Goals (Primary and Secondary)

1. Suggest recipes based on what ingredients you have in your fridge taking into account your cooking experience.
   1. Diet tracking that supports popular diets or make a custom diet
2. Notify users of when items in their fridge are about to go bad/have gone bad so they can limit waste
   1. Implemented with goal 1 that suggests food items for recipes that may expire soon
   2. Reduce food waste - (methane? - dangerous greenhouse gas)
3. Maintain an automated grocery shopping list that knows what you have and what you need
   1. Keep track of items in stock from the mobile app so users don't have to check their fridge
4. Security

Target Audience / Users

* Families (wealthier people who own fridges)
* People who are busy
* People who cook regularly

Hole in the Market

* Convenience in the at-home food space
  + No at-home product exists to make grocery shopping and storing more efficient
* Limiting carbon footprint
  + People nowadays prefer to be more environmentally conscious, so limiting the amount of expired food will limit the greater supply, thus limiting the emissions and other hazards that go with agriculture.
* Healthy Cooking
  + Trying to eat nutritiously is a large concern for many families, and rather than shopping for expensive groceries, many people already purchase the needed ingredients to make a nutritious meal. This will encourage people to cook more often rather than unhealthy takeout.

Description, Hole in market, goals, target audience.

Or maybe hole -> description cause it’s a better intro

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Fridge-0101-04

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*Refrigerator Tablet and Mobile App - Phase 1.1*

A refrigerator is an appliance that every family uses and is an essential part of all of our lives. Surprisingly enough though, through the recent technological revolutions, the refrigerator hasn’t evolved much past just being a storage unit for food, with even “smart” fridges lacking significantly when it comes to making our food-related endeavors more efficient and convenient. What our group envisions through this project is a tablet/app combination that, in conjunction with a refrigerator’s normal food preservation function, would create a truly “smart” refrigerator. This device would be less focused on displaying the weather and allowing you to search Twitter, but rather on making our interactions with food inside and outside of the home that much better. Some useful features that this system would have include recipe suggestions, notifications for when food goes bad, and an automated grocery list system that would help you before, during, and after shopping.

This idea was an extension of our noticing of some holes in the current fridge/grocery market. The three largest holes in the current refrigerator market are a lack of added convenience for grocery shoppers, the growing movement to limit personal carbon footprints, and the difficulty in healthy cooking. Firstly, there does not exist a viable option for current grocery shoppers to be made aware of all the food items they need without having someone manually check the current items in stock. Oftentimes, people go grocery shopping and will return missing items that they were out of, or buying a needless surplus that could go to waste. Also, with the current global consumer concern with toxic emissions into the atmosphere and keeping the environment clean, the current fridge market lacks a positive product to help consumers achieve the lesser carbon footprint that they desire. The average American wastes over 200 pounds of food a year (USDA) and by limiting that waste, each person could limit the emissions needed to create that supply of food. Lastly, there has been a growing movement to encourage greater nutritious eating and there does not exist many household products that not only encourage, but also support this goal. Trying to eat nutritiously is a large concern for many families, and rather than shopping for expensive groceries, many people already purchase the needed ingredients to make a nutritious meal. This will encourage people to cook more often rather than unhealthy takeout.

Being given a blank slate to pursue a design of our choice we identified four main goals that are followed by a handful of secondary goals. Our first main goal is efficient customer engagement with our product, which would be demonstrated through providing software that auto-suggest recipes based on the current inventory of the fridge. By offering healthy recipes for consumers it can enlighten users to food ideas that were not known before, yet they already had all of the necessary ingredients. Individuals who have extremely busy schedules and are following a diet can utilize certain criteria such as choosing a popular dieting technique and finding recipes or food options that help them stay on track. Our next goal our product is attempting to solve is eliminating the food waste issue in the United States. Over 80 billion pounds of food is wasted or thrown away in the United States (RTS) resulting in the emission of greenhouse gases and wasted money which our product will assist in solving by tackling food spoilage. Food spoilage is the main reason millions of pounds of food is wasted, so our fridge will provide a food tracking system in which based on the item, the fridge will alert users when the item is close to expiration or needs to be eaten soon. A consumer informed on the status of their food items can save money at the grocery store by not overbuying and using perishable items within their edible time frame.

Another primary goal for our fridge and mobile application is the access of information on the inventory of a user’s fridge. Consumers using our mobile application will have a detailed list of the items in their fridge, so they don't have to scan the contents of the fridge every time to see what is needed in their next grocery store trip. Through accessing the shopping list on their phone they can add specialty items to their shopping list and have a basic weekly shopping list that is already pre-filled with the specified items the users buy every week. Lastly, the final primary goal our fridge and mobile application duo is attempting to achieve is security, in which research on current smart fridges has resulted in articles on security breaches in which hackers gain access to a user’s private network through a poorly designed smart fridge. Security is always a primary goal when designing software and users need to trust that the software they are using is designed to protect their private information. We will keep the trust of our users by purposefully designing software that is built around security and privacy.

While we believe that our smart refrigerator would be useful to any household, our target audience is wealthy families that are too busy to cook or want to start cooking more. Since this smart fridge would be expensive compared to an ordinary fridge, we are targeting wealthier households since people like college students would most likely not be able to afford our product even though they would likely find it useful as well.

There are many people out there who want to start cooking more but don’t have the time to or don’t know how to. One of the most powerful features of our smart refrigerator is its ability to generate recipes based on items in the user’s fridge and the user’s cooking experience. We believe that our product will greatly benefit these people because it will provide them with quick and easy recipes to cook with items they already have in their fridge. Many people are discouraged to start cooking because they don’t know what to make or how to start cooking but our smart fridge simplifies this process and makes cooking more user-friendly for our users. Additionally, people who are too busy to cook are more likely to have expired or close to expiring food in their fridge so our smart fridge would be extremely beneficial for them since it would give them recipes to cook with the close to expiring food instead of it being wasted.

Another target customer would be people on a diet who want to track their calories or macronutrients. Our smart fridge would be particularly useful to them because it would help them track their calories and macros throughout the week as well as provide them with healthy recipes they can cook with the ingredients they have in the fridge.