

Dhandun

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Project overview



The product:

Creating a mobile application that will allow farmers to connect with buyers from anywhere in the Maldives..



Project duration:

June 2021 to July 2021

Project overview



The problem:

Farmers who need to sell their produce but are having difficulty finding buyers.



The goal:

Creating a mobile app where the user can connect with buyers.

Project overview



My role:

Designing a mobile application that will allow farmers to find buyers from anywhere in the maldives.



Responsibilities:

Conducting interviews, paper and digital wireframing, low and high-fidelity prototyping, conducting usability studies, accounting for accessibility, and iterating on designs..

Understanding the user

- User research
- Personas
- Problem statements
- User journey maps

User research: summary



Our goal was to identify the challenges that users encountered while attempting to complete core tasks in the Dhandun mobile app, such as connecting Maldivian farmers and buyers. Farmers can use the app to update and manage their stock.

We conducted a remote, unmoderated usability study between June 23-30. We assigned 5 participants the task of updating the price and stock they have on hand. Including the test and interview questions, each session lasted 15-20 minutes.

Participants included anyone who was concerned about purchasing farm produce from Maldivian farmers. The testing group included people from islands and rural areas. We had a balanced number of male and female participants, all of whom were between the ages of 18 and 72. We gave participants a series of tasks that required them to interact with the app's core functions. Then they were asked to complete the system usability scale (SUS). As shown in the note taking spreadsheet, we recorded the sessions and took notes on their progress and feedback.

User research: pain points

1

Contact

Most of the farmers face challenges finding buyers, and getting contacts.

2

Accessibility

Users require shipping options to be available.

3

Manage stock

User requires an easier way to update the price and stock availability.

Persona: **Abdulla**

Problem statement:

Abdulla is a farmer who need to connect with buyers, because he needs to sell his farm produce..



Abdulla

Age: 72

Education: -

Hometown: Vaavu Atoll, Maldives

Family: Married

Occupation: Self employed

"It's difficult for me to sell the vegetables since I have to deliver them to shop owners and find buyers from other islands by calling friends."

Goals

- A simple way for me to sell veggies
- Easy way to connect with the buyers

Frustrations

- Call friends and ask if there are any buyers
- It can take weeks to get produce to buyers.

Abdulla lives in the least populated atoll of Maldives. Travelling between capital city to the island is not a hassle as the transportation is easy and is closeby. However, selling the crops to the nearby shops within the capital city is quite a challenge as the large scale farmers in other islands sell their produce in a smaller price to the local market where the central market for fresh veggies and fruits are based.

User journey map

The user journey of Abdulla highlighted how helpful it would be to have an app that connects farmers and buyers.

Persona: Abdulla

Goal: Connect farmers and buyers

ACTION	Open app	Sign up as farmer	Update stock	Available shipping options	Update information
TASK LIST	Tasks A. website url B. goto home page	Tasks A. Fill up farmer information and phone number. B. Sign up C: Enter OTP	Tasks A. Goto home screen. B. Click products. C. update price and quantity.	Tasks A. select the available shipping options.	Tasks A. Goto to profile B. Add location and address of the farm. C. Add contact details.
FEELING ADJECTIVE	Excited Happy	Happy	Excited Relieved	Hopeful Curious	Excited Satisfied
IMPROVEMENT OPPORTUNITIES	None	None	Adding new products within app would be helpful.	None	None

Persona: Ali

Problem statement:

Ali is a farmer who needs a simple method for locating buyers because He needs sales opportunities for his farm products.



Ali

Age: 42

Education: College

Hometown: Addu City, Maldives

Family: Married

Occupation: Self employed

"I'm hoping for a simple way to market and sell the fruits and vegetables from my farm.."

Goals

- Connect with the retailers and wholesalers
- We require a simple solution for selling our farm produce.

Frustrations

- Air freight charges are high
- Finding buyers are challenging.

Ali is a Maldivian farmer who lives in the Addu Atoll, the Maldives' southernmost atoll. The logistics in this area are extremely hectic, freight rates are enormous, and getting to Male' takes roughly 3-4 days via boat. This is the area where we have the most difficulties. We need to find a solution as soon as possible.

User journey map

Mapping Ali's user journey revealed how useful an app for connecting with buyers and managing stock would be for users.

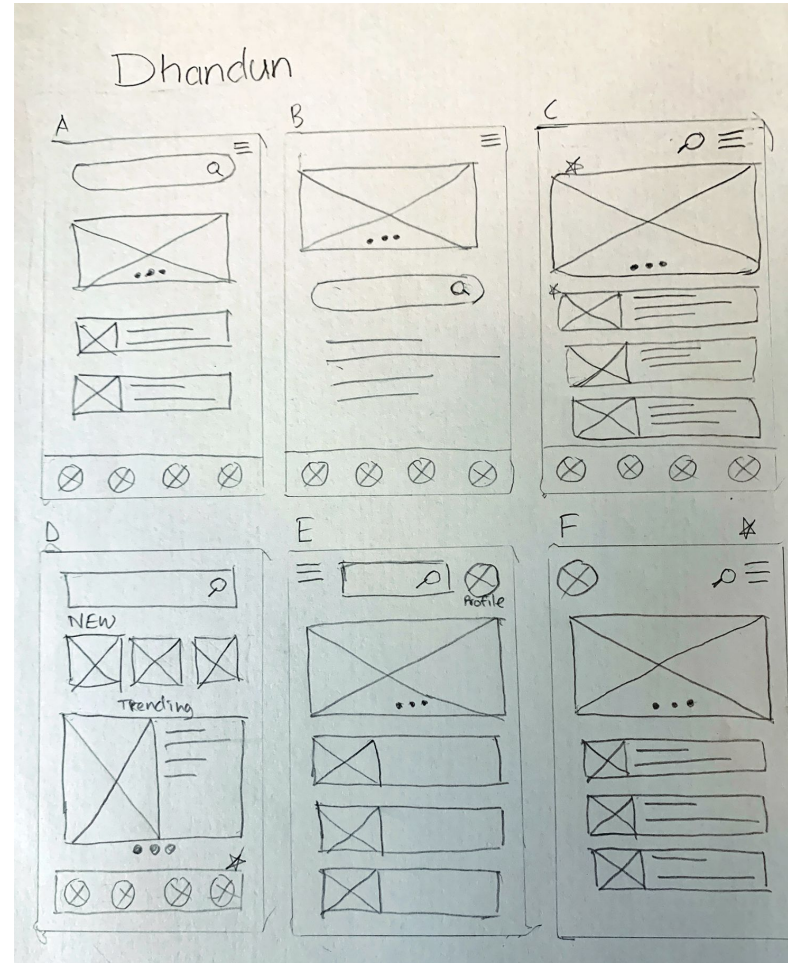
Persona: Ali

Goal: Connect farmers and buyers

ACTION	Sign up	Find farmer	See the description	Contact buyer	Delivery
TASK LIST	Tasks A. Sign up as buyer B. Enter phone number C. Sign up process completed	Tasks A. clicks on farmer name. B. see the available produce.. C. Selected an item from the list	Tasks A. See the product details. B. Checks location.. C. See available shipping options.	Tasks A. Finds farmer number. B. Call farmer and place order C. Transfer payment to farmer	Tasks A. Buyer received goods.
FEELING ADJECTIVE	Excited Happy	Wondering	Excited Relieved	Hopeful Curious	Excited Satisfied
IMPROVEMENT OPPORTUNITIES	None	Add a distance filter to search.	Option to add sizes	Adding payment option could be really helpful.	Notification upon delivery

Paper wireframes

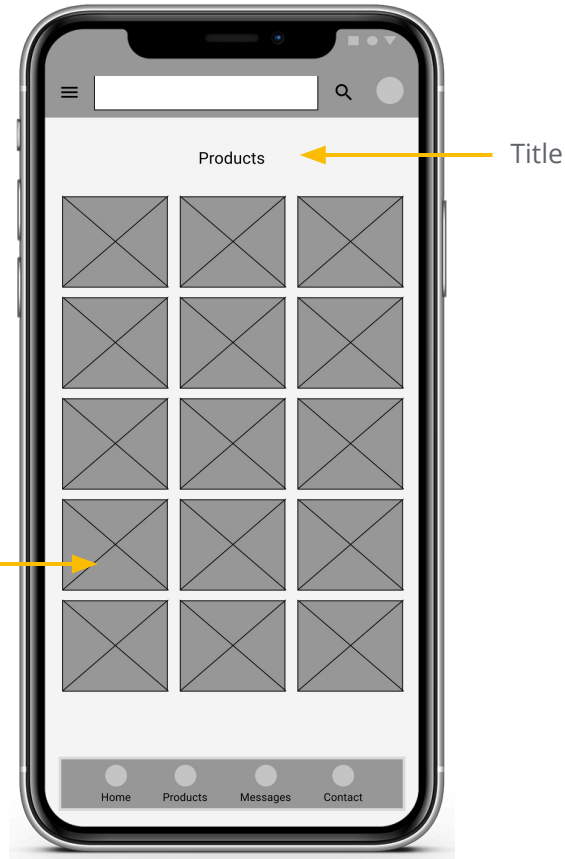
Components marked with a star in the wireframe sketches are prioritised for use in digital prototypes. I chose “C” because it is by far the most accessible design to me.



Digital wireframes

First wire frame, I've decided to use only photos of produce which isn't accessible to some users.

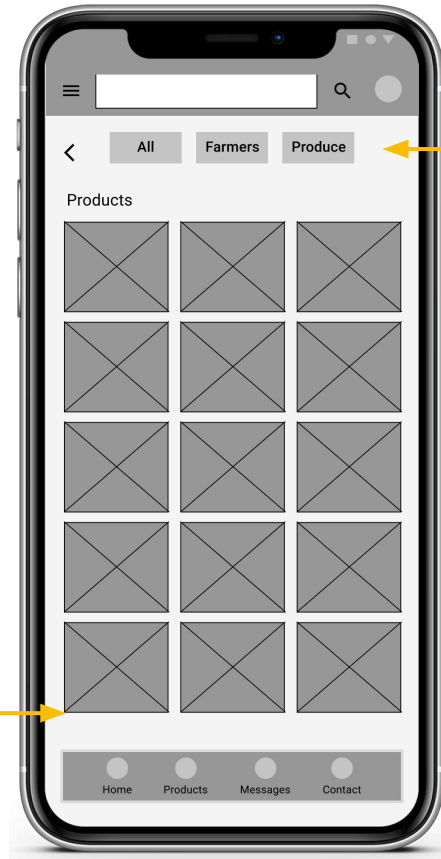
Photos of produce



Digital wireframes

Updated home screen with sort by category which will be more accessible for most users.

Photos of produce with title

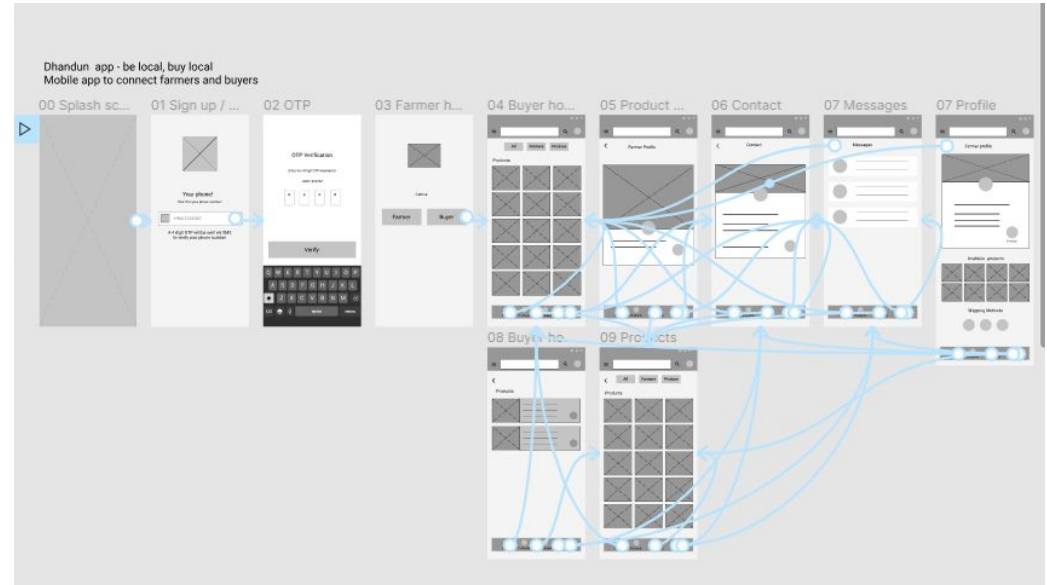


Categories

Low-fidelity prototype

Lo-Fi prototype of Dhandun app updated with new screens.

Link to the prototype: [Dhandun app - be local, buy local](#)



Usability study: parameters



Study type:

Unmoderated usability study



Location:

Male', Maldives; remote



Participants:

5 participants



Length:

15 - 20 minutes

Usability study: findings

These were the primary findings of the usability study.

1

Efficiency

Users who wants to find buyers to sell their produce.

2

Customization

Users wants sign up options for "Farmers" and "Buyers".

3

Convenience

Users are looking for information about shipping options.

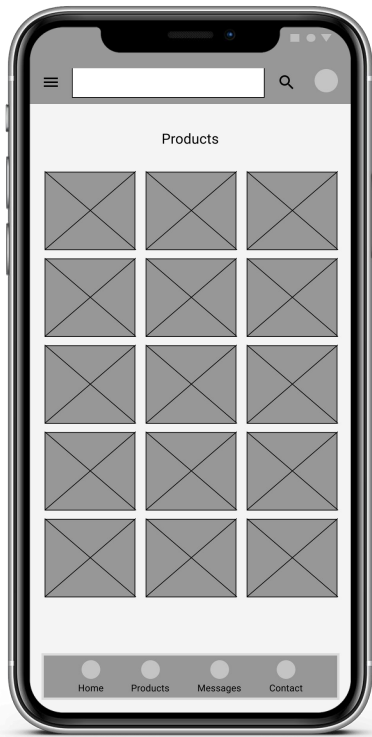
Refining the design

- Mockups
- High-fidelity prototype
- Accessibility

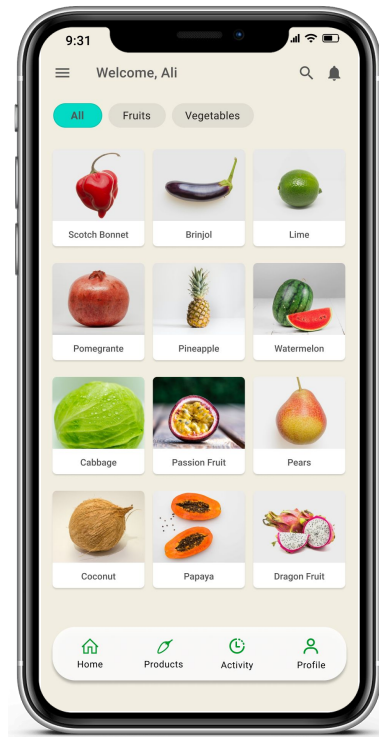
Mockups

I came up with a few actionable insights from the usability studies. One of them was to add categories to the app's home screen, making it easier for more accessible to users.

Before usability study



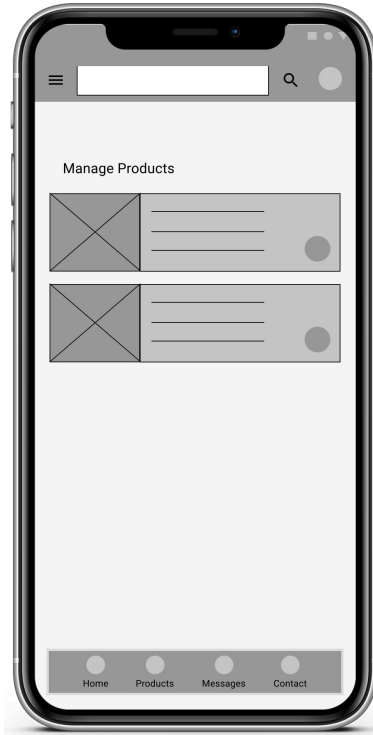
After usability study



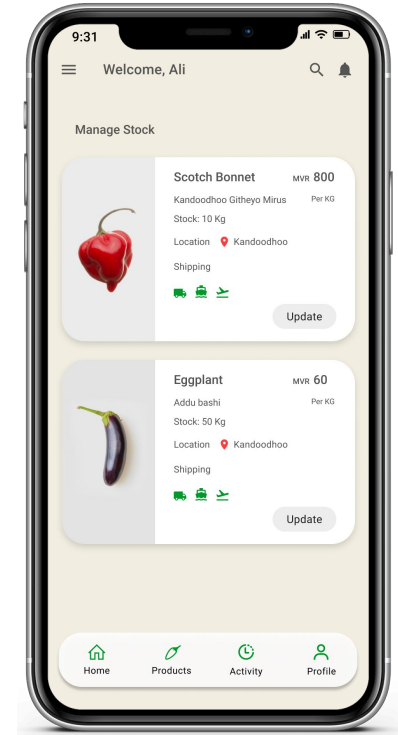
Mockups

Another iteration was to make the interface more user-friendly by adding stock managing feature for the farmers. This help farmers to update their stock with few clicks..

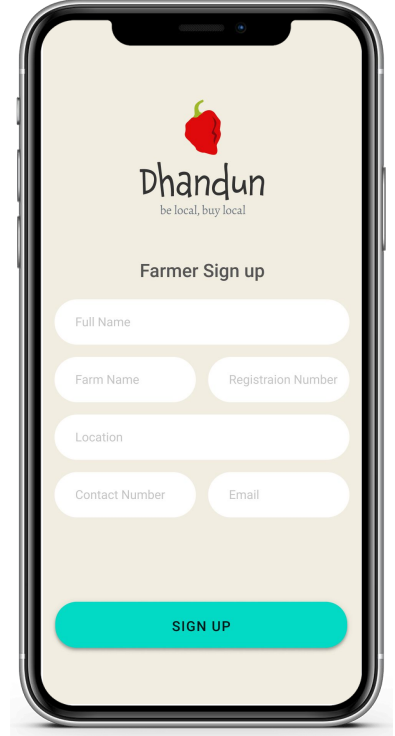
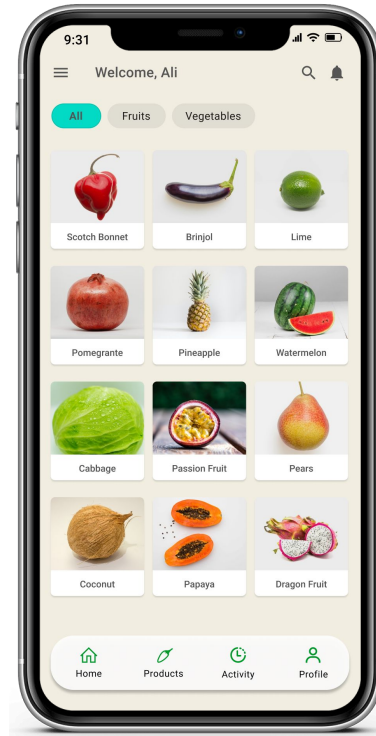
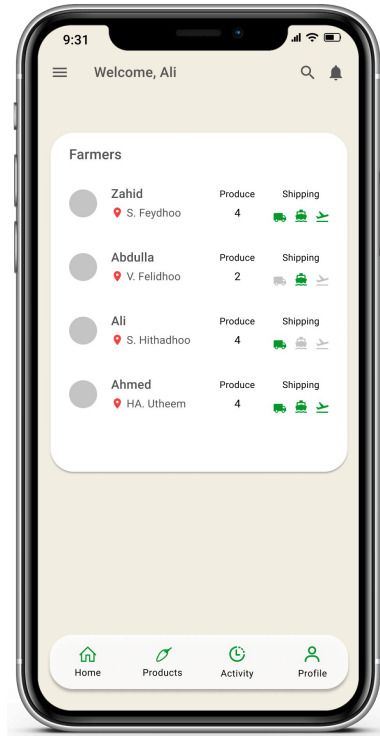
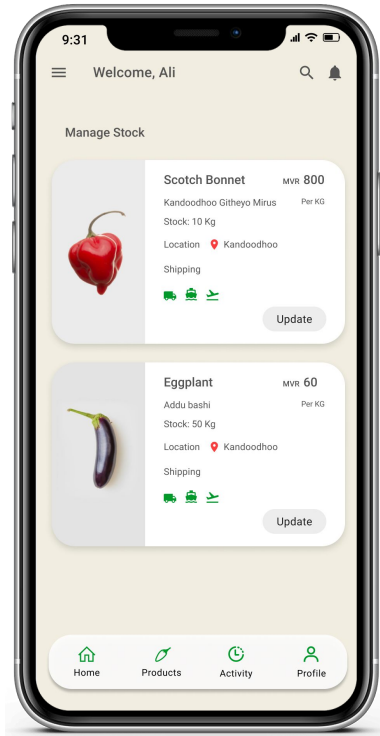
Before usability study



After usability study



Mockups

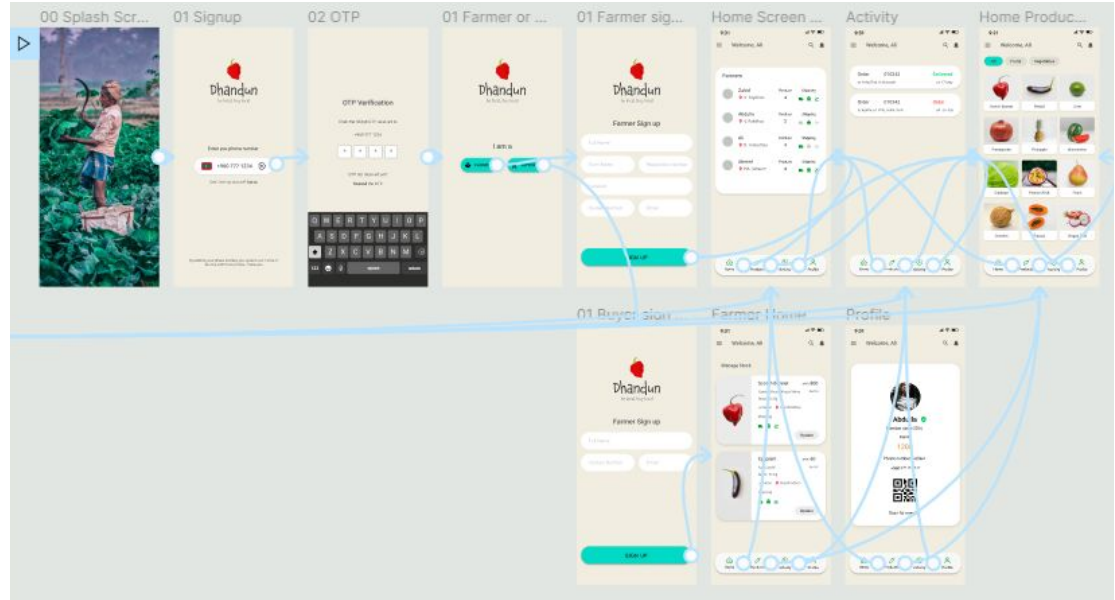


High-fidelity prototype

The Hi-Fi prototype adopted the same "Farmers connecting with buyers" user flow as the Hi-Fi prototype, but with design improvements based on the usability study's findings.

View Dhandun app

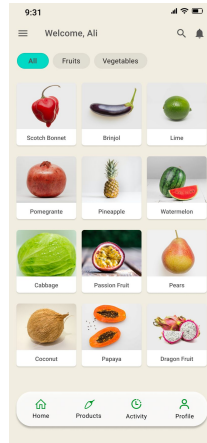
[High-fidelity prototype.](#)



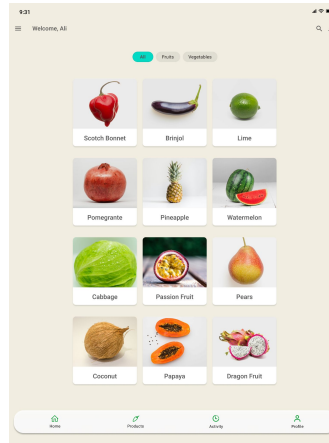
Responsive designs

The designs for screen size variation included mobile, tablet, and desktop. I optimized the designs to fit specific user needs of each device and screen size.

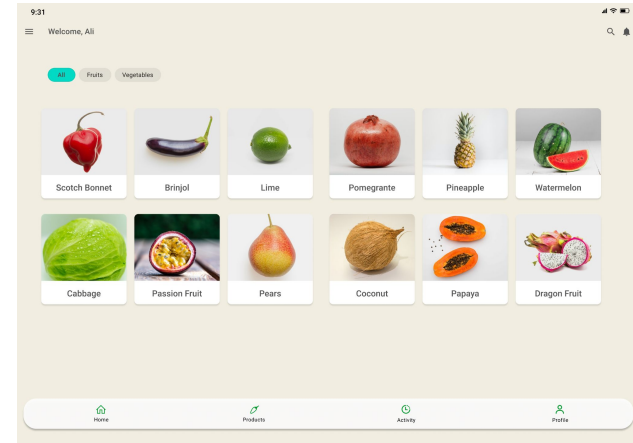
Mobile



Tablet



Desktop



Accessibility considerations

1

After doing a usability study, I added a categories selection to the Buyers home screen. This made sorting by fruits and veggies much easy.

2

For the farmers stock update, I've added shipping icons to make it easier for users to place orders.

3

I've made some changes. A stock update icon appears on the farmers' home screen, allowing them to easily manage their stock.

Going forward

- Takeaways
- Next steps

Takeaways



Impact:

The app gives the impression to users that the Dhandun app is genuinely concerned with meeting their needs.

One comment from a peer: "It's difficult for me to sell the vegetables since I have to deliver them to shop owners and find buyers from other islands by calling friends"



What I learned:

While designing the Dhandun app, I found that the initial app ideas are only the beginning of the process. Each iteration of the app's designs was inspired by usability studies and peer reviews.

Next steps

1

Conduct another round of usability studies to validate whether the pain points users experienced have been effectively addressed

2

Conduct more user research to determine any new areas of need.

3

Keeping up with design inspiration and technology in order to keep up with the latest trends and applications.

Let's connect!



Thank you for your time reviewing my work on the Dhandun app! If you'd like to see more or get in touch, my contact information is provided below.

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Thank you!