

# Project 2



Service Design to enable peer  
to peer sharing of owned goods  
and services

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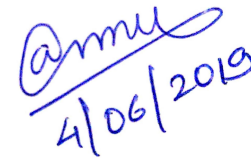
IDC School of Design,

Indian Institute of Technology, Bombay



# Declaration

I declare that this written document represents my ideas in my own words and where others' ideas or words have been included. I have adequately cited and referenced the original sources. I also declare that I have adhered to all the principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission.



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# Approval Sheet

The Interaction Design Project 2 titled “Service design to enable peer to peer sharing of owned goods and services” by Annu (Roll Number 176330009), is approved, in partial fulfilment of the ‘Master in Design’ Degree in Interaction Design at the Industrial Design Centre, Indian Institute of Technology Bombay.


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Most importantly, I would like to thank my classmates for their help, support and encouragement.

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# Abstract

The report presents the analysis and design of a collaborative system which implements peer to peer economy based solution for people to share the assets which they require only for a few times of use.

With increase in migration of millenials away from their homes for higher studies or new jobs, new individual requirements of household items pop up and are usually fulfilled by making new expenditures. These expenditures extend the product dominant market which essentially is about manufacturing with the need. Increase in manufacturing increases the competition and hence the demand for better products and create more and more waste.

With the boom in shared economy based applications and its acceptance amongst people provides a positive outlook towards extending it to small scale assets as well.

In the system I propose, people when they need items for only a few times of usage could share it with someone in their close knit circle.

This will also help is utilization of resources which are lying under-utilized with one user and increase the work time of the particular asset. Basically the solution is to connect individuals with the resources to others who want them. It is inspired from the good old method to lend and borrow , which can now be implemented along with financial transaction of goods and services.

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## 2. Introduction

Every year we end up buying piles of stuff which we use only once a lifetime. When you buy a product its cost of upgrade and repair has to be borne by you and also because you are owning a product there is storage issue with every item you add on. However, the desire to own more and more is creating a issue bigger than just the individual expenditure. This is being enhanced by the prevailing endowment effect which is the hypothesis that people ascribe more values to things merely because they own them.[1] If it is your property, the value goes higher automatically.

Manufacturing has negative environmental impacts, it leads to increased extractions of resources and increased waste production. Which seems to be the problem of the hour. With the waste generated we aren't just polluting the land but putting the lives of sea creatures at risk.

Once the object is produced and sold to the customer, the liability lies with the consumer for repairs and modifications, However, we do not necessarily need the object in the question but we certainly need the service that the object can provide. For example, we need to take some pictures for a project and not the camera. Camera being the equipment to achieve the functionality, people assume buying the equipment is the only way to complete the service.

This reduces manufacturing jobs but increases service and repair jobs. This product-dominant logic, or the prevailing assumption that owning more is always better, is certainly not the only way to live in this world.

# 3. Secondary Research

Aldo de Jong from Claro Partners[2] in his Ted Talk depicts how joy of ownership on acquisition turns into burden of ownership after usage. The question remains why do people still end up buying such things to be lying in one corner of the house. It is all answered by the statement “Just in case ..”. The unassertiveness of the need is somewhat causing the problem and that is the reason why on-demand economy is on rise.

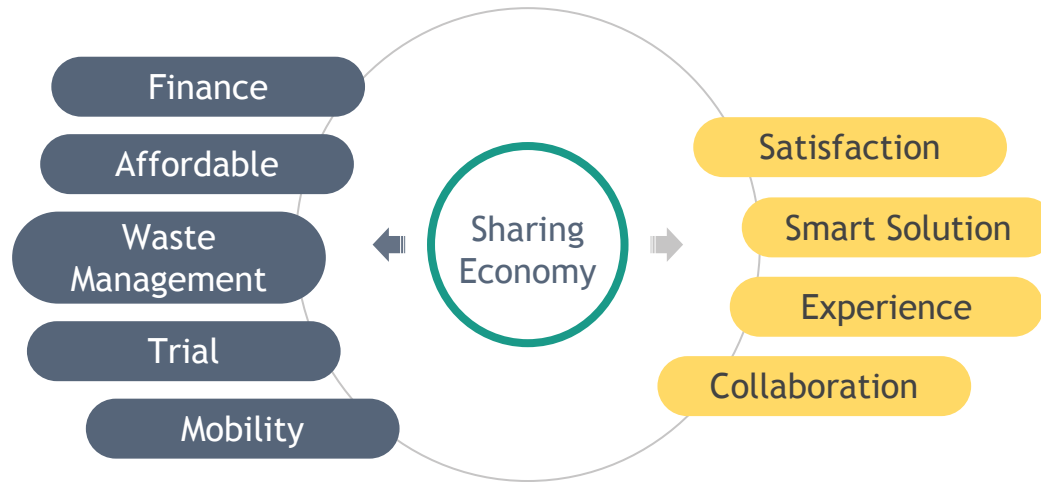
This reduces manufacturing jobs but increases service and repair jobs. This product-dominant logic, or the prevailing assumption that owning more is always better, is certainly not the only way to live in this world.

## 3.1 SHARING ECONOMY

Sharing economy is a new kind of economy that allows users to share human or physical resources that they are able to supply with people who are interested in that resource. The sharing economy includes more intimate, person-to-person interactions, like Airbnb, tool-share programs, crowdfunding and open-source communities. In most sharing economy initiatives, peer-to-peer interactions that generate value for everyone involved take center stage.

Some examples of sharing economy includes - Uber, Airbnb, Zoomcar

## Sharing Economy will help in -



- Decreasing environmental effects
- Increased sense of trust
- Reducing the sense of ownership
- Incentive opportunity
- Frugal is the new way of lifestyle
- Contributing to the environment

## Sharing Economy in India

How does it work in India ?



Sharing economy has certain benefits such as extra incomes from the users of such services, Better resource allocation and utilization and New economic activities for cities and municipalities. But it does have certain Negative externalities where the whole system becomes more about economic self interest rather than sharing which sometimes can be predatory and exploitative like in case of airbnb where businessmen have created a new marketplace in which the properties are listed with the purpose of business contradicting the initial idea of sharing the existing houses and experiences. Although the motivation is strong as it is more convincing to not having to own a product which can help save money or maybe make some money as well. [7]

#### Smartphones as part of sharing economy -

Ericsson consumer labs analytics platform conducted a study in october 2014 where they measured Interest levels in smartphone services as part of the sharing economy.[16]

In their research they found that more than half of smartphone owners are already open to renting other people's equipments which are underutilized, rooms or household appliances. While 46 percent users of the study could consider using a mobile app to book a dinner in someone else's home. Thus design for shared economy can be achieved through technology which enhances the trust amongst participants and hence on a pathway of becoming a new currency.

In order to enable and empower users to share resources with their neighbours, Instead of just becoming passive consumers, we need to extend our roles in our economy and society by being creators, collaborators, financiers and providers. Power is distributed amongst individuals and communities. Built on underlying values of collaboration, empowerment, openness and humanness. It is a convenient way to find what they need when they need it. Hence enabling real time sharing.

## 3.2 FINDINGS AND OPPORTUNITIES

1

The marketplace provides many such platforms which enable sharing but that is usually businessmen to consumers. A peer to peer communication is still not famous.

2

Trust is the underlying factor when it comes to sharing amongst peers . And that is the reason that it worked well in closed knit communities.

3

There are existing solutions abroad which facilitate the sharing between two parties involved. They seem far fetched a dream if they follow models like airbnb and uber which usually rely on making a profitable market.

4

This could be synonymous to the Tribal Culture of sharing which still exists as the system seems to work in communities utilizing every resources they own

5

From the study it comes out that what one really need is the hole not the drill. Hence one needs to do a service and for that he/she needs an asset. So sharing will enable them to own without sacrificing their lifestyles , or not cherishing their personal freedoms. Eventually losing the urge to own.

6

The user should be able to say that “I don’t want the stuff but the experiences it fulfills”. Because he/she now understands that Access better than ownership.

7

Of course not everything can be rented as per sharing economy model, the perfect example of this would be China's umbrella sharing startup which lost its 3 lakh umbrellas in 3 months due to lack of understanding in returning ways. Hence we need a list of items to be identified which can be shared.[18]

8

In peer to peer review reputation will become a corner point. While browsing in web we leave a trail. With every spammer we flag, with comments we share, we are signalling how we are collaborating whether we can or cannot be trusted. This could provide a perfect opportunity to work for the issues that may arise at sharing.

The secondary research provides a number of opportunities for which one could design for. There is an opportunity to make people less interested in owning products and accumulating wealth instead have them craving for experiences, renting, second hand possessions. Make people realise the benefits of Collaborative consumption and help them become the part in Creating a new type of commerce which could help in reinventing our spending habits. And thus helping in conserving the environment and the implications of it.



## 4. Primary Research

Here I decided to go into the field and ask people about their method of sharing amongst friends and acquaintances and understand the real world practices of stakeholders. This research was conducted within IIT Bombay campus, involving 10 students pursuing different courses and stayed in different hostels. There were 6 male and 4 female students with their age group lying between 20-30 yrs of age.

They were divided as per the course they pursued from bachelors to masters to phd. These interviews were then listed out in detail in an excel sheet and the items were classified in four categories namely what they say, do, think and feel so that the results can have maximum impact.

Here I decided to go into the field and ask people about their method of sharing amongst friends and acquaintances and understand the real world practices of stakeholders.

They were later on printed on A4 sheets and were mapped such that statements which could lead to similar findings could be clubbed together.

These interviews were mostly informal, however the care was taken that they are held in their room or their studios to understand the behaviour much more in detail and to help them contemplate the issue of over owning and the need for sharing if any to get their perspective on the same. I used Realtimeboard to create an affinity diagram to get a digital version of the affinity map created on a large sheet. The full map can be accessed through the drive link shared at the end for the various documents used in this report.

## 4.1 FINDINGS AND OPPORTUNITIES



1

People prefer sharing in close knit communities. However there is also a social burden and dilemma associated with sharing.

2

Heavy expenditure was made on certain items which now have gone bad due to technical issues or upgrading.

3

It is the responsibility of both the giver and the service user to be concerned about the proper handling or usage of products or service used.

4

People do not expect monetary incentives out of sharing mechanism instead they treat it as a way to connect and expand their social circle. Although an unspoken barter system is present. There are also some reservations about sharing second hand stuff or used stuff.

5

It is expected from a sharing platform to reduce the mental churning and social anxiety by making the process smooth and hassle free.

6

No entry point for any user to be part of this service.

7

Many things which people got in collaboration with their neighbours or colleagues were due to shared interest. Usually these things were pretty expensive for one person to buy alone.

8

Smaller things which are shared such as rickshaw fare or milk or groceries do not really add or subtract a significant amount of value for both the involved parties.

9

The mechanism, Behaviour and items shared is different amongst men and women. And so is the after feeling of the sharing.

10

Although there are platforms available to leverage sharing mechanism but since they aren't specifically for sharing, it becomes troublesome.

## What All people can share

---

### Things that you may need only once

- Backpack - rucksack
- Hair curler
- Straightener
- Dryer
- Hard disk - data transfer
- Tripod

### Things you want to try out before sharing

- Gum sole shoes
- Kindle
- Laptop
- Go-Pro
- Speakers

### Regular basis - Monthly sharing

- Iron
- Kettle
- Charger
- Makeup
- Cycle
- Organiser

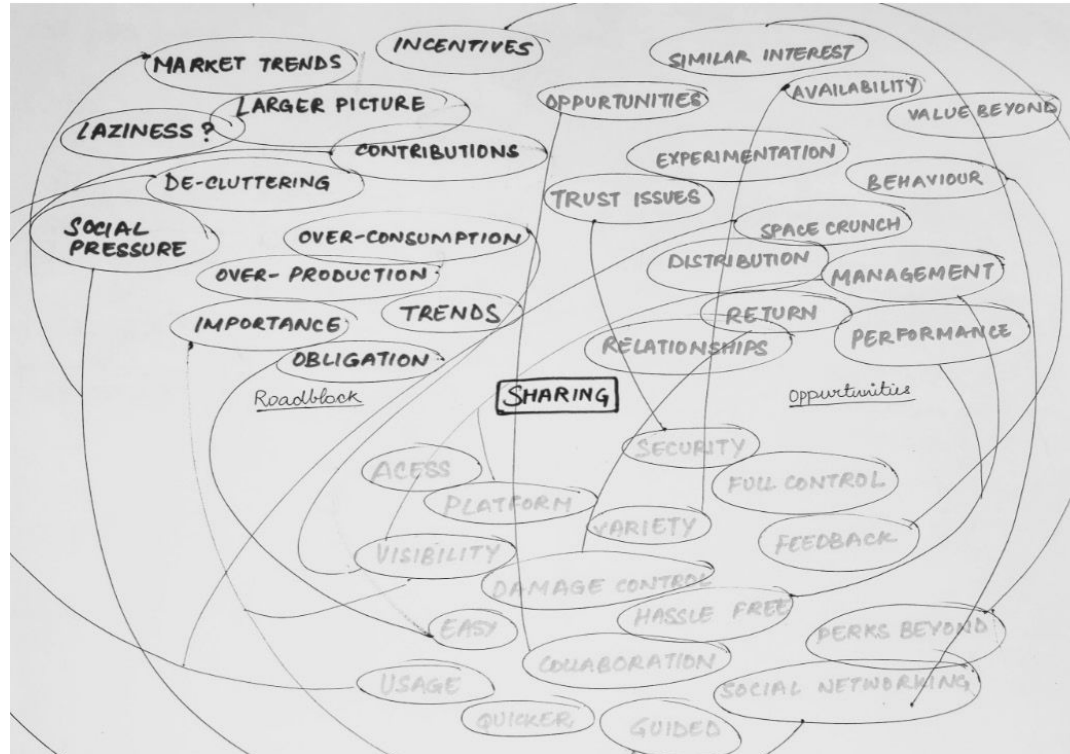
## Empathy Map

To get a deeper insight into the customer , here the maps are made on the basis of findings made after primary and secondary research



## Mind Map

Mind Map to identify the design opportunities and solutions for the roadblocks happening in the current system and the current behaviour



# Design Goal

Enabling sharing of idle products and services for a closed knit community such as colleges like IIT to conserve resources , cut down costs, eventually reducing Environmental impact.

## SCOPE

Targets Millennials, Specially college students where migration and affordability is an issue.

And they end up accumulating a lot of stuff which they do not need at all or more than once.



## 5. Design Brief

At this stage it is important to explore different designs of the system possible. One great way to look at it is through service design3 key principles (Strategy, Society and experience) are considered that defines a new approach to service design for networked business models, Hence helping in navigating through disruptive changes.

This study will target Millennials as they heavily participating in shared economy and are unaware about the benefits and issues associated with it. Mostly students who shift and end up buying things again. Limiting to college in order to help students who can't afford to buy. In Indian context where it is so important to maintain a good connection with neighbours and roommates, it would be a nicer scope to look at especially studying the current behavioral Trends.

Many universities abroad maintain an inventory based lending and borrowing where students with monetary challenges do not have to struggle buying things which they can borrow. In the study done with UC Berkeley and CMU , it was found that limiting renting and lending at one point becomes an important task in order to make both lender and the user responsible for their belonging or services.

When we think of incentives usually it is monetary, but here as we are focusing on the value you create with your contribution it is decided that a leaderboard will be published which helps the user understand the contribution he or she is making. For example, it could be a simple text such as “You have saved 10% of resources” - make user feel good”

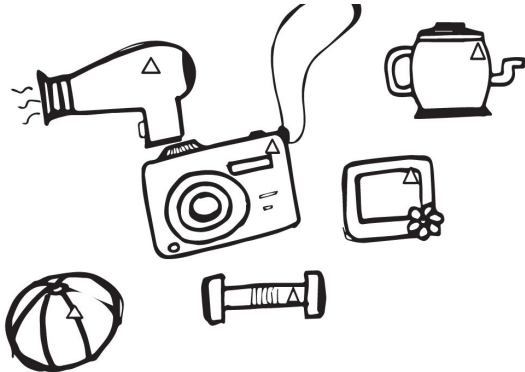
The aim of the design is to Increase in sustainability by Reducing Carbon footprint. There could be a measure either in terms of Responsible citizen quotient , R community Q

# Attention Seeker Toaster

## 01

Italian product designer Simone Rebaudengo has created a connected toaster that becomes unhappy when it goes unused, drawing attention to areas where e-waste can be reduced.

*"This idea is based on the whole concept of "Make your product smart" where some sort of futuristic chip will measure the usage of the product that one owns and emotes as per the usage. Like Brad the toaster, a happy product is likely to remain with you."*



Devices connected to each other creating a network within themselves. This network can be divided into :-

Local Network which can include people from your locality whom you may or may not know that well.

Peer Network is a network you create specifying the people joining the network or adding them through phone's contact

External Network this is a network that is beyond locality could be comprised of office friends et.

The seeker requests for an asset - If the Criteria is Matched then users gets a notification of acceptance - The seeker can pick up and drop the asset to his/her home - this whole time the item stays connected to network storing all the transactions within itself - If it is underutilized - then it pops up a request itself finding a new seeker.

# Inventory Based Sharing

## 02

We are used to multiple inventory based lending systems and have been using it in one way or the other. As a college student, we have libraries in order to issue books and re-issue if we need it for longer duration. Usually such a system will have multiple copies of an item so that multiple people can use it at the same time but also when they are done using, this could be used by another set of people to use. Thus getting the maximum out of a system.

Each device in the inventory will be identified using a QR code which then has to be scanned by a user to either share or return. This works on a model which is responsible for china's peer to peer sharing market. Seeker will search the nearest inventory Available using location tracking. And once he is near an inventory, he/she can scan the code.



### Pros

1. No need to own a product
2. Digital tracking of the things
3. Easy pick up and return option
4. Reliable system

### Cons

1. There are certain limitations to items that can be kept in inventory
2. Digital tracking would mean digitally storing identities of each and every item.
3. No social collaboration

The scanning will unlock the inventory for that particular asset in need and will be tracked using the seekers ID. The seeker will then have to return it to nearest such inventory point once it has been used and later can be issued by someone else in need.

# Initial Ideation

Here I considered a system where lot of players are involved , In this case the premise of IIT fits well also the fact that we established that such a network can seem to survive in a close knit community, on a larger scale it might tend to collapse on the biggest factor of trust issues. Although this will require a separate study to make such a comment.

With the aim on focusing on user journey, the design captures the end to end scenario of what goes on with the customer in terms if thinking, feeling and doing as well his response to what the system generates. To facilitate the design thinking ,

I made some initial sketches which briefly covers journey of the users in the system and later detail it out Here I considered a system where lot of players are involved , In this case the premise of IIT fits well also the fact that we established that such a network can seem to survive in a close knit community, on a larger scale it might tend to collapse on the biggest factor of trust issues. Although this will require a separate study to make such a comment.

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# Sketches

One will start with describing the requirements

Specify the number of days, budget, distance.

Share existing or after buying

Get Matched

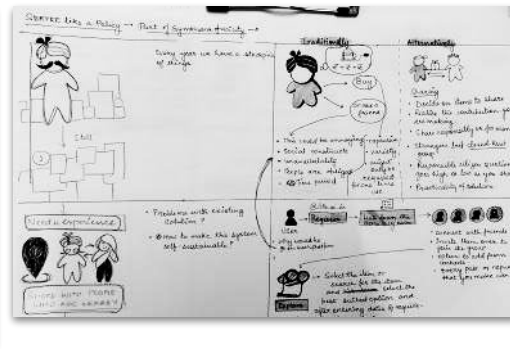
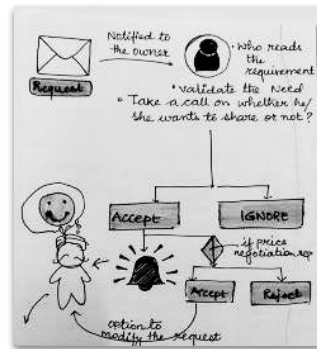
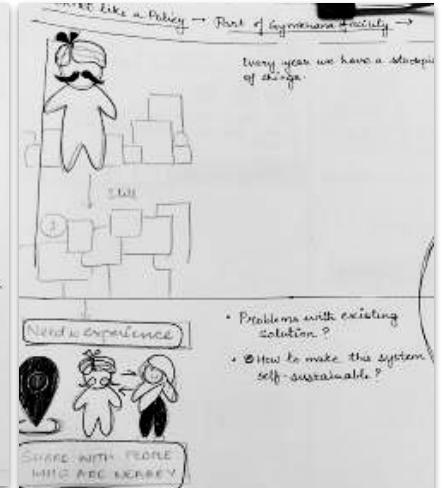
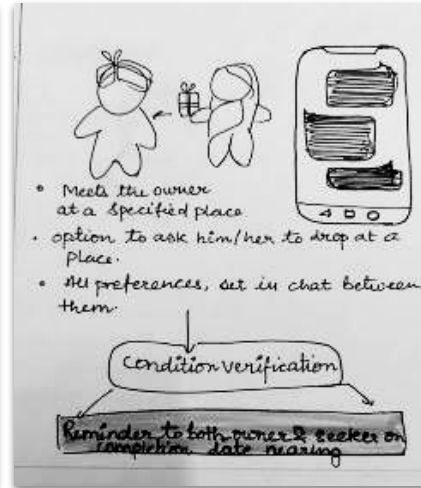
Connect and Collaborate

Share, make the appropriate payment

Create Value

The Happiness Pledge

Background check and damage recovery.



# 6. Service Design

Why service design ?

Using service design we can create experience through product services and eventually dealing with everything as a service only. The economy has boomed from agrarian to industrial to sharing to experience and service design provides the best toolkits to achieve the same.

It can escalate the product to stage experience through differential measures. And it cannot be denied that people actually pay for services and experiences you get from those services over products. Service design help us create value using the value equation which is explained below. [15]

Functional benefits + Emotional Benefits

---

Monetary Costs + Time Costs +Energy cost +Mental Tax

I have taken a concise decision yo increase and decrease the numerator and the denominator to achieve what customer might expect.

Service lets me design for

Granularity - how broadly one needs to define a function.

Extensibility - level of effort needed to extend the system.

Linkage - Maintaining hierarchy and relationships

Evolvability - Scalability of the system.

Service design help us breakdown the impact of the service and the effect it makes on people in this case can be understood from the example such as

- It is a platform based service which will be point of communication between two people who want to share an asset between them.
- Designing for the society instead for an individual
- Size of the item to be shared
- People even when they rent they like to customize their belongings
- No sustainable model available for recycling or reusing electronic items.

- How can you trust a vendor who isn't completely traceable, online verification - Design for trust.
- Making it appealing to everyone.
- Find economic and social balance.
- Re-design the culture.
- Not just a short term effect but a long lasting habit
- When we talk about value creation, it need not mean a tangible one in fact it is more about an Intangible Value creation. For example the feeling of satisfaction after helping someone as a good deed. The amount of contributions you make or even the smallest deed forwarding the request.

Value creation and value capturing is the essence of this service. Here products and assets which are obsolete to someone but Immediate latent value to someone else. Alternatives like swap trading. But this would be solving coincidental wants. Interest in collaborative behaviour and trust mechanics underlying.

Sure it has been existing in India, however sharing with strangers remains a problem still. Hence technology becomes the medium to enable trust between strangers. One such example is Jumio.com. Extending the already existing network. Base - Crowd power , crowdsourcing .Internet is creating a peer to peer revolution .We are born and bred to share and cooperate , we have been doing this for thousand of years. We now live in a connected age where we can pay anyone anytime.

#### Revenue model of Sharing economy -

Current models include - service/commission fee , subscription fee, membership fee, licensing, tiered subscription plans, freemium.

From Maharashtra govt. Data of household item possessions, following are identified items which every household needs.[13]

Mattress, Pressure cooker, chair, bed, table, electric fan, radio or transistor, television, sewing machine, mobile telephone, landline telephone, internet, computer refrigerator, Air conditioner, cooler, washing machine, clock, thresher, water pump and tractor. As this service is focusing specifically on students studying here in IIT, things like thresher, water pump and tractor will be excluded from the study.

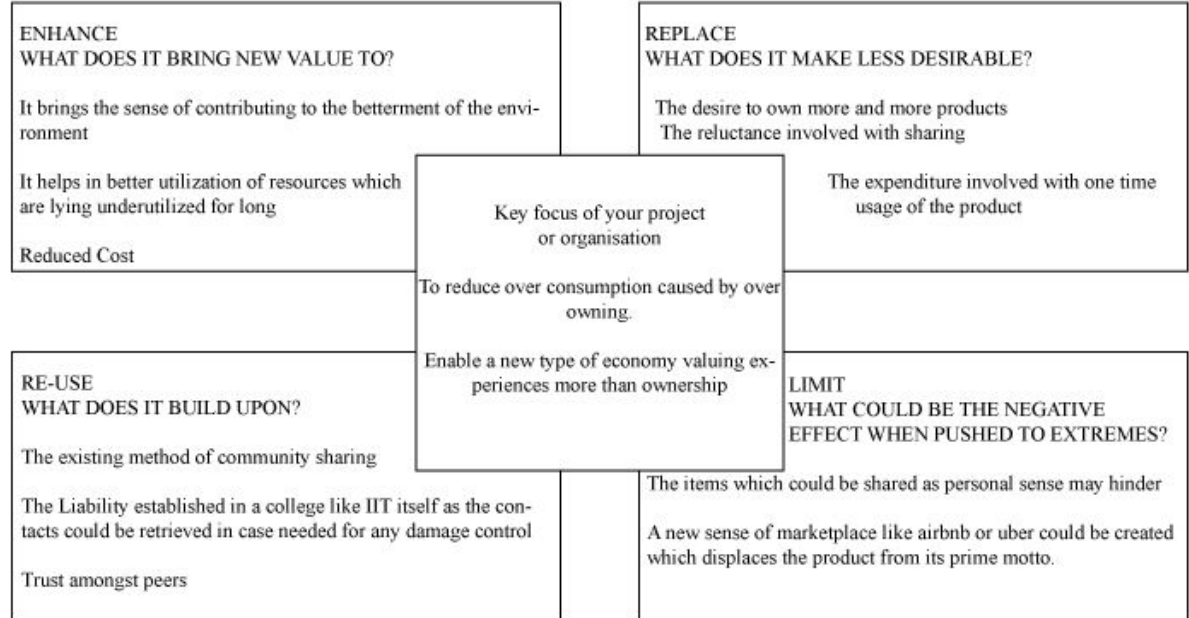
Apart from things which are necessary for people the focus would be on items which are not needed for daily sustainable life.

# Evidence Planning

To Define the outcomes of my project I have used Evidence planning toolkit from Nesta. Evidence planning helps you to communicate and refine the goals and build an evidence-based case for your planned impact.

This worksheet provides prompts to help consider how the work will affect other people and organisations. It also helps to highlight any potential issues early on. [14]

## EVIDENCE PLANNING



## PROBLEM DEFINITION

WHAT IS THE KEY ISSUE YOU ARE TRYING TO ADDRESS AND WHY IS IT IMPORTANT?	WHO IS IT A PROBLEM FOR?	WHAT SOCIAL/CULTURAL FACTORS SHAPE THIS PROBLEM?	WHAT EVIDENCE DO YOU HAVE THAT THIS IS WORTH THE INVESTMENT?	CAN YOU THINK OF THIS PROBLEM IN A DIFFERENT WAY? CAN YOU REFRAME IT?
<p>The desire to own more and more is creating a issue bigger than just the individual expenditure</p> <p>In a lifetime of a product, it is used only for the 5 % and the rest of the time it lies underutilized. It is important to put use and utilize the product to its lifecycle.</p>	<p>Problem for the environment because the extraction of resource is causing depletion and resource extinction issues.</p> <p>It is problem for people <b>who cannot afford expensive stuff but do want to experience services by those stuff.</b></p>	<p>The nuclearization of families and the migration of people towards cities giving rise to more nuclear needs</p> <p>The sense of ownership and pride associated with the things that you own. Creating more and more market for multiple products and more varieties</p>	<p>The current boom in sharing economy which has shaped many sharing platforms to give rise to a new method of contributing to the environment.</p>	<p>The problem of buying more and more even for one time need as no such platform available which could help the users share <b>for that specific need in time.</b></p>

# Service Levels

## TRANSFORMATIONAL

Insights to show their contributions on larger scale.

## AUGMENTED

Option to list down the items one would like to share  
Track the time period for which it has been used

## EXPECTED

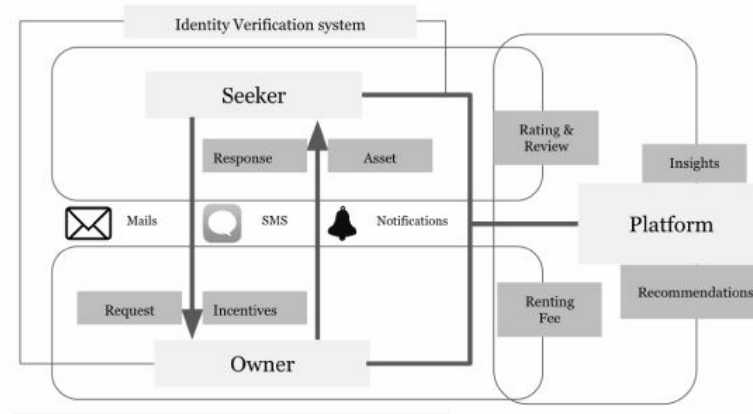
Tracking down the assets shared  
A fair share while sharing

## GENERIC

Help in posting the requirement  
Connect with the people

## CORE

Enable sharing amongst peers possible



## WHY SHOULD PEOPLE USE IT ? HOW ARE THEY BENEFITED BY THIS ?

At present people are just piling up things one over the other even if it was purchased for a one time need. There is a social constraint in sharing things as people might think less of others comes in mind.

However, with the boom in sharing economy and the benefits seen to end customers, it becomes acceptable to implement it at such a small level. Using this solution people will be able to Declutter their spaces , which is a huge problem in metropolitan cities of India, To create a new kind of sustainable economy. Save money on those one time use.

Explore and work around with a wide range of products available which are otherwise expensive but sharing makes the access easy.

Increase social networking , not just on a glass screen but in person too. And thus creating value for both the owner and the seeker.

## VALUE ADDITION

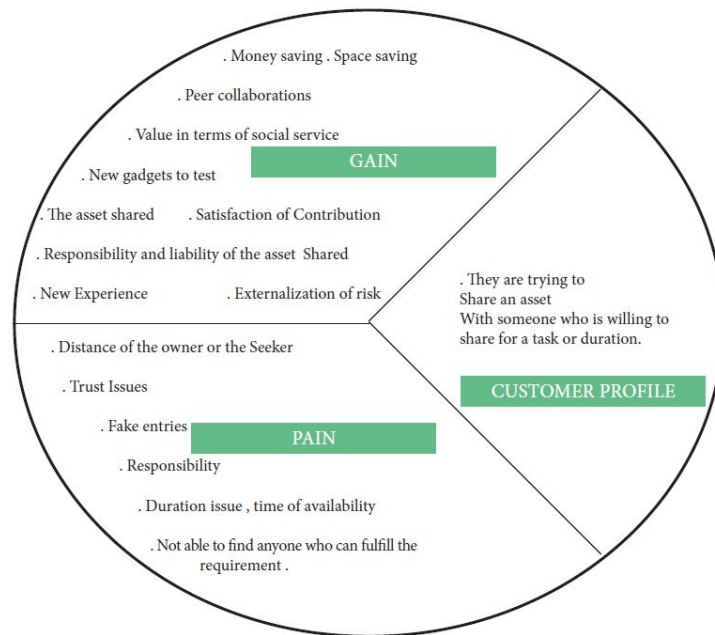
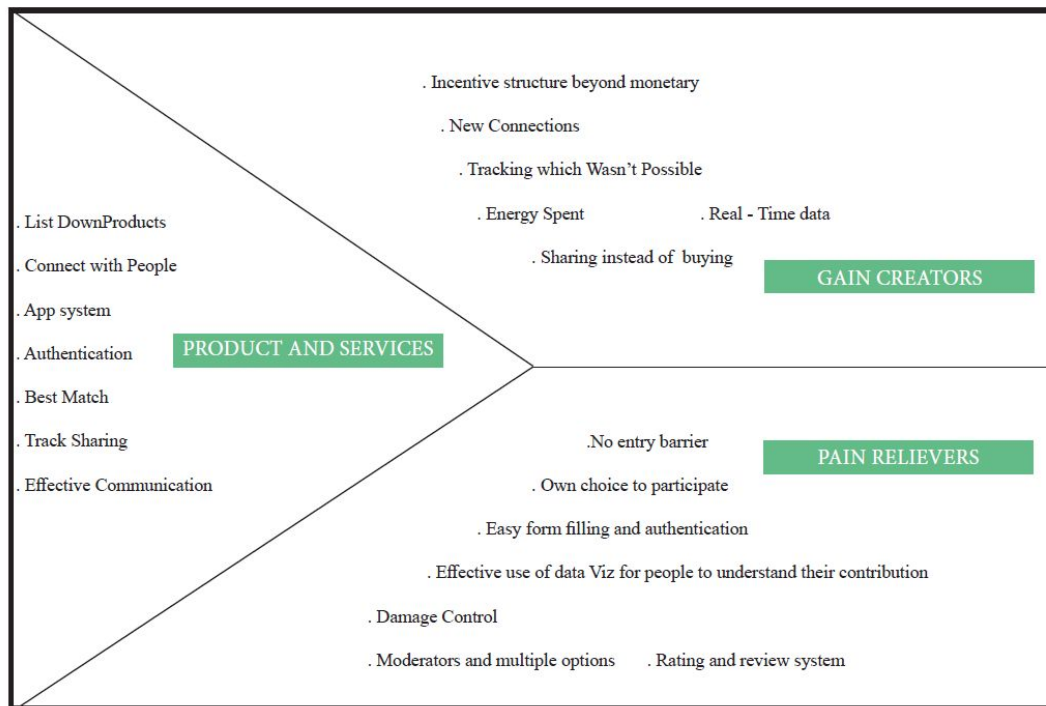
The way to measure addition of value is using a value proposition canvas which is a simple way to understand what does your customers needs, and design products and services they will want. It works in conjunction with the Business Model Canvas and other strategic management and execution tools and processes.[15]

I am using it here with the studies obtained from evidence planning and redefining the problem using problem statement mapping.

To improve the customer experience, and not to fail on delivering expectations ,and to visualize, design and create value for customer we use Strategyzer Value Proposition canvas. The details of steps are shown in the diagram on the right . The identified points are then considered in the final service solution and also in creating appropriate screens for users to interact.

# Value Proposition Canvas

How are we benefited by this ? How are we creating value ? [6]



# Customer Journey Map

For Seeker

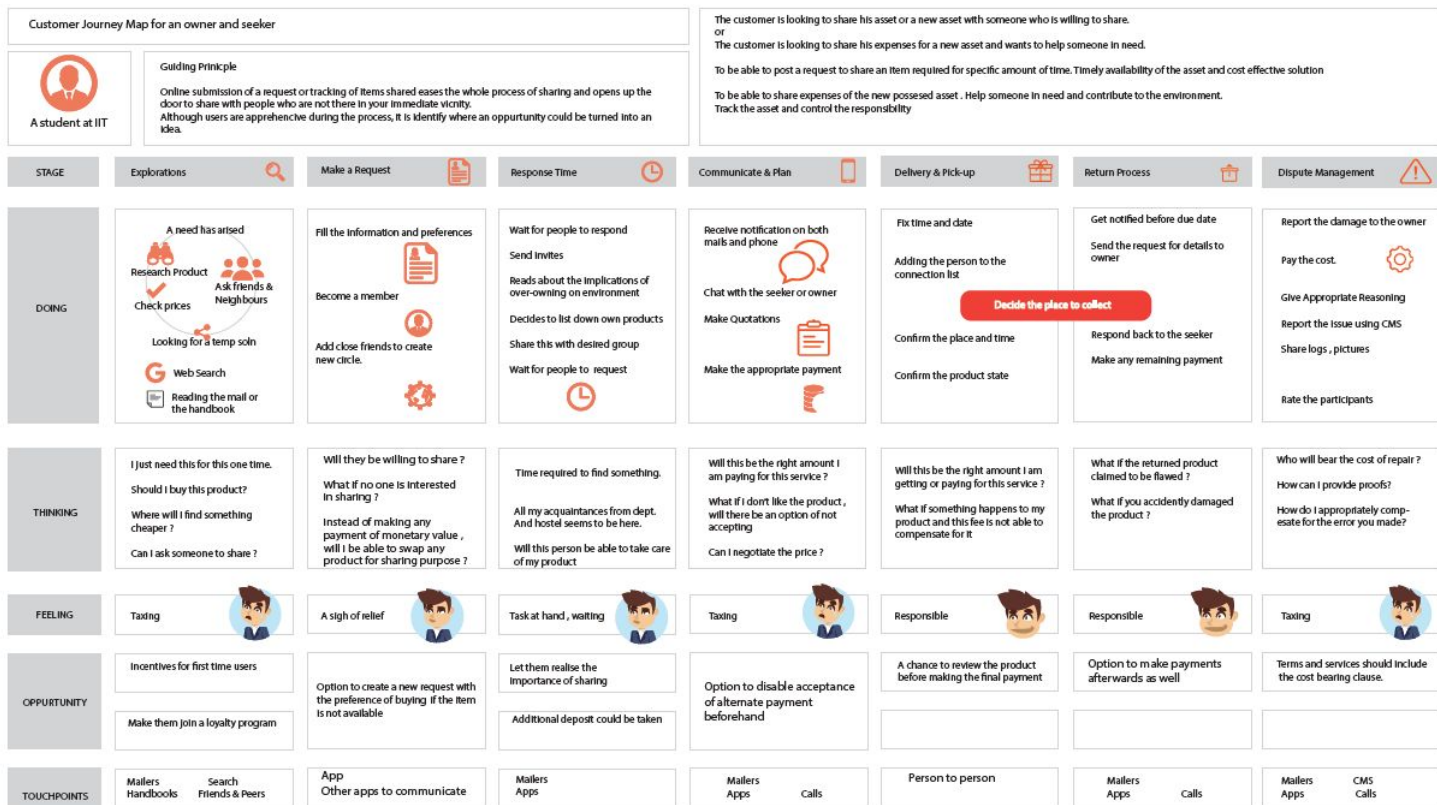
	Research & Planning	Product Discovery	Request	Delivery & Payments	Return	Damage Control
Actions (what will the customer be doing)	<ol style="list-style-type: none"> <li>1. Looking for places to share</li> <li>2. A need has arisen</li> <li>3. Looking for a temporary solution</li> <li>4. Has recently shifted</li> </ol>	<ol style="list-style-type: none"> <li>1. Information in the handbook</li> <li>2. Friends Recomm and invites.</li> <li>3. Mailers</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill the information and preferences</li> <li>2. Become a member</li> <li>3. Add close friends to create new circle.</li> </ol>	<ol style="list-style-type: none"> <li>1. Receive notification on both mails and phone</li> <li>2. Make the appropriate payment</li> </ol>	<ol style="list-style-type: none"> <li>1. Fix time and date</li> <li>2. Adding the person to the connection list</li> <li>3. Decide the place to collect the asset.</li> </ol>	<ol style="list-style-type: none"> <li>1. Report the damage to the owner</li> <li>2. Pay the cost.</li> <li>3. Appropriate Reasoning</li> </ol>
Thinking & Feeling	<p><b>Oo.</b> I might have to buy a lot of stuff for the lifestyle</p> <p><b>Oo.</b> Should I borrow it from my friends, will they give it to me?</p> <p><b>Oo.</b> This seems expensive, wish I could share this with someone.</p>	<p><b>Oo.</b> Will this platform help me find what i am looking for ?</p> <p><b>Oo.</b> Time required to find something.</p> <p><b>Oo.</b> All my acquaintances from dept. And hostel seems to be here.</p>	<p><b>Oo.</b> What if no one is interested in sharing ?</p> <p><b>Oo.</b> Instead of making any payment of monetary value , will I be able to swap any product for sharing purpose ?</p>	<p><b>Oo.</b> Will this be the right amount I am paying for this service ?</p> <p><b>Oo.</b> What if i don't like the product , will there be an option of not accepting</p>	<p><b>Oo.</b> What if the returned product claimed to be flawed ?</p>	<p><b>Oo.</b> Who will bear the cost of damage ?</p>
Experience	Taxing	A sigh of relief	Task at hand , waiting	Taxing	Responsibility	Responsibility
Opportunities	<p>Incentives for first time users</p> <p>Make them join a loyalty program</p>		<p>Option to create a new request with the preference of buying if the item is not available</p>	<p>A chance to review the product before making the final payment</p>		<p>Terms and services should include the cost bearing clause.</p>

# Customer Journey Map

For product owner

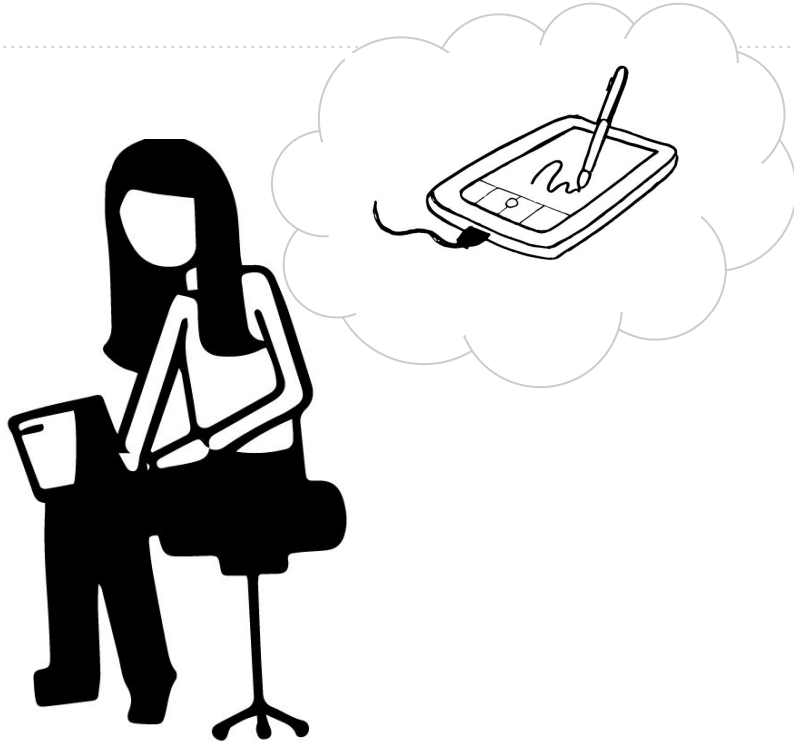
	Product listing	Explorations	Response	Damage Control
Actions (what will the customer be doing)	1. Has come across the implications of manufacturing on the environment 2. Wants to contribute by sharing	1. Information in the handbook 2. Friends Recomm and invites. 3. Find suitable people with ratings	1. Receive notification on both mails and phone 2. Make quotations 3. Receive the payment	1. Fix time and date 2. Adding the person to the connection list 3. Decide the place to collect the asset.
Thinking & Feeling	<b>Oo.</b> I have accumulating a lot of stuff but I don't use them at all <b>Oo.</b> Is there anyone who needs it more than me ? <b>Oo.</b> But how can I just give away my stuff like that?	<b>Oo.</b> Will this person take care of my product <b>Oo.</b> Is there any monetary benefit <b>Oo.</b> All my acquaintances from dept. And hostel seems to be here.	<b>Oo.</b> Will this be the right amount I am getting for this service ? <b>Oo.</b> What if something happens to my product and this fee is not able to compensate for it	<b>Oo.</b> What if the returned product claimed to be flawed ?
Experience	Contemplating mode	Questioning and exploring	Taxing  Additional deposit could be taken	Responsibility
Opportunities	Incentives for first time users Make them aware about their contributions	Explain Importance of sharing		

# Customer Journey Map For both participants



## Scenario One

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Kosha is a second year masters student at IDC school of design. She is a very organised person who is very wise with her spending as she learns in her classes as well. Kosha has recently shifted to this new hostel. She is getting a single room after sharing a room with another batchmate for a year. She bought a lot of new things to take care of individual needs. Being a very counting person, she realised that it is not worth buying everything as she might not need it more than once and she could always opt for eventually buying if the need persists.

For her upcoming workshop it was compulsory to carry a wacom tablet to draw some quick illustrations, she never felt the need of owning one as she used to draw hand illustrations and later transfer them on illustrator to get digital versions of her drawing. This compulsion sent her in dilemma as buying would mean using it only for the workshop. She decided to post this request to her group in the sharing app. She realised that no one had put up the option of sharing a wacom, so she decided to create a brand new request after registering herself on the platform. A few hours later of posting her request she got a notification from a junior of hers who was willing to share his wacom at the price of INR 50 per day.

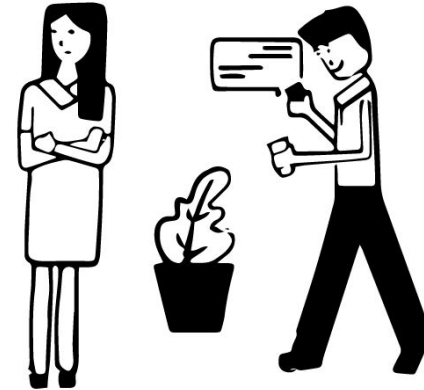
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She was delighted to find a solution and decided to book the wacom , however she found the price of INR 50 a bit too much , she decided to negotiate with the junior and gave him an option of 30 rs per day plus the digital copy of his sketch from the workshop. The junior accepted the offer as he was excited to get himself sketched.

He agreed to the offer and Kosha received a notification to make the payment, after making the payment , the junior filled in pickup location and time for the wacom. However, the time mentioned clashed with Kosha's classes, she decided to chat on this subject matter and invited him for the chat on the app, where they discussed a suitable time and agreed to meet at the decided location. Pictures of the product was taken as she was little cautious of using someone else's property.

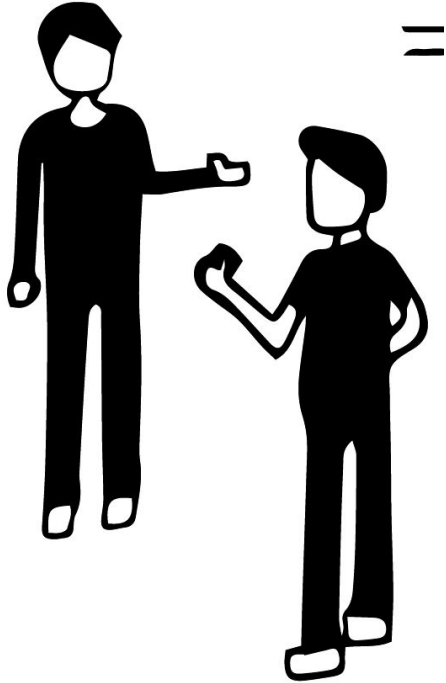
Kosha started using wacom, after two days when she was packing up from the workshop, she got a reminder from the app that her due date is tomorrow with an option of fixing time and location for the drop off.(as it is the responsibility of the owner to initiate the drop off process) She sends the notification to the owner and he responds back with the details for the drop-off.

Kosha meets up with the person and hands over the tablet to the owner and asks him to check the condition. Once the owner verified the product he is to confirm it on the app and an option to rate the whole experience. The same rating is asked from Kosha as well. She happily gives him 5 star and share the sketch with him on his official mail ID



## Scenario Two

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Ajay is a 18 year old student who has recently joined IIT and has been allocated a double sharing room with his classmate Karan. They both are very excited to start a new phase to learn together and make their room nothing less than a second home. They list down all the things they will be needing it for their time in hostel. However, they suddenly realise that they will be doubling up the items in their room. Already the space felt less for two people to fit in.

Ajay got reminded of the sharing service which was discussed in their orientation and how IITs are playing active role in reducing the over consumption. He then checked his welcome mail where all the links are usually given and downloaded the app which helped IITians share objects in favour of money or goods and services to fellow IITians.

He found out that there was lot of stuff already available for people to share. He found out that he could even share a gopro with his senior which has been his dream ever since its launch.

## Scenario Two

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Containing his excitement to try out new things he focused on the notification that blinked on the home screen of the app which congratulated him for his new start and giving him an option to share new items with roommate or friends. He quickly registered himself with the details and sent an invite to share to Karan for a list of item.

Karan received a mailer asking him to join the app and share the items. And he agrees to all the options by clicking on I agree button at the end of each item.

Once they agreed their items started appearing in the section of currently sharing. They continued this system till the room allocation was about to begin single. Ajay decided to buy off the shared products, Karan did not mind as he initiated the deal and had gone out to purchase as well. However, curtain remained the point of conflict so they decided to put that as a tag conflict item in the tagging section of each item.

Which was resolved either with mutual understanding or by putting up for sharing with other occupants of the room.



## Scenario Three

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Nayan is a pg student at IIT Bombay and has been staying in campus for past four years. He feels that over the year he has accumulated quite a lot of amount of items which he hasn't used since ages. He feels that these items just occupy the space in his room and serve no useful purpose than accessories lying around.

Especially the skateboard which had been lying around with dust eating it away, he hated to see his skateboard serving no useful purpose. He decided to put this on the sharing app. He added the item using the add new screen and shared it with the whole campus. He did not want to restrict it to his group as the obligation of sharing in less money might pop up.

After few time of waiting, He found a user who was willing to share with him. Although this person seemed to have no money hence he opted for alternate payment methods in which he mentioned his skills of painting and offered to paint his skateboard with an artwork of Nayan's choice.

Nayan has always been a fan of artwork and personalized items. He realised this would be a great deal and accepted the proposal.

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They both decided to meet and exchanged the skateboard which was returned with a beautiful artwork to Nayan.

On one such sharing, Nayan missed his skateboard which he had given for sharing. He was tired of sitting on his computer for long and wanted to step out and have fun.

However the due dates of the return were two days far. He opted for a solution, He found out the option of join sharing where he could borrow it for little period of time as per the decision of the seeker who got it in the first place.

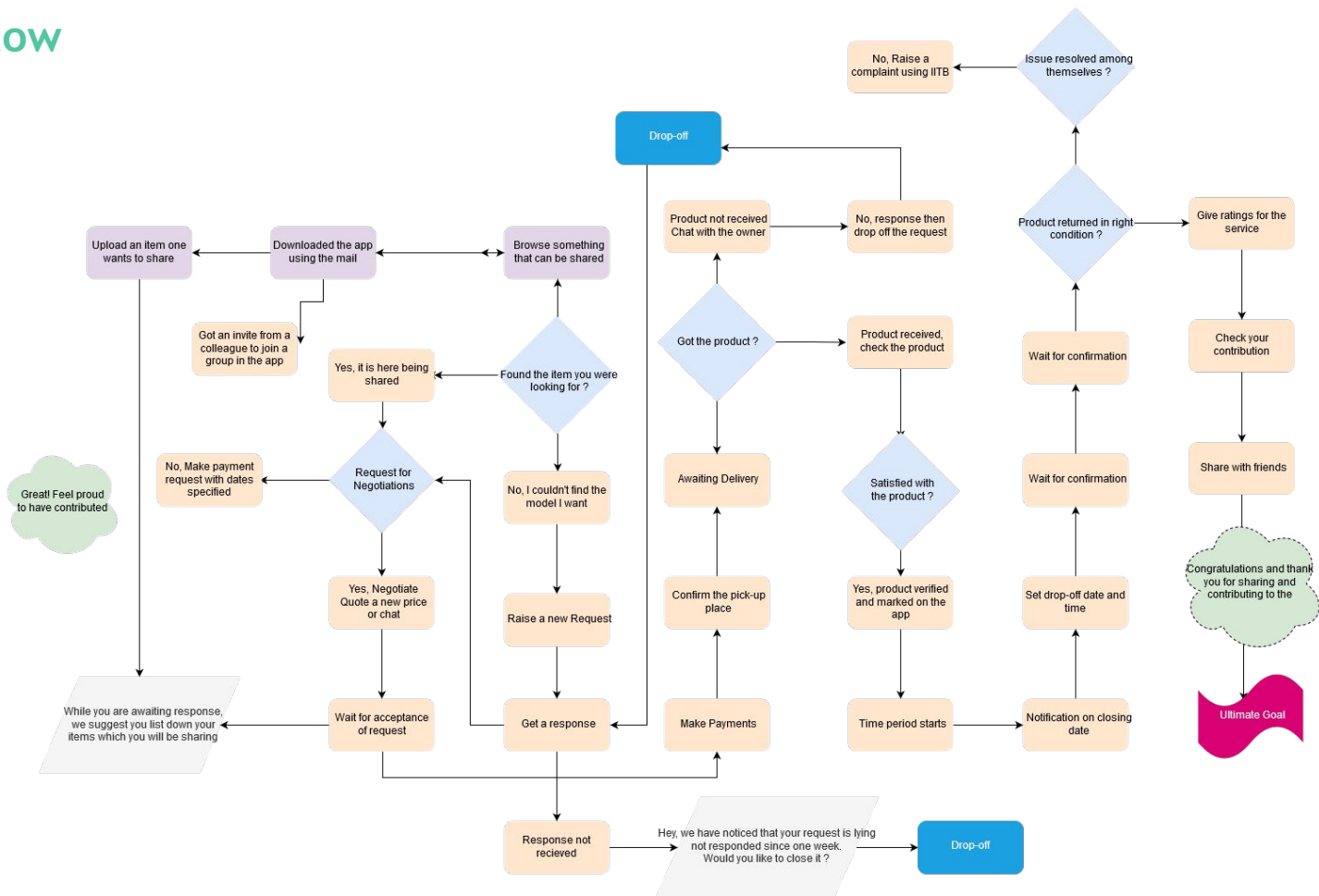
He got an interesting idea of teaching him the skateboard while he owned it. Thus by utilising one's social skill.

Other scenarios such needs to be consider as well

- If someone wants a shared thing back before the actual deadline
- Swapping items instead of monetary incentives
- Deviations from a happy path

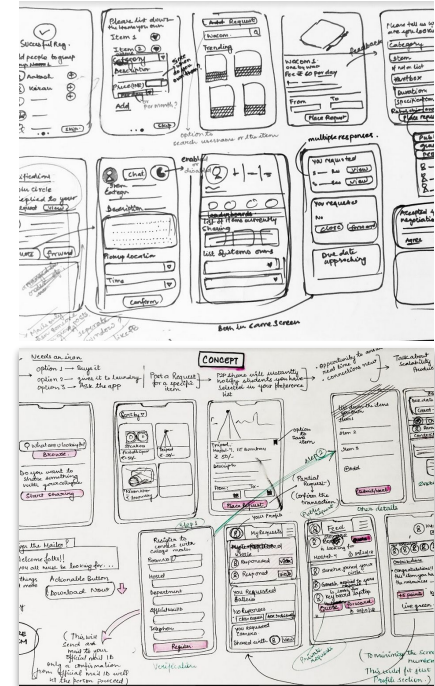


# Concept Flow

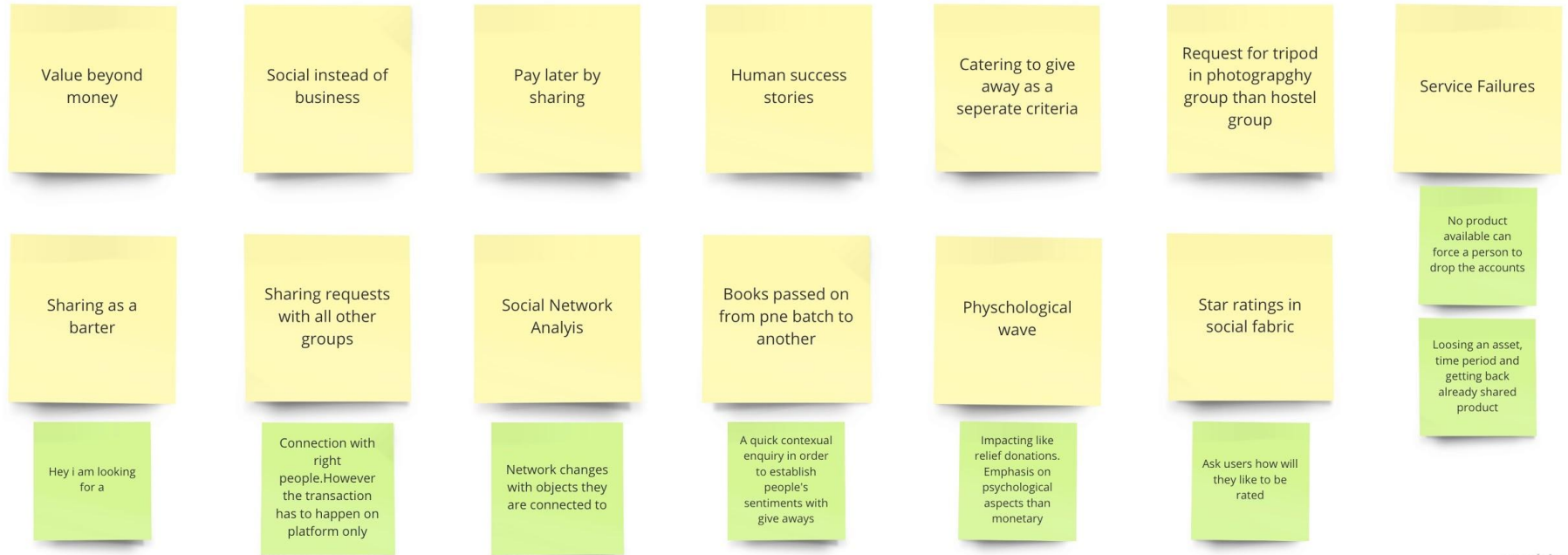


# Low fidelity Wireframes

A quick exploration of the flow of information amongst the various screens was sketched out. After a quick feedback, it was then modified into high level prototypes which demonstrated clickable movement.



Took Feedback at that stage and incorporated the following features in the major touchpoint that is the app plus other touchpoints depicted through the service blueprint.



**P2P sharing  
service blueprint**

Physical  
Evidence

Actionable  
Mailers

Mobile  
Application

Confirmation  
Message

information and  
Location

Notification  
Window

Asset

Status Screen

Refund Text

Customer  
Actions

Download  
application

Register  
&  
Settings

Check  
out the  
Listings

Request  
for an  
Asset

Wait for  
a  
Response

Picks up  
the  
Asset

Returns  
the  
Asset

Check  
the  
condition

Get  
reasoning  
or  
Refund

Add  
his asset  
to the list

Receives a  
Request

Send  
a  
Response

Decide a  
place  
for pickup

Complain

Line of Interaction

Front - Stage  
Actions

Contact  
&  
Find the  
Owner

Have a  
chat for  
more details

Ask for  
a way asset  
handling

Takes care  
of the  
asset

Thank  
the owner

Post  
a  
feedback

Post  
a  
Complaint

Explains the  
Constraints  
with asset

Asset is  
given

Look for  
condition  
of the returned asset

Line of Visibility

Back - Stage  
Actions

List  
the items  
like to share

Check app  
for any  
request

Accept  
Request

Look for  
other  
options

Get  
Payed

Line of Internal Interaction

Support  
Processes

Validation of  
the registration  
with college ID

Get  
started  
tooltips

Connect  
owner &  
seeker based  
on preferences

Track  
and store  
the transaction

Confirm  
rating &  
process  
payment

Moderate  
the issue

# Material Design



## Color Palette

While the care has been taken in order to make it look formal. But this app lacked initial enthusiasm which is achieved using shade of yellow and red.

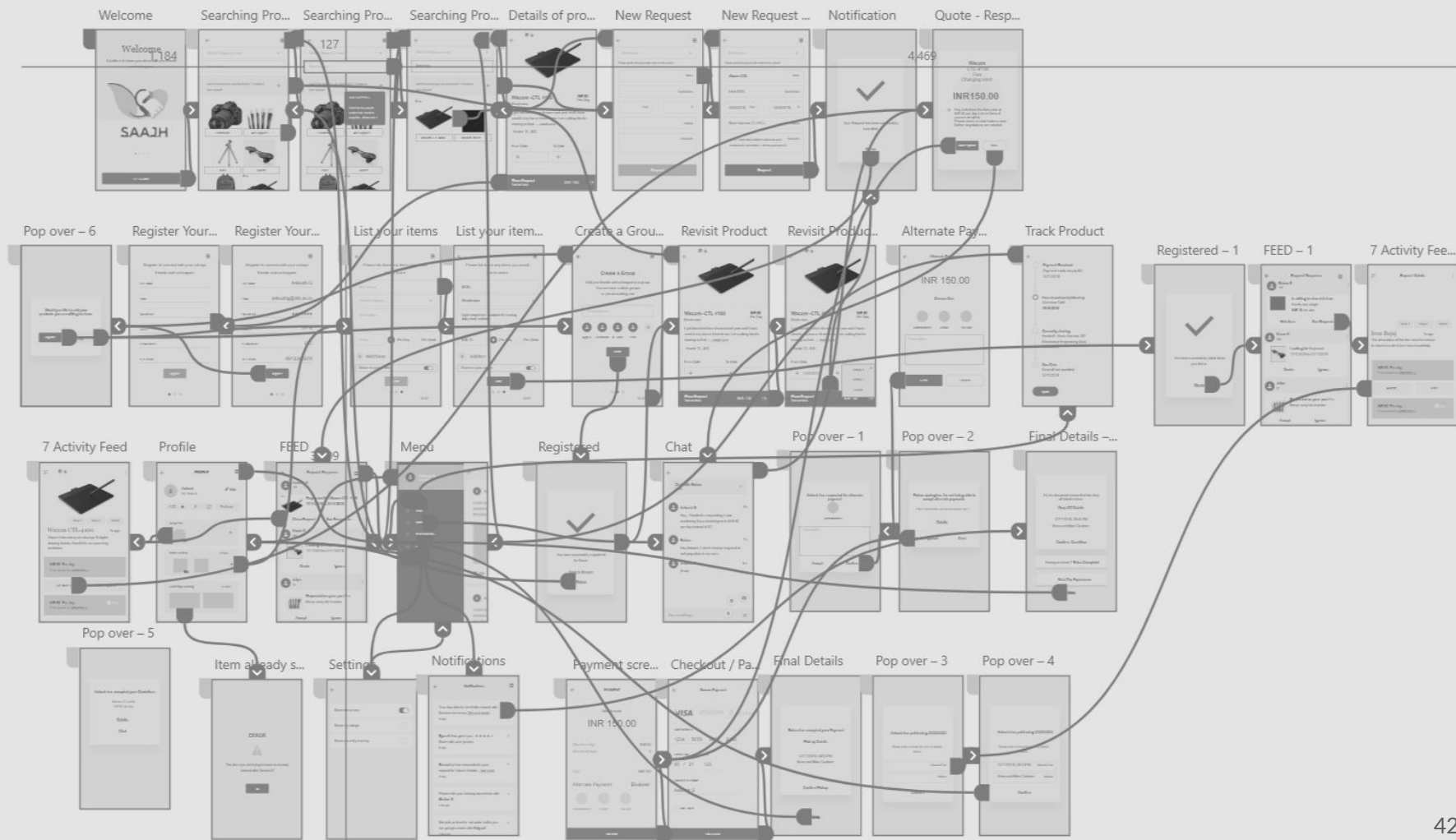
## Logo and Typography

It depicts collaboration amongst two individuals which is leading to contribution to the environment. Lato is used as font.



## Illustrations

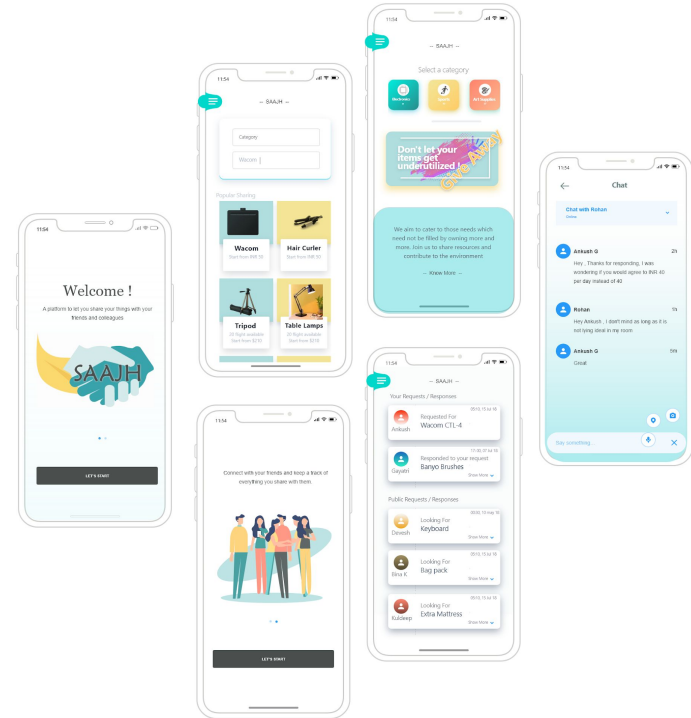
To make the app more relatable self drawn illustrations were used wherever necessary.

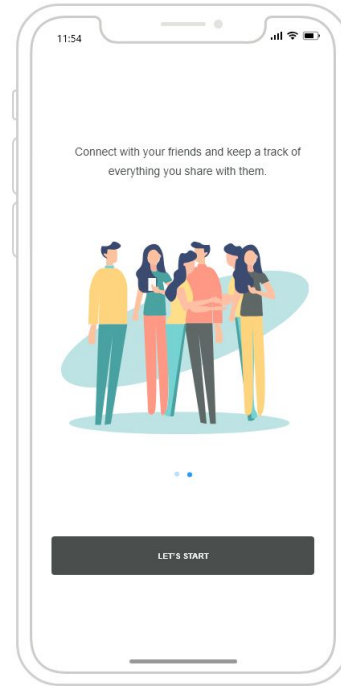
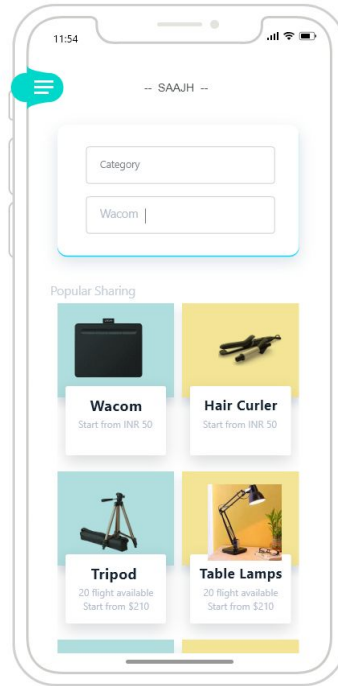
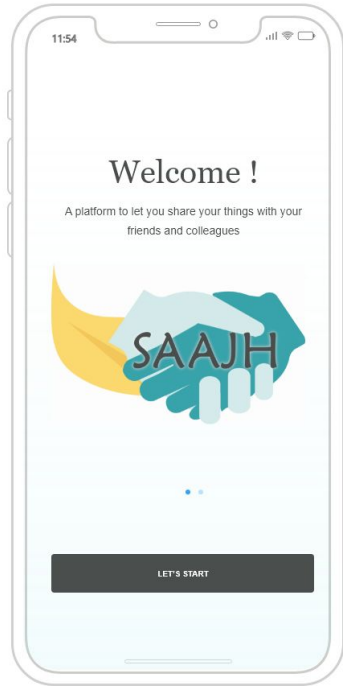


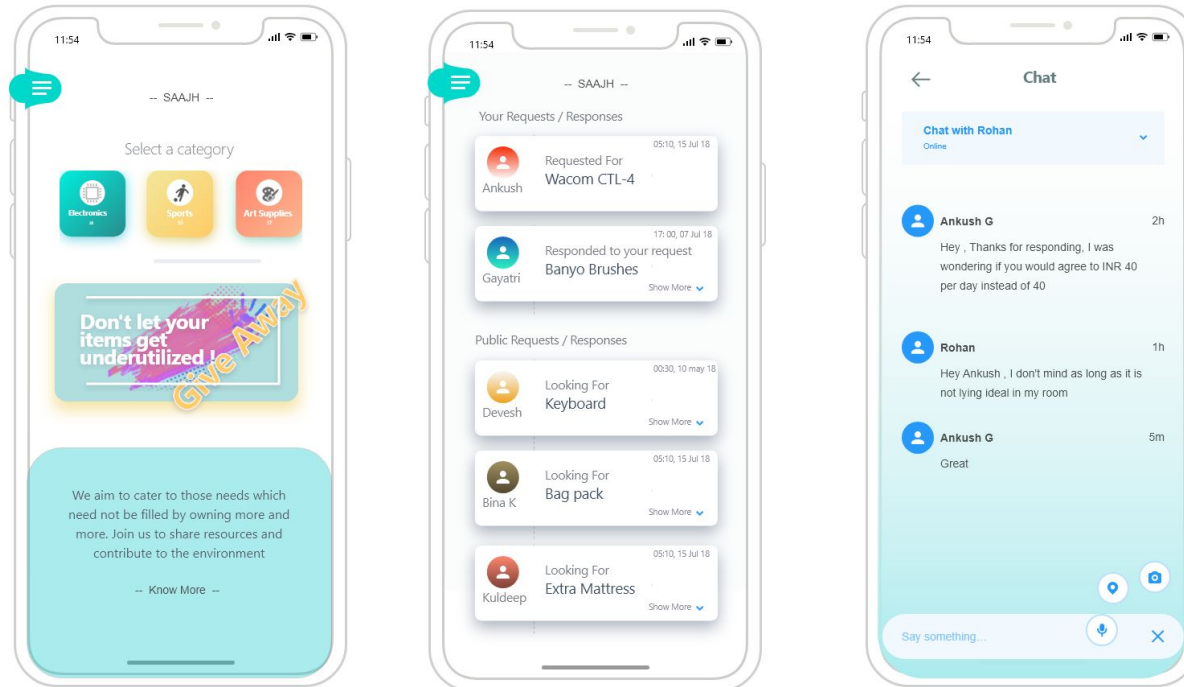
# High fidelity Wireframes

These wireframes are made in adobe XD , which allows you to make a clickable prototype of the same.

Material design was taken into account while making this. This was also evolved from the paper and grey prototypes.







The detailed link of the prototype could be obtained from the URL :- <https://xd.adobe.com/view/b15acbba-ee7b-41b0-5a2d-ab77e15c336d-c76b/>

# 7. Evaluation



Why it matters

Capture positive change

Establish causality

Check Efficiency

Evaluation was done in order to check four key points of a service as mentioned to the right.

Out of four levels mentioned in the book Service Design: From Insight to Implementation, I selected the one which preferred the most at this case. The future plan includes one with the participation. [10]

	Discussion	Participation	Simulation	Pilot
Time span	6-8 hours	2-3 days	1 day	1 week-1 year
People to be interviewed				
Level of realism				
Effect	To even out the most obvious issues and problems with the service to avoid major pitfalls	To improve how the touch-points work together over time, in the real world	To improve the real experience and include any unknown factors	To learn what it takes to run a sustainable service that meets people's needs
Delivery	Top 10 insights	+ top 5 improvements	+ key success factors	+ prolonged time
Cost	≈ £5,000	≈ £7,000	≈ £10,000	

To go ahead with experiencing prototyping of level one known as **Discussion Prototyping**, I started with an inexpensive semi structured discussion, where users were asked questions to understand the conventional method. However, the users differed this time from the ones who participated in primary research.

This has been taken from *The four levels of experience prototyping*. Polaine, Løvlie, and Reason. 2013. *Service Design: From Insight to Implementation*. New York: Rosenfeld Media.

Here the prototyping is very similar to a user insight interview and they are being tested on their reactions to the touchpoint interactions using the customer journey flow.

Following questions were asked :-

1. What are you looking for to share ?
2. What do you want to share ?
3. To whom would you share your request ?
4. What is the price you will be charging for your product ?
5. How much are you willing to pay for the shared item ?
6. How will you make the payment ?
7. How will you accept the payment ?
8. How will you make sure the quality of product at pick-up ?
9. What will you do if you require the product in middle of the sharing duration ?
10. What will you do if you are requested to return the product in middle of the sharing duration ?
11. What if the received product is damaged ?
12. What if you mistakenly malfunctioned the product ?

After going through the journey , they were asked to answer the following questions :-

Whether the service component provides assistance/support to the Seeker ?

Will people be willing to disclose their belongings in order to list them down beforehand ?

Whether the service component reduces the cost of owning an asset ?

Whether the service seem to make the process of asset acquisition and its return easier?

Whether the owner of the product sees any benefit in the service ?

Whether the service seem to improve the overall impact on the behaviour of people ?

Whether the service reduces the tax associated with tracking of stuff shared ?

# Observations

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- Items to be shared vary depending on the individual.
- A platform specifically for sharing reduces the issues with traditional posting in a group.
- Taxing for person who is ready to share
- Missing option to compensate in case broken product is received.
- Collaboration only during chatting - but optional
- But do serve as an commitment platform
- It needs to be incentivize for items I paid higher price for

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