

Design for Social Innovation

Thesis 2023

Kexin Zhang
& Ziyuan Wang



LETTUCE: EAT TOGETHER

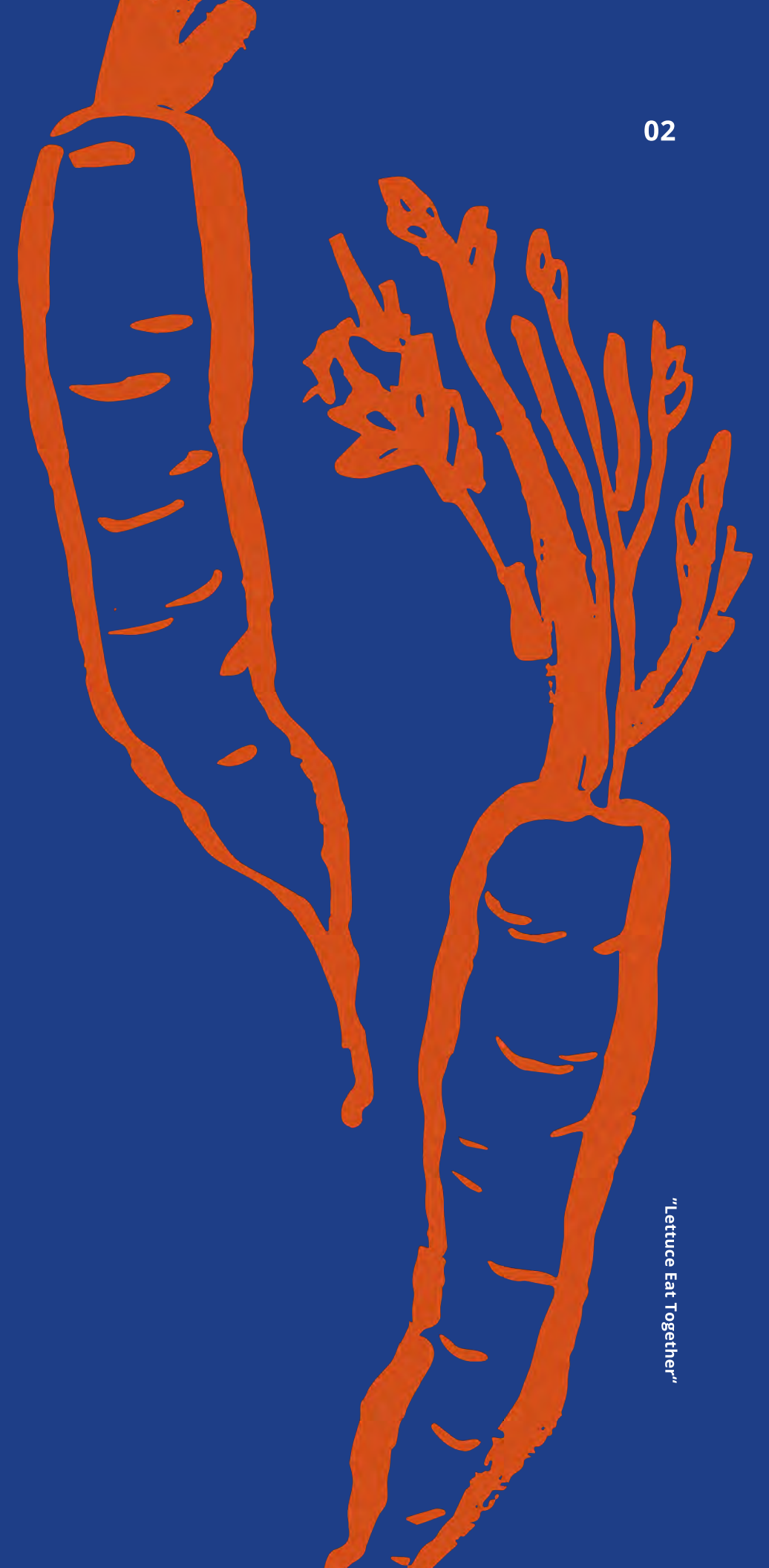
Community Dinners Against
Food Waste



**"Reducing Food Waste Is
Something That Each Of Us
Can Do, And It Can Start With
Small Changes In Our Own
Homes And Communities. "**

- Jose Andres

(World-Renowned Chef And Entrepreneur)



ABOUT US



Ziyuan (Jessie) Wang

Ziyuan is from Beijing, China. She received her bachelor's degree in visual communication design, multimedia network communication design program from Beijing University of Technology. For the past year she has worked as commercial designer and brand designer for internet and technology company. Ziyuan is passionate about art, UI/UX and service design. She intends to use her time at DSI to explore more areas of society, and use design to help more people in the future.



Kexin Zhang

Kexin is from Beijing, China, where she grew up. She has an undergraduate degree in digital media and arts, which helped her discover an interest in UX/UI design, video editing, and intelligent hardware. Kexin believes the value of design is solving social problems effectively, and improving life conditions while also progressing society. Specifically, she focuses on designing for people with disabilities and ways she benefit the public good through intelligent product design. To her, the hardest and most important step is finding valuable problems to solve between humans and society; once that is established, various methods may follow to solve it. Overall, Kexin wants to help those in need and make the world a better place, and hopes her individual efforts will contribute to a more ideal society.



CATALOGUE

01

Background

- 1 Glossary
- 2 Personal Story
- 3 Project Overview
- 4 Thesis Journey Map
- 5 Thesis Partner

02

Research

- 1 Social Issue
- 2 • History Of The Issue
- 3 • Impacts
- 4 • Key Players
- 5 • Statement Of Need
- 6 Thesis Research Plan
- 7 Primary Research
- 8 Workshop
- 9 Second Research
- 10 Target Audience
- 11 Ecosystem Map
- 12 Thesis Statement

03

Design

- 1 Prototyping & Testing
- 2 Summary Feedback
- 3 Insights
- 4 Workshops
- 5 Intervention

04

Impact

- 1 Environmental Impact Assessment
- 2 Metric And Evaluation Plan
- 3 Theory Of Change
- 4 Next Step
- 5 • Short Term
- 6 • Long Term
- 7 Reference

GLOSSARY

Carbon Footprint:

The amount of greenhouse gas emissions that are produced by human activities, such as transportation, energy use, and food production and consumption

Community Dinner Events:

Gatherings where members of a community come together to share a meal and engage in conversation and social activities

Composting:

Uneaten food that is discarded, either at home or at a commercial establishment, such as a restaurant or grocery store

Food Insecurity:

The lack of access to enough nutritious food to maintain a healthy and active life for all household members

Food Recovery:

he process of rescuing surplus food and redistributing it to those in need, such as food banks or homeless shelters

Food Redistribution:

The act of distributing surplus food to those in need through charitable organizations or other channels

Food Waste:

Uneaten food that is discarded, either at home or at a commercial establishment, such as a restaurant or grocery store

Food Rescue:

The act of collecting surplus food from various sources and redirecting it to those in need

Food System:

The complex network of activities, people, and resources involved in producing, distributing, and consuming food

Food Waste:

Uneaten food that is discarded, either at home or at a commercial establishment, such as a restaurant or grocery store

Host Community:

A group of individuals who volunteer to organize and host community dinner events in their neighborhoods or communities

Sustainability:

The practice of meeting the needs of the present without compromising the ability of future generations to meet their own needs

Surplus Food:

Food that is still safe to eat but would otherwise go to waste due to excess supply, short shelf life, or imperfect appearance

Food Recovery Coordinator:

A person who manages and coordinates food recovery efforts within an organization or community



01

BACKGROUND

PERSONAL STORY

Hailing from China, my family's history is deeply intertwined with the nation's past struggles, particularly the devastating Three-Year Famine that my grandparents endured. Throughout my upbringing, they continuously emphasized the value of food and the importance of not wasting it. However, upon moving to New York and beginning my journey towards independence, I found myself unintentionally wasting food, either by not finishing it or simply forgetting to consume it. This stark contrast between my actions and my grandparents' teachings filled me with guilt and a strong desire to change my ways.

——Ziyuan Wang

As a Chinese international student in the United States, I faced a number of challenges when I first arrived in New York City and began living on my own. One issue that stood out was my tendency to waste a significant amount of food. I took pride in cooking for myself every day, but often, I couldn't finish the meals I had prepared, leaving behind an abundance of leftovers. I longed to share my home-cooked dishes with friends, but having only recently arrived in the city, I had not yet had the chance to form many new friendships.

The guilt I felt over wasting food was further compounded by the high cost of living in New York. Not only was I contributing to an unsustainable practice, but I was also wasting hard-earned money. Determined to make a change, I began seeking out ways to connect with others who shared my passion for food and sustainability.

——Kexin Zhang



PROJECT OVERVIEW

Food waste has always been a serious global issue that has significant economic, social, and environmental implications. Approximately one-third of all food produced for human consumption is wasted each year, [1] which translates to 1.3 billion tons of food wasted globally. [2] In the United States alone, an estimated 30-40% of the food supply is wasted annually. [3] New York City is no exception to this problem. The city generates over 3 million tons of solid waste each year, and approximately one-third of that waste is food. Food waste in New York City not only has economic and environmental impacts, but it also affects social issues such as hunger and food insecurity.

Lettuce: Eat Together is a dinner series that aims to bring people together to reduce food waste. Participants can share their surplus food with others and organize dinner events in their community to cook and enjoy dishes made from leftover food. The events also include interactive games and educational activities that help participants learn about food waste and raise awareness about the issue. By monitoring changes in people's thoughts and behaviors before and after the events, this approach aims to promote a zero-waste community by raising people's awareness of food waste and encouraging them to take action to reduce it in their daily lives.



OBJECTIVE



- Increased awareness and knowledge of food waste issue
- let more people to pay attention on the food waste issue and be aware about it
- promoting sustainable consumption habits
- Increased trust in the community
- Reduced food waste at the individual or household level

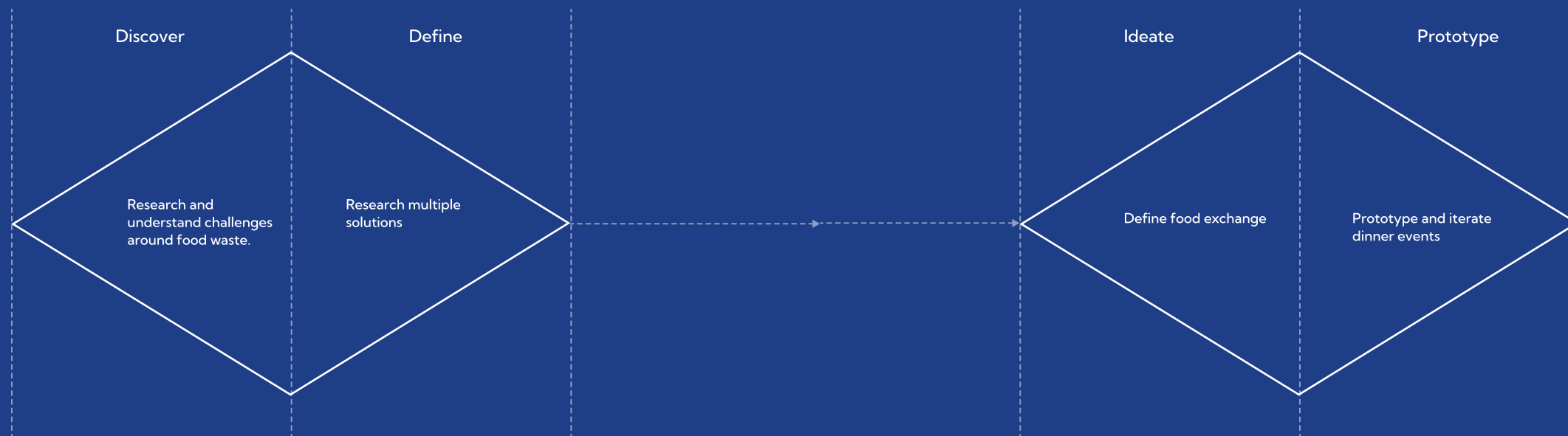


- Changes in attitudes and behaviors related to food waste
- A deeper understanding of the impact of food waste on the environment and society
- Participants develop new skills and perspectives related to sustainable consumption
- Inspire participants to take action in their personal or professional lives

Thesis Journey Map

Our thesis journey map outlines the comprehensive process we undertook to address the complex issue of food waste. We embarked on a journey that began with discovery, immersing ourselves in extensive research to gain a deep understanding of the challenges surrounding food waste. This knowledge laid the foundation for the next phase: defining multiple solutions that could potentially mitigate food waste.

Building on these ideas, we entered the ideation stage, honing in on the concept of a food exchange as a promising solution. To bring this concept to life, we moved into the prototype phase, creating and iterating dinner events that would serve as tangible representations of our vision. Through each step of this journey, we sought to develop a comprehensive approach that tackles food waste while fostering community engagement and sustainable practices.





02

RESEARCH

THE SOCIAL ISSUE

What is Food Waste?

According to the Food and Agriculture Organization of the United Nations (FAO), food waste refers to the "decrease in quantity or quality of food resulting from decisions and actions by retailers, food service providers, and consumers" [4]

Food Waste in New York City

Like other big cities, New York City has a serious food waste problem. According to the City of New York Department of Sanitation, approximately 1.3 million tons of food waste are generated each year. [5] Unfortunately, much of this food waste ends up in landfills

Why It Matters

- **Environmental Impact:**

Because only 10% of food waste generated by NYC each year diverted from landfills through composting or other means.[6] This suggests that there is a significant amount of food waste that is contributing to greenhouse gas emissions in the city.

- **Economic Impact:**

According to a report by the NYC Department of Sanitation, the cost of disposing of food waste in landfills was estimated to be \$200 million annually. [7] The cost of food waste extends beyond just the cost of purchasing the food. It also includes the cost of disposal, transportation, and other related expenses.

- **Food Insecurity:**

According to a 2018 report by the Food Bank for New York City, 1.2 million New Yorkers are food insecure, meaning they lack access to enough nutritious food to meet their basic needs. [8]



More Action is Needed

New York City passed a law in 2013 to require large food waste generators to recycle their organic waste. They also launched programs to encourage composting and food donation, including a curbside collection program for compostable food waste.

Despite these efforts, much work still needs to be done to reduce food waste in the city. A 2017 report by the National Resources Defense Council found that only 10% of the city's food waste was being diverted from landfills through composting or other means. [9] This suggests that more education and outreach efforts are needed to encourage residents and businesses to take action to reduce food waste.

Where we should take more action?

- **At an Individual Level**

Let us envision a pyramid that represents the different aspects of user analysis in reducing food waste. At the base of the pyramid, which is the largest part, lies people's awareness. This foundation is crucial, as it is the starting point for any change in behavior. Moving up to the next level, we find people's attention or focus on the issue. Once individuals have developed an awareness of the need to reduce food waste, they can begin to actively pay attention to the problem.

Further up the pyramid, we reach the level of action. It is at this stage that people start to implement measures to address food waste after they have acknowledged and focused on the issue. Finally, at the very top of the pyramid, we see environmental change. As more and more people adopt actions to reduce food waste, a positive shift in the environment can be achieved. The pyramid thus illustrates the progression from awareness to action and ultimately to environmental, economic related issues and impact in the context of user analysis for reducing food waste.

Food waste can occur at any stage of the food supply chain, from production and processing to distribution, retail, and consumption. It can be caused by a variety of factors, including overproduction, spoilage, expiration, improper storage, and consumer behavior.

Which Foods Tend to Be Surplus?

Over 75% of excess food originates from perishable items, encompassing fruits and vegetables, meats, freshly prepared deli products, seafood, milk and dairy, as well as some grain-based products like bread and baked goods. Perishable items are often discarded due to their rapid spoilage. On the other hand, non-perishable foods, such as pasta, canned goods, and highly processed, shelf-stable products, are generally wasted less frequently because they have a longer shelf life. More than one-third of overall food waste is made up of fruits and vegetables. In contrast, seafood and meats, being the priciest food categories, are the least wasted among all food types. [12]

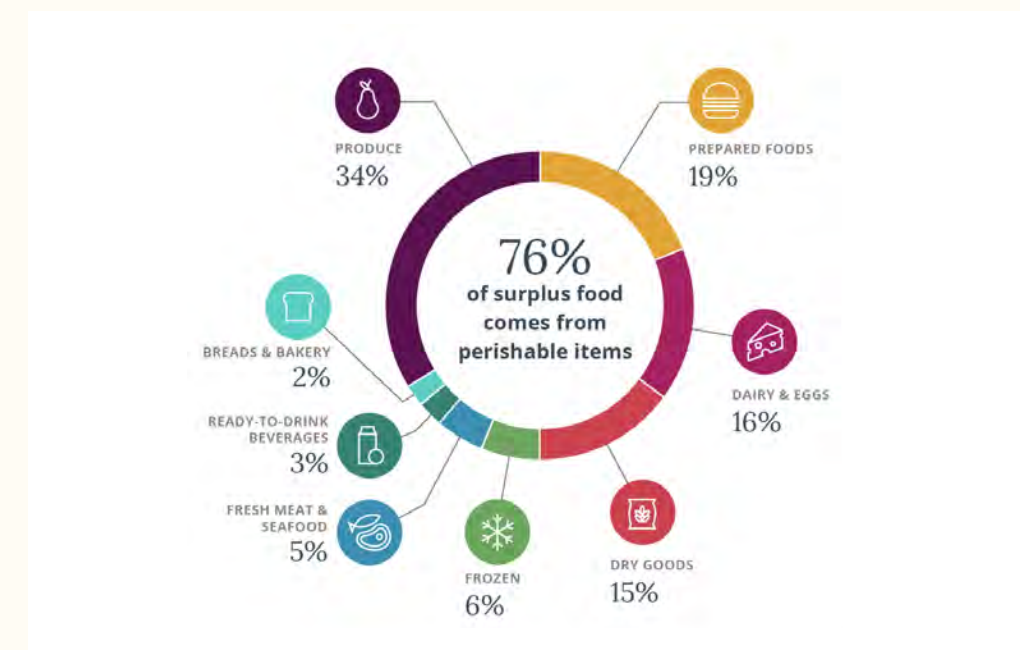


Photo from: <https://refed.org>

TARGET AUDIENCE

Young Adults in New York City

Our target audience is young adults in New York City, ranging from age 18-24 years old.

Characteristics of Young Adults

- **Waste More**

A study published in the journal Sustainability found that young adults in urban areas are more likely to waste food than other age groups, and identified engaging this demographic in food waste reduction efforts as a critical strategy for achieving sustainable food systems in urban areas [10]

- **More Malleable**

young adults in urban areas are more likely to engage in sustainable consumption behaviors, such as reducing food waste, than other age groups [11]

- **Higher attention**

young adults as a key demographic to engage in food waste reduction efforts in NYC, noting that this demographic is more likely to be concerned about environmental sustainability and social justice issues



RESEARCH

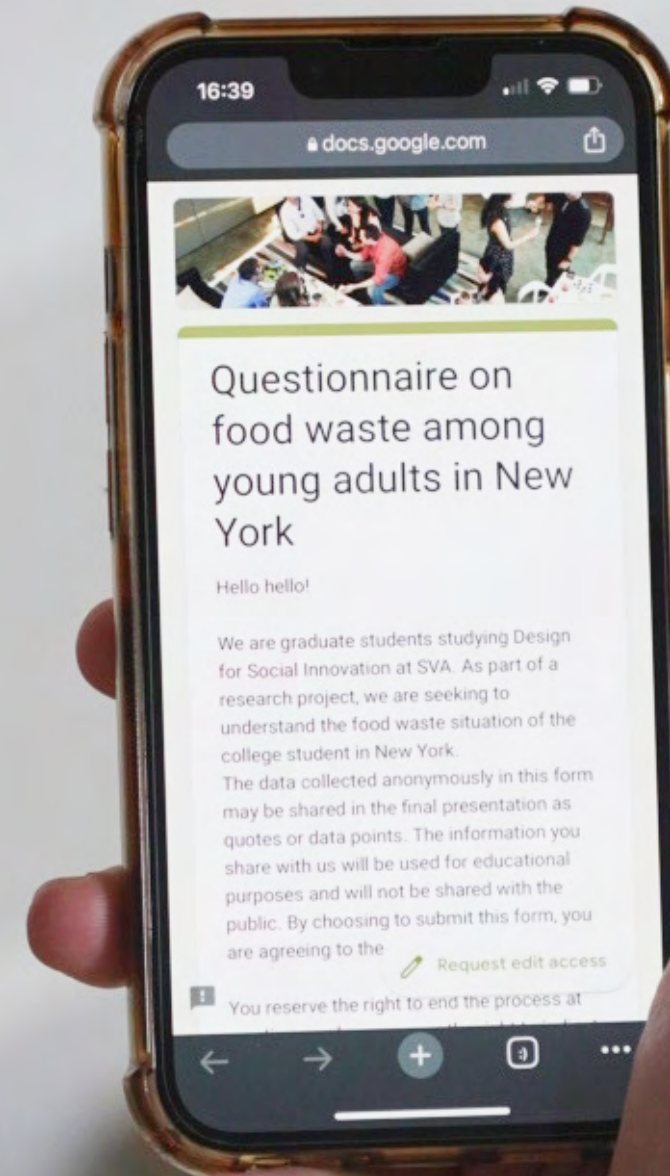
Survey with young adults

To gain a better understanding of young adults' perspectives on food waste and specific details regarding their food waste behaviors, we reached out to 17 young adults living in New York City and conducted a detailed 14-question survey

The survey participants were between the ages of 18-24 and were college students living in New York City. They came from various parts of the world and did not have access to a cafeteria in their school

from the survey we know that:

- Young people tend to buy more food than they need.
- Many foods end up rotting in the fridge due to busy lifestyles and lack of knowledge on how to cook them.
- Young people are aware of the effects of food waste but haven't taken action.
- Young people lack of food preservation skills and cooking skills.
- We need to find more accessible resources and solutions that help them to take on this positive change.
- We need to seek more ways to let young people feel motivated to reduce food waste.
- Need to provide more education and information about foods preservation and cooking.
- Develop more encouraging activities and interactions, that can encourage young people to better participate in food waste reduction activities

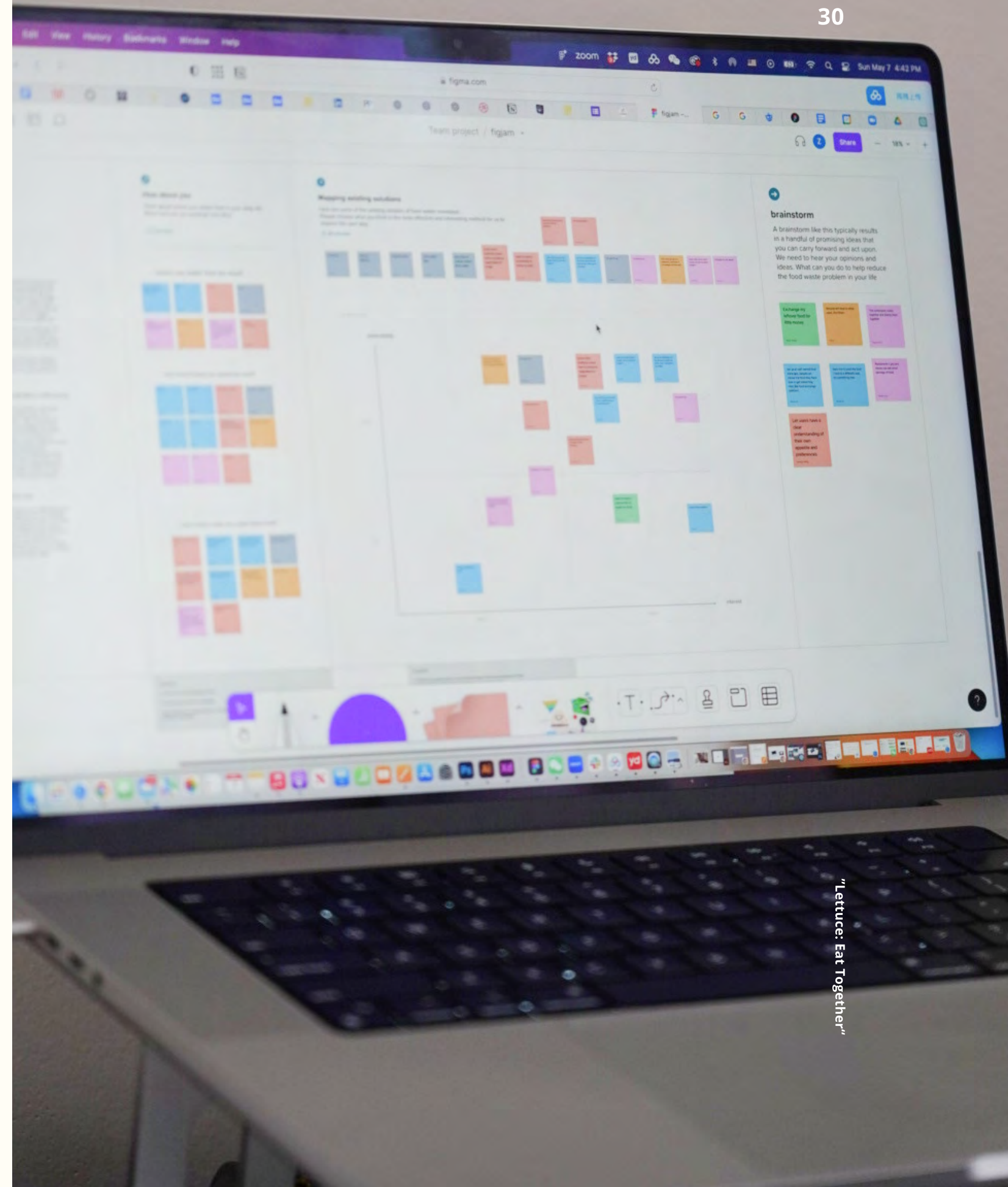


Workshop

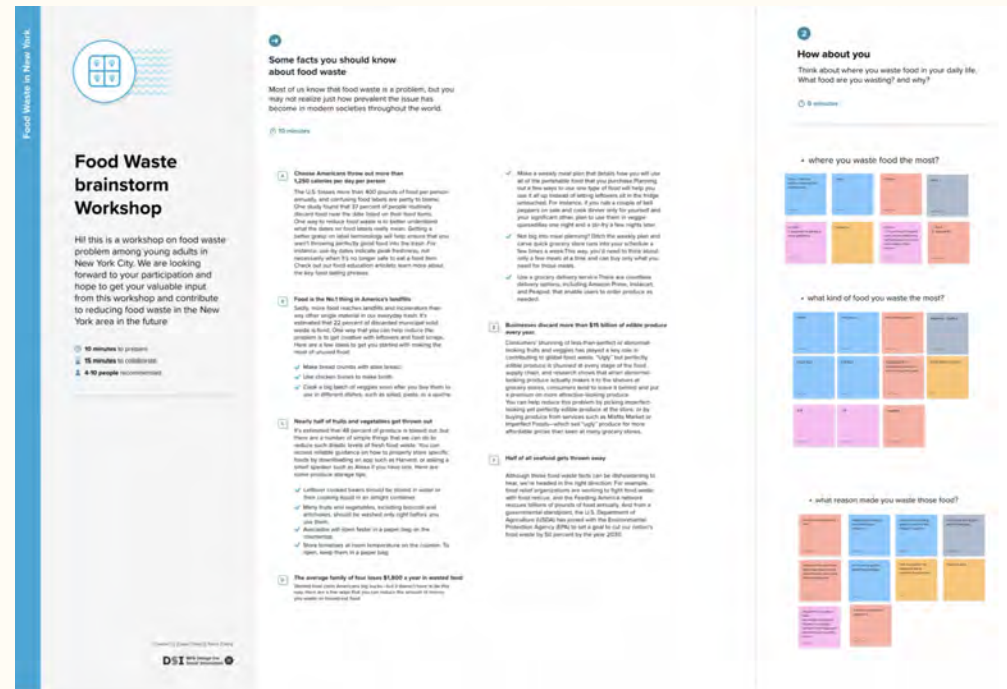
Workshop with young adults

In order to better understand young adults' views on food waste, we contacted seven young adults living in New York for an online workshop.

We recently conducted a workshop with the participation of seven young individuals, aiming to gain a deeper understanding of their awareness of food waste and the strategies they employ to minimize it. The workshop was structured into four sections, allowing us to thoroughly examine the participants' perspectives and actions regarding food waste.



Workshop



In the first section, we presented an overview of the magnitude and impact of food waste in New York City. This provided the participants with valuable context and set the stage for further discussion. Next, we encouraged the participants to share their experiences by identifying the food items they waste most frequently, the situations in which they tend to waste the most food, and their thoughts on the underlying causes of this waste.

In the third section, we asked the participants to plot the food waste reduction methods they were aware of and those they had personally employed on a graph with two axes: Interest and Actionability. This exercise enabled us to gain a deeper understanding of the participants' knowledge and the steps they had taken to combat food waste in their lives.

Finally, we concluded the workshop with a brainstorming session, during which the participants were asked to propose the most feasible solutions they could think of to address the issue of food waste. This collaborative exercise not only fostered creativity but also provided valuable insights into the participants' priorities and their willingness to take action in support of a more sustainable future.

Overall, the workshop offered an informative and engaging platform for exploring the complex issue of food waste from the perspective of young individuals, allowing us to better understand their experiences, concerns, and potential solutions to this pressing environmental challenge.

Workshop

Following a thorough user analysis of our workshop, we have arrived at some valuable conclusions. It became evident that the young participants exhibited a strong interest in, and considered it highly feasible to, reduce food waste through the sharing of food. This method of combating food waste resonated with them on both a practical and emotional level, emphasizing the importance of fostering community connections while addressing environmental concerns.

By engaging in the food-sharing process, the participants not only found a sustainable way to minimize waste, but also identified opportunities to create meaningful relationships with others who share similar values and interests. This approach to food waste reduction aligns with the participants' desire for social interaction and collaboration while simultaneously promoting environmental responsibility.

In summary, our workshop shed light on the potential of food sharing as an appealing and actionable solution for young individuals seeking to reduce food waste. The insights gained from this user analysis can help inform the development of future strategies and initiatives, driving positive change in both our communities and the environment.

INSIGHTS & OPPORTUNITIES

Finding: Despite being aware of the significant problem of food waste, few young people take action to address it.

Insight: Improve the accessibility to motivate young people to take action to reduce food waste.

Narrow the gap between knowledge and action

Despite being aware of the significant problem of food waste, many young people do not take action to address it. This suggests that there may be a gap between knowledge and action, and its associated environmental and social impacts.

However, by designing activities that are enjoyable, interactive, and relevant to the daily lives of young people, it is possible to better motivate them to take action in reducing food waste. For example, interactive cooking classes that emphasize creative ways to use leftover ingredients or community composting programs that allow young people to see the impact of their efforts can be effective in promoting behavior change. By making activities fun and interactive, young people are more likely to engage in them and feel a sense of ownership over their actions.

In addition, by making the issue of food waste relevant to the daily lives of young people, we can increase the likelihood that they will take action to reduce waste. For instance, emphasizing the financial benefits of reducing food waste, such as saving money on groceries, can be an effective motivator for young people who are budget-conscious. Furthermore, framing food waste in the context of environmental sustainability and social justice can also be an effective strategy for inspiring young people who are passionate about these issues.

finding: Young people have not been sufficiently motivated to take action in reducing food waste.

Insight: Designing activities that are enjoyable, interactive, and relevant to the daily lives of young people, it is possible to better motivate them to take action in reducing food waste.

Improve accessibility and motivation

Young people have not been sufficiently motivated to take action in reducing food waste highlights the need for more accessible resources and solutions that can empower them to make a positive change.

Improving the accessibility of these resources and solutions can help to remove barriers that may prevent young people from taking action. For instance, providing easy-to-follow guides and tips on reducing food waste can help young people to adopt sustainable practices in their daily lives. This could include information on meal planning, food storage, and composting, as well as strategies for reducing food waste when dining out or shopping for groceries. In addition to providing access to information and resources, it is also important to create opportunities for young people to get involved in community efforts to reduce food waste. This could include volunteering at local food banks or community gardens, or participating in programs that encourage food recovery and redistribution. By providing these opportunities, young people can see the impact of their efforts and feel a sense of ownership over their actions.

SUMMARY

Based on our surveys and interviews, we learned that young people have a tendency to purchase more food than they actually need. As a result of busy lifestyles and a lack of knowledge on how to cook certain foods, a significant amount of purchased food ends up spoiling in the fridge. Although Young people are aware of the effects of food waste, they've struggled to take action

building on the insights and formal research, we also identified some key challenges of young people to reduce food waste, which are young people lack of food preservation skills and cooking skills, they have difficulty finding more accessible resources and solutions that help them to take on this positive change, and young people really seek more ways to feel motivated to reduce food waste

In addition to all of this our research helped us gather ideas and learn more about what can motivate young people to mitigate food waste. Participants suggested more education and information about food preservation and cooking, and Develop more engaging activities and interactions that can encourage young people to better participate in food reduction activities

PARTNERSHIP



To help guide our work, we partnered with Christina Chen, founder of FoodiePath, an innovative platform that seeks to understand food waste deeply. She allowed us to test some of our ideas through the FoodiePath platform as well as provided expert guidance as we tested out other ideas to help shape our final intervention.

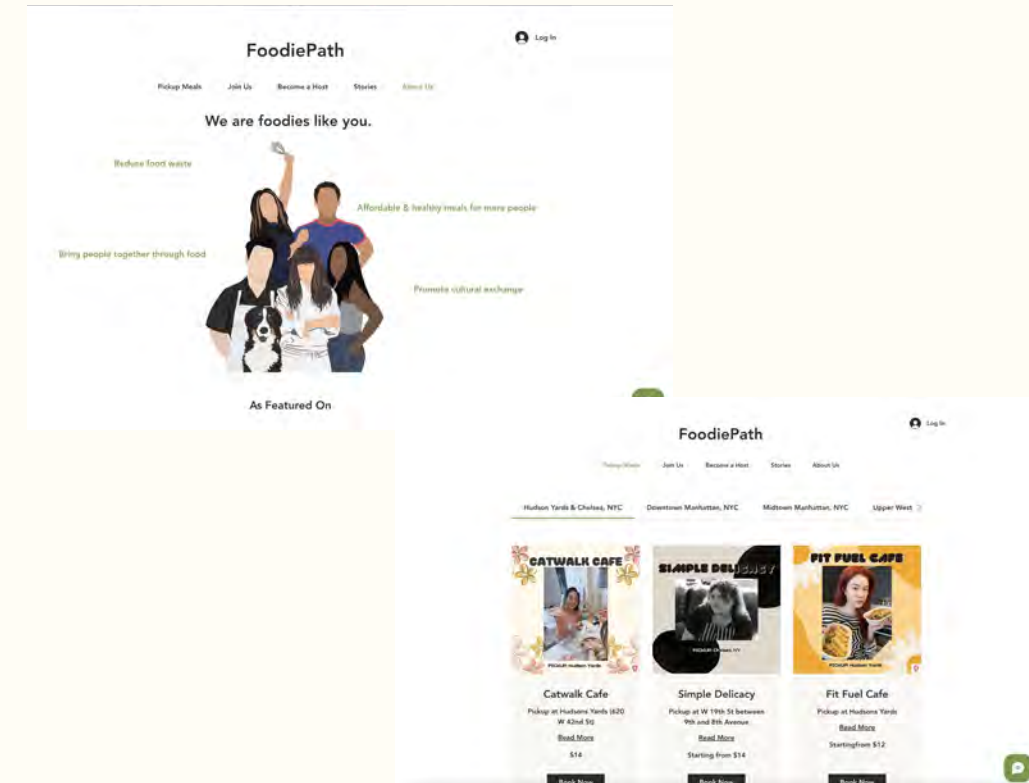
“Thanksgiving has been one of my favorite holidays since 2014, when I came to the States by myself for high school. As many international students, the first few months were full of homesickness and loneliness. However, I was very lucky to be invited to a local friend’s Thanksgiving dinner. During that dinner, I found comfort and belongingness by cooking together, eating together, and sharing culture through food. — **Christina Chen**”

From that point, food becomes the bridge between her and other people. Communication through food is open, friendly, and inclusive, which she believes is one of the best ways to know about the world and people next to her. She began to host lunch and dinner parties at her apartment when she was in college, and invited not only friends, but also strangers to her dining table. This is the embryonic form of FoodiePath.

In our conversation with Christina Chen, we learned that she is a young food enthusiast who currently lives alone in Manhattan, New York. Every day, she enjoys cooking her own meals. Gradually, she discovered a problem: she was wasting food. Due to living alone, she couldn't finish all the dishes she prepared. This realization sparked an idea in her mind; she hoped to find a way to share her meals with others who might need them.

FoodiePath

FoodiePath is an innovative food-sharing community platform that connects passionate home cooks with those seeking delicious and affordable meal options. By offering their home-cooked dishes at cost price, these culinary enthusiasts create a diverse menu that allows buyers to select meals based on their preferences and location. FoodiePath serves as a convenient and accessible solution for people who don't have the time or desire to cook, while also fostering a sustainable approach to dining by minimizing food waste. The platform cultivates a sense of connection within the community and encourages the sharing of culinary talents, enabling everyone to enjoy diverse and delectable dishes.



Core Issue

How might we narrow the gap between young people's knowledge and action to improve access and increase motivation to take action to reduce food waste?



03

DESIGN

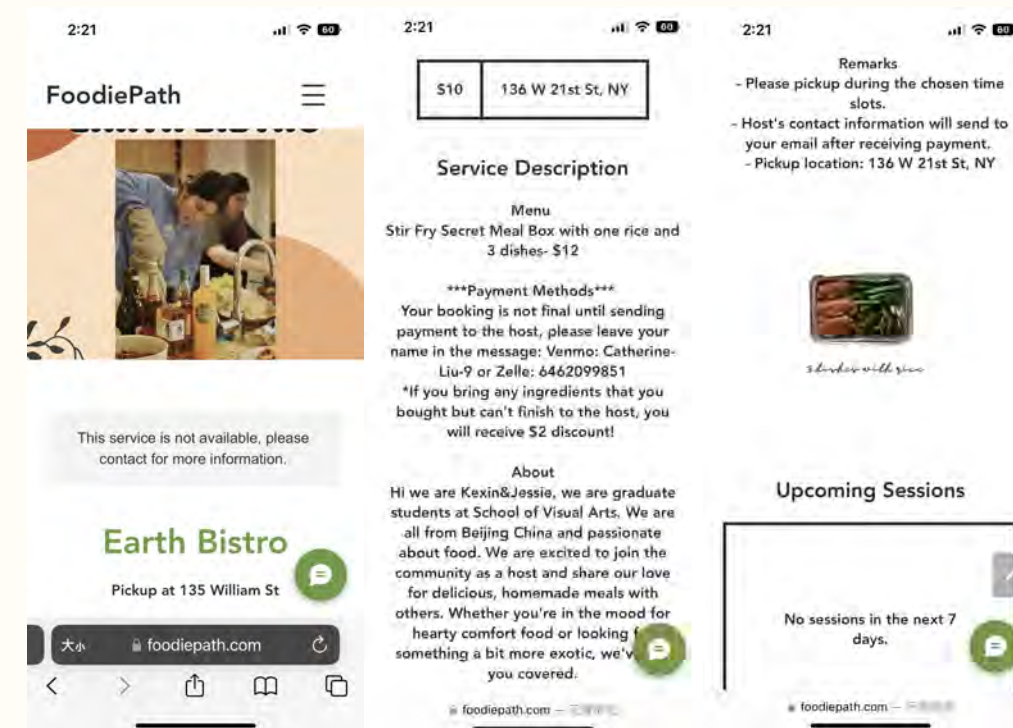
Prototyping

Overview

Based on our early research we decided to start prototyping our idea: collect people's surplus food and make a meal out of the surplus, which we believe is the most effective method of addressing food waste among young people in New York. Following this, we embarked on the prototyping phase. In order to design a food exchange process that is not only appealing to young adults but also promotes long-term adoption, we underwent three rounds of prototyping. After each prototype, we analyzed the problems, iterated our solutions, and ultimately designed a comprehensive surplus food exchange process that we have named "Community Dinner Series."

In this section, we will share descriptions of each of our three prototypes as well as the process of each prototype and our insights and learnings.

Prototype I: Earth Bistro



What we did

On February 1st and 7th, 2023, we conducted the first prototype test in our partner organization, Foodiepath. As hosts on Foodiepath, we integrated a surplus food exchange step into their existing process. When guests picked up their meal boxes, they were given the option to bring their surplus food items to us, which would then be utilized as raw materials for our subsequent hosting sessions. To encourage guests to bring their excess food, we offered a \$2 discount on their meal box purchases.

On February 1st, we collected various food ingredients from our guests. Later, on February 7th, we combined these ingredients with the fresh produce we purchased and prepared meal boxes for sale to guests who bought meal boxes on that day.

Learnings

Through the first prototype test, we discovered that young people were very willing to participate in this new activity, as many guests brought their surplus food. The majority of the food items were vegetables, with a small amount of meat and fruits also being contributed.

On 7th, most guests asked us the same question: "Is my meal box made from someone else's surplus food, and can you assure me that these ingredients are fresh and safe to eat?" From this feedback, we realized that because guests did not know each other, they expressed concerns about the food brought by others.

Insights

- People tend to question the food safety of surplus ingredients brought by strangers.
- Without seeing the unprocessed ingredients, they instinctively assume that this surplus food is not fresh.
- Young people are intrigued by the novelty of the food exchange event and are eager to participate in this innovative activity.

Prototype II: Dinner With friends VI

What we did

We iterated off our first prototype and decided to test ideas outside the FoodiePath platform on our own. We realized from the first prototype that mutual trust is very important. For this second food exchange event, and in order to eliminate people's mistrust, we invited our friends to participate. To ensure the event would run smoothly, we planned it as a barbecue dinner party in advance. Participants brought their surplus food, and everyone prepared dinner together, engaging in the barbecue activity.

Participants brought various surplus food items, and to prevent any unforeseen situation (such as not having enough food), we purchased some meat from the market in advance. Since all the participants were friends, the atmosphere during the event was harmonious. We sorted the food brought by participants, washing the vegetables and grilling them directly, while the meat was marinated before being grilled for consumption.



"Lettuce: Eat Together"



Participants worked together with us to prepare the barbecue ingredients, discarding any spoiled or inedible food. Based on mutual trust and collaborative preparation, no one questioned the food's safety during dinner. Throughout the event, we discussed food waste issues around us, also exchanged methods on how to avoid food waste. We all learned great methods, for example, tomatoes are cleaned and put in a fresh bag and then put in the freezer, using this method tomatoes can be stored for a very long time. Also the event proceeded smoothly.

"Lettuce: Eat Together"

Learnings & Insights

Since all the participants were friends with us, there was a mutual trust that eliminated concerns about food safety. The dinner atmosphere was pleasant, and we discussed various food waste issues and solutions during the meal. Additionally, we exchanged cooking tips and insights on preserving leftover food, enabling all of us to learn a great deal from each other.

- Discussions during dinner can significantly impact people's perspectives on food waste, making it essential to include engaging games or activities with educational value.
- Mutual trust among friends and the collaborative cooking experience alleviate concerns about food safety.
- Tracking changes in behavior and mindset after implementing such dinner activities is crucial.
- To broaden the reach of the event, we should involve some unfamiliar faces while still considering trust issues. A suitable approach would be to invite friends of friends – individuals who may not know everyone else. This strategy can help maintain a degree of trust while effectively expanding the participant pool.



Prototype III: Dinner With friends V2

What we did

Based on the feedback from the previous two prototype tests, we conducted the third prototype iteration. "Before executing this event, we designed a detailed Dinner Events Procedure. Since we had new participants from extended networks, we began by providing a brief introduction of the purpose and process of the dinner, welcoming and thanking all participants. Next, participants brought out their surplus food that they had brought along, and everyone discussed together what dishes to prepare, then collaboratively prepared the meal.

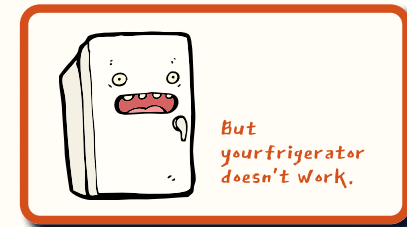
As everyone was almost finished with their dinner, we presented activity cards, inviting everyone to engage in some mini-games about reducing food waste. Subsequently, we prepared a small educational lecture on food waste reduction for the participants, where we shared tips on extending the shelf life of food. The participants then engaged in a fruitful discussion, fostering a harmonious atmosphere. We exchanged many useful tips on food preservation with one another.

As the dinner event neared its conclusion, we encouraged participants to use our behavior tracking booklet to set their own goals for reducing food waste. We asked them to take the booklet home and complete it, allowing them to track changes in their thoughts and behaviors. At the same time, we also encouraged participants to share their changes in thoughts and behaviors with us, without violating privacy concerns.





Food cards: Show the name and type of food, e.g. broccoli.



Action cards: Show what the player needs to do: e.g. extend food shelf life.



Event cards: Show something unexpected, e.g. the fridge is broken and unusable.

Learnings & Insights

The third prototype test went very smoothly, with participants exchanging many food preservation and cooking tips and tricks during the event. The games and lectures also proceeded without a hitch. Moving forward, we will continue to update the mini-games and related educational lectures. Additionally, we found that most of the current participants are friends around us. We need to do some promotion to let more people know about our activities. In each subsequent dinner event, we will invite some new participants to join, thereby expanding our reach and letting more and more people know about our activities. By participating in our events, we aim to make a positive impact on their behavior, ultimately reducing food waste.

Each player draws 3 cards from the food card pile, one from each category: food, action and event cards.

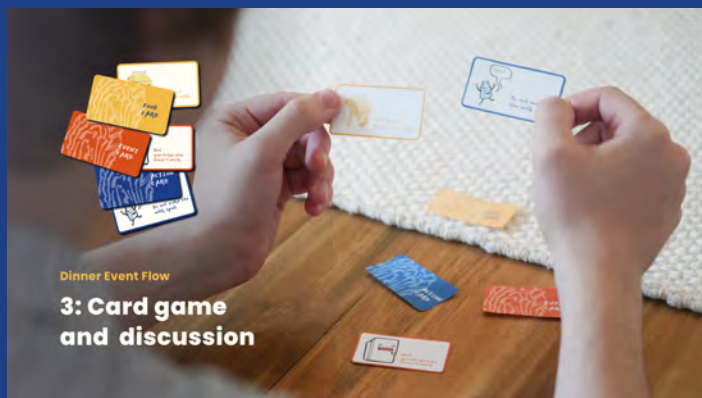
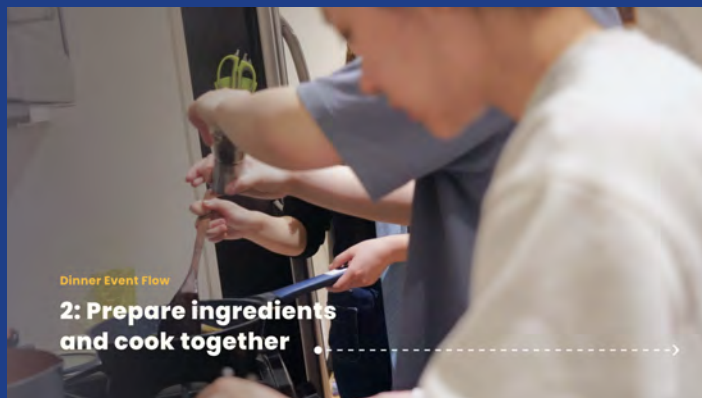
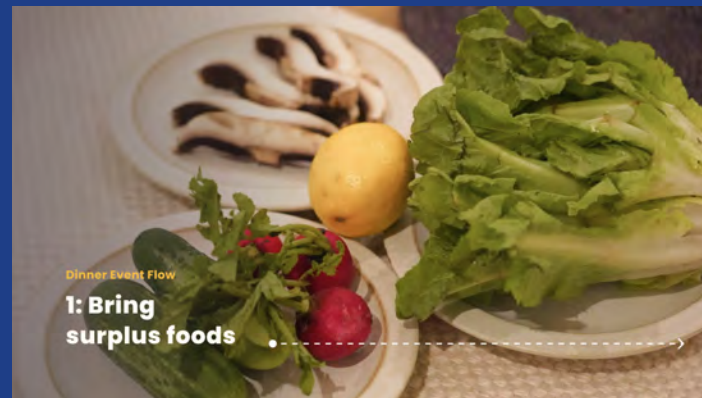
Players brainstorm to connect the contents of the three cards drawn together to write a story with the goal of saving food that is about to go to waste and not wasting it.

At the end, the amount of food wasted by each player is counted. The player who wastes the least amount of food wins!

Thesis Statement

**How might we utilize
communal dinners to raise
awareness about reducing
food waste and ultimately
change people's behavior?**

Dinner Event Flow



Lettuce: Eat Together incorporates suggested dinner flows, activity cards, discussion prompts and storytelling. We hope to expand this platform and create a modular system where people can host dinners, breakfast or brunch themselves, by small or large groups. So we write a dinner event flow introduction help people to understand how to host.

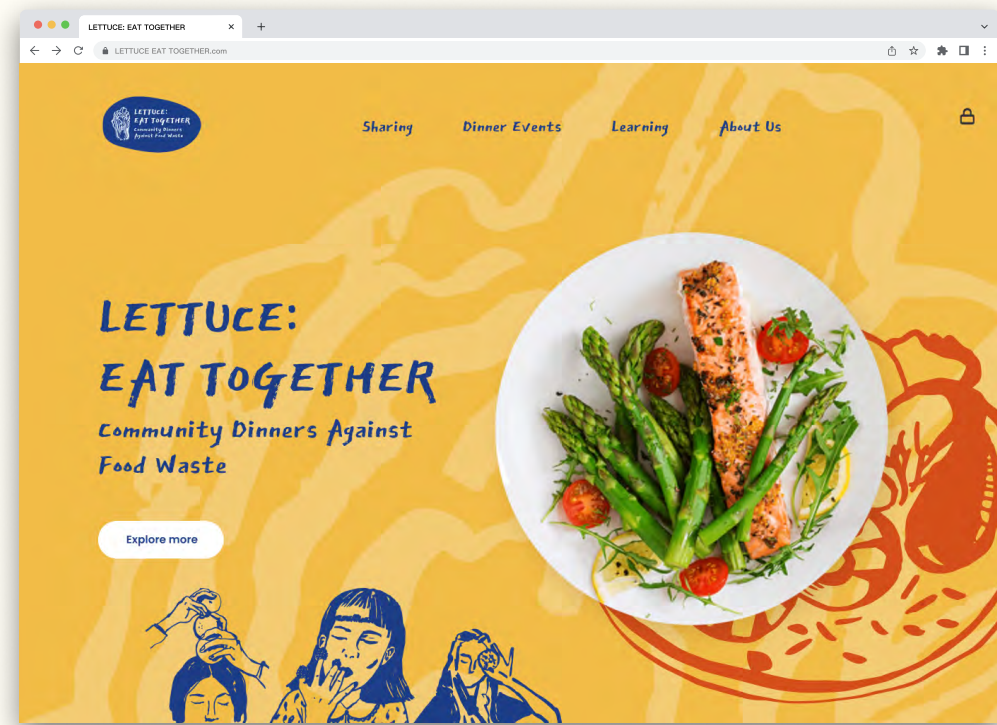
First, the organizers invite their friends to a get-together. They ask everyone coming to bring any surplus food or ingredients they have at home, of any kind.

As everyone comes together, a sense of community builds. The organizers extend a warm welcome to all, followed by a brief outline of the gathering's objectives.

Everyone pitches in to cleanse the brought food, sorting and discarding any items that have spoiled. Based on the available food, decide collectively on what dishes to prepare.

Post-meal, these games are not just entertainment but also a conversation starter. They create a lively atmosphere and serve as a fun, natural platform for discussions on food waste, as well as an exchange of tips on food preservation and cooking.

Final concept



Lettuce: Eat Together

Based on our research and prototypes, we conceptualized the final intervention, called Lettuce Together. This platform was designed specifically for young people to engage them in a positive and energetic approach to reducing food waste through the dinners.

"Lettuce: Eat Together" is a structured dinner processes, engaging game cards and discussion prompts. These elements weave together to create an environment that inspires creativity, fosters dialogue, and ultimately leads to concrete action against food waste.

Our vision for Lettuce Together goes beyond the concept of just being a platform. We envision it as a flexible, modular system that can be adapted to different social contexts. Whether we are hosting a dinner, a breakfast, or an brunch, our event fit everyone, no matter the size of the group. This adaptability ensures that the message of food waste reduction is consistently promoted in a variety of social interactions.

However, we are still refining and expanding our platform. We are still considering several aspects of Lettuce Together. For example, we are exploring ways to make the platform more user-friendly, expand its reach, and ensure its sustainability. We are also considering adding more interactive features to further enhance the user experience.

In essence, Lettuce: Eat Together is our small effort to foster a culture of prudent consumption and waste reduction among the younger generation. We are optimistic that with continued refinement and expansion, our platform can play a significant role in addressing the global food waste problem. These are just a few of the thoughts we have as we continue this thesis journey.

Foodiepath has enjoyed working with us. As a result, they'll be promoting "lettuce eat together." on their platform. We continue to look for other partners who can support our work or help us build a partnership together, so we can point young people to all these great resources that are being developed by us and others like Christina.



04

IMPACT

Environmental Impact Assessment

Located in New York City, NY, our project, "Lettuce Eat Together," is an innovative initiative that aims to reduce food waste. It is a series of community dinners designed to create a guide for young adults, especially those between the ages of 18 and 24, to share surplus food, and to organize communal dinner events. These gatherings not only provide an opportunity to cook and enjoy dishes made from leftovers but also incorporate interactive games and educational activities. These elements are geared towards raising awareness about food waste and promoting action against it in our daily lives. The effectiveness of this approach will be gauged by monitoring shifts in people's thoughts and behaviors before and after the events.

New York City is grappling with the severe environmental challenge of food waste, producing approximately 1.3 million tons of organic waste annually. This waste, when relegated to landfills, decomposes and releases methane, a potent greenhouse gas contributing to climate change. Hence, our project, which falls under the event category, intends to address climate impacts such as energy and power, transportation, overconsumption, manufacturing, food production, and deforestation.

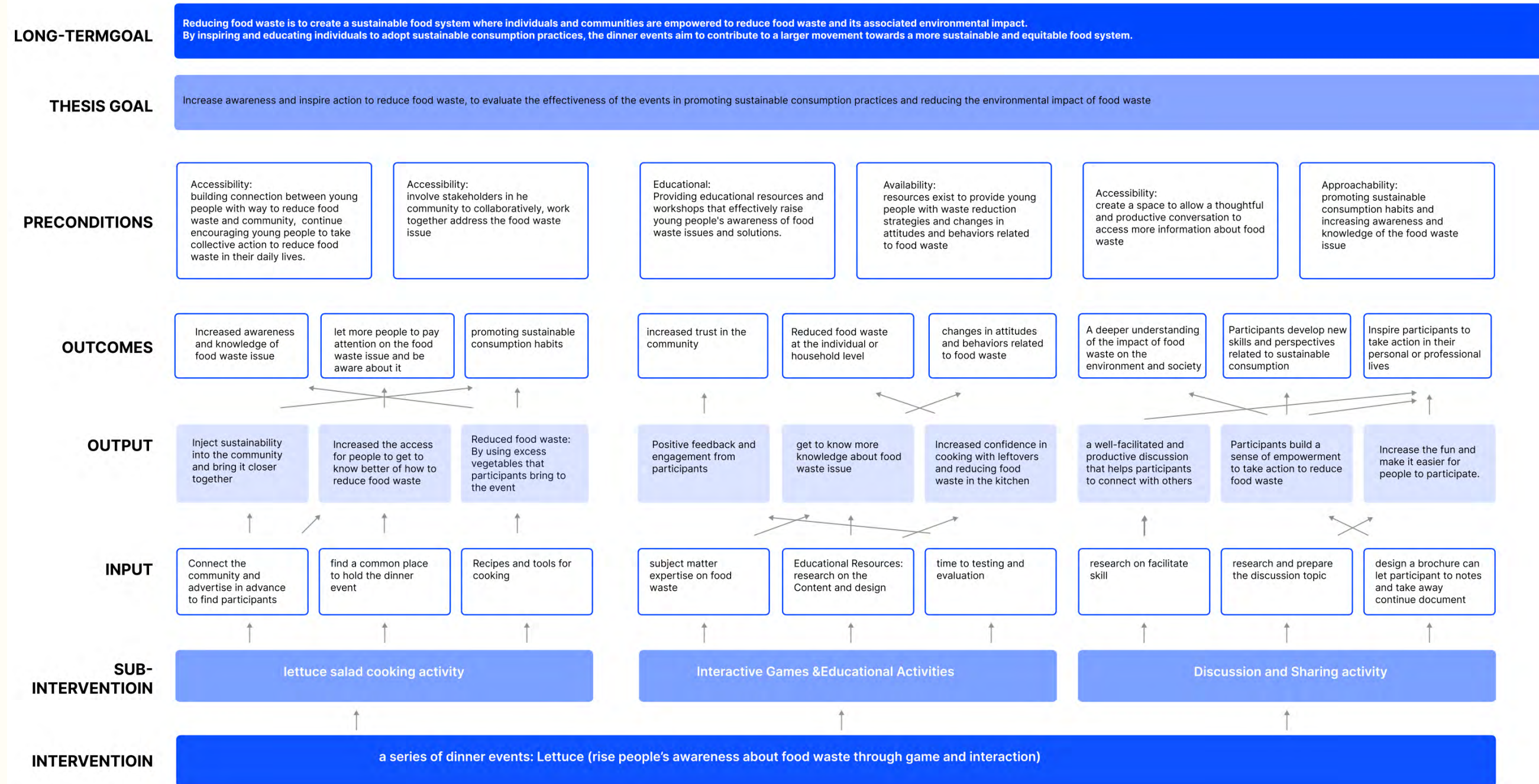
Our project, "Lettuce Eat Together," is a behavioral intervention plan designed to encourage community members to share surplus food, cook, and eat together. This plan directly impacts various aspects of the environment, including the community environment, food system, ecological environment, air and water quality, and socioeconomic factors. It fosters increased social interaction, communication, and collaboration among community members and promotes sustainable food practices. However, the proper disposal of food waste after meals is crucial to prevent any negative impacts on the ecological environment and air and water quality.

An alternative to our proposal could involve community members sharing surplus food without a communal cooking and eating arrangement. Although such an approach could reduce food waste, it brings along food safety concerns and risks wasting shared food a second time. Trust within the community could be severely damaged if food safety issues arise, negatively impacting community cohesion. Therefore, cooking and sharing surplus food collectively is the most feasible and effective solution to address food waste in the community.

In the absence of action against food waste, community members will likely continue traditional disposal methods, perpetuating the serious environmental, economic, and hunger impacts. This inaction would lead to the continued wasting of resources, generation of unnecessary greenhouse gas emissions, and contribution to food insecurity.

In conclusion, "Lettuce Eat Together" presents the most viable solution to reduce food waste, alter attitudes and behaviors, and foster sustainability within the community. The concept not only promotes sustainable food practices but also encourages community engagement and trust. We also recognize the potential negative impacts of not implementing intervention plans and the limitations of alternative solutions. We aim to continue refining the intervention plan to minimize potential negative impacts and maximize positive outcomes. This could involve offering classes for the community to prepare quick, delicious, eco-friendly meals, and to dispose of excess food and kitchen waste correctly. Additionally, we could also conduct educational campaigns about sustainable food practices and the benefits of reducing food waste. Ultimately, we believe that community cuisine is a sustainable and effective way to promote the concept of reducing food waste and to change people's food waste behaviors. This can lead to a healthier, more resilient, and sustainable food system within the community.

Theory of change



TOC Narrative

Goal: Our objective is to address the significant food waste problem among young people in New York City by fostering awareness, promoting behavior change, and encouraging community building, ultimately resulting in a positive impact on both the economy and the environment.

Pathways of Change: To accomplish this goal, we have identified three pathways of change: increasing young people's engagement in food waste reduction activities, raising awareness of food waste issues and potential solutions, and cultivating connections among young people to encourage collective action.

Interventions: Our targeted interventions include organizing collaborative dinner events where participants can bring their surplus food, prepare and eat together, discuss food waste issues, and exchange experiences in waste reduction. In addition, we will provide educational resources and workshops on sustainable food practices and waste reduction strategies.

Outcomes:

Through our interventions, we aim to achieve several outcomes, including:

- Increased awareness of food waste issues and solutions among young people
- Greater motivation among young people to implement food waste reduction strategies in their daily lives
- A sense of community and support among participants that encourages continued engagement in waste-reduction activities

Indicators of Success: To measure the success of our interventions, we aim to reach specific targets, including:

- A significant increase in the number of participants engaged in food waste reduction activities
- Demonstrable shifts in attitudes and behaviors related to food waste among participants
- A growing sense of community and collective action among young people in addressing food waste issues

Monitoring and Evaluation:

1/5

We will track the effectiveness of our interventions by monitoring changes in participant numbers, attitudes, and behaviors. This data will allow us to assess the impact of our approach and make necessary adjustments to maximize its effectiveness.

In summary, our theory of change posits that by engaging young New Yorkers in collaborative dinner events focused on food waste and providing educational resources, we can create a ripple effect of awareness, behavior change, and community building that contributes to a significant reduction in food waste across the city.

Log Frame

Inputs: · Financial resources for event organization · Surplus food from participants · Venue for dinner events · Educational materials and resources on food waste reduction · Trained facilitators for workshops

Activities: · Organize collaborative dinner events · Provide workshops on sustainable food practices and waste reduction strategies · Develop and distribute educational resources on food waste issues and solutions · Facilitate discussions on food waste and sharing of personal experiences · Encourage the formation of connections among participants

Outputs: · Number of collaborative dinner events organized · Number of workshops conducted · Number of educational resources developed and distributed · Number of participants attending events and workshops · Number of connections formed among participants

Outcomes: Increased awareness of food waste issues and solutions among young people
Greater motivation among young people to implement food waste reduction strategies in their daily lives
A sense of community and support among participants that encourages continued engagement in waste reduction activities

3/5

Impact: A significant reduction in food waste among young people in New York City Positive effects on the economy and the environment due to reduced food waste

Key Evaluation Questions

- How effective are the collaborative dinner events in increasing awareness of food waste issues and solutions among participants?
- To what extent do participants implement food waste reduction strategies in their daily lives following the events and workshops?
- How successful are the events in fostering a sense of community and support among participants?

Key Monitoring Questions

- How many participants are attending the collaborative dinner events and workshops?
- Are participants actively engaging in discussions on food waste and sharing their experiences during the events?
- How many connections are formed among participants during the events?
- What are the participants' attitudes and behaviors related to food waste before and after attending the events and workshops?

Grateful Thanks

Lettuce: Eat Together: Community Dinners Against Food Waste. From Concept to Current Phase" has been an extensive journey, and we recognize that this is not the conclusion but rather the commencement of a new chapter. Throughout this journey, we have faced numerous challenges, highs and lows, and have triumphed together.

Our accomplishments thus far would not have been possible without the unwavering support of those who have stood by us, and we would like to express our heartfelt gratitude to them here.

First and foremost, we must thank each other. We have been each other's pillars, offering mutual support and reliance to reach this point.

We are also deeply grateful to our Thesis Advisor, Mari Nakano, who has consistently encouraged us through both difficult times and moments of progress, providing invaluable suggestions and guidance for improvement. In addition, our appreciation extends to our partner, Foodiepath, and its founder, Christina Chen. Their generosity in sharing insights and experiences in combating food waste, as well as allowing us to conduct prototype testing within their organization, has been invaluable. We cannot forget to express our gratitude to our DSI Chair, Miya Osaki, who has been a beacon of hope and guidance during our darkest moments, illuminating the path ahead. Lastly, we extend our sincere thanks to the DSI faculty and all the thesis advisors for their invaluable input and advice.

REFERENCE

[1] 5 facts about food waste and hunger (2 June 2020, World Food Programme) from: <https://www.wfp.org/stories/5-facts-about-food-waste-and-hunger>

[2] Study conducted for the International Congress SAVE FOOD! (Interpack2011 Düsseldorf, Germany) <https://www.fao.org/3/mb060e/mb060e00.pdf>

[3] U.S. DEPARTMENT OF AGRICULTURE, <https://www.usda.gov/foodwaste/faqs>

[4] Food and Agriculture Organization of the United Nations. (2019). Food loss and food waste. Retrieved from <http://www.fao.org/food-loss-and-food-waste/en/>

[5] City of New York Department of Sanitation. (n.d.). Organics collection. Retrieved from <https://www1.nyc.gov/assets/dsny/zerowaste/residents/organics-collection.shtml>

[6] Natural Resources Defense Council. (2017). Wasted: How America Is Losing Up to 40 Percent of Its Food from Farm to Fork to Landfill

[7] NYC Department of Sanitation. (2016). Save Money, Save the Environment: Your Guide to Food Waste Prevention.

Natural Resources Defense Council. (2017). Wasted: How America Is Losing Up to 40 Percent of Its Food from Farm to Fork to Landfill.

[8] Food Bank for New York City. (2018). Hunger in America 2018: New York

[9] NRDC. (2017). Scaling up composting in New York City. Retrieved from <https://www.nrdc.org/sites/default/files/food-waste-new-york-city-report.pdf>

[10] Bharucha and Pretty, 2010

[11] Tang et al., 2016

[12] Refed <https://refed.org/food-waste/the-problem>



**LETTUCE:
EAT TOGETHER**

*Community Dinners
Against Food Waste*

Designed by

Kexin Zhang & Ziyuan Wang

Advised by

Mari Nakano

MFA Design for Social Innovation Thesis 2023

School of Visual Arts

New York City