

IHCI Second Project Submission

Rules

- Submit a Google Doc, NOT a PDF or a Google slide.
 - Use the default fonts, line spacing, and font size unless specifically required in the assignment.
 - After submission, the Google Doc will get automatically locked, so you won't be able to make any changes.
 - Standard plagiarism rules apply.
 - Your submission will only be considered for grading and feedback if you follow these guidelines.
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Names of Group Members: Nishant Tomar, Nakul Grover, Parv Goyal, Pratham Bansal, Rachit Bhandari

Project Group Number: B_G8_P1

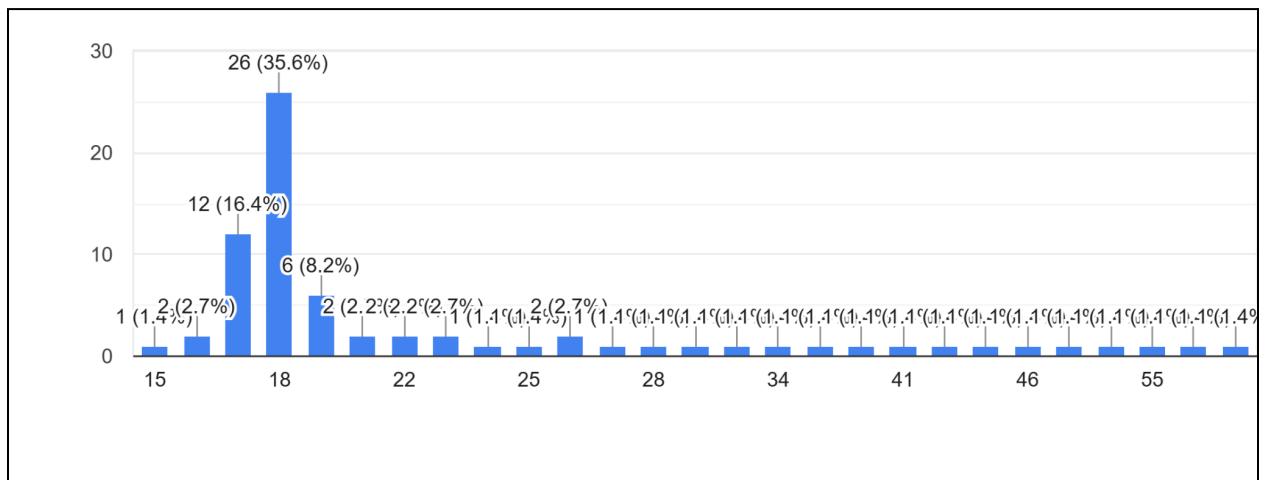
HCI Group No.: B8

Refined Gathering

See what our questionnaire responses have revealed.

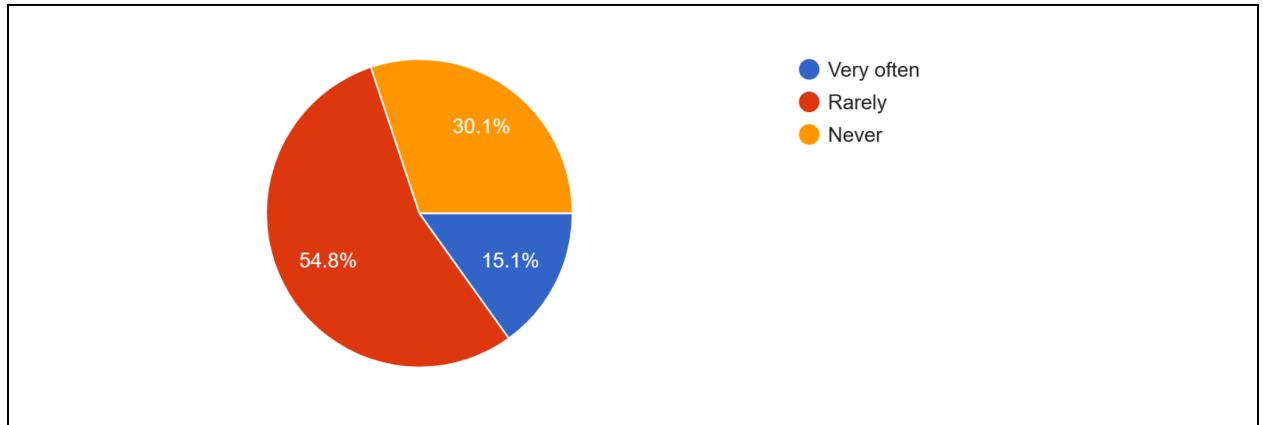
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1. Age



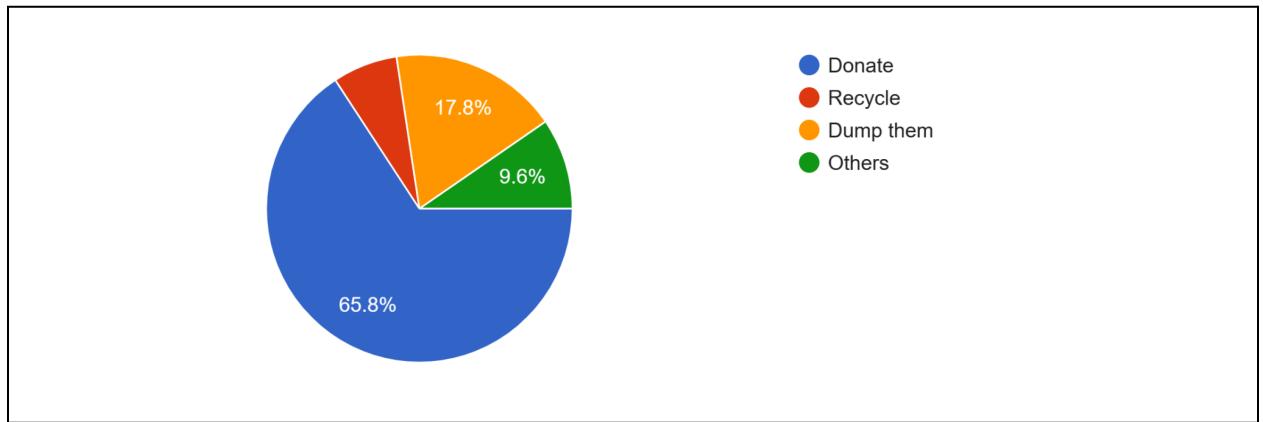
As per the recommendation of our TAs, we made our sample population more diverse by targeting people of more diverse age groups this time. Over 15% of our age population were over the age of 40. Similarly over 30% of the people surveyed were non-students.

2. How often do you think about the environmental impact of your clothing choices?



It's not just us, but over 50% of our respondents who 'rarely' think about the environmental impact of their clothing choices. And, and, over 30% of the respondents 'never' think about the same. So, a huge problem exists but when people don't even think about it... now that is a problem of a magnitude which is inexpressible.

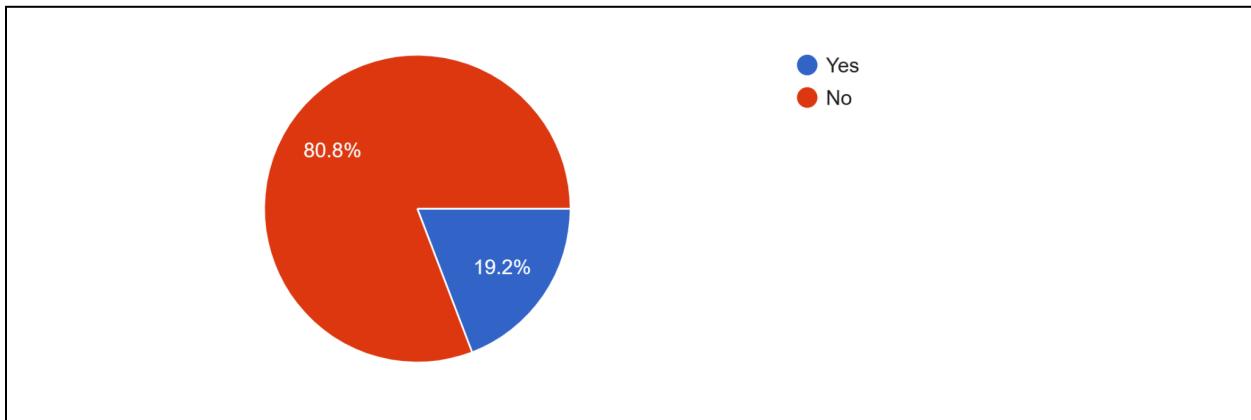
3. What do you do with worn out clothes?



If you donate your clothes to the maids, then don't worry you got good company... Over 60% of our respondents have said that they do donate their used clothes. This is a positive response which indicates that the problem is smaller on the users' ends. Hence, our focus is more on the manufacturers.

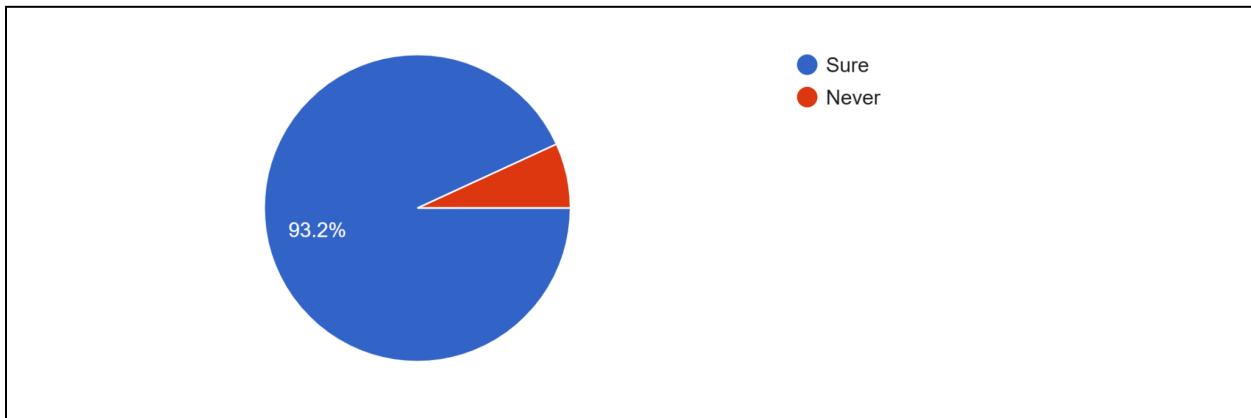
(There is however a healthy group of 17% respondents that dump their clothes, hence the problem cannot be ignored altogether as well)

4. Have you ever considered the environmental impact when purchasing clothing?



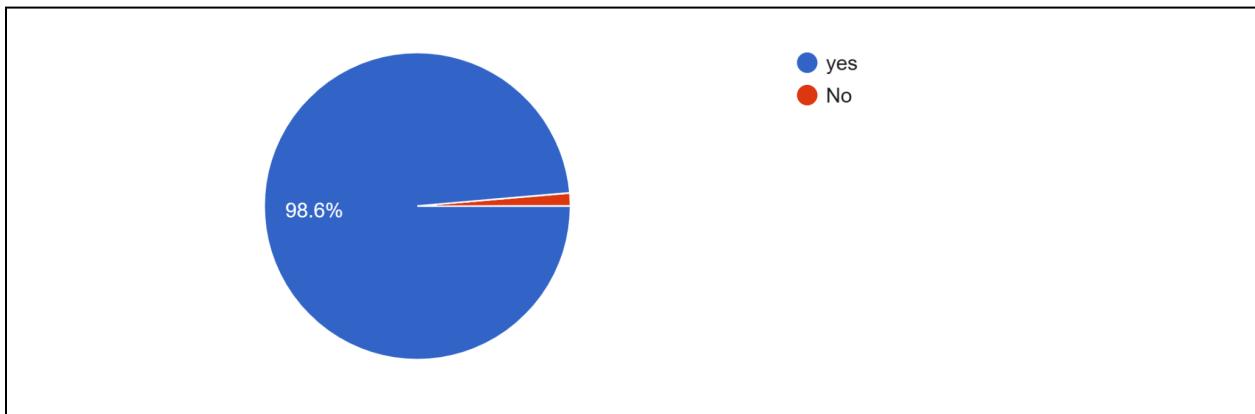
Clearly... environmental impact does not hold much importance when making cloth purchase decisions. Over 80% of our respondents have said that they've never considered the environmental impact of clothes while purchasing them.

5. Fashion waste contributes to more than 7% to the total waste. Would you like fashion waste to have a less harmful impact on the environment?



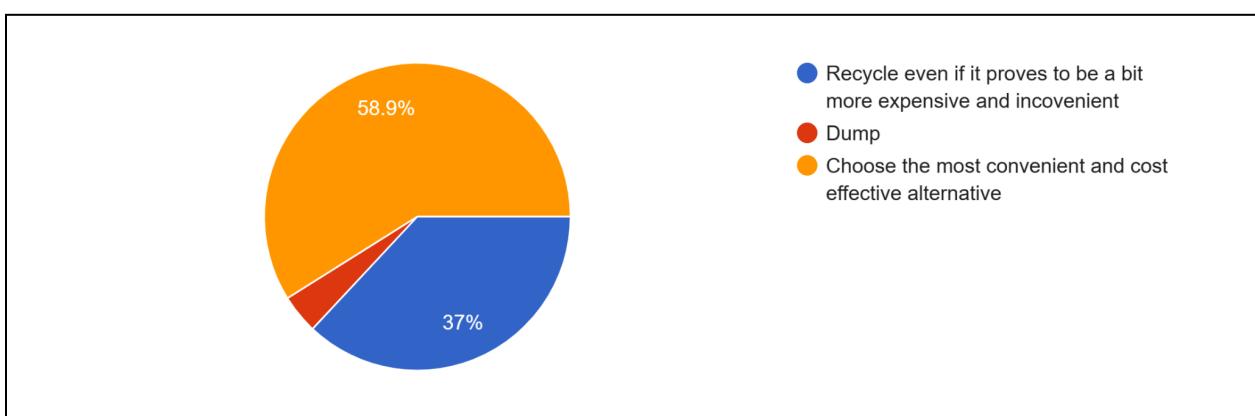
Now that is not a debate! Overwhelmingly, people want that fashion waste should cause less harmful impact on the environment.

6. Do you want your favourite brands to actively recycle their unused fabrics and donate their unsold inventory?



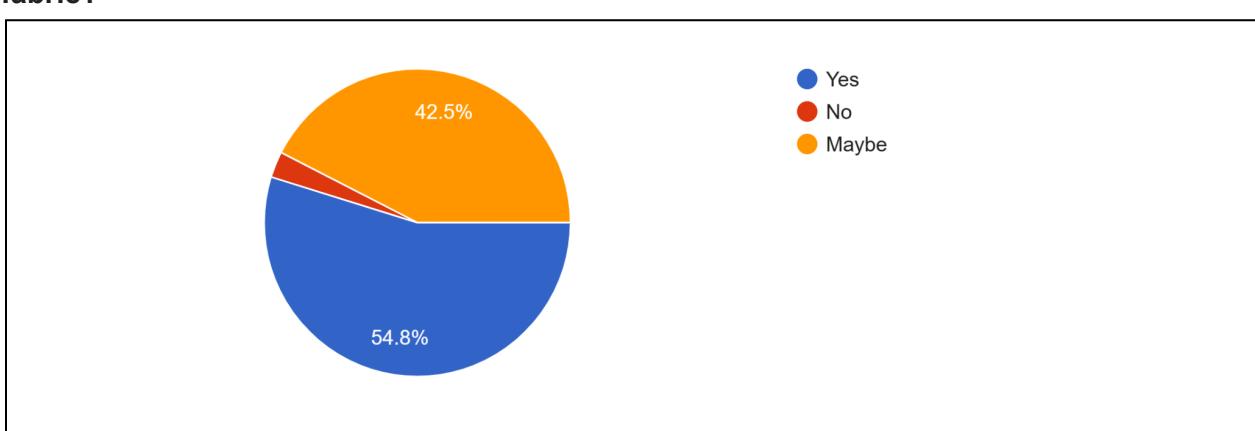
So, why aren't companies doing it!! Reason being there aren't many cloth recycling firms and it is very difficult to collaborate with those who do recycle.

7. Say, if you had been a cloth manufacturer what would you have done with the waste fabric?



The 'cost effective and convenient alternative'- is what we aim to become.

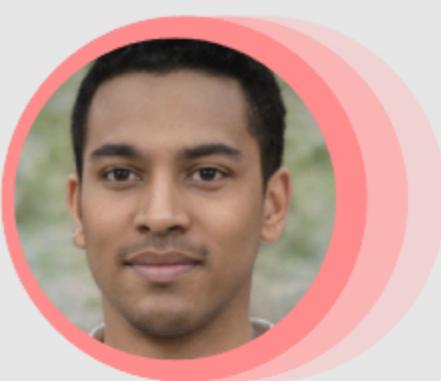
8. Would you prefer clothes made of recycled fabric which is as good as normal fabric?



Just some additional information, but it does show that customers won't mind buying recycled-fabric-made-clothes.

Refined Personas and Scenarios

Personas: https://miro.com/app/board/uXjVNYs7l1o=/?share_link_id=756535213788



VIKRAM

"DON'T COUNT THE DAYS
MAKE THE DAYS COUNT"

PROFILE

Gender: Male
Age: 23
Designation: Tailor

Location: Delhi
Education: Graduated
Company: Sri Sai Stich Work

GOALS

- 1) Wants to expand his business, also aims to build a loyal customer base.
- 2) Continuously want to improve and upgrade tailoring skills.

FRUSTRATIONS

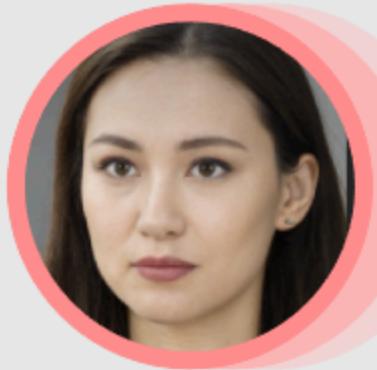
- 1) So much capital is being used while purchasing clothes.
- 2) Huge amounts of cloth waste gets accumulated daily.

NEEDS

- 1) Wants to connect with various cloth recycling companies which can sell them at reasonable prices.
- 2) Need consistent solution so that daily cloth waste can be recycled easily without any dedicated effort.

#1 Vikram→He is a 23-year-old tailor who works under “Sri Sai Stich Work” near Pitumpura. He wants to approach & acquire new customers with innovative designs and offers. His main goal is to expand his business and build a loyal customer base. He also strives for continual improvement, considering customers' feedback. He is very passionate about his skills and continuously works on his tailoring skills and wants to improve them to perfection. **He is facing some issues regarding clothes waste, which accumulates** in his shop daily. So he desired a connection with recyclers who could recycle this cloth waste and provide him with some new recycled clothing material or capital in return. His main goal is to increase his business, so he wanted a solution which is less hectic/ flawless and needs less dedicated effort from his side so that he can focus on bigger goals. Furthermore, he currently purchases new clothes from the market for his work, which costs him a lot of money from his side. **Hence, he also needed a recycling company to give him recycled (refined) clothes for a cheaper price.** Therefore, he needs a connection with various clothes recycling companies which can sell recycled clothes at reasonable prices.

Our project, “Fashion Recycled” completely counters his issues as we act as a bridge between him and the recyclers so that he can focus on his main goals without stressing about these issues, which we will take care of



VEENA

"THERE IS NO CHARM EQUAL
TO TENDERNESS OF HEART"

PROFILE

Gender: Female

Age: 24

Designation: Employee

Location: Delhi

Education: Graduated

Company: Pal Manufactures Ltd.

GOALS

- 1) To find suitable solution for recycling fashion waste produced by the company.
- 2) Ensuring that fashion waste reaches recyclers.

FRUSTRATIONS

- 1) All the fashion wastes goes to dumping fields or burns out.
- 2) Not enough connections with recyclers so clothes go to waste.

NEEDS

- 1) Need proper connections with recyclers so that fashion waste produced by the company can be easily recycled.
- 2) Need flawless medium between company and recyclers so that everything happens smoothly.

#2 Veena—She is a 24-year-old woman who works as an employee at “Pal Manufacturers Ltd.” situated in Rohini. Being an employee in a large clothes manufacturing firm, her duty is to find a suitable solution for recycling fashion waste produced by the company, which currently goes to dumping fields or burned out, which causes too much pollution. The company’s CEO finds it very concerning and immoral that their company is causing this much pollution. So he decided that from now onwards,

all the fashion wastes produced by them must be recycled, and Veena is given the duty to find a recycling company and also to ensure that fashion wastes reach them. She does not have enough connections with recyclers as the company recently decided to do so. **Therefore, she needed a proper connection between them and recyclers so that fashion waste produced by them can easily be recycled.** Being a passionate woman, she wants a promotion, and after resolving this issue, she wants more duties so that she can get a promotion. Hence, she needs a flawless medium between her company and recyclers so that everything happens smoothly and she can supervise it easily and focus on other duties.

Here at “Fashion Recycled” we completely resolve her problem of providing connections between their company and recyclers, and being a trustable medium, we also ensure that fashion waste by the company reaches the recyclers smoothly.



JHON

"LIVE YOUR BELIEFS AND
YOU CAN TURN THE WORLD
AROUND."

PROFILE

Gender: Male

Age: 27

Designation: Chief Manager

Location: Delhi

Education: Graduated

Company: Viens Recyclers

GOALS

- 1) To supervise the company that recycles fashion waste in Delhi.
- 2) To recycle more than 80 percent of fashion waste of Delhi NCR.

FRUSTRATIONS

- 1) Lack of availability of fashion wastes that we can recycle
- 2) Not enough connections with big manufacturing firms

NEEDS

- 1) Need proper connections with big fashion manufacturing firms so that waste produced by them can directly be recycled by us at Viens Recyclers.
- 2) Also needs a platform where all fashion manufacturing firms (small scale and large scale) can directly connect with recyclers.

#3 Jhon—Jhon is a 27-year-old young millionaire who runs “Viens Recyclers”, a massive recyclers with five branches all over Delhi. His company aims to recycle more than 80 per cent of the total fashion waste of Delhi NCR. He wanted to expand his business by opening new branches. He wants that every fashion waste, whether produced by big or small manufacturing firms reaches, to them. Currently, they do not have enough connections with fashion manufacturing firms and small-scale businesses.

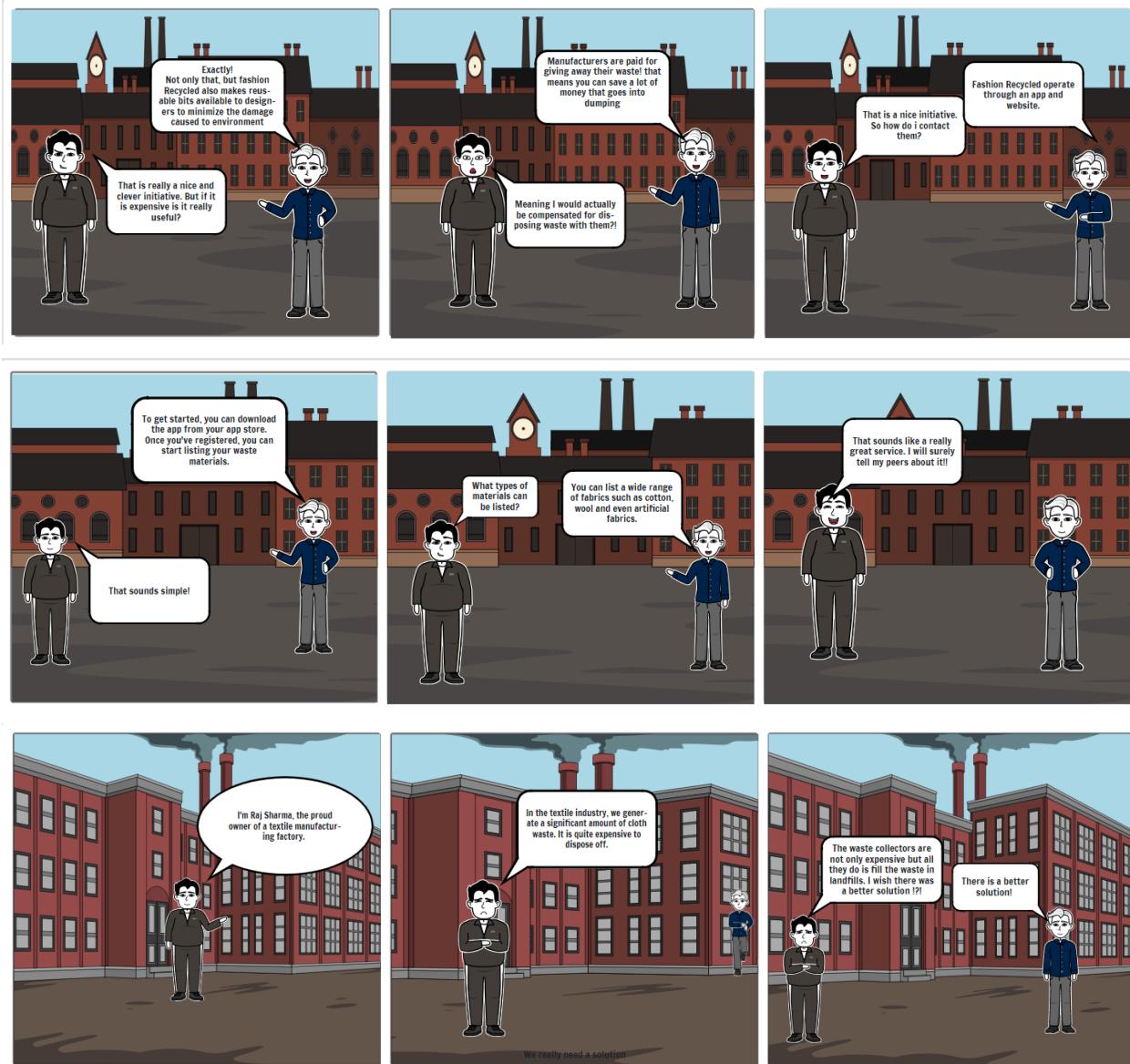
Thus, he needed a proper chain of connections with fashion manufacturing firms so that fashion wastes produced by them could be hustle-lessly recycled by his company “Viens Recyclers”. He also wanted his recycled clothes to reach the desired people like tailors who wanted to purchase recycled clothes at cheaper rate for their work or to fashion designers/artists who use their clothes to design various clothes or to the market shops, which sells their recycled clothes at cheaper prices to the customer. Therefore he needs a smooth platform which can provide his company with more fashion waste and also that all recycled clothes can smoothly be exported to the desired people.

We, “Fashion Recycled” provide that platform which “Viens Recycled” needs we will flawlessly connect their branches to the fashion manufacturers throughout the Delhi NCR so that wastes produced by them can easily reach “Viens Recycled”. Furthermore, we will also export their recycled clothes to desired targets such as tailors and fashion designers/artists.

Scenarios (same as before):

https://miro.com/app/board/uXjVNYs7I1o=/?share_link_id=756535213788

STORYBOARD
Manufacturer's perspective



Recycler's perspective



Refined Problem Understanding

Have a look at your wardrobe. You will find multiple clothes that you have stopped wearing but they still lie there. Let's go deeper. Find that place of your house where all the old

clothes are stacked. The ones that you outgrew, the ones which can't be worn anymore, the ones which are kept to be converted to dusting cloths. A rough guess, but you would have found at least 10 pieces of clothes which pass any of these criteria. How many of these will be recycled? Let's imagine half of these go to the maid, one or two are converted to dusting clothes, but the rest. Won't they be thrown away? How many households have you heard of that give their clothes for recycling?

This is just one aspect of the problem. Let's go deeper into this issue. How much cloth do you think is wasted making a single tshirt that you wear. If you don't know the answer, ask a tailor. He/she may probably say much more than what a large manufacturer may say. But a small waste of cloth on millions of tshirts that may be manufactured multiplies into tonnes of cloth being dumped each year.

Some staggering facts [1]:

1. **92 million tonnes** of textile waste is produced every year.
2. The average US consumer throws away **81.5lbs** of clothes every year.
3. The number of times a garment is worn has declined by around **36% in 15 years**.
4. It takes **20,000 litres** of water to produce **one kilogram** of cotton.
5. **\$500 billion** is lost **each year** because of under-wearing and failure to recycle clothes.
6. Nearly **10%** of microplastics dispersed in the ocean **each year** come from textiles.

Clearly, fashion waste is a problem. But what action are you and me taking for it? What action are manufacturers taking for it? Now this is the bigger problem.

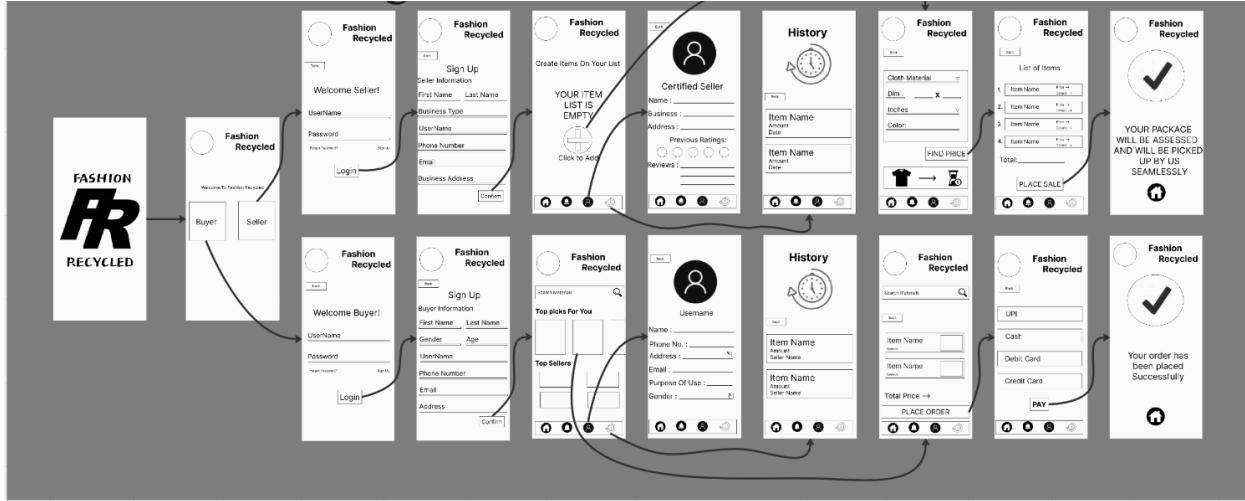
Updates on Problem Understanding

Based on our interactions with more and more people, including regular office goers, college students, garment manufacturers, NGOs and our TAs of course, we realised that there are more aspects to the 'Fashion waste' problem that we had initially thought of.

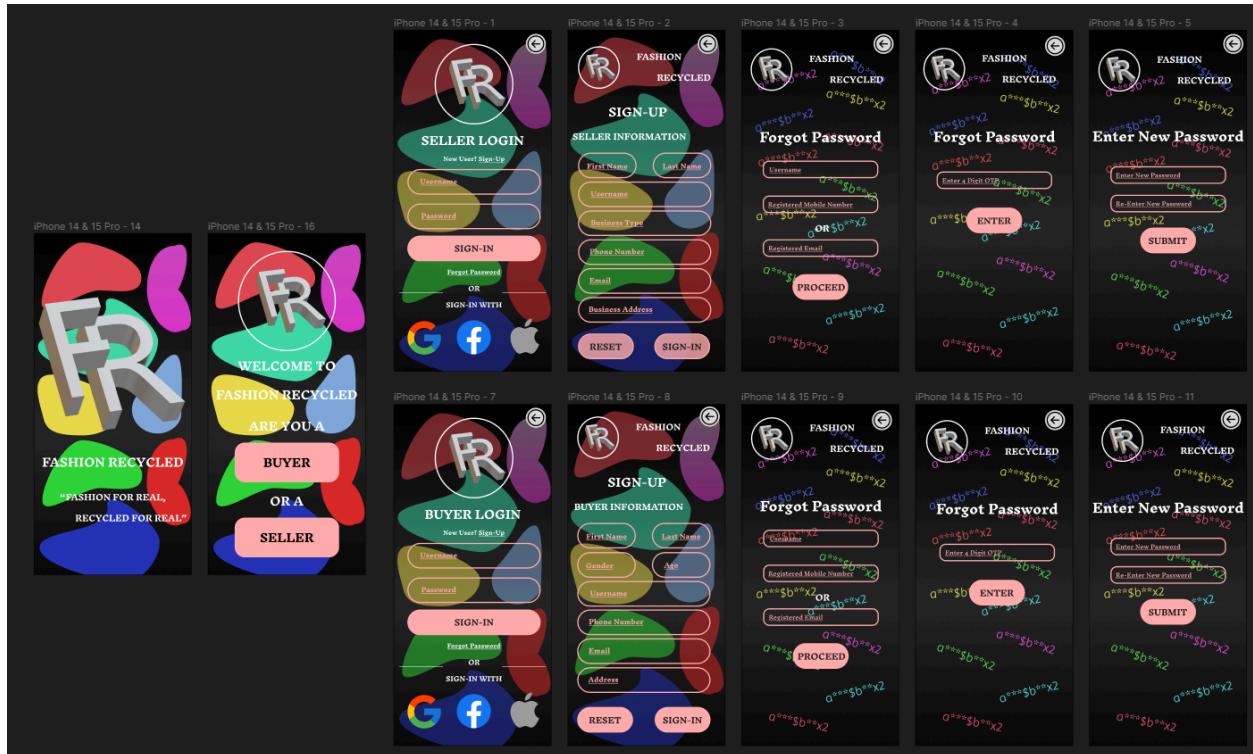
1. Getting rid of old clothes by giving it to maids or NGOs is frustrating many-a-times because these clothes have not been worn enough times that the person feels that its value has been recovered. This problem also came up during our group's presentation with the teaching assistants.
Thereby, we plan to inculcate a sale-purchase portal where users will be able to sell their less used branded clothes. Their authenticity will be verified via bills and otherwise via our hired fashion experts. These may later be listed on our website for purchase by 'thrift shoppers'.
2. Garments made from recycled/repurposed cloth lack proper marketing channels as it cannot be sold along mainstream fashion, and any single portal for them does not exist. This was discussed with an NGO and a suggestion for a sort of social media platform where such goods may be promoted came up.
Hence, we have inculcated a social media platform where users (NGOs, designers) can upload images of the products they make using recycled/repurposed materials. They will also be able to tag the products. This will also increase traction on the

website.

Refined Lo-Fi Design



Working Hi-Fi Prototype along with User Evaluation



iPhone 14 & 15 Pro - 6

YOUR ITEMS LIST IS EMPTY

CLICK TO ADD

Add Items To The List

FASHION **RECYCLED**

Location: Chandigarh

Home **Bell** **Clock** **User**

iPhone 14 & 15 Pro - 17

CERTIFIED SELLER

NAME: HUYGEN MISHRA

BUSINESS: HOISERY MANUFACTURING

ADDRESS: PLOT 709, ORHLA PHASE 3, NEW DELHI

RATINGS: 4.5/5

REVIEWS:

Huygen Mishra sells the top quality fabric cuttings at the most affordable prices. Just loved it!

1 2 3 4 5

NO NEW NOTIFICATIONS

Home **Bell** **Clock** **User**

iPhone 14 & 15 Pro - 19

CONSIGNMENT HISTORY

CONSIGNMENT QUANTITY: 31

Value: INR 4763

Date: 15-10-2023

CONSIGNMENT QUANTITY: 23

Value: INR 3473

Date: 07-09-2023

CONSIGNMENT QUANTITY: 15

Value: INR 1785

Date: 02-07-2023

SHOW MORE

FASHION **RECYCLED**

Location: Chandigarh

Home **Bell** **Clock** **User**

iPhone 14 & 15 Pro - 12

Top Picks For You

Search for Materials, Colors, etc.

Location: Chandigarh

Blue **White**

Colour: Blue **Material: Silk** **Dimension: 40x40 in** **Price: 9500Rs**

Colour: White **Material: cotton** **Dimension: 48x20 in** **Price: 2000Rs**

See more

Top Sellers Near You

UrbanChic **TrendSculpt Closets**

VelverVista **Enchanted Ensemble**

CoutureCanvas Corner **Leamlux Collections**

Home **Bell** **Clock** **User**

iPhone 14 & 15 Pro - 18

USERNAME

NAME: HUYGEN MISHRA

PHONE NO: +91 97224747321

ADDRESS: 271B, SARITA VIHAR WEST, NEW DELHI

EMAIL: huygen@principle.in

PURPOSE: BUYING CHEAP CLOTH FOR FASHION PURPOSE

OF USE:

GENDER: PREFER NOT TO SAY

NO NEW NOTIFICATIONS

Home **Bell** **Clock** **User**

iPhone 14 & 15 Pro - 20

ORDER HISTORY

ORDER QUANTITY: 7

Value: INR 450

Date: 26-10-2023

ORDER QUANTITY: 5

Value: INR 370

Date: 07-09-2023

ORDER QUANTITY: 2

Value: INR 190

Date: 02-07-2023

SHOW MORE

FASHION **RECYCLED**

Location: Chandigarh

Home **Bell** **Clock** **User**



Hi Fi Link:

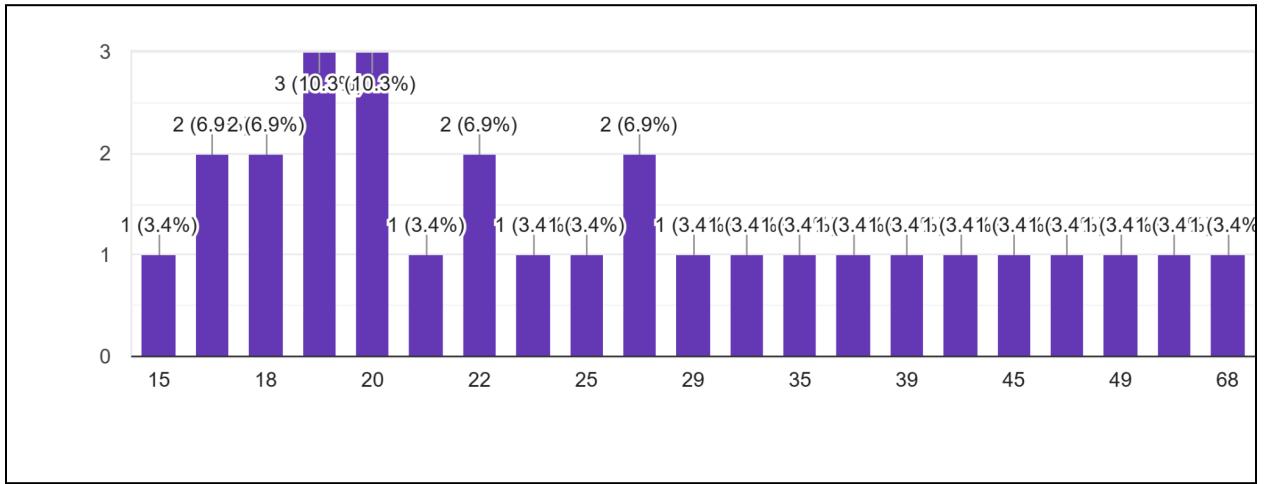
[https://www.figma.com/file/AOvuygDs6oiCDaStfsBRrd/Hi-Fi?type=design&node-id=0%3A1&mode=design&t=dFPzwezf4O cwd7L-1](https://www.figma.com/file/AOvuygDs6oiCDaStfsBRrd/Hi-Fi?type=design&node-id=0%3A1&mode=design&t=dFPzwezf4Ocwd7L-1)

User Evaluation:

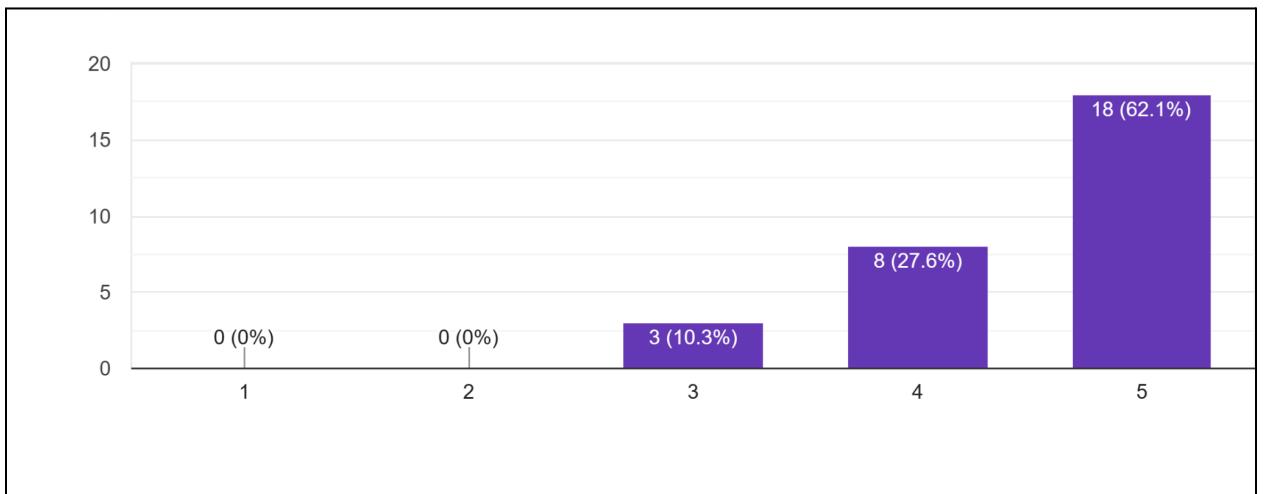
Google form link

<https://forms.gle/7DpkKDXpqRjechnQQA>

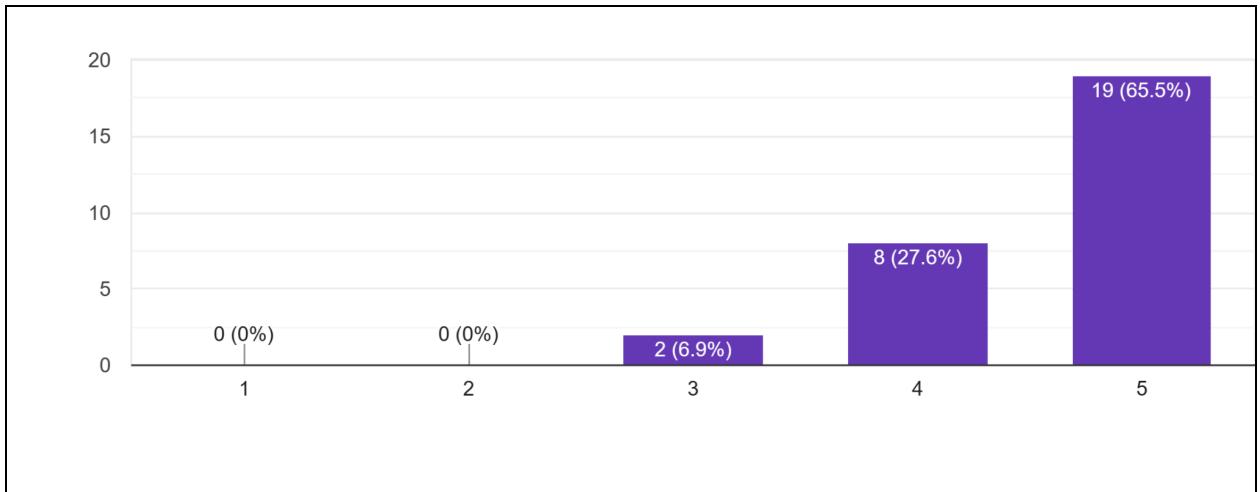
1. Age?



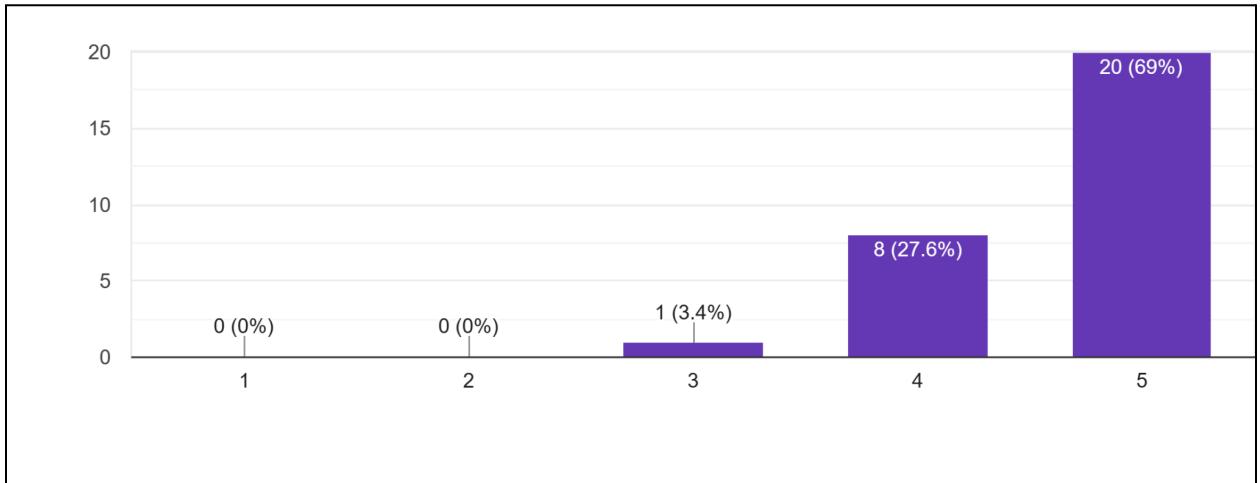
2. How easy or difficult is the design to understand and use?



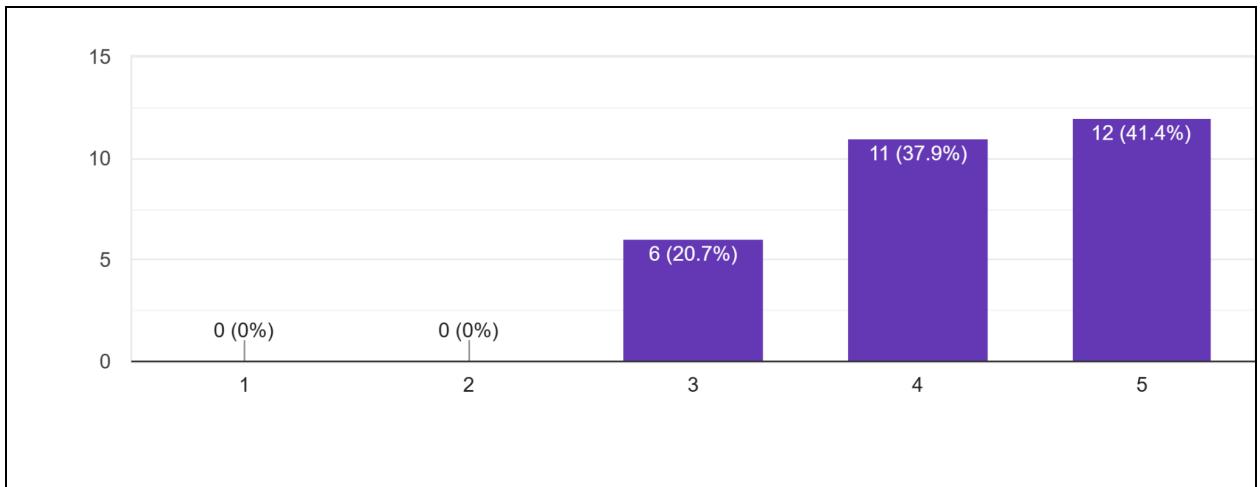
3. How interactive is the application in terms of user experience?



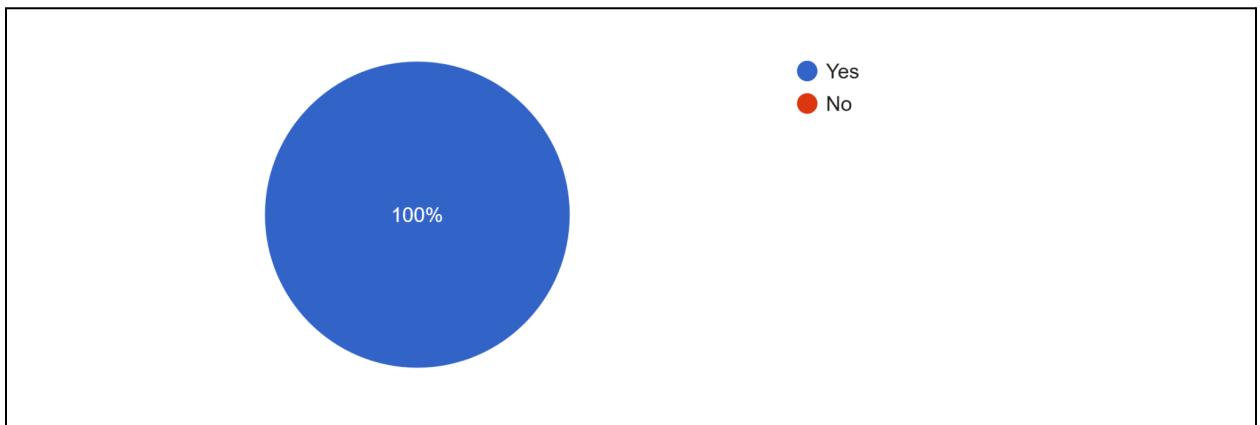
4. How visually appealing is the app design?



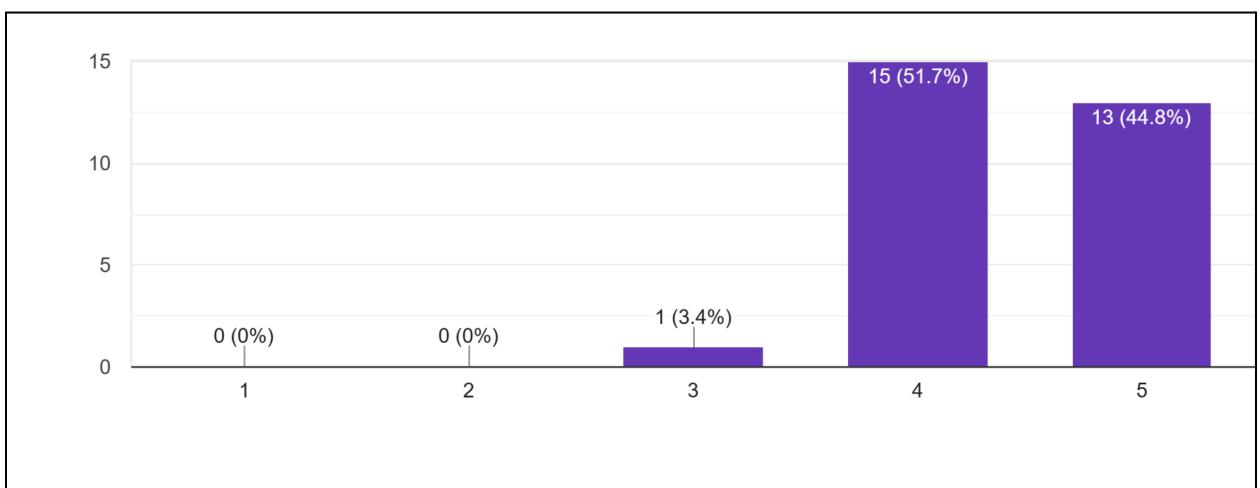
5. How accessible is the application design in terms of the button placements, icons, menus, etc.?



6. Were you able to find the features you had suggested to inculcate previously?



7. How likely are you to use this application if this is how the version to be released will look like?



Contributions

Nakul Grover: Brainstorming, Scenarios

Parv Goyal: Form building, Alternate Design

Nishant Tomar: Personas

Pratham Bansal: Form Analysis, refined requirements

Rachit Bhandari: Lo-Fi design, Hi-fi design