

Report

1. Team name :

WasteFULL

2. Members Names

Vivian, Wei Tzu, Lauren

3. Problem domain

Our problem domains include charity and social justice. The goal of our project is to address the issue of uneven food distribution and to create better solutions to handle food waste and excess food.

4. Initial POV

All of our members were amazed to realize that there is excess food left over at events and stores. A lot of time, the remaining food gets thrown away while the food is still edible. We believe that there are many people out there who can make good use of the excess food and could benefit from them. Hence, we think it would be game changing if we could create a good system and application for stores and event holders to easily distribute the excess food for a greater good.



5. Additional needfinding results

Results:

1. Interviewee (Supply): Event coordinator of the NTU CSIE student union (蔡同學)

Says : “I always eat out”, “There are expiring products that are in good qualities”

Does: He always finishes all his food and other people’s remaining food for them, has experience buying nearly expired food. He encourages participants to finish them or take them home when there is remaining food at events. He also posts information about remaining food on NTU’s forum. Chooses which kind of food to receive based on personal preference.

Think: He thinks that as long as the store is willing to sell nearly expired food, he should not be worried about food safety. From his experience, he believes that most of the food gets distributed after being posted on the forum.

Feels: Concerned about food safety of the remaining food and whether the food is sealed.

2. Interviewee (Demand): NCHU (王同學) Extreme User

Says : “I do not waste food ”, “I hate it when people play with their food”

Does: She always finishes her food. She buys nearly expired food all the time. Has gone onto school forum to receive information about remaining food and decides whether to go get them depending on her preference for food and whether she is short in money

Think: Thinks that food waste is a common phenomenon in Taiwan.

Feels: Feels positive about nearly expired food that is discounted and remaining food that is being distributed. Does not worry about food safety regarding remaining food.

3. Interviewee (Demand): UW (丁同學)

Says :Tells her classmates who was about to throw away food to give it to her

Does: If there is remaining food at events, she will encourage club members to bring it home. Will receive remaining food depending on the type of food and the number of people in the queue.

Think: She thinks that people who waste food will get condemned by God.

Feels: Does not have a negative feeling toward remaining food or nearly expired products

4. Interviewee (Demand): UW (林同學) Extreme User

Says :”I waste a lot of food”

Does: She has never bought nearly expired food before. When there is remaining food from events, she sometimes keeps it in the refrigerator and eats it another time or gives it away.

Think: She thinks that selling and buying expired food is a win-win situation for both the stores and the customers

Feels: She feels that whenever she receives notification from the school about remaining food, a lot of times it’s already too late. Worries that remaining food might not be fresh.

Analysis:

1. Quote: “I am concerned about food safety of the remaining food and whether the food is sealed”

Insights: Although for some students, food safety might not be their main concern, it is still extremely important to ensure that remaining food being shared does not pose a threat to others’ health

Needs: We need to find a way to **encourage** stores or event holders who are giving out the food to properly seal all their food and **make sure that they are still in good condition.**

2. Quote: She feels that whenever she receives notification from the school about remaining food, a lot of times it's already too late.

Insights: Untimely notification is a huge issue when it comes to receiving remaining food because outdated information is usually useless for the users.

Needs: It is crucial to ensure that users **receive the most updated and correct information** so that they can easily receive remaining food.

5. Revised POVs and HMW (highlight the 3 most important HMW)

- a. We met Samuel, who needs to know when and where will share the remaining food . It would be game changing if Samuel could get the latest , fullest and specific information.

How might we...

- i. **ensure that he get the information on time**
- ii. **ensure that he could get the food nearby**
- iii. **ensure that providers update their information in a timely manner (preserve portion/ food is the same as the picture)**
- iv. ensure that he could know what exactly the food is from picture
- v. ensure that he would not get stale food
- vi. ensure that the supplier preserve a portion of food for him

- b. We met Nicole, whose father owns a restaurant. She said that whenever there are non-paying orders of Food Panda, he would post this information on the restaurant's fan page and let others get the food if they want. It would be game changing if other restaurants also joined it and send out their information on one platform, so that customers could get the info more efficiently.

How might we...

- i. **gather the information from different restaurants and make it easier for the customers to get info instead of letting the info scattered around**
 - ii. **encourage restaurants and event holders to participate on the platform**
 - iii. ensure the restaurants in the group is trustworthy
 - iv. ensure there are enough customers on the platform or the platform is been advertising well enough to people
- c. We met two clerks from the grocery store. They said when they give away excess products, they need to first filter who they should give the food to in order to ensure that the receivers are people who do not mind and would appreciate nearly expired food and whose health is not at risk. It would be game changing if the suppliers could get the relevant information about the receivers and to communicate with them.

How might we...

- i. **allow the suppliers to see the relevant information of the receivers**
 - ii. **help the supplier for not involving in food safety lawsuit**
 - iii. **make people more willing to receive excess food**
 - iv. create a better channel for communication between the suppliers and the receivers
 - v. make the process of selecting/filtering receivers easier
 - vi. decrease the human resource on giving away the food
6. Present the concrete solutions (highlight important thoughts)
- a. ensure that he get the information on time
 - i. **app notification**
 - ii. reminder calls
 - iii. text message
 - iv. email
 - v. **allow the users to follow restaurants/providers of their interests so that they could get the latest information from these suppliers**
 - vi. some genius recommend system which would automatically remind him

- vii. set up some specific time (like 9. a.m for breakfast ...) for sending the information or notice
- b. ensure that he could get the food nearby
 - i. **enabling GPS or integrating Google Map within the app to allow the users to see available remaining food nearby their distance from the user**
 - ii. **setting that notifies the user if there are available food nearby the current location of the user**
 - iii. **users could use the walking/commute time they are willing to spend to get excess food to filter the available locations nearby**
- c. ensure that providers update their information in a timely manner (preserve portion/ food is the same as the picture)
 - i. create a **reservation system** including how long will you arrive to pick up ...
 - ii. **request the supplier to provide more detail when post the information**
 - iii. **make the suppliers hit the “finish” button when a receiver successfully receives his/her food**
 - iv. live stream from the providers to show the conditions of the remaining food
 - v. if the users didn't pick up the food after their reservation time, they would get a bad record on their profiles
 - vi. system will **notified the supplier** routinely for more update until all the food is delivered away
 - vii. the app would automatically filter out food that is allergic to the users
- d. gather the information from different restaurants and make it easier for the customers to get info instead of letting the info scattered around
 - i. try to reach as many suppliers as possible
 - ii. **user friendly interface** (only few clicks to get the info)
- e. encourage restaurants and event holders to participate on the platform
 - i. make the app well-known (especially for students)
 - ii. **make the app a good advertising platform for restaurants**
 - iii. reward those who participate in sharing food

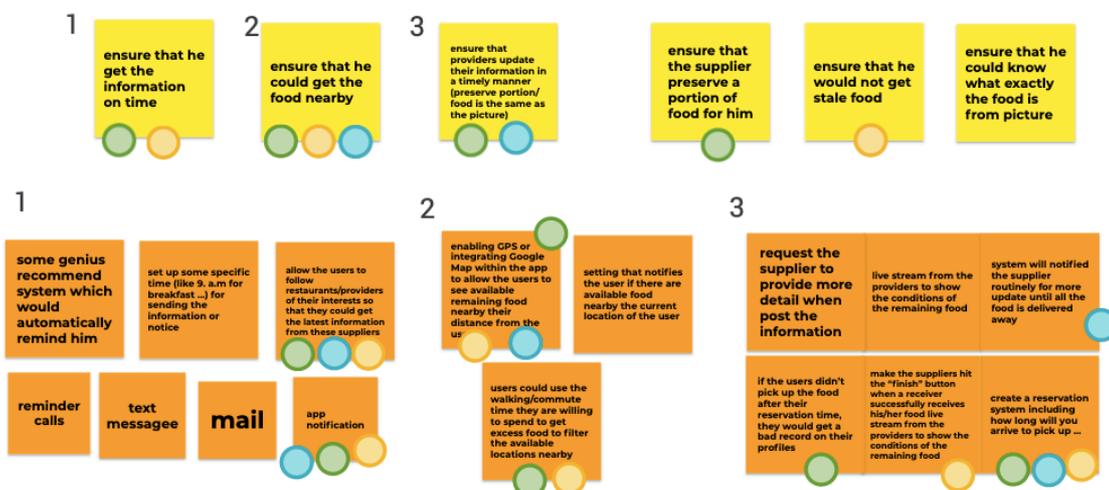
- f. allow the suppliers to see the relevant information of the receivers
 - i. receiver should complete their health condition like allergies or any disease when sign up the app
 - ii. **supplier could filter the post to target customers**
- g. help the supplier for not involving in food safety lawsuit
 - i. **receivers need to sign an agreement consenting that they bear their own risks of eating the remaining food provided by the suppliers and that they are responsible for their own health conditions.**
 - ii. **consulting the lawyer for any possible situations**
- h. make people more willing to receive excess food
 - i. **supplier could get money from receiver if they provide receiver lunch box or any more portable way to take food**
 - ii. **create a reward system or do advertising for the restaurants**

7. Experience Prototypes

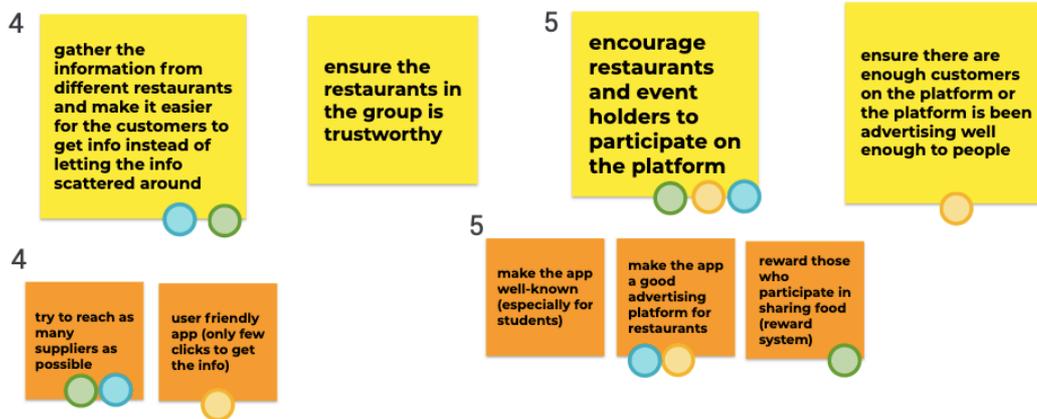
- a. App notification
 - i. notified when following restaurants posting remaining food, the remaining food is nearby or any customized modified settings → provide user to filter when to inform the users
 - ii. notified immediately → provide latest info
- b. Using GPS and google map
 - i. easily fill out the place where you at when sharing food → user friendly interface
 - ii. find nearby food easily → provide more location information
- c. Reservation / Line-up system
 - i. requesters could click the “lined-up” button to line up for the remaining food if still available, but if the requester did not get food in 20 minutes the reservation would be canceled. → ensuring all the users that line-up would get the food
 - ii. After the requester gets the food in time, the requester would click the “get” button, and the supplier would then receive the ensuring message with the “check” button. The supplier would then click the “check” button. → ensuring the supplier only gets a message when sharing the food away, which makes the supplier much easier to check who takes the food.

- d. rewarding system with advertising
 - i. All the users would have 10 points as initial value. If the users line-up for food, but do not take the food, the user will get a deduction. But if the user gives away food, the user would get an addition. → ensuring users to take the food , and encouraging them to share the food.
 - ii. User with higher points could choose to be advertised on our app (on the search page) → provide motivations for suppliers
- e. filtering mechanism
 - i. filter mechanism ,which includes food type, distance and user's health condition → provide customized information to requester and allow suppliers to filter who to give.
- f. sign an agreement consenting
 - i. In order to prevent the law suit, user should sign an agreement contract
- g. supplier could earn some money for providing portable material
 - i. If the supplier provide portable material, like lunch box or bags, supplier could ask for \$5 ~ \$10 for the material → encourage both supplier and requester to get and share food

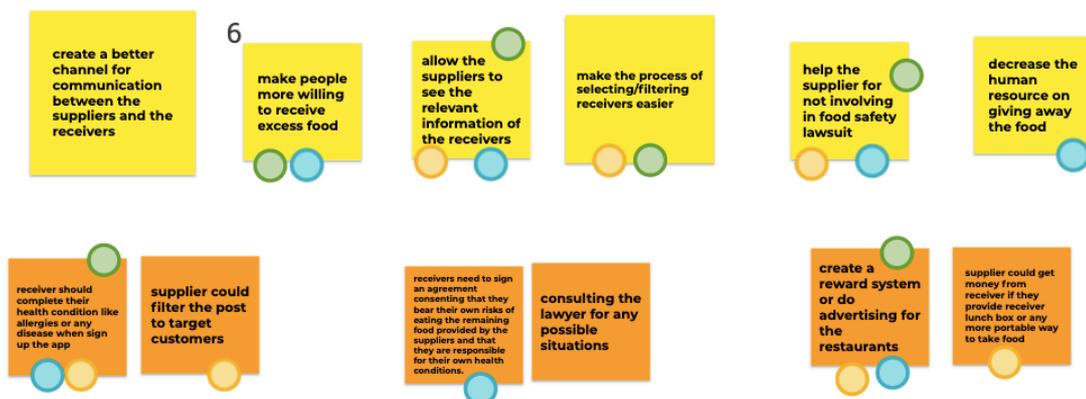
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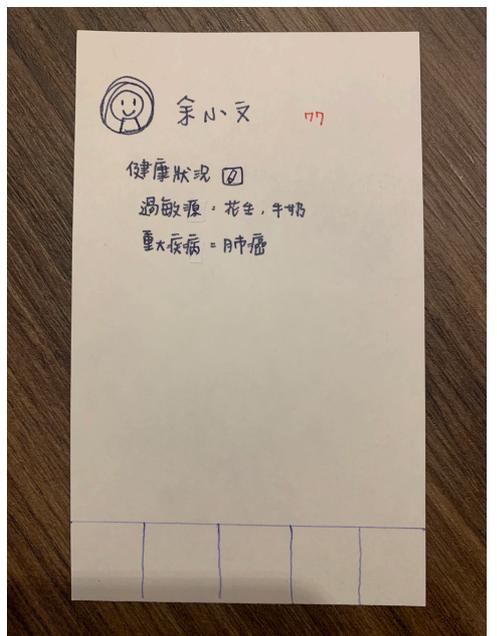
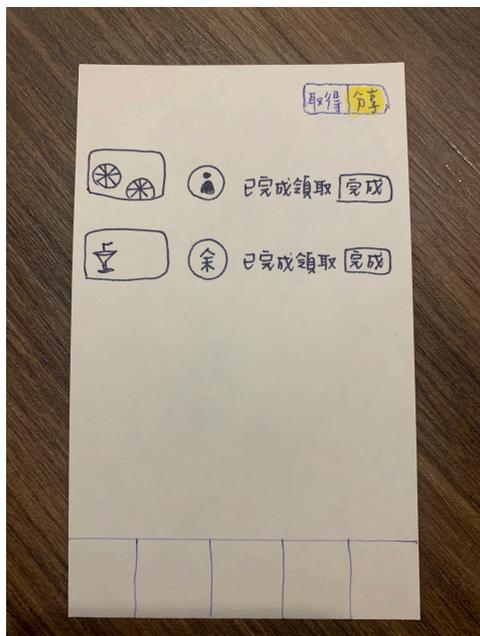
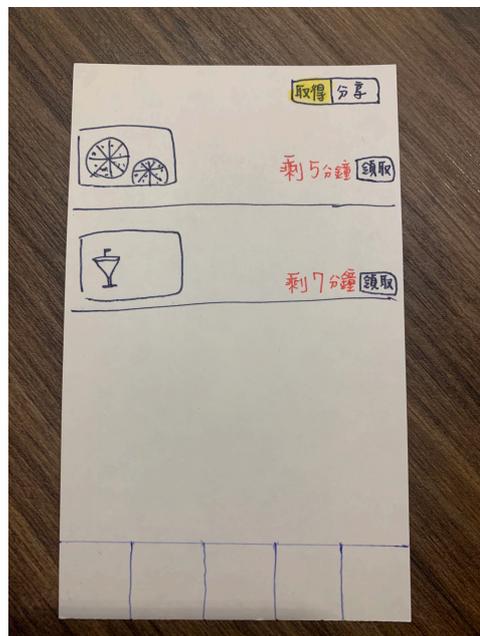
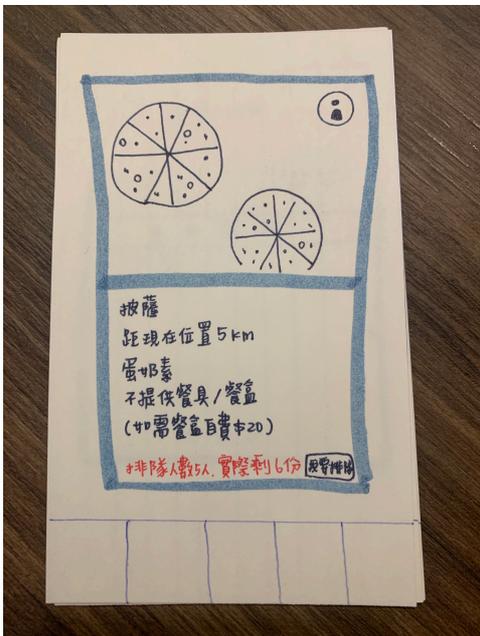
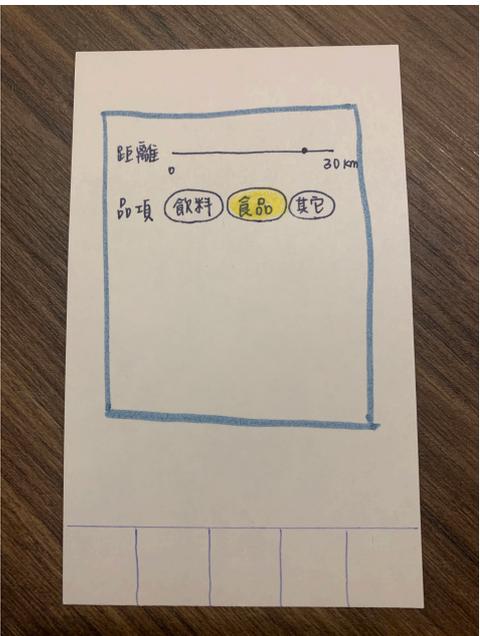
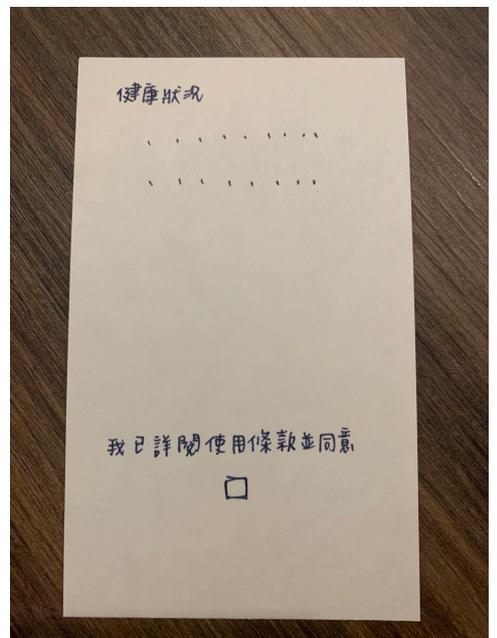
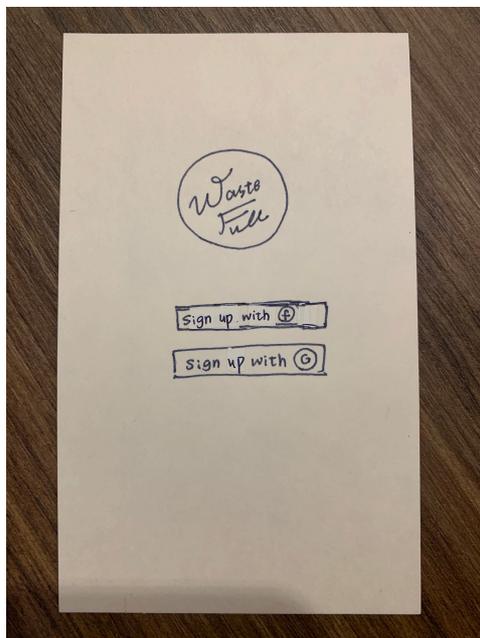
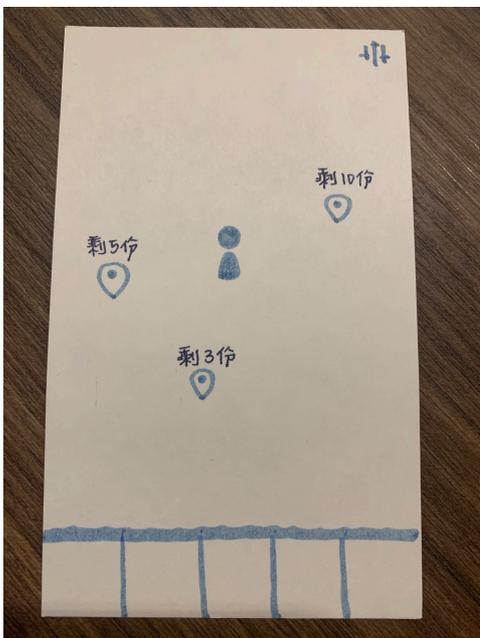
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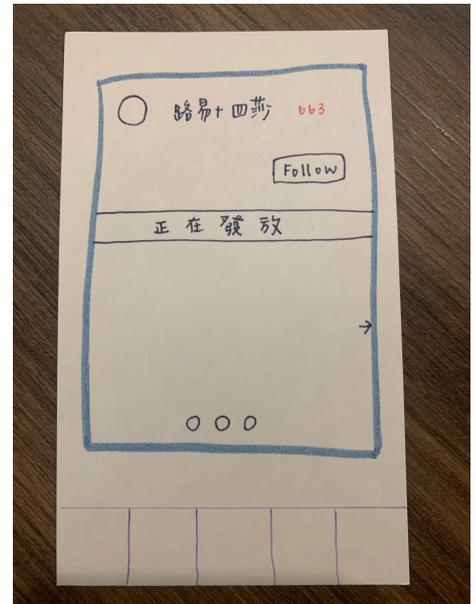
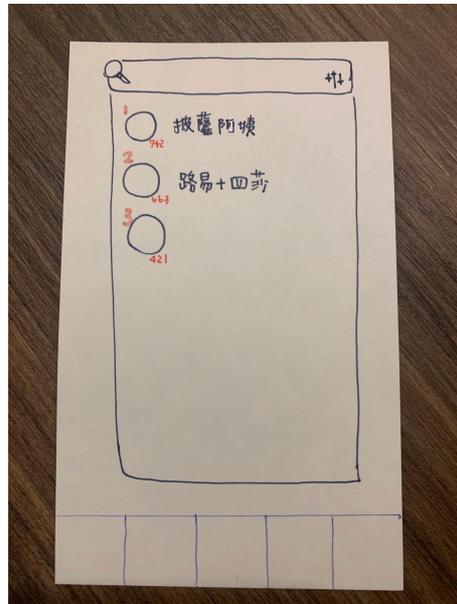
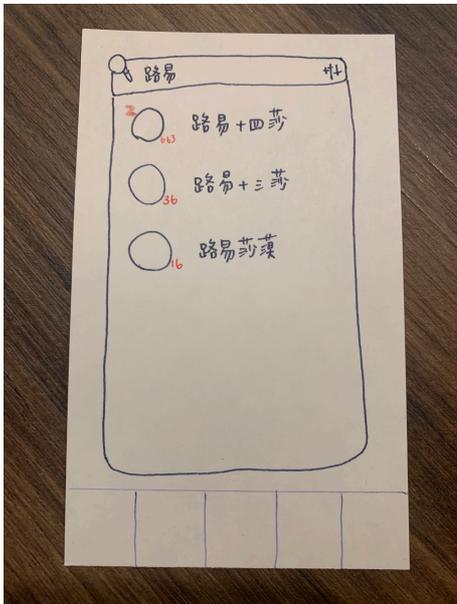


8. feedback about the assumption prototype

We test the users by using the index card, here's the testing video :

<https://youtu.be/TeCJr50iF2M>





Great :

- a. app notification and GPS map → The most central need for the users is immediate notification and where the place is.

Think Twice :

- a. rewarding system
 - i. The rewarding system is not specific enough and thorough , problems like :
 - what if the requester gets stale food or the supplier does not supply food to the requester ? How should the requester review the supplier ?
 - How should the requester improve their points ?
 - ii. Did advertising surely boost the motivation for users to share the food ?
- b. filter mechanism
 - i. Since some options are limited, how could we find a better way or better categorized way to be suitable for most of the users?
- c. Sign an agreement consenting
 - i. Does the consenting really protect the supplier ?
- d. Allow stores to post products nearing expiration date with discount value
 - i. If the store could still earn some profit , maybe will encourage them to share food with discount price
 - ii. If allowing discount value, what will happen to \$0 food suppliers ?