.	The maintenance workers and user groups can be directly connected, which will provide maintenance workers with stable job opportunities.
Utilization With low use frequency and utilization rate, damaged items will occupy storage space if stored, but lead to waste if discarded.	Improve the maintenance success rate of damaged items and extend the service life of items.

Through my design, I hope to provide young people with convenient maintenance service and tools, contribute to the reappearance of street maintenance workers and offer them reemployment opportunities.

Ideation



The system map shows the overall operation process of FETTLER. As the direct objects of the maintenance link, users and individuals request maintenance and provide maintenance services respectively. In addition, the government, advertisers, tool vendors, recycling centers and other stakeholders are also included in the entire operation process to minimize operating costs and optimize resources.

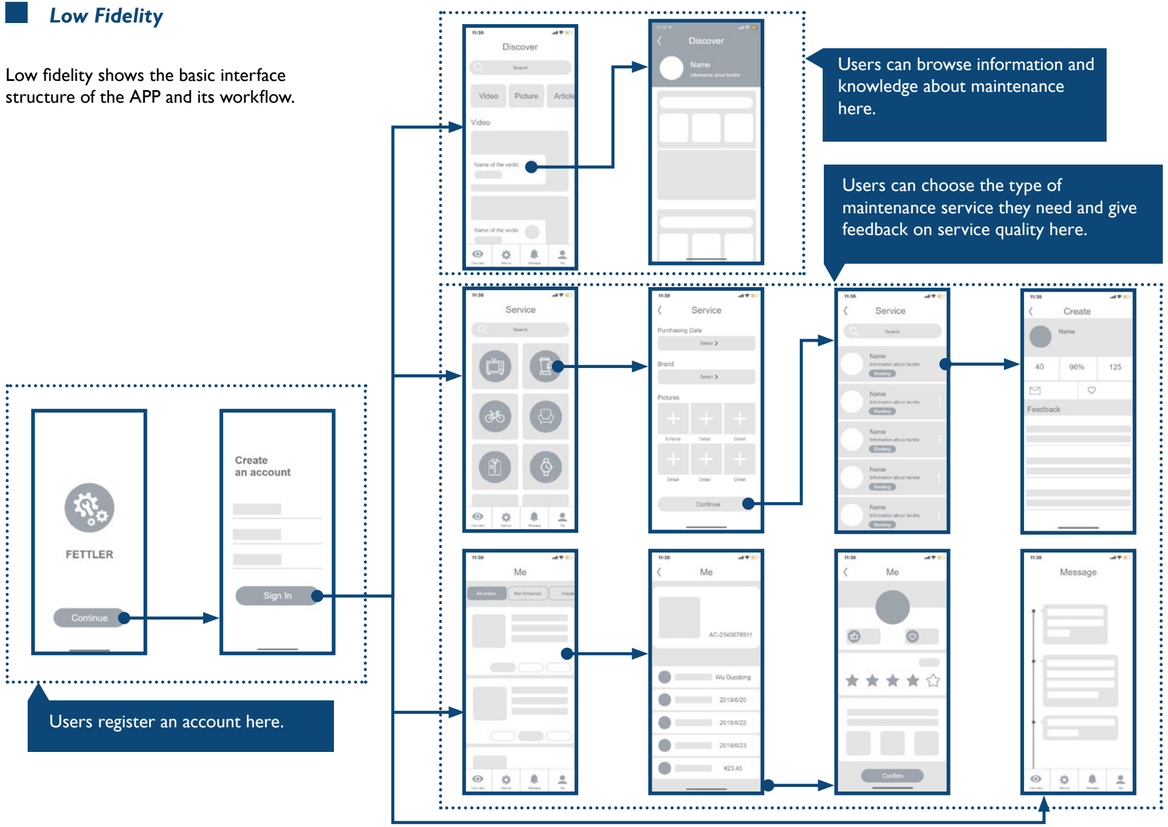
Information Frame

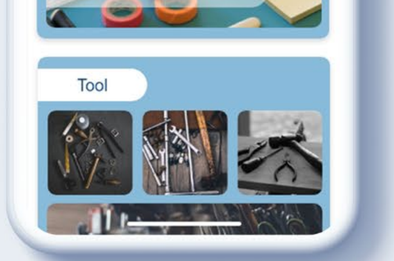
- **Login**
  - Login
    - username
    - password
  - Register
    - username
    - mailbox
    - password
- **Discovery**
  - Information
    - vedio
    - article
    - image
    - upload
  - Creator
    - follow
    - like
    - collect
    - message
- **Service**
  - Type
    - electric appliance
    - kitchenware
    - transportation
    - furniture
    - textile
    - clock
  - Details
    - purchasing date
    - brand
    - pictures
  - Fettler
    - name
    - picture
    - skill
    - booking
- **Message**
  - Process
    - time
    - status
  - Reply
    - question
    - confirm
- **Me**
  - Orders
    - payment
    - receipt
    - comment
  - Details
    - fettler
    - time
    - amount
    - status
  - Evaluation
    - rank
    - comment
    - picture

Based on the assumption of the whole operation process proposed in the system map, I further analyzed the maintenance needs of users and set up corresponding service procedures.

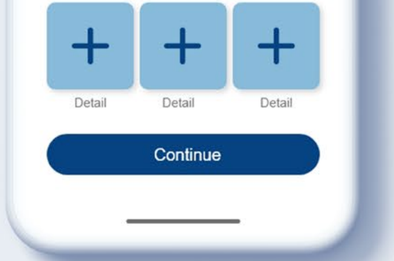
Low Fidelity

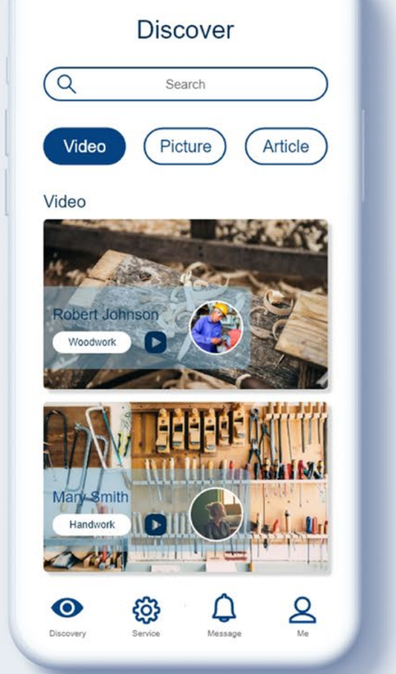
Low fidelity shows the basic interface structure of the APP and its workflow.

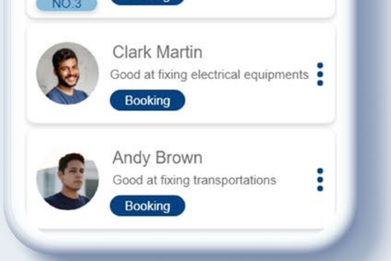


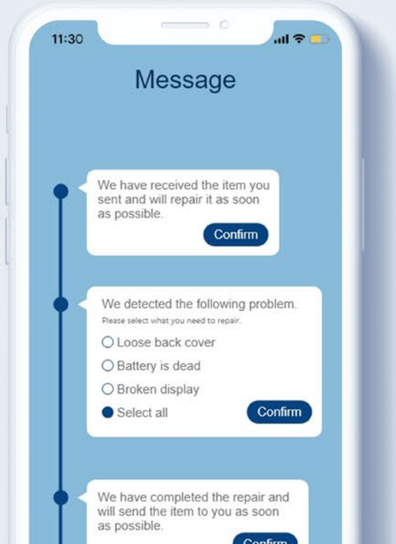

Tool

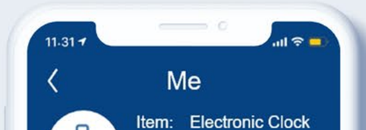

FETTLER
Continue

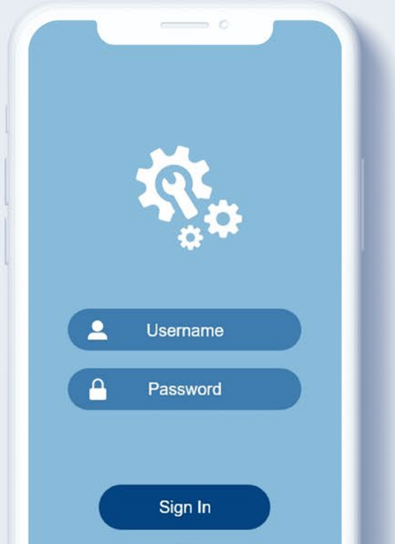

Detail
Detail
Detail
Continue

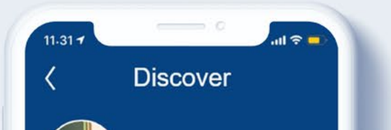

Discover
Search
Video
Picture
Article
Video
Robert Johnson
Woodwork
Mary Smith
Handwork
Discovery
Service
Message
Me

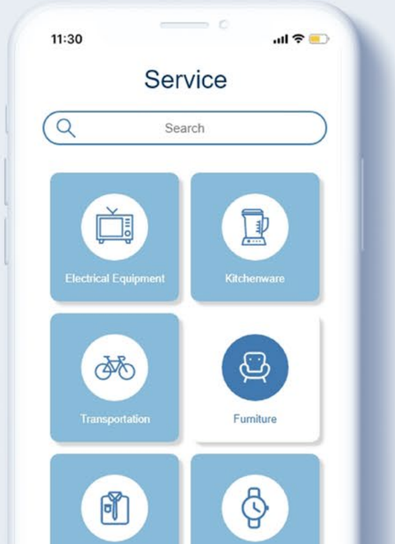

Clark Martin
Good at fixing electrical equipments
Booking
Andy Brown
Good at fixing transportations
Booking


11:30
Message
We have received the item you sent and will repair it as soon as possible.
Confirm
We detected the following problem.
Please select what you need to repair.
Loose back cover
Battery is dead
Broken display
Select all
Confirm
We have completed the repair and will send the item to you as soon as possible.

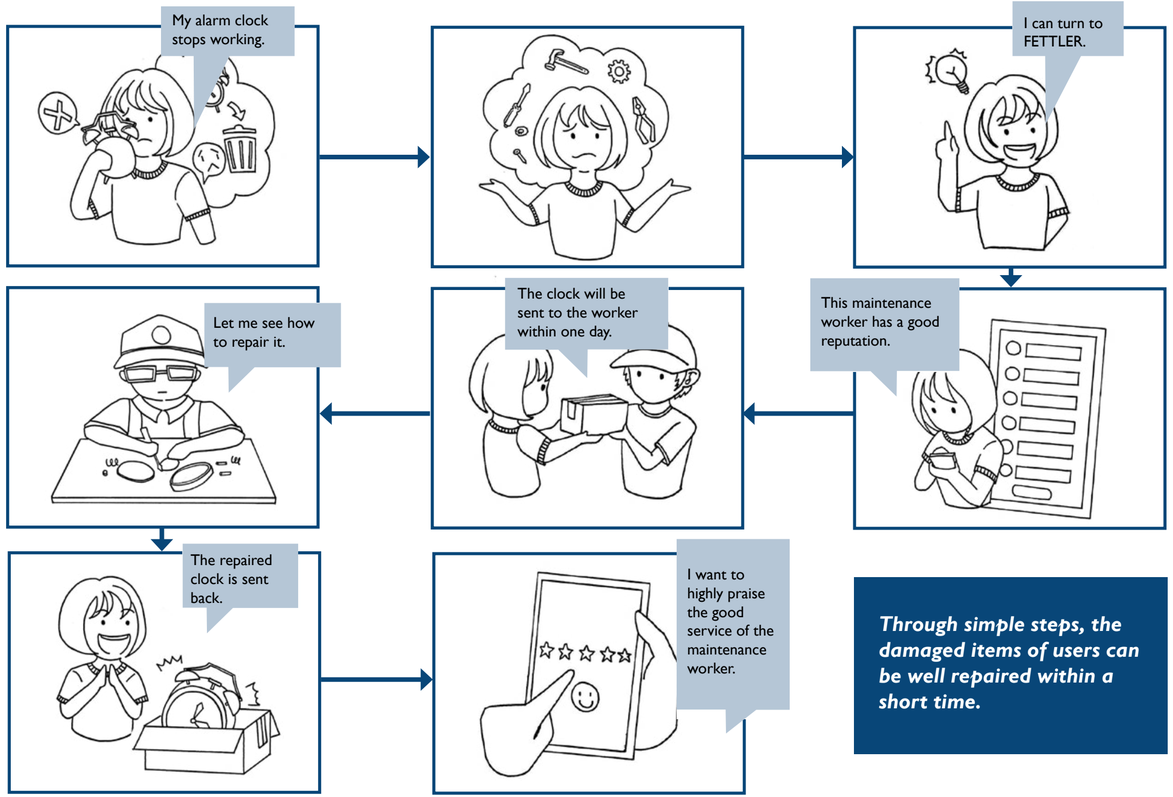

11:31
Me
Item: Electronic Clock


Username
Password
Sign In


11:31
Discover


11:30
Service
Search
Electrical Equipment
Kitchenware
Transportation
Furniture

Storyboard



Through simple steps, the damaged items of users can be well repaired within a short time.

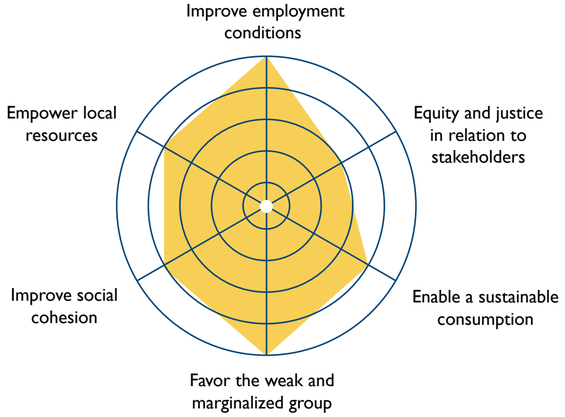
Radar Chart

This sustainable design contains three important elements, namely available idle items, an efficient supply and demand platform as well as the active participation of resource suppliers and demanders.

Criteria of system design for social equity and cohesion

The sound platform and a great demand for maintenance service provide employment opportunities for workers without permanent jobs. Convenient and fast service can increase the happiness level of residents. Meanwhile, the platform can also bring value to other stakeholders through advertising.

Criteria of system design for social equity and cohesion



Criteria of system design for eco-efficiency