TOGETHER

Hunger's Heroes

AGAINST HUNGER

HUNGER'S HEROES

UX TEAM

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TOOLS

Figma
Miro
Visual Studio Code

Project Links

Mobile Prototype >

Desktop Prototype>

Project Folder>

Whiteboard>

Landingpage>

THE PROBLEM

- Food loss is a massive issue throughout Canada and the world
- Around 396 kg of food is wasted annually per capita
- Food waste in landfills is a significant source of Methane (a greenhouse gas 25 times stronger than carbon dioxide)
- Even though there are billions of tonnes of food waste there are still Canadian adults and children who don't have access to healthy food
- Around 1.4 million Canadian kids don't have access to healthy food
- Restaurants contribute to 9% of food waste in Canada

THE CAUSES

- **Main reasons for food waste in restaurants:**

  Pre-consumer losses in the kitchen result from:

  ❖ Food prepared but not served

  ❖ Surplus inventory of ingredients

  ❖ Inadequate Storage

  Post-consumer food losses:

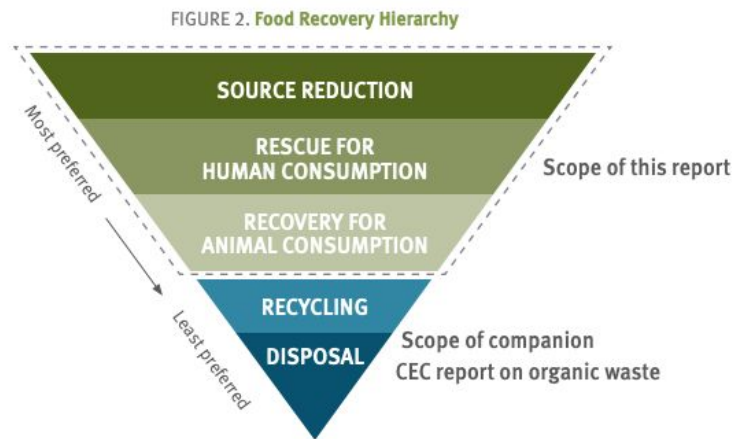 ❖ Uneaten food is returned to the kitchen and must be disposed

APPROACHES

- **There are several approaches to overcome food loss and food waste:**
- Source reduction: Actions to minimize generation of surplus food
- Rescue for Human Consumption: Actions to rescue safe nutritious surplus food for human consumption.
- Recycling: Recycle food for non-food related uses.
- Disposal: Landfilling, Open Dumping, Open Burning.

Food Recovery Hierarchy

The **food recovery hierarchy** (Figure 2) prioritizes the reduction, rescue and recovery of food over recycling and disposal. The scope of this study includes source reduction, rescue for human consumption and recovery for animal consumption.

FIGURE 2. **Food Recovery Hierarchy**

SOURCE REDUCTION

RESCUE FOR HUMAN CONSUMPTION

RECOVERY FOR ANIMAL CONSUMPTION

Scope of this report

RECYCLING

DISPOSAL

Scope of companion CEC report on organic waste

Most preferred

Least preferred

Source: Adapted from US EPA 2016a; MacRae et al. 2016; Papargyropoulou et al. 2014; Kelly 2014; WRAP 2013.

THE SOLUTION

Surplus food recovery and redistribution

Food recovery and redistribution is the process of obtaining surplus, edible food from across the supply chain and redistributing it to local food programs or commercial enterprises that can utilize this resource, maintaining the highest value of food - as nourishment for people.

PROPOSAL

We hope to develop an app for an organization that seeks to allow restaurants to donate surplus food to charities rather than let it go to waste.

User Research

SURVEY FORM

We did survey to learn how restaurants handle leftovers and understand users interest participating in initiatives to donate surplus food from restaurants.
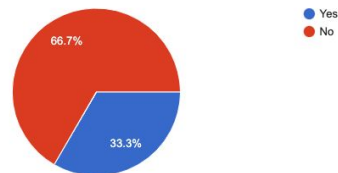
AFFINITY DIAGRAM

The survey results were turned into transcripts. From Transcripts they turned into sticky notes and sorted into categories.

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EMPATHY MAP

Empathy Map was the next step to gain a deeper insight into the user.

SAYS

- Financial benefit is not expected
- Not much awareness about any waste-related initiatives
- Dispose lefotvers daily
- Dont want to participate in food donations
- restaurants are not currently donating food waste
- doesn't want to pay for the app

THINKS

- Awareness about food donation has to be made
- Should come up with innovative methods of utilising disposed food.
- Restaurants should be made aware about the disadvantages of leftover food disposal to the planet earth.
- Not interested in donating leftovers

DOES

- Dispose lefotvers daily
- Composting leftovers
- Other method of disposing lefovers (dumping)

FEELS

- Food waste is a serious problem
- restaurants are neither satisfied or unsatified with the current ways they are handeling food waste.

PAIN

- need volunteers to donate the daily leftovers
- Not aware of methods to donate leftover food
- Dont want to participate in food donations
- mistakes made by chefs when preparing meals
- restaurants are unaware of any incentives to donate food waste
- Food waste in his area and lack of resources available to help feed those in need
- Unsure about health and safety regulations for ensuring quality

GAIN

- Utilizing Waste
- Helping Communities
- Helping Economy
- Helping Environment
- Feeding Hungry
- Find an efficient way to connect restaurants with excess food to food banks
- Good for public relations

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USER PERSONA

User Goals:

- Find an efficient way to connect his restaurant to food banks in his area
- Reduce Food waste in his restaurant

Pain Points (Limitations):

- Frustrated by the amount of food waste
- Lack of resources available to feed those in need
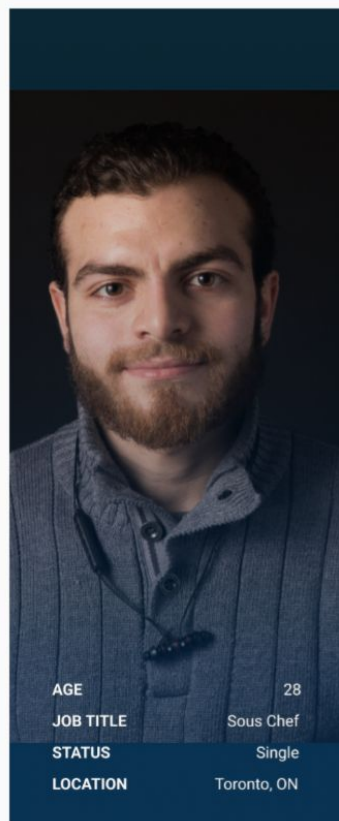
David

ABOUT

David grew up in a lower-income family and is passionate about cooking and helping those in need. He has volunteered with several local food banks in the past.

PAIN POINTS

- David struggles with finding enough time to research ways to donate excess food, and worries about the amount of food that goes to waste in his restaurant.
- David is frustrated by the amount of food waste that goes on in his area, and the lack of resources available to help feed those less fortunate. He also struggles with finding enough time to volunteer and help out at the food bank.
- Time-consuming process of finding the right food bank to donate to, concerns about food safety and quality

PREFERENCES

Cooking at Home

Takeout

Food Delivery Service

In Restaurant Dining

Hello Fresh

GOALS

- Find an efficient way to connect his restaurant with excess food to food banks in his area, in order to feed those who are in need.
- Reduce food waste in his restaurant and find ways to donate excess food to those in need
- Secure donation process with good customer service and clear communication about the donation process, reliable and secure payment options

AGE	28
JOB TITLE	Sous Chef
STATUS	Single
LOCATION	Toronto, ON

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Definition & Ideation

User Insight

David is frustrated by the amount of food wasted at his restaurant and lack of resources available to help those less fortunate.

From the survey results, we discovered that restaurants agree that food waste is a serious problem but unaware of any current initiatives to donate surplus food which is discarded daily.

Therefore, we believe that restaurants need help donating leftovers and that we might be able to help if we developed an app that helps restaurants collaborate with charitable organizations to help the distribute excess food.

Problem Statement

It is challenging for restaurants to deal with the amount of food waste accumulating daily. Not only only disposing is the problem, but it's also hard to connect with charitable organizations to donate excess food.

How might we design a product that will helps restaurants collaborate with charitable organizations to distribute excess food to feed those who are in need and eliminate the food waste.

Ideation

For the ideation, we used "I like, I wish, what If" method to generate ideas for new app design. Then, we voted on our favourite features to work on.

Feature Prioritization Matrix

After voting on our favourite features of the app, we used the prioritization matrix.

Here are some of the features we decided to work on:

- Organizing by Categories
- Adding ETA and Route Map
- Connecting restaurants to food banks
- Adding dietary preferences
- Adding Visuals of food

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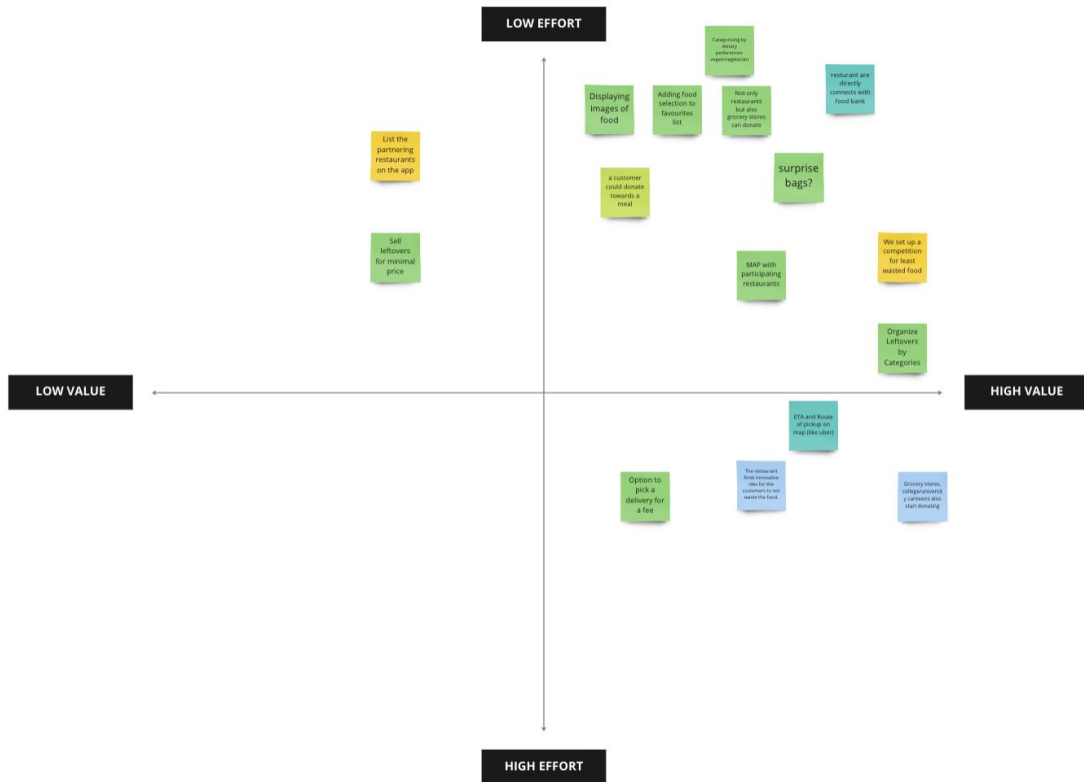
Value Proposition

Hunger's Heroes is an app that helps restaurants collaborate with a charitable organizations so they can distribute excess food to help feed those in need.

Storyboard

Our storyboard depicts our user persona, David who is upset by the amount of food waste at his restaurant and he decides to look for a way to make use of extra food and help those in need.

1

David is a chef in a local restaurant. He is upset by the amount of food waste they have to throw away daily. He decides to look for a way to make use of the extra food and help those in need.

2

One day, while he was browsing the internet, he found an app called "Hunger Heroes" that connects restaurants to food banks to donate their extra food. He was excited to find a solution to his problem and decided to download the app.

3

He downloaded the app and told his manager about it, and they decided to sign up and test it. After signing up, they received a confirmation email with instructions on how to use the app.

4

The next day, they tried the app and submitted their extra food as a donation. After a while, their donation was accepted by a food bank, and they could follow up the process on the app. They also received a notification that the food bank was sending a courier to pick up the food.

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Then, they received a notification that a courier from the food bank was on his way for pickup. They could see the car on the map and make the packages ready before the driver's arrival. When the driver arrived and picked up the packages, they felt happy that the food they usually had to throw away was going to feed those in need.

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After the successful donation, David and his manager decided to make it a regular practice. They also spread the word about the app to other restaurants in the area, so they could also benefit from it.

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User Scenario

To help us better understand our user and design a better solution we have created a user scenario.
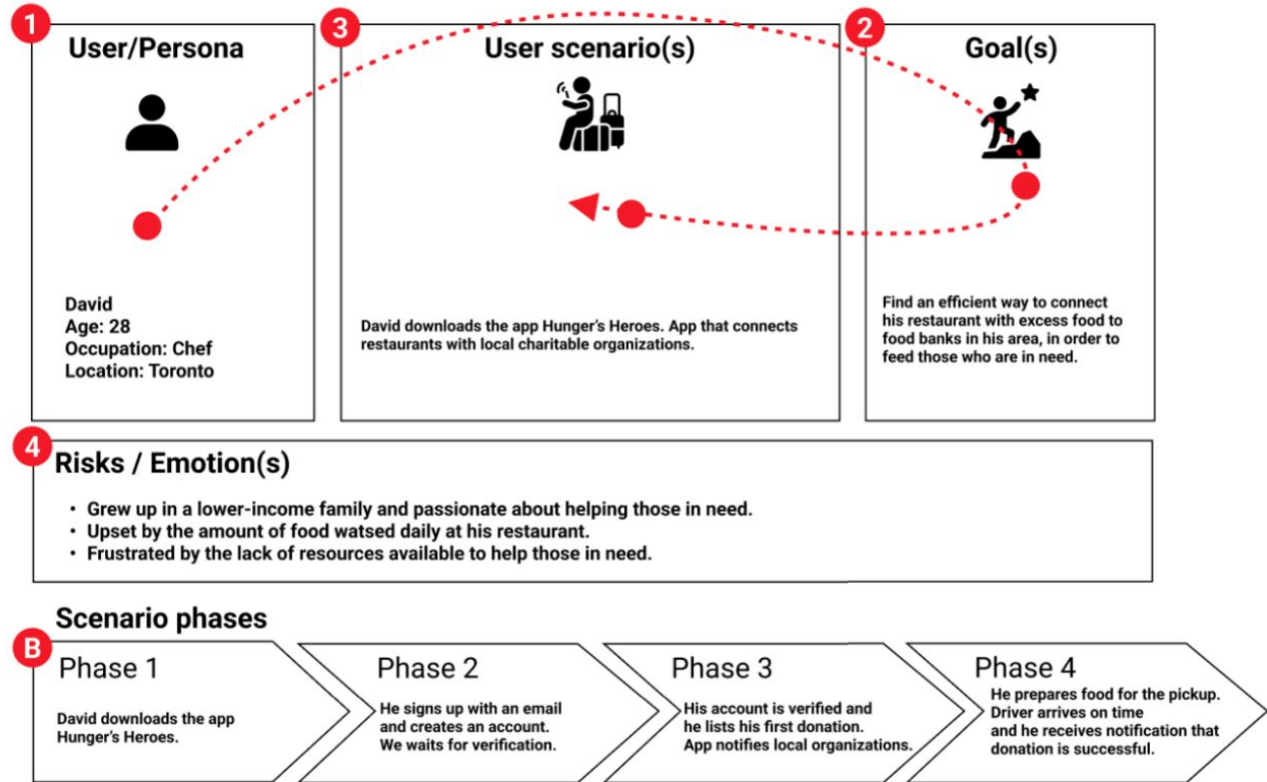
Prototyping

Competitor Analysis

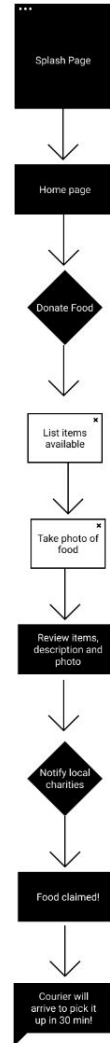**Secondharvest.ca**

Toogoodtogo.com

FoodbanksCanada.ca
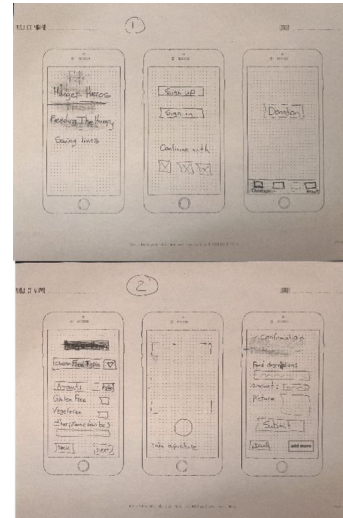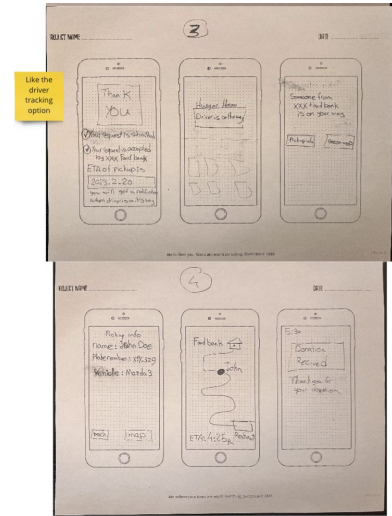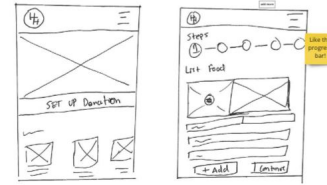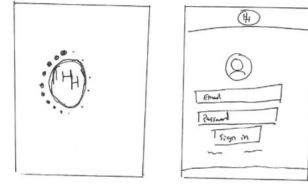
Dailybread.ca

User Flow

We created flow using Miro to illustrate how the user will navigate through the application:

1. Home Page
2. Donate Food
3. List surplus food
4. Take a photo of the food
5. Review items
6. Notify local nonprofits
7. Food claimed by foodbank
8. Courier arrival notification

Sketches

After creating user flow we drew
paper wireframes for each screen.

Digital Wireframes

After completing paper sketches we made low-fidelity wireframes in Figma.

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Moodboards

To help us define design elements for our app we have worked on a Mood Board and identified color palette and typography.

Hi-Fi Figma Prototype

Then we proceeded to create a hi-fi prototype using Figma.
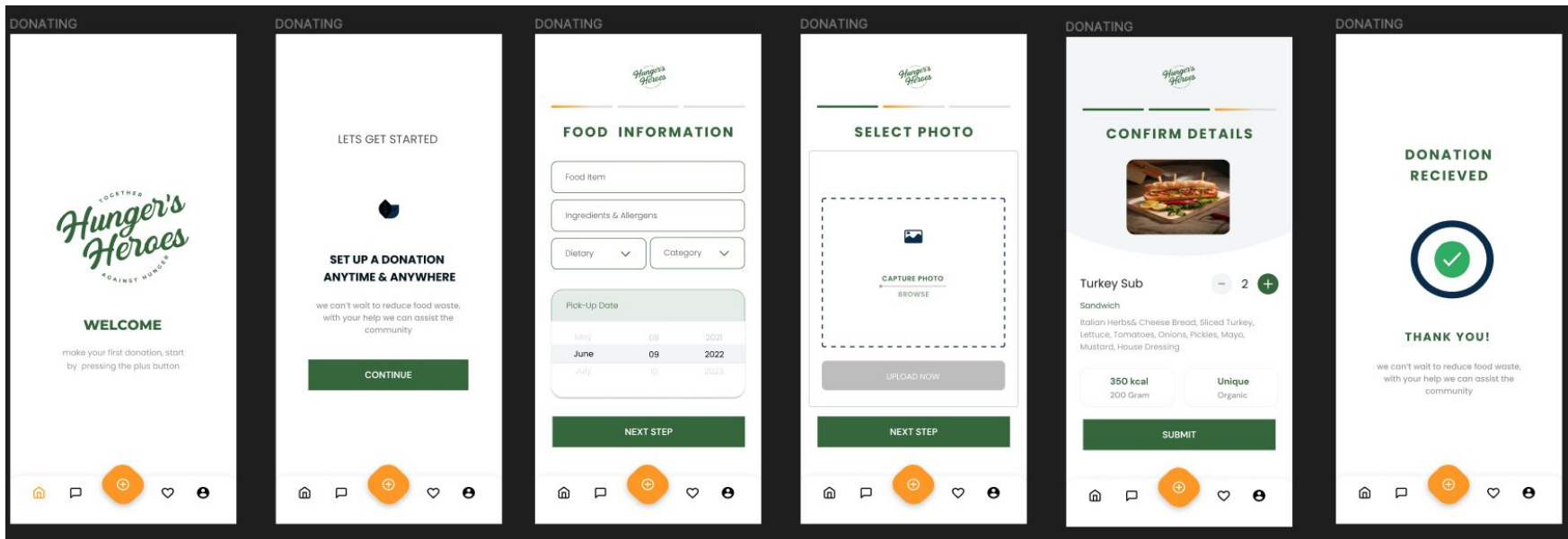
Testing and Iterating

User Testing Plan (Gerilla/Remote Moderate)

We started our testing by developing a user testing plan.

Objective

Understand pain points when users are using the application. Gain detailed user insight on the ways the app can be improved primarily the app layout, navigation, and aesthetics.

Target Users

The target users will be individuals ages 25-45, who live in a metropolitan area. They would ideally have previous experience using food service apps such as uber eats, as either a customer or a business.

Questions You Want to Be Answered

How could reduce user pain points and stress related to using the app?

How can we improve navigation for users?

What is the current application missing?

Recorded User Tests

We completed 6 user tests.

5 tasks for users to accomplish during test:

1. **On-boarding**
2. **Sign Up**
3. **Donating**
4. **Track Pick-Up**
5. **Checking Achievements**

Test results were turned into sticky notes and placed on prioritization matrix.

Key Learning from User Test

After completing user tests we found that:

1. **On-boarding was confusing for some users**
2. **Finding Sign Up link was hard**
3. **Navbar needed improvement**
4. **Unnecessary to upload images of the food**
5. **Home page is too plain. Need to add illustrations and interactions.**

Iterations Made Based on User Test

1. **Simplified onboarding screens.**
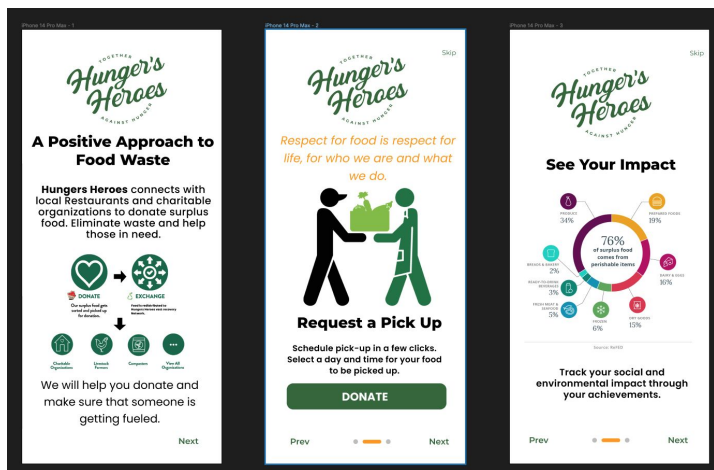
BEFORE USER TEST
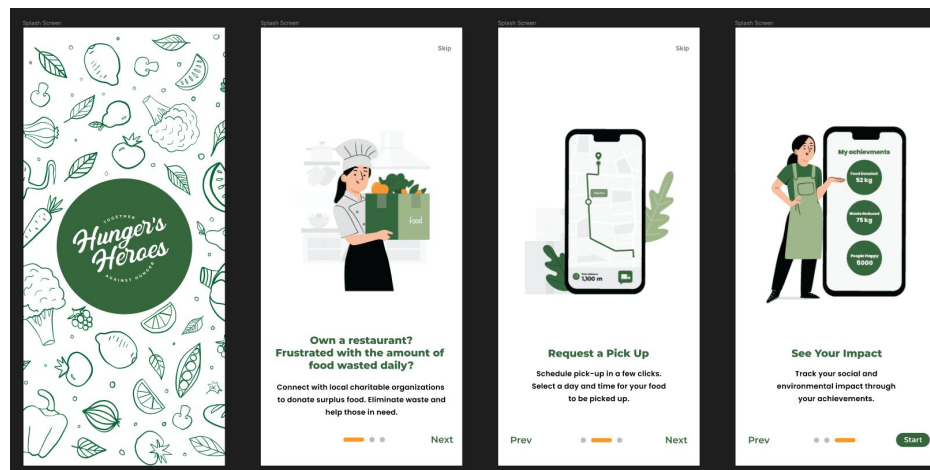
AFTER USER TEST

Iterations Made Based on User Test

2. Improved navigation bar icons and added labels
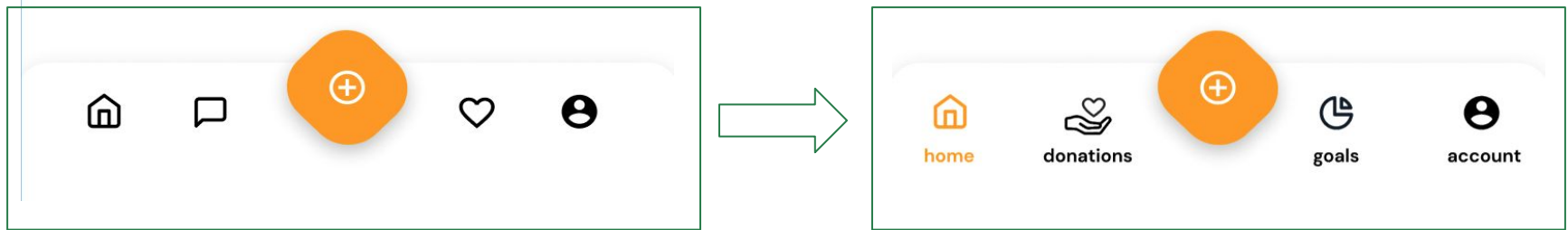
BEFORE USER TEST

AFTER USER TEST

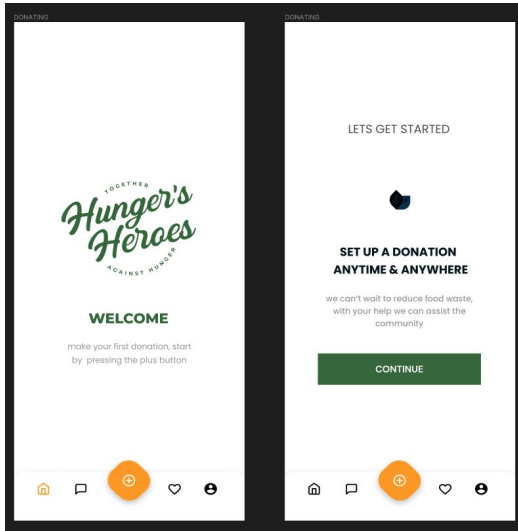# Iterations Made Based on User Test
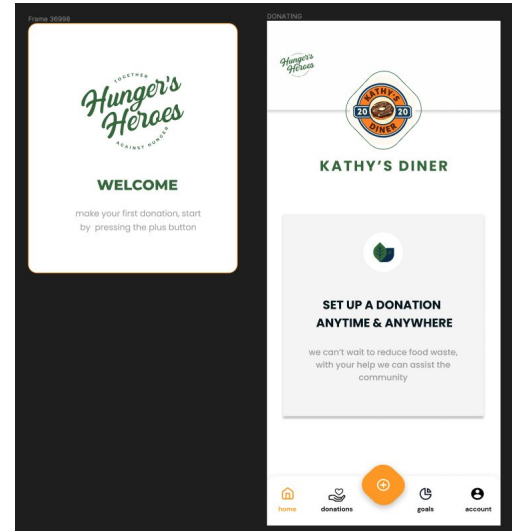
3. Removed upload image option.
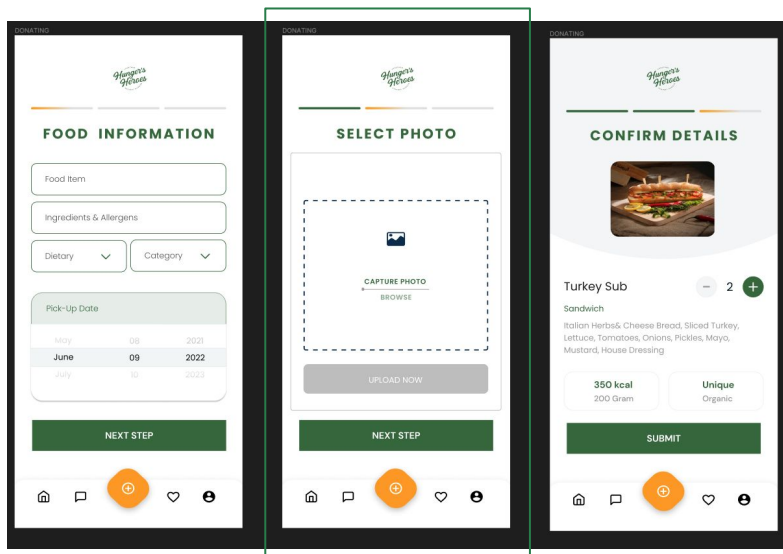
BEFORE USER TEST
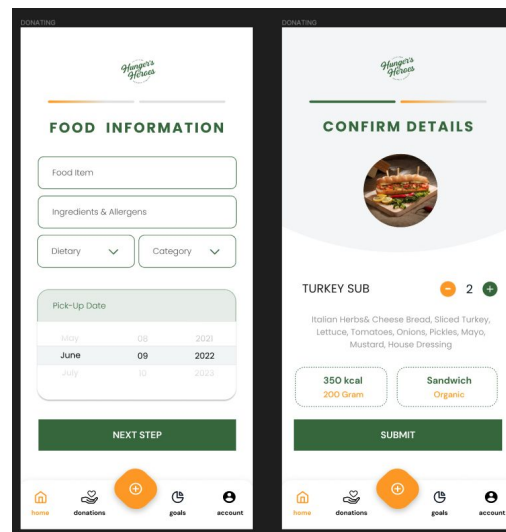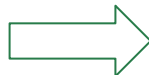
AFTER USER TEST

Iterations Made Based on User Test

4. Added illustrations and interactivity to the homepage.

BEFORE USER TEST

AFTER USER TEST

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iOS Prototype

ios prototype>>

ONBOARDING AND SIGN UP
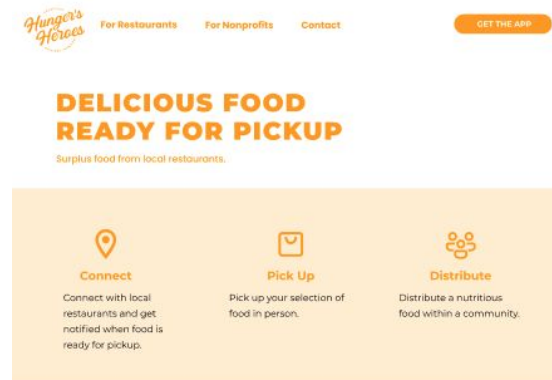
DONATING AND TRACKING

Introduction Website

Introduction Website

In addition to mobile prototype we have decided to develop introduction website to promote our application.

Figma Prototype

Each page explains how the app works for restaurant owners and nonprofits.

Visual Studio Code

The website was coded in visual studio code using:

- **Html**
- **Css**
- **Bootstrap 5.3**
- **JQuery**
- **Java script**

Future Iterations:

- **Creating an interface for the charity organizations**
- **Adding Account registration to the website.**
- **Adding support chat feature to the app and website.**
- **Adding other partners:** Farms, Grocery, Stores, Hotels, Manufacturers.
- **Adding option for financial support (monthly donations) on the app.**

Final Thoughts

Food loss and waste is not a new issue. With available guidance, and existing technologies to connect donors with recipients, donation of surplus food is one approach to making the best use of surplus food generated within a business or organization.

Thank You!