

Fridgful

Ingredient Expiration tracking made easy

Spec Status: Complete

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I want to move forward to build this product with a cross-functional team in the Co.Lab Program.

Undecided

Summary

Fridgful is a product that enables users to track the expiration dates of their food items which helps them effectively utilize their food item purchases.

Problem Statement

How might we make tracking the best before dates and providing alternative uses of food ingredients easier for working adults so that they can fully utilize purchased food items.

Problem Background

Food waste is a crucial global issue and unfortunately households are significant contributors to this problem. According to a 2022 article by Heather Brown, Canadian households account for 14% of food waste in the supply chain [\[1\]](#). A lot of the time this 'waste' stems from leftovers or expired foods, otherwise known as avoidable food waste [\[2\]](#). Avoidable food waste refers to food items that could have been consumed if better managed [\[3\]](#).

In a 2022 Canadian household food waste research study conducted by the National Zero Waste Council, it was discovered that 63% of the food being thrown away by households could have been consumed [\[4\]](#). Wasted food items were mainly

vegetables, fruits, dairy, eggs and baked goods. This amounts to 140 kilograms of wasted food or \$1300 worth of food per year for the average Canadian household.

The results from my research survey further solidified the issues around household food wastage with 71.2% of the 59 survey participants acknowledging that they throw out their surplus food items. 55.9% highlighted that “food items going past their best before dates” led to them having a surplus in the first place. On further investigation during the user interviews done with 6 participants in the 25 - 34 year age range, two-thirds of the participants expressed that their having surplus food items was due to forgetting the expiration or best before information which resulted in items going bad. Here are some quotes from participants:

- *“I forget some ingredients at the back of the fridge or in the pantry, then it goes bad and I have to throw it out”*
- *“Some stuff like yogurt and milk expires super quick. I can’t remember the expiry dates”*
- *“I shop at Costco so most times bread or vegetables will get to the best before date before I can use it”*

The target demographic for this product are young professionals who are actively trying to reduce their food waste but lead a busy life and therefore don’t have time to be hands on when it comes to their fridge or pantry inventory. From the qualitative research done the core problem is that many of the participants do not have a way to keep track of the best before dates of their purchased grocery items which ultimately leads to the items going bad and not being fit for consumption. Secondly, 50% of the participants expressed not having an immediate use for the forgotten food item.

*“Forgetting about the ingredient until it’s too late and it goes bad or **not having a use for the ingredient.**”*

Currently, the solutions on the market for this problem focus solely on expiry date tracking. There is no widely adopted solution that helps users track the best before dates, expiry dates and provide them possible uses either in the form of recipes or food preservation tips. Fridgful will provide users with a solution that not only tracks their expiry and best before dates but also provides usage suggestions which will ultimately help decrease food wastage habits.

Goals

1. Enable individuals to easily keep track of the expiry and best before dates of food items.
2. Decrease the chances of food items in households getting wasted because they go past their best before dates.

3. Provide individuals with recipe options for their available ingredients to encourage food item repurposing.
4. Provide users with a way to easily get information on their grocery item utilization and corresponding trends.

User Stories

1. As a user who doesn't remember the best before and expiry dates of food items in my pantry and fridge, I want to store all relevant food items and associated best before dates in one place so that I can easily prioritize which items to use first.
2. As a user who is forgetful, I want to be notified when my food items are about to expire so that I can use them before they go bad.
3. As a user who enjoys experimenting with new recipes at home, I want suggestions on how to make use of the leftover ingredients from those recipes so that I can repurpose my ingredients.
4. As a user actively trying to reduce my food waste, I want to access my weekly or monthly household food item usage summary so that I can better understand my habits surrounding my grocery utilization.

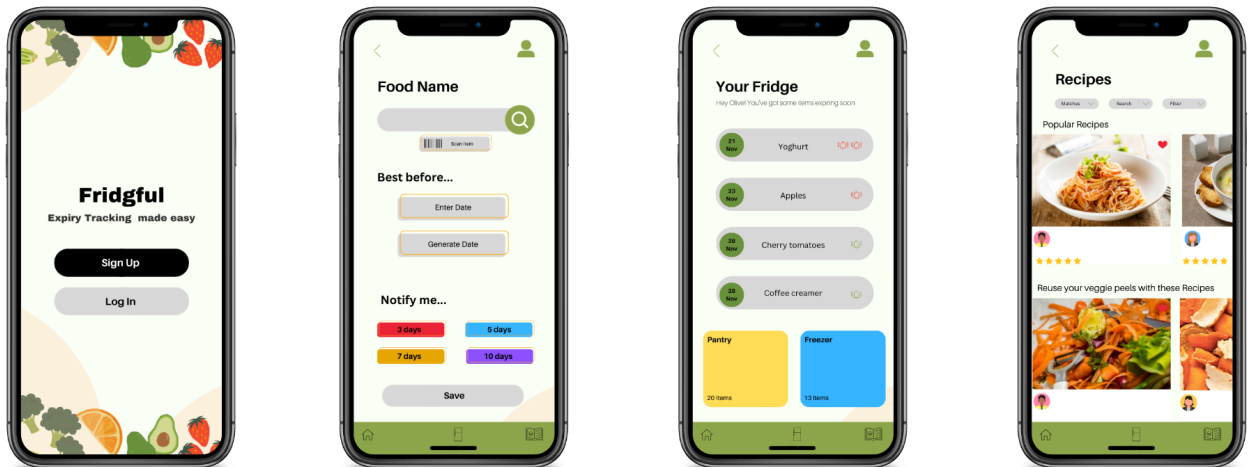
Proposed Solution

Introduce an application that primarily allows users to log and track the expiry dates of their various food items whilst also providing recipe suggestions and alternate usage suggestions based on the logged food items. This solution will enable users to easily assess their household food expiration information thereby eliminating the problem of forgetfulness and lack of ideas relating to ingredient usage.

Lo-fi Wireframes



App Mock-up



Scenarios

User Story #1

- As a user who doesn't remember the best before and expiry dates of food items in my pantry and fridge, I want to store all relevant food items and associated best before dates in one place so that I can easily prioritize which items to use first.

Scenario #1 - Log expiry dates or best before dates of food items

Acceptance Criteria

- Users can manually input food items
- Users can scan food items
- Users can log the best before dates or app generates the date
- Users can organize the food items
 - Pantry
 - Fridge
 - Freezer
- Users can assign usage priority for each food item

User Story #2

- As a user who is forgetful, I want to be notified when my food items are about to expire so that I can use them before they go bad.

Scenario #1 - Expiration reminders

Acceptance Criteria

- Users can get reminders for expiring food items based on their selected window
 - 2 days
 - Week
- Users can extend reminders manually
- Users can input what they do with expiring food item
 - Used
 - Not used
 - Prolong usage date
- Users can distinguish between 'expiration', 'best-by', and 'use by' dates with colour coded icons

User Story #3

- As a user who enjoys experimenting with new recipes at home, I want suggestions on how to make use of the leftover ingredients from those recipes so that I can repurpose my ingredients.

Scenario #1 - Recipe suggestions based on ingredients close to expiration

Acceptance Criteria

- Users can search for recipes based on their available ingredients
- Users receive recipe suggestions for food items nearing expiration

- Users can access recipes they've used in the past
- Users can share recipes with those within their household accounts

User Story #4

- As a user actively trying to reduce my food waste, I want to access my weekly or monthly household food item usage summary so that I can better understand my habits surrounding my grocery utilization.

Scenario #1 - Access food usage summary

Acceptance Criteria

- Users can see their food item usage history
 - Foods used in time
 - Foods that went past the best before
- Users can see their impact on food waste reduction
- Users can get tips on how to better utilize their food items

User Personas

1. Organized Olivia:

- Frustrations:
 - Olivia often forgets the best before dates of items in her pantry and fridge.
 - She struggles to prioritize items, leading to potential waste as she may overlook items nearing expiration.
- Motivation for the App:
 - Olivia seeks the app to streamline the organization of her food items, prioritize usage, and receive timely reminders to avoid wastage.

2. Forgetful Felix:

- Frustrations:
 - Felix frequently forgets about the food he has, leading to items expiring without use.
 - His schedule changes frequently, making it challenging to remember and manage food items effectively.
- Motivation for the App:
 - Felix is motivated to use the app to receive flexible reminders and maintain an organized system that accommodates his forgetful nature and dynamic schedule.

3. Creative Chef Carmen:

- Frustrations:
 - Carmen often has leftover ingredients from experimental recipes, and she struggles to find creative ways to use them.
 - She wishes for an easy way to track and share recipes within her household.
- Motivation for the App:
 - Carmen is drawn to the app to find recipe suggestions based on close-to-expiration ingredients and to maintain a centralized recipe history that encourages collaboration within her household.

4. Eco-Conscious Evan:

- Frustrations:
 - Evan is frustrated by the absence of a tool that provides insights into his household's food usage and its impact on waste.
 - He wants to actively contribute to reducing food waste but lacks the information to make informed decisions.
- Motivation for the App:
 - Evan seeks the app to access comprehensive usage summaries, understand his impact on waste reduction, and receive personalized tips to enhance his eco-friendly practices.

Measuring Success

Co.Lab Success Metrics

By demo day, ideally I would like to have an MVP product that allows users to log the expiration dates of their food items and get push notification reminders for expiration and best before dates. These two features cover the main problem that is being solved.

Product Success Metrics

- Key Milestones Achieved - have key features completed, tested and deployed.
- Beta Users Survey - collect some feedback from users after using the product. Track how many experienced a decrease in their household food waste.
- Active User Percentage - track the users actively using the app on a daily or monthly basis.
- Net Promoter Score - through app reviews, measure the user satisfaction with the product.

- Data collection - collect data on users' food item usage to gain insights on if the app is helping users better utilize their food item purchases.

Milestones & Timeline

Timeline	Milestone
Week 1	• Present problem space and possible solution to the team, collect feedback • Conduct and synthesize additional research • Create product roadmap and highlight key milestones
Week 2	• User story breakdown - task assignment • Features prioritization • Begin low fidelity design for User Story 1 • Begin dev of User Story 1
Week 3	• Team review of low fidelity design • Re work design based on feedback • Finalize application framework
Week 4-5	• Start design of high fidelity mockups • Start dev of high fidelity mockups • Backlog refinement
Week 6	• Start product testing • Team review of tasks progress • Implementation of feedback from review • Start coordinating beta testers
Week 7	• Deploy MVP to beta testers • Collect feedback from user testing • Implement on feedback
Week 8	• App roll out • Finalize product documentation • Prep demo material

References

1. [Food Waste in Canada: An in depth review](#)
2. [What is Surplus Edible Food \(and Why Should You Care\)?](#)
3. [Towards Zero Waste](#)
4. [Love Food Hate Waste](#)
5. [User Research - Interviews](#)