



INF 385E Information Architecture and Design
Instructor: Yan Zhang, School of Information

Chewy

Optimize your grocery shopping experience

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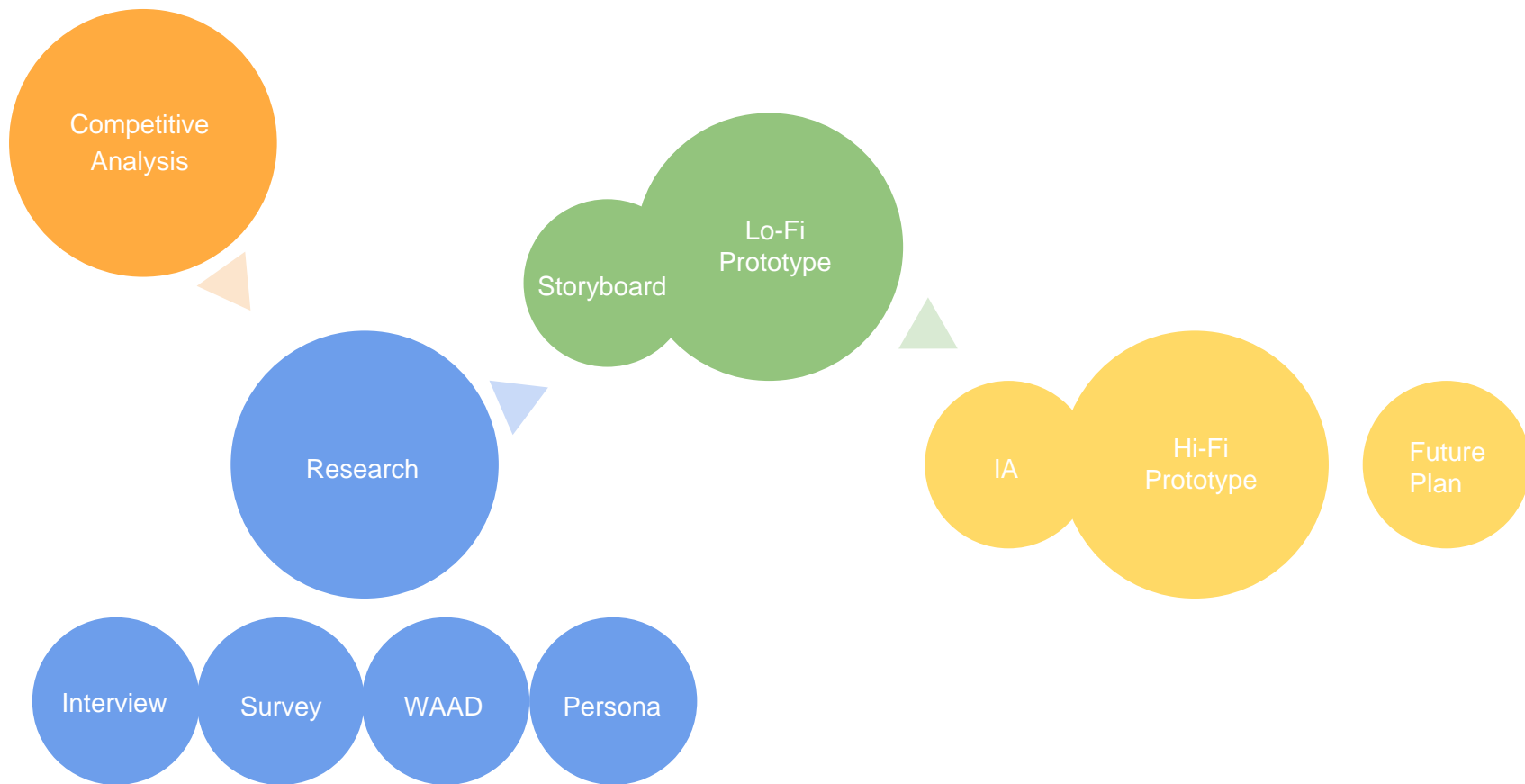
Han Han

Yueyang Wu

Senneon Mesfin

HOW TO AVOID THIS IN YOUR DAILY LIFE






MENU **GROCERY LIST** **WEEKEND PREP** **PRINT / EMAIL**

You're making 4 meals. Check out your [grocery list](#) and optional [weekend prep](#).

MONDAY




ITALIAN SAUSAGE AND WHITE BEAN SOUP
with swiss chard and mushrooms

ORIGINAL GF PALEO VEG

FOR 2 4 6 8 OTHER

☒ **MAKE THIS MEAL**

TUESDAY




BALSAMIC MARINATED STEAK SALAD
with avocados, roasted red peppers and pine nuts

ORIGINAL GF PALEO VEG

One-pot Sausage And Peppers Pasta

any short pasta 1 pound






Ingredients
for 4 servings

farfalle, pasta, or any short pasta 1 lb

3-ingredient Creme Brulee

TRENDING THIS WEEK

Halloween Finger Food
No-bake Cookies and Cream
One-pot Sausage And Peppers

Step-by-step mode

Pepperplate

[recipes](#) [menus](#) [planner](#) [shopping \(7\)](#)

[recipe list](#) [import recipe](#) [manual recipe](#)

Get the Pepperplate Bookmark
Importing recipes is now even easier

SORT BY ALPHABETICAL **DATE** **FILTER BY** CATEGORIES [ALL] ★ FAVORITES

ALLRECIPES.COM
Fluffy and Delicious Pancakes

ALLRECIPES.COM
Thai Beef

ALLRECIPES.COM
Amazing Pork Tenderloin in The Slow Cooker

In the same pot, heat 1 tbsp of olive oil and fry sausages, working in batches as needed, until deeply browned on all sides.

3 of 10

INGREDIENTS

Meal Plan

Paprika Salmon with Grilled Eggplant & Basil Vinaigrette

Thai-Inspired Turkey Burgers with Napa Cabbage Slaw

Ribeye Steak with Sweet Potato Wedges & Arugula-Walnut Salad

PRODUCE

- ☐ baby arugula
- ☐ sweet potato
- ☐ cilantro
- ☐ napa cabbage
- ☐ ginger root
- ☐ lime
- ☐ carrots
- ☐ jalapeño pepper
- ☐ eggplant
- ☐ fresh basil

Meal Plan **Grocery List** **Favorites** **Settings** **Meal Plan** **Grocery List**

Yummly **JUST FOR YOU** **EXPLORE** **STORE**

Last personalized a few seconds ago

Top Recommended Recipes

Yums
Tap "Yum" to save recipes and to teach Yummly about your tastes.

Mashed Potato Cakes

Fluffy and Delicious Pancakes

Source **ALLRECIPES.COM**
Yield 4 servings
Active Time 15 minutes
Total Time 30 minutes

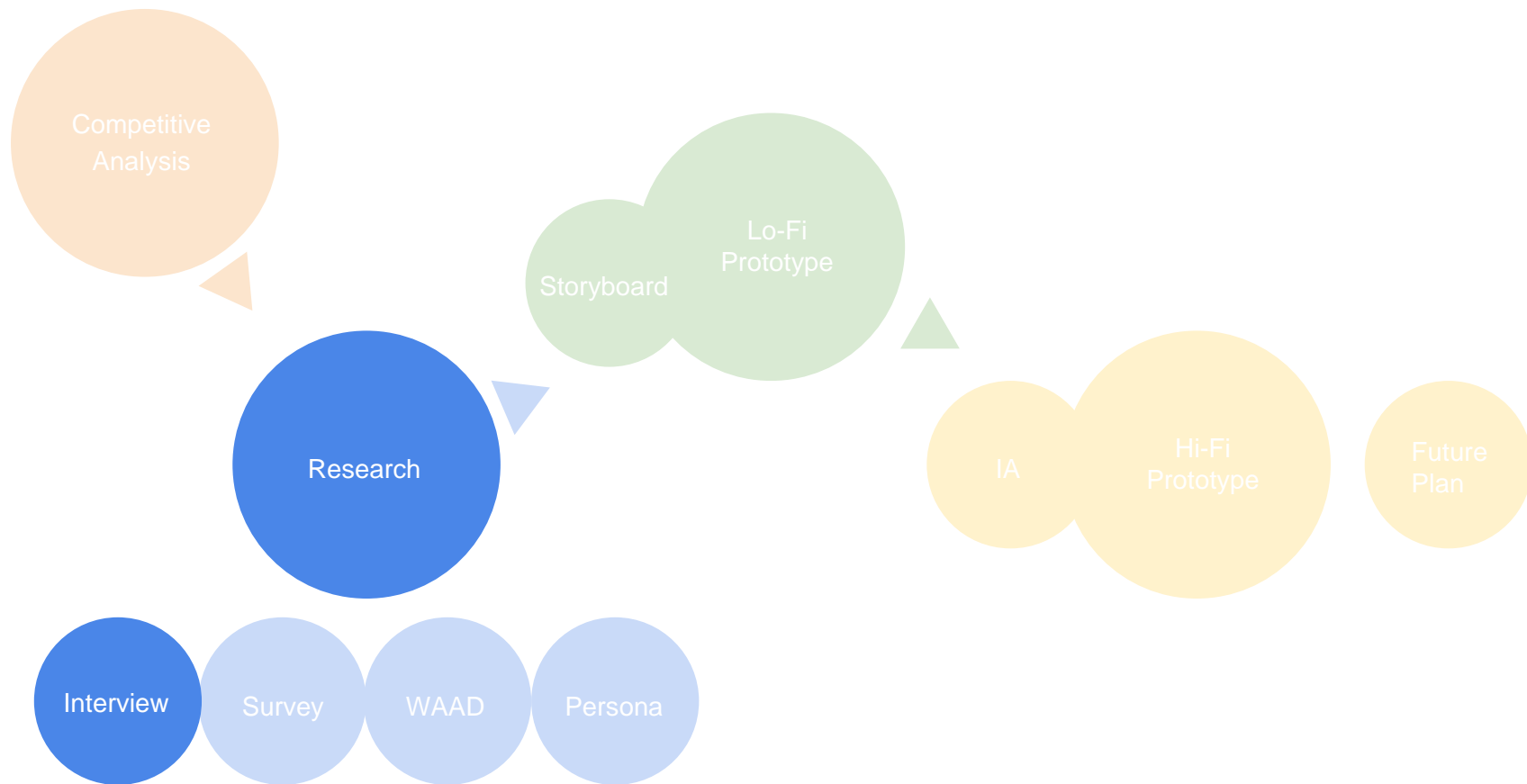
INGREDIENTS

- 3/4 cup milk
- 2 tablespoons white vinegar
- 1 cup all-purpose flour
- 2 tablespoons white sugar
- 1 teaspoon baking powder
- 1/2 teaspoon baking soda
- 1/2 teaspoon salt
- 1 egg

Synchronization Complete

	Mealime	PepperPlate	Yummly	Tasty	CookSmarts
Description	It offers personalized and healthy recipes and it enables users to create grocery shopping list with a click according to the recipes. We choose this app because it has similar functions with our app. Also, it is a popular app with over 100,000 downloads and ranks as the first place in Top Grossing Food & Drink.	Pepperplate helps users organize recipe collections, plan their meals based on those recipes, and building out shopping lists. This app has similar functions as what we want to do.	Yummly provides personalized recipe recommendations, semantic recipe search, a digital recipe box, shopping list to users. Also it cooperates with other platforms to provide grocery delivery.	Tasty has over two thousand video recipes and a step-by-step mode which allows users to view all the cooking steps in separate videos.	CookSmart helps you plan your weekly meal each day of the week so that you don't have to waste time figuring out what to make for dinner.
Platforms	Web, APP	Web, APP	Web, APP	Web, APP	Web, APP
Strengths	<ul style="list-style-type: none"> • Super personalized • Can choose recipes for user • Online community (enable users to share information, discuss and provide suggestions for improvements) • Provide alternative groceries suggestions • Cooking mode enables hover over to top of screen to go to the next step 	<ul style="list-style-type: none"> • Does a great job of scrubbing recipes from various websites • “cook now” feature which allow you set a timer while view the recipe 	<ul style="list-style-type: none"> • Has a lot of functions: grocery shopping record, recipes, online grocery shopping and kitchen supplies shopping • Beautiful user interface • Has all the health related information • Allows users to schedule eat time 	<ul style="list-style-type: none"> • Has popularity on social media • The recipes are all videos • Step-by-step mode allows users to see each one of the steps in video form • Ingredient lists are available for printing out 	<ul style="list-style-type: none"> • Having comment and rating for the receipt so it's easy to see whether this menu is a good fit for your taste or not. • send the list to instacart
Gaps	<ul style="list-style-type: none"> • Too many pro-only features (exclusive recipes, view nutritional info, calorie customization filters, add notes to recipes) • Can't build recipes 	<ul style="list-style-type: none"> • Poorly designed UI • Users have to add recipes in browser and then check it in their app 	<ul style="list-style-type: none"> • lack of consistency. Some of the recipes are in pictures, some of them are videos. 	<ul style="list-style-type: none"> • It is a video recipe book, no more other functions 	<ul style="list-style-type: none"> • You can't pick your menu







1. Do you cook?
2. If no, what is the reason? If yes, proceed

Preparation

- a. How often do you cook?
- b. How is your cooking skill? low, medium, high
- c. Where do you purchase the ingredients?
- d. How often do you purchase your ingredients?
- e. Do you use a shopping list when purchase these ingredients? If no why? if yes, do you share the grocery list with someone else?
- f. What is the biggest problem when you purchase the ingredients?
- g. How do you plan your meals?
- h. Do you cook for your family? If yes, do you ask for your family member's choice for meal before you go for purchase? How often do you ask?

During cooking

- a. Do you need recipes when cooking?
- b. If yes,
 - i. Where do you get those recipes?
 - ii. How do you keep those recipes?
 - iii. Do you like to be adventurous and try new recipes or would rather keep with the recipes you already familiar with?
 - iv. How do you remember the steps when you're cooking?
 - v. What is the biggest issue you met when you're cooking?

After cooking

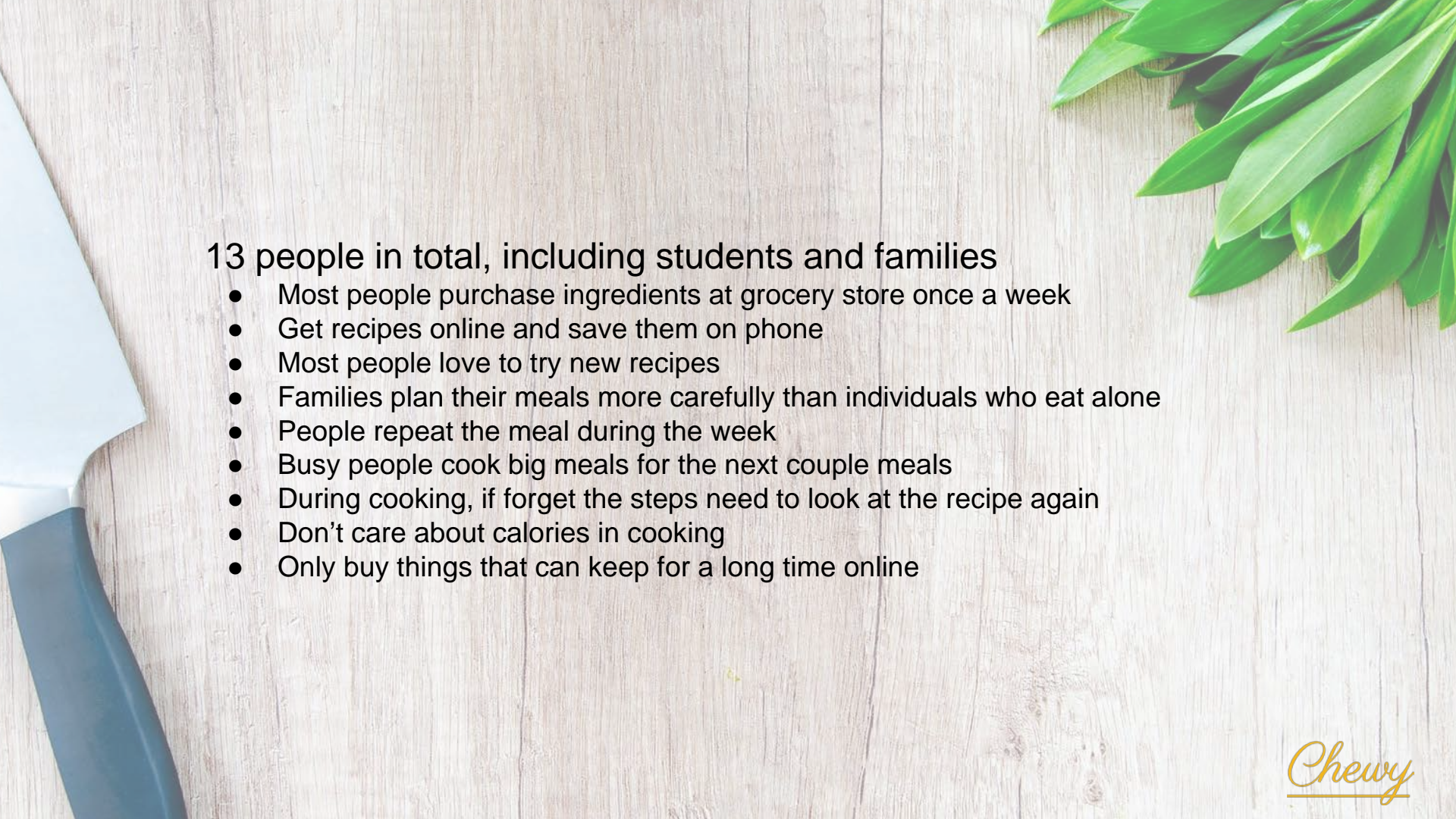
- L. Do you have trouble when you realized the food is already run out but you didn't noticed?

Health

1. Do you use tools to control your diet?
 - a. If yes:
 - i. What are those tools?
 - ii. Do you care about knowing nutrition facts of the meal?
 - iii. Do you care about calculating calories of the meal?
 - iv. How helpful do you think those tools are? (What features do you like the most, What features do you think are useless)
 - v. What are the features you hope them to have?
 - b. If no:
 - i. What is the biggest issue that stops you?

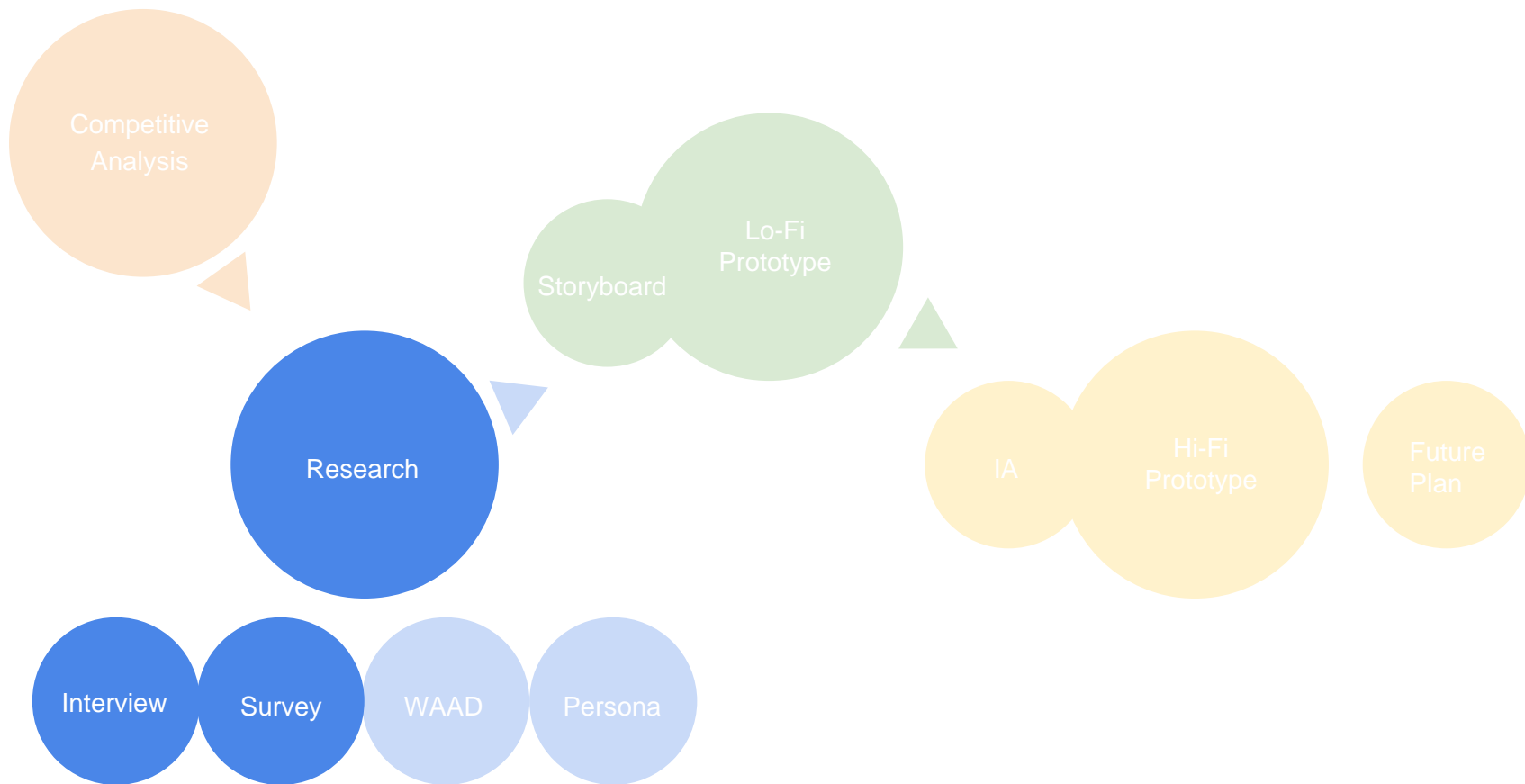
Online purchase

1. Do you purchase ingredients online?
 - a. If no:
 - i. Why?
 - b. If yes:
 - i. What do you think is the pros and cons to shop ingredients online?



13 people in total, including students and families

- Most people purchase ingredients at grocery store once a week
- Get recipes online and save them on phone
- Most people love to try new recipes
- Families plan their meals more carefully than individuals who eat alone
- People repeat the meal during the week
- Busy people cook big meals for the next couple meals
- During cooking, if forget the steps need to look at the recipe again
- Don't care about calories in cooking
- Only buy things that can keep for a long time online



Sample Questions

How long does it take for you to cook a meal on average?

Answer	Response	%
0-10 minutes	3	6.12%
11-30 minutes	29	59.18%
1 hour	16	32.65%
Over an hour	1	2.04%
Total	49	100.00%

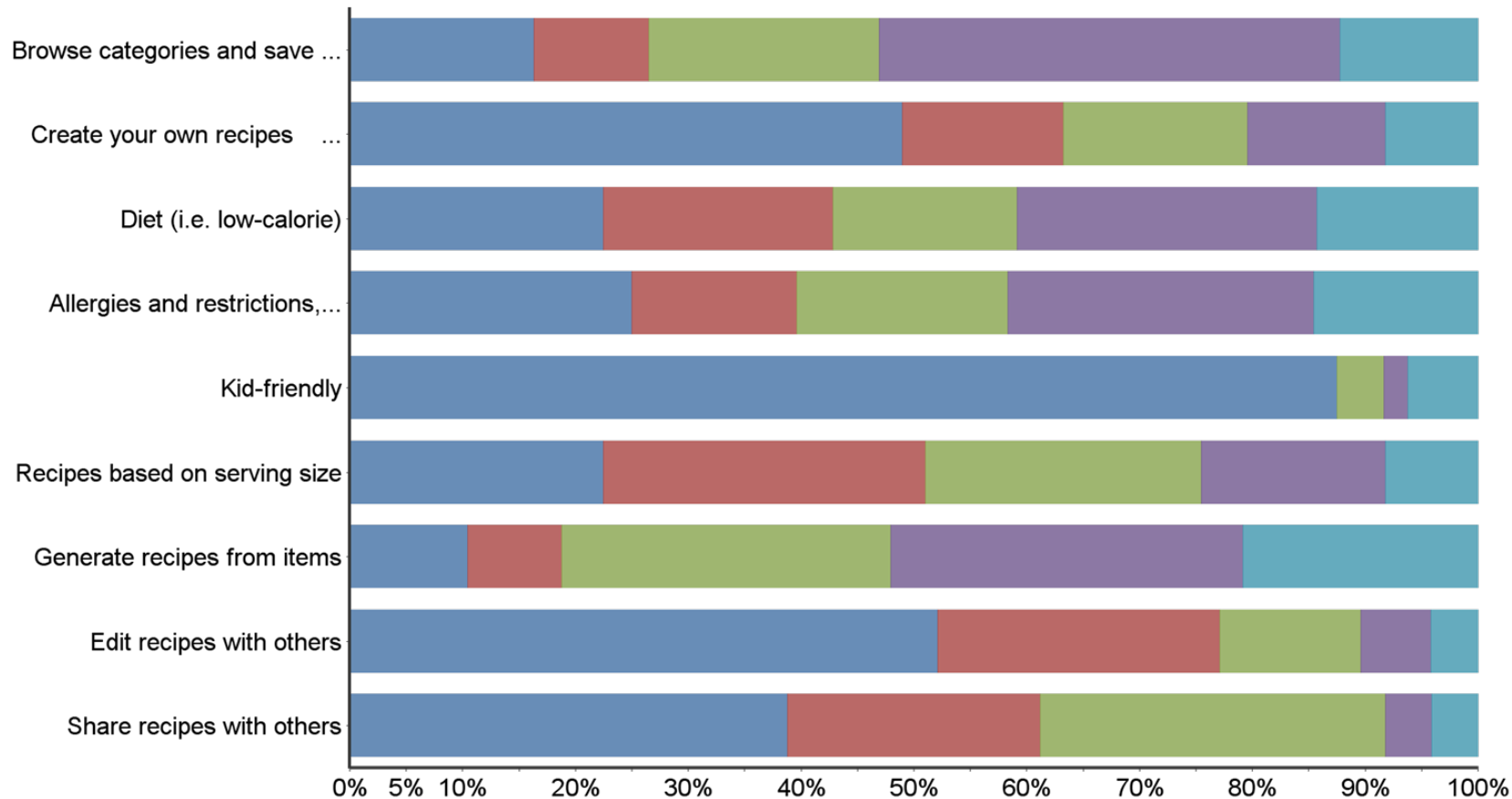
Do you prepare meals for the week?

Answer	Response	%
Yes	20	40.82%
No	29	59.18%
Total	49	100.00%

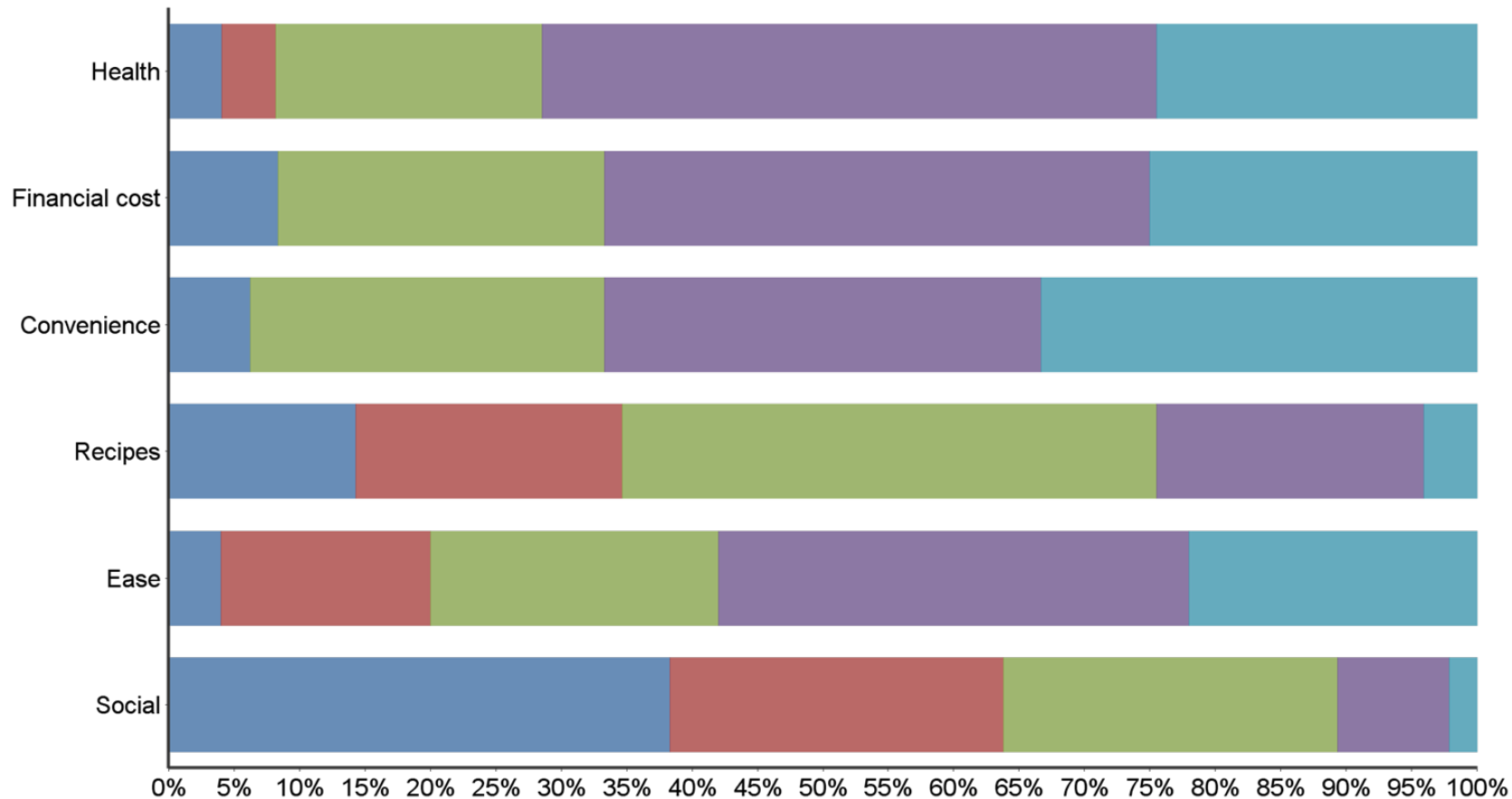
How often do you cook?

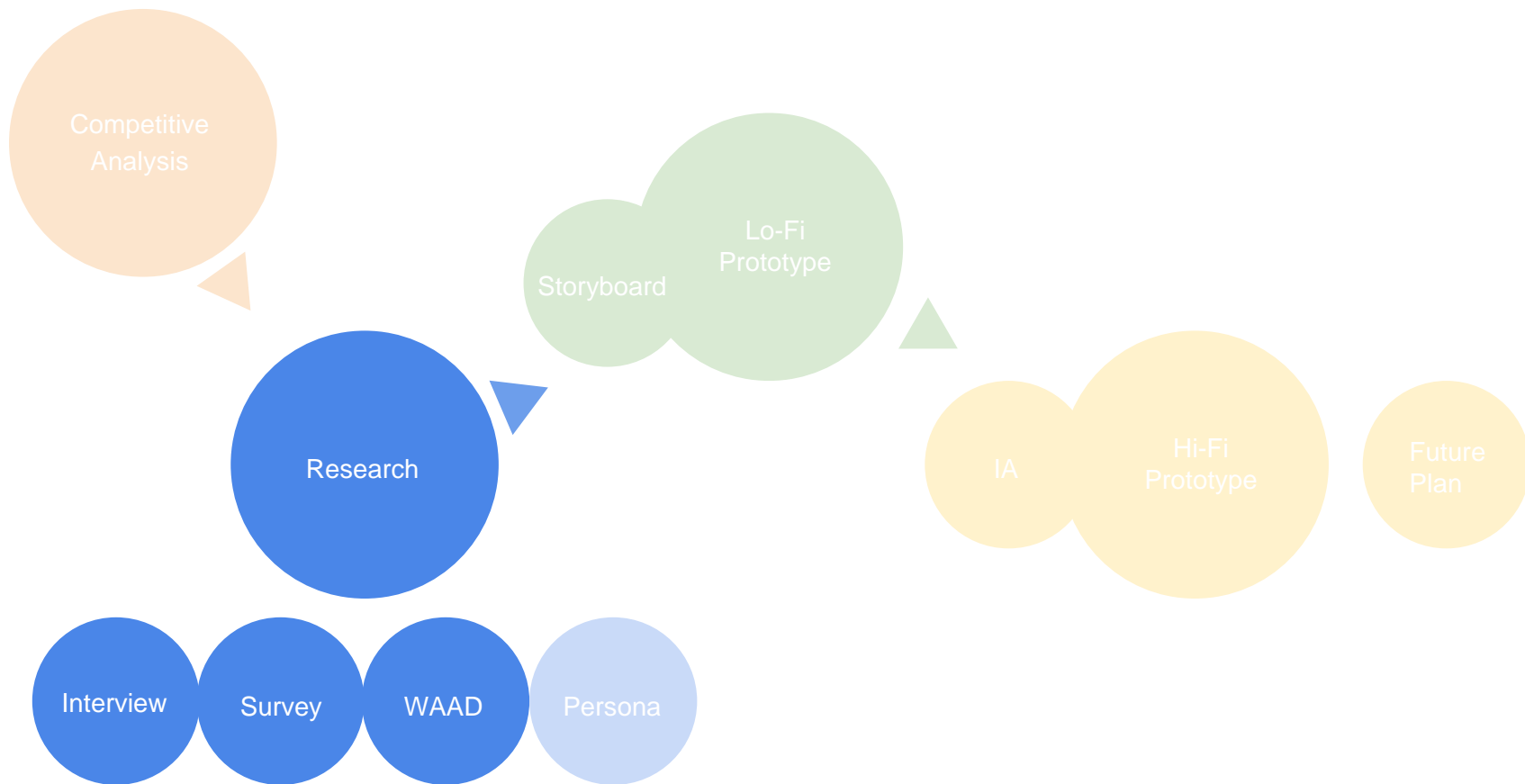
Answer	Response	%
Everyday	9	18.37%
Several times a week	31	63.27%
Several times a month	8	16.33%
Several times a year	1	2.04%
Never	0	0.00%
Total	49	100.00%

Not at all important Slightly important Moderately important Very important Extremely important



■ Not at all important ■ Slightly important ■ Moderately important ■ Very important ■ Extremely important





WAAD

Ingredients Managment

Ingredients can be rotten fast without notice

Food Manage: We have our system.

Serve my husband to store when food fast out

I don't know many recipes so I buy some things at the time

Not easy to find ingredients for asian dishes

Food Plan

Buy seasonal ingredients

We usually will plan before we come to the grocery store. We will repeat some dishes in the week

Sometimes forgot something to buy

Plan ahead but plans often change. Depends on time and mood.

Like the feature of creating shopping list

I try to stay under a budget

We have two little kids we can't leave that to chance.

Make a list and buy once for a week

I usually put the list on refrigerator if they want sth they add to the list.

Would like a feature of meal planning

Ask family member's choice once a week before shopping

make a big whiteboard and schedule our entire week of calendar what time and what days

I just kind of change my menu based on what my husband and kids gonna want

Nutrition

Calculate calories: Lack of time

Do not calculate calories because it's troublesome. Also needs to know more about calories first

don't care about health fact have the idea of getting exercise

I'm vegan I get all the nutrients and so need to calculate the calories

Do not think low-calorie food are delicious

don't use any keep it simple because they can't persist

I'm lazy. I don't want to input everything I've eaten and I have to estimate the quantity

never used any nutrition app

My husband has diabetes

Recipes

Google for recipes and make a note

Recipe books. Save it on my phone when I am a beginner.

Use recipe apps

My husband like to try new recipes. Try things simple.

Sometimes just google recipes

Usually I know what I want of sometimes I see something new and create something in my mind

Only can remember simple recipes

When I get too tired I try on new. Every couple months

Sometimes hard to control the amount of ingredients

Sometimes when you following the recipe it could be expensive buying the ingredients.

Like the feature of searching recipes by ingredients

I just purchase ingredients that I buy regularly

Most of the things we've been making for a while

Keep favorite recipes in Apple Notes because she may want to combine several recipes and create her own.

I have lot of cookbooks. Picture and take it in my mind how my family would like it

It's look at the recipe first and will look at it again if I forgot the steps when the cooking

Make sth over and over again somehow memorized. Check back the recipe.

Enter our dish, Pinterest, Apps

Sometimes they like it sometimes they don't. Twice a month.

With my new recipes if she saw them many times when browsing

Internet and take screenshot save on phone.

I'd like to try new recipes

I use apps like blue apron is not the recipe will come with ingredients. And I like use I cook much better with those recipe

Second time go from memory and go back to phone when forgot.

Cooking

It's forgetful I have to look at the recipes again

Lack of it need later

Substitutes food ingredients when cooking

It is hard to control the quantity

have to check recipe on their phone while cooking, which can pollute their phone and slow their cooking

Others eat instant food

Cooking time is too long

Online Purchase

Things bought online may not be fresh enough

It is hard to control the quantity

Online purchase. Worry about the quality I can't see it or touch it.

I don't trust buying fresh stuff from online stores.

Fresh I rather come to store smell it and feel it.

Seeing the real items at the grocery stores will make me feel secure.

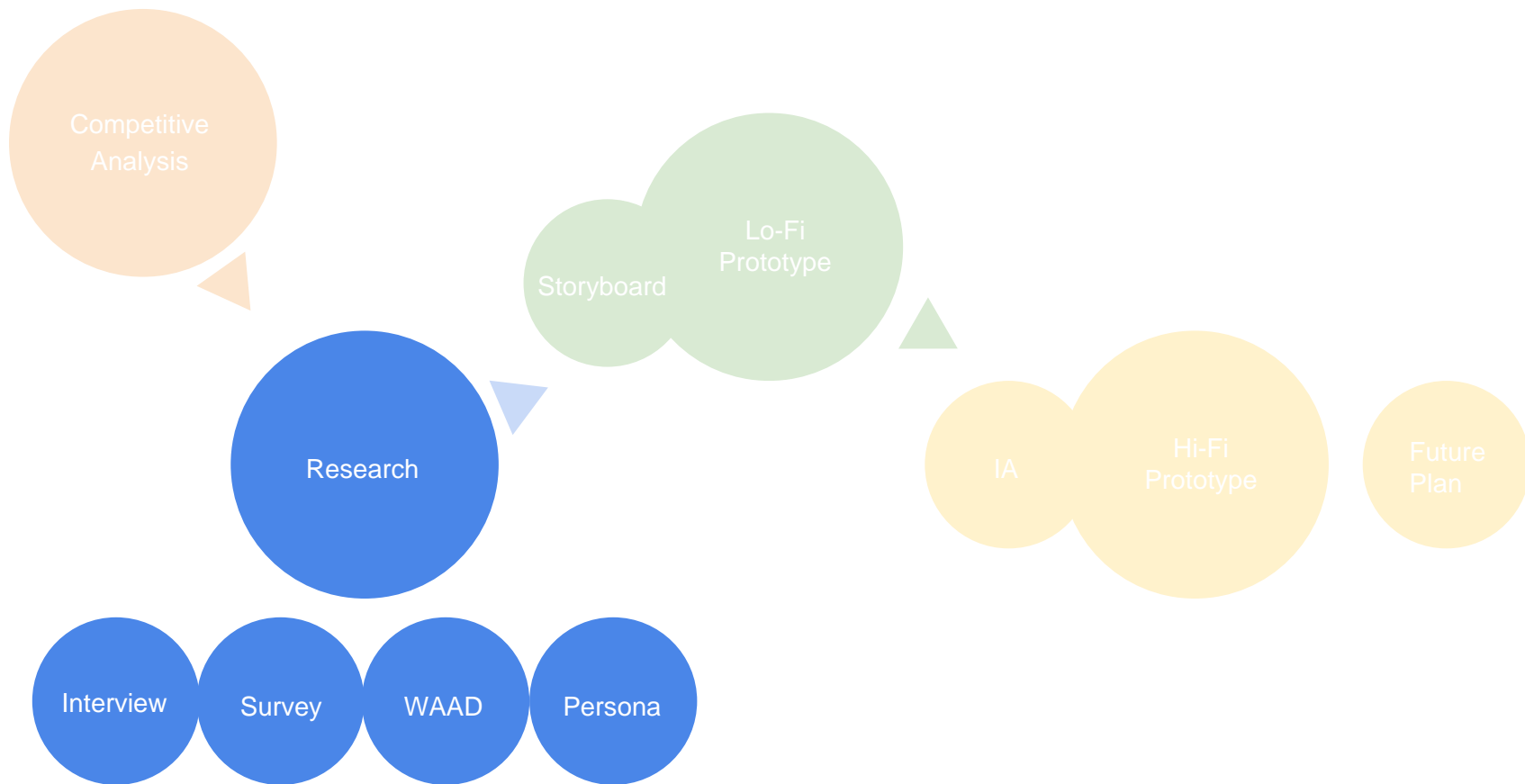
only purchases ingredients online which have a long preservation time

online purchasing are expensive

Shopping online is good when buy sth heavy

Blue Apron is expensive, the choices of recipes are very little

Do not want to create an account on app because of privacy issues.





Cooking skill
level: High;

Tools: Shopping
List, recipe
Advancedbook;

Homemaker

Problem Case

Alessia is a homemaker who cooks for the family three times a day. She has to decide what meals to cook in the next couple of days and makes a plan. Normally she goes to the supermarket near her house to buy daily supplies including foods. Every time before she goes to the supermarket she has to make a shopping list in case she misses something.

Requirements

She wishes there's something can help her remember those things so she won't have to worry about missing items in the shopping list.
She wishes she don't have to plan the meal every day.
She wants her family to eat healthier.

Alessia
33 · Married, has 2 kids · Home maker



Cooking skill
level:
Foundation;

Devices: Ipad,
Iphone

STUDENT

Problem Case

Sam is a freshman in school of engineering. He has so much work to do in the school that he can't spend too much time on cooking. He is interested in learning cooking though; He downloads a app with recipes and instructions teaching him how to cook. But he finds that he doesn't have most of the ingredients. He wants to buy the ingredients but he only has time to go the supermarket once a week. So he delete the app and give up on cooking.

Requirements

Need some food easy to cook;
Need someone remind him which food is going to rot if he doesn't cook it.
Need someone teaches him what materials are for what dishes when he's in the supermarket.

Requirements

Recipes:

1. Source: Google3, Recipe books, Recipe apps
2. Need recommendation of recipes;
3. Recommend recipes based on the ingredients they have;
4. Recommend recipes for children;
5. Generate calories based on the ingredients and serving size;
6. Combine different recipes from other websites to the app;
7. Allow users to input recipes themselves and share.
8. Add filter or sort by cooking frequency;
9. Different ways of adding the recipes both manually and from other websites;
10. (Filter, Search, User Preference) Recommend recipes with shorter cooking time; Add it to user's preferences;

Cooking:

1. Have a start cooking button. Allow voice input and manual input to check steps and move on to the next steps;
2. Allow users to set timer for certain steps and get notified.
3. Tutorial for beginner:
 - a. What is tablespoon/teaspoon/cup?

Online Purchase:

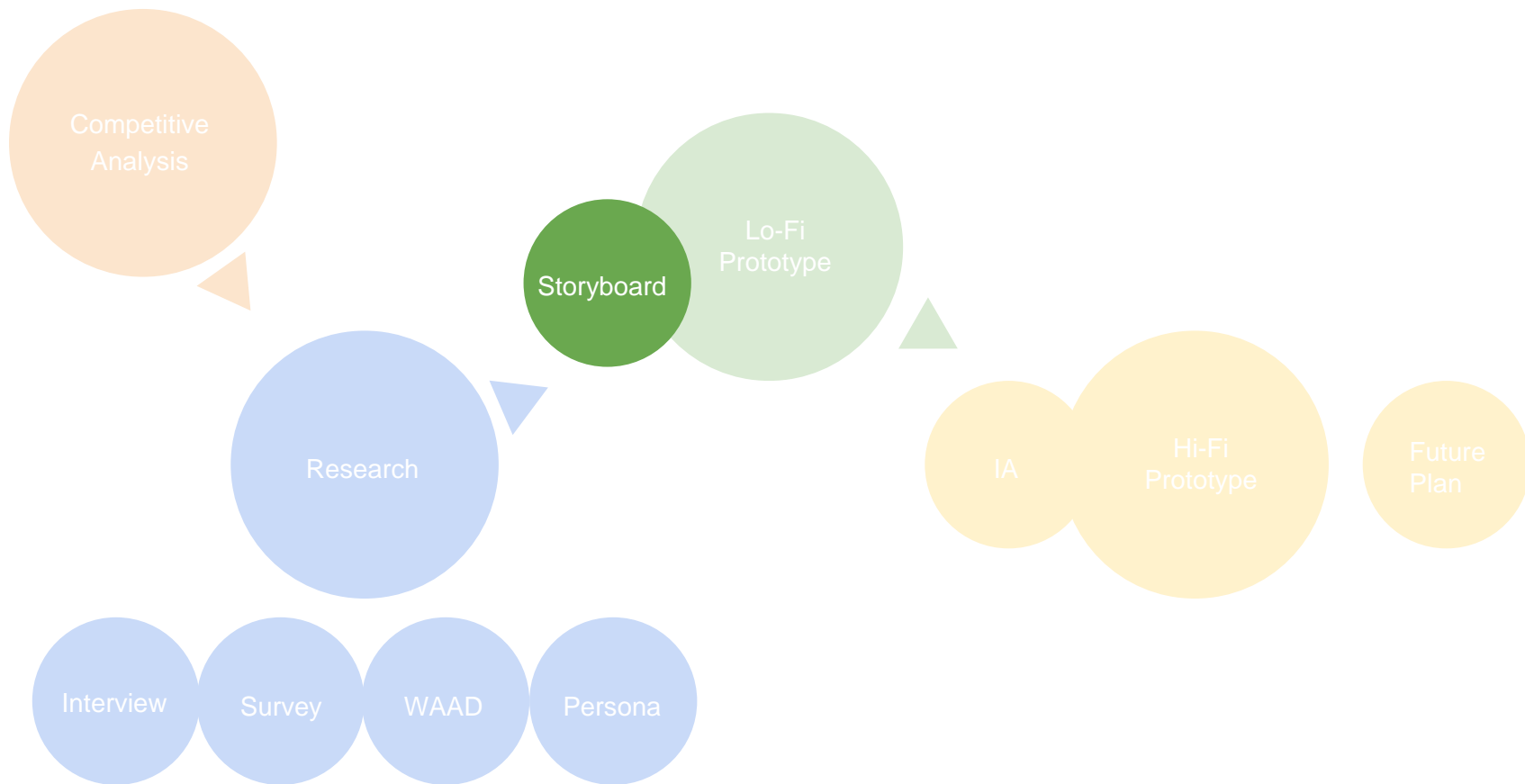
1. Link to online shopping apps and send criterias, quantify, and messages;
2. Price comparison.(Optional)
3. Coupons;

Ingredients:

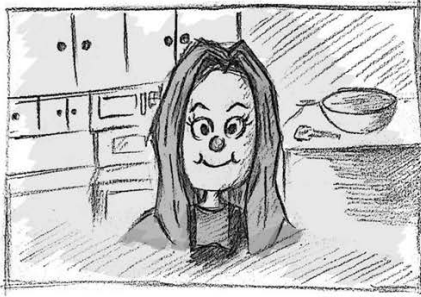
1. Track the freshness of the ingredients;
2. Tell the users where to buy ingredients;
3. Vegan
4. Preference for seasonal ingredients (veggies);
5. Take a picture of the ingredients, and shows the calories and nutritions;

Food plan:

1. Allow users to add meal to different days;
2. Users need shopping list2;
3. Organize ingredients in shopping lists based on the locations they can shop it;



Storyboard



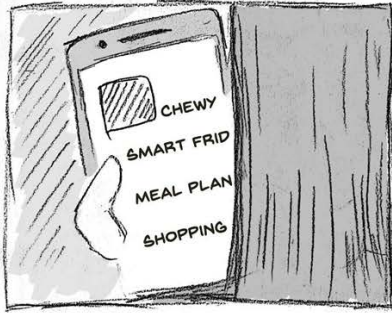
ALESSIA IS MARRIED AND HAS 2 CHILDREN. SHE IS A HOME MAKER WHO COOKS FOR THE FAMILY THREE TIMES A DAY.



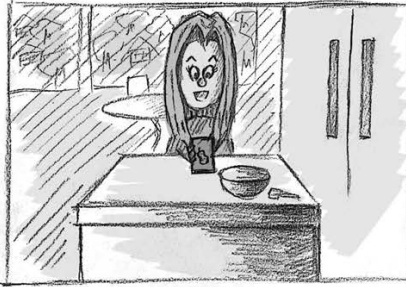
NORMALLY ALESSIA GOES TO THE SUPERMARKET NEAR HER HOUSE TO BUY DAILY SUPPLIES INCLUDING FOODS. EVERY TIME BEFORE SHE GOES TO THE SUPERMARKET SHE HAS TO MAKE A SHOPPING LIST IN CASE SHE MISSES SOMETHING.



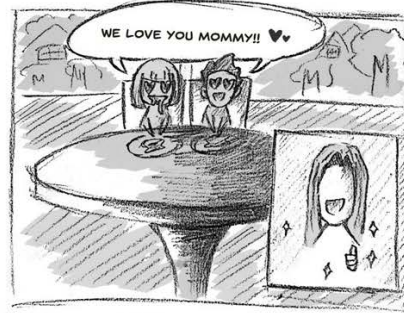
ALESSIA HAS TO PLAN THE MEAL EVERY DAY. SOMETIMES SHE CAN'T COME UP WITH SOMETHING NEW. THIS MAKES HER UPSET.



THINGS CHANGED WHEN ALESSIA MET CHEWY IN THE APP STORE.

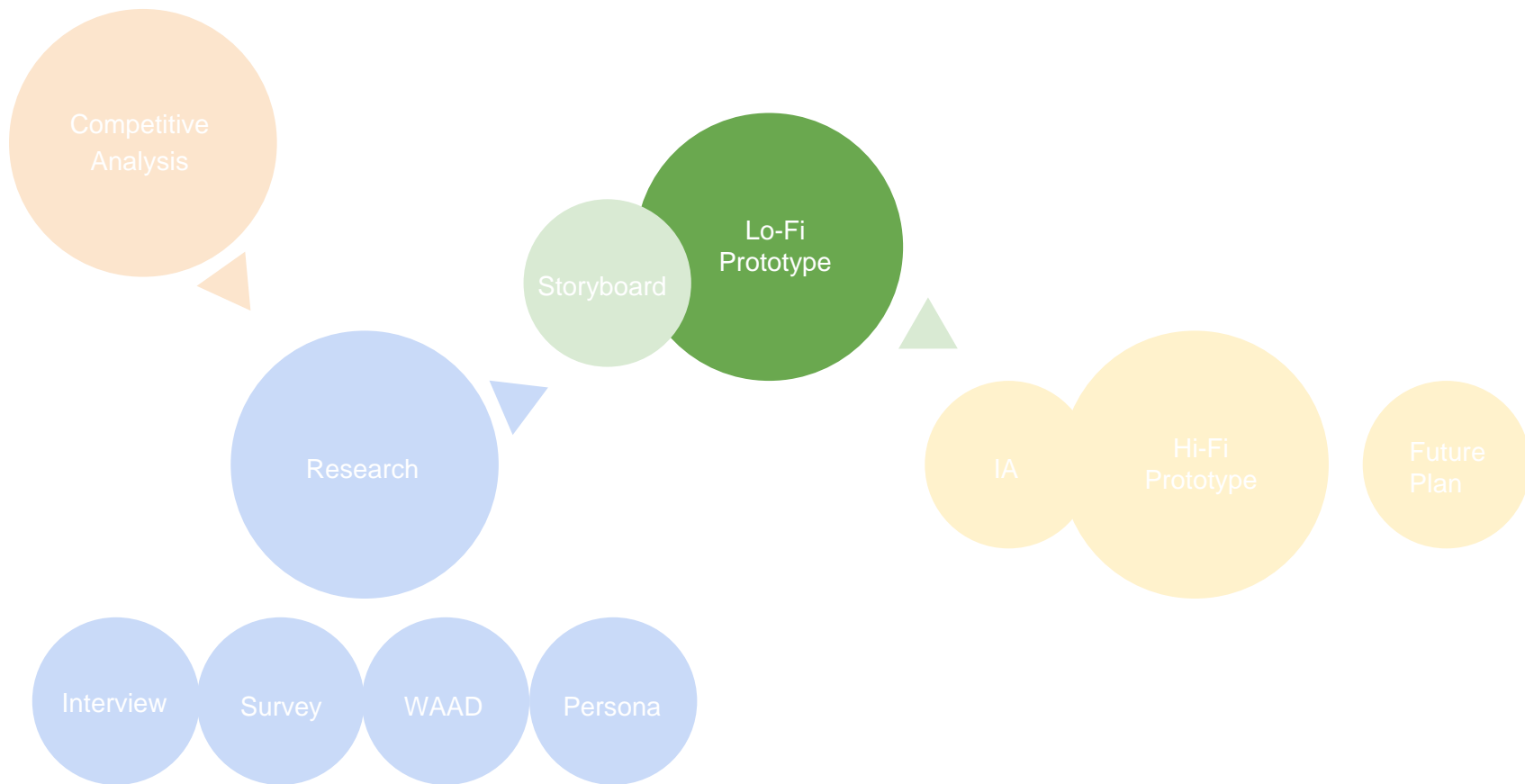


CHEWY ALLOWS HER TO PLAN MEALS AHEAD AND TRACK THE FRESHNESS OF ALL THE INGREDIENTS SHE HAS GOT.

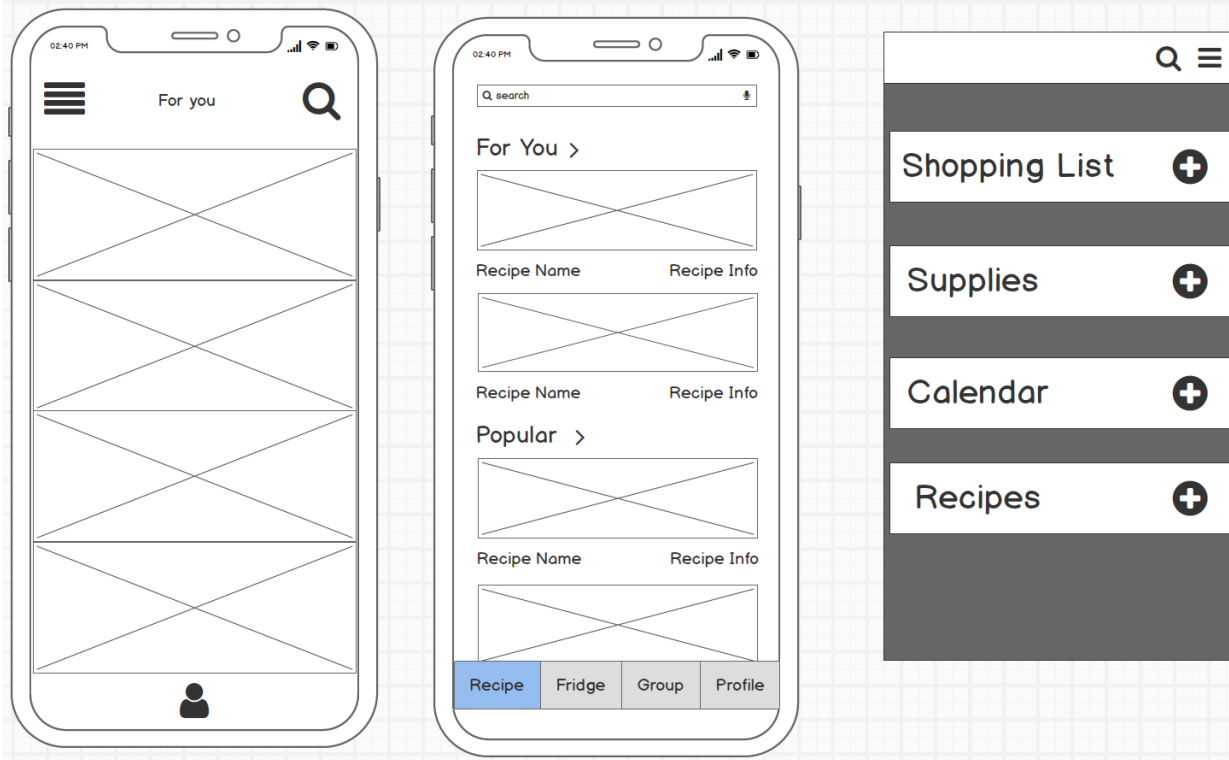


THE LARGE AMOUNT OF RECIPES RECOMMENDED BASED ON THE FAMILY'S PREFERENCES ALSO HELP ALESSIA IMPRESS HER CHILDREN. SHE IS VERY SATISFIED.

Chewy



Homepage

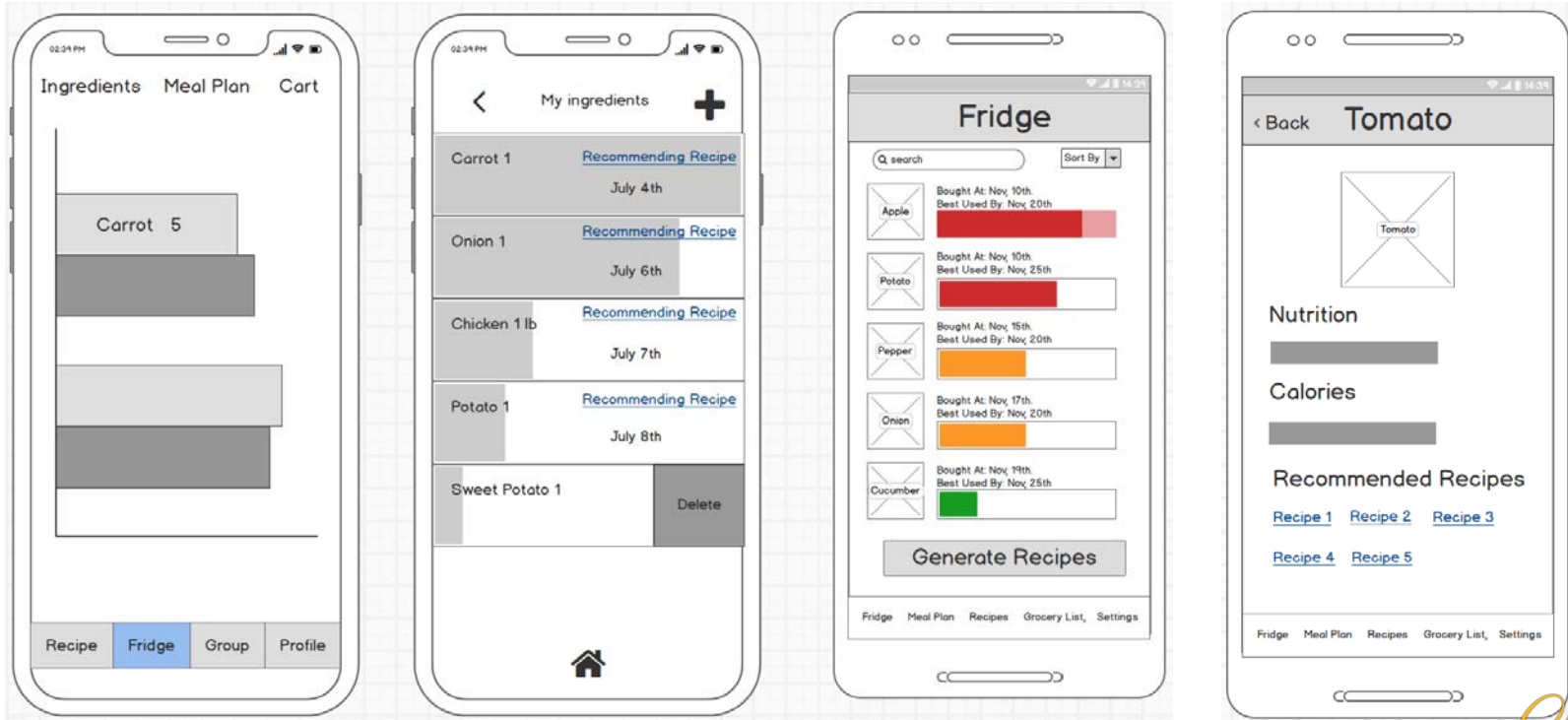


A homepage to show main features to our users.

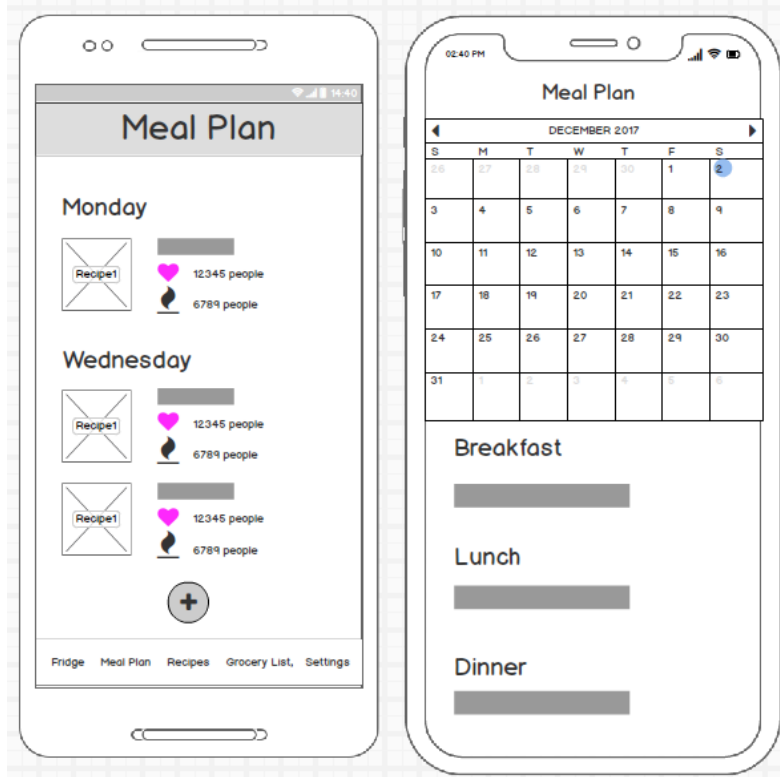
Fridge

A fridge page to show the groceries, their freshness and best used date.

- Use progress bar with colors.
- Provide nutrition facts and recommended recipes for each ingredient.



Meal Plan



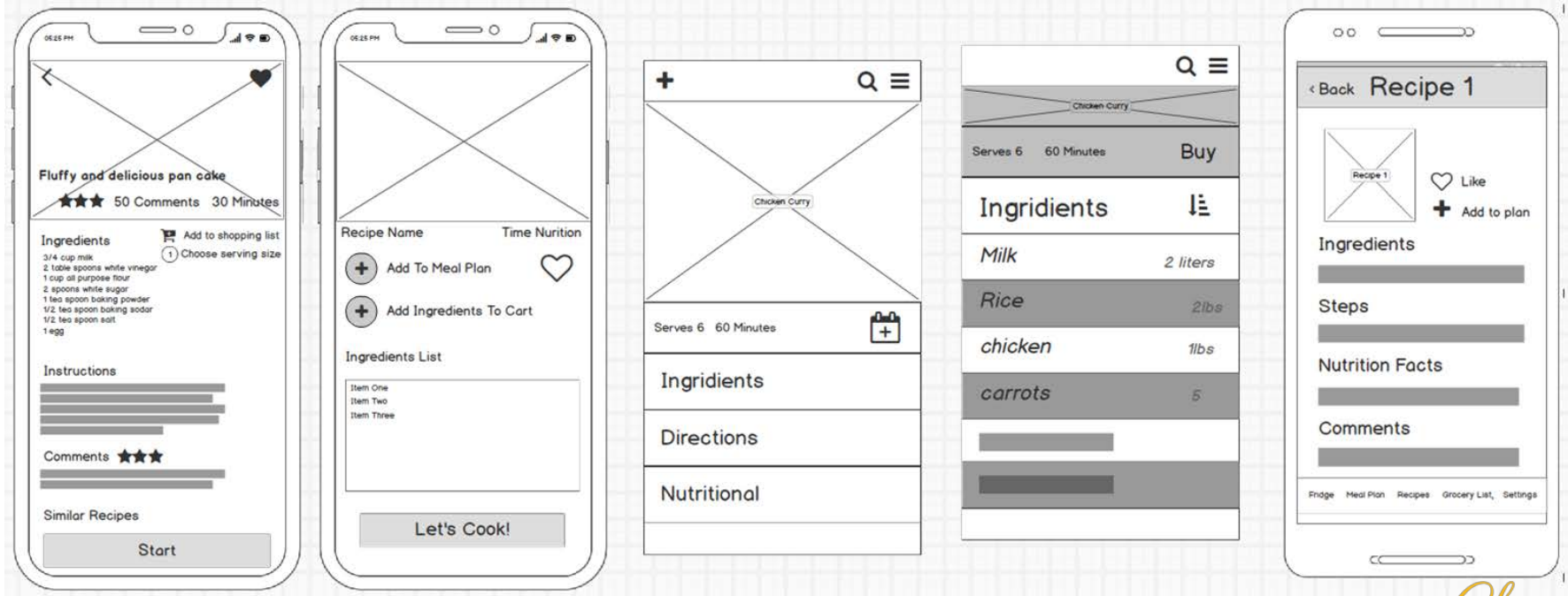
A meal plan page to plan ahead.

- Allow users to check their weekly plan
- Allow users to add meals to a specific day

Recipes

A recipe page to provide ingredients and instructions.

- Enable voice control during cooking.
- Provide a timer for each step.



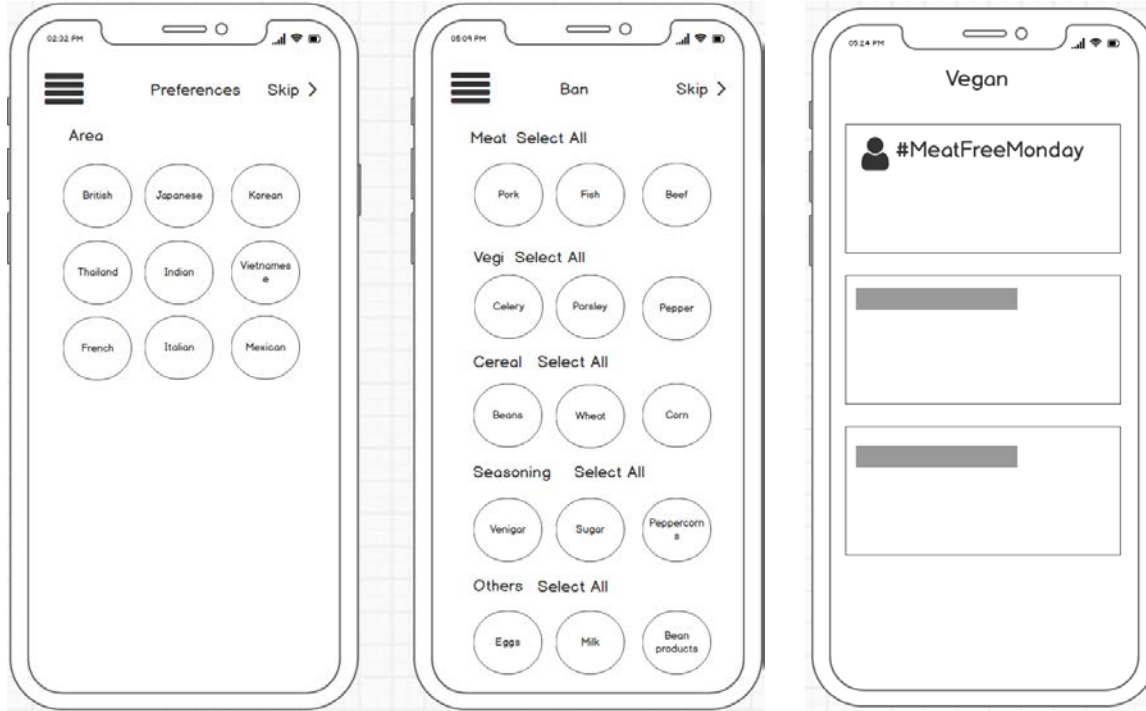
Shopping List

Enable users to generate a shopping list according to recipes.

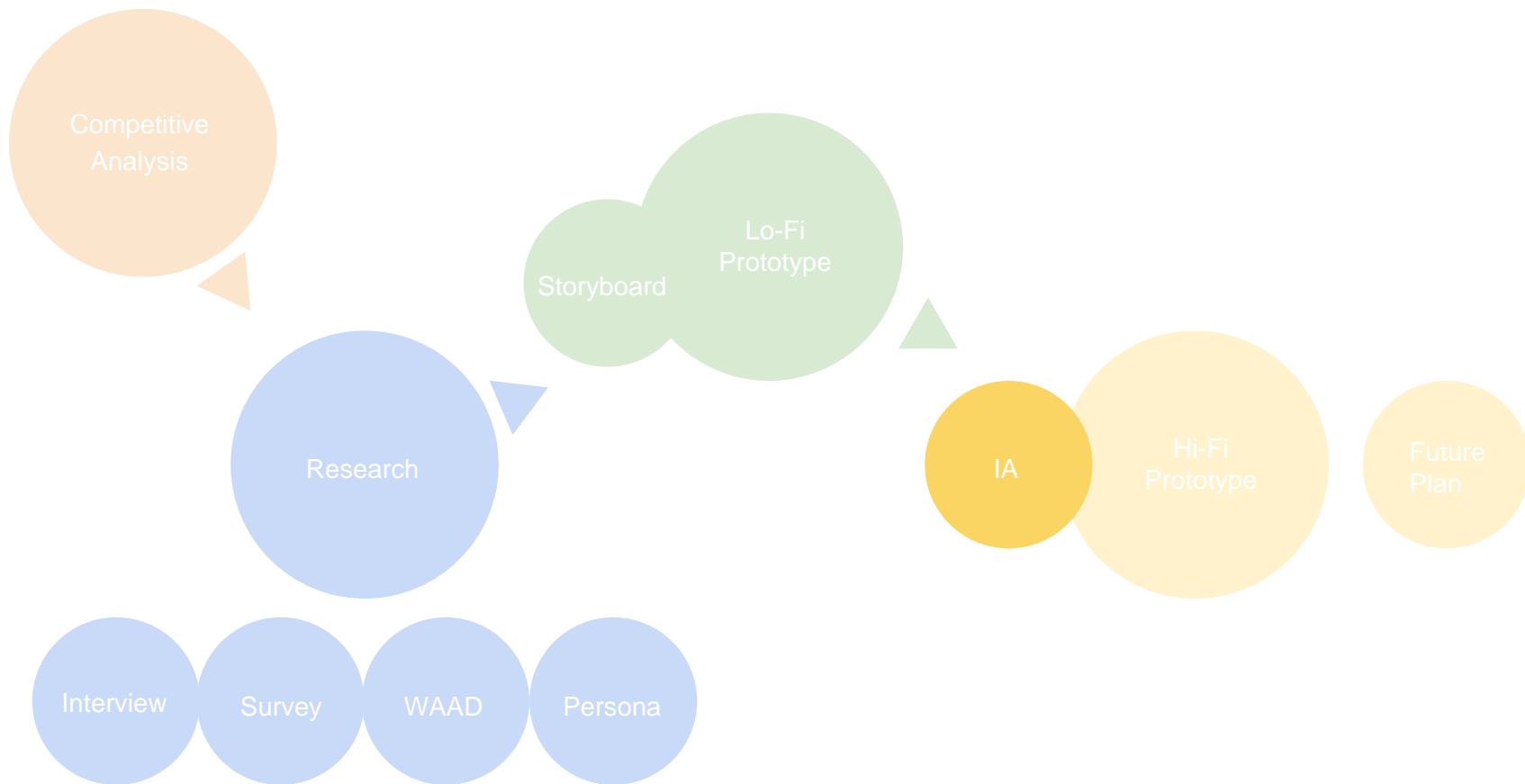
- Group items according to their category.
- Use icons to represent each category.



Others



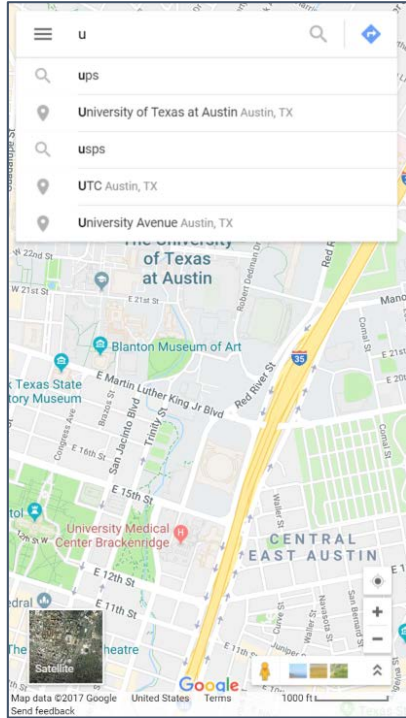
- Allow users to choose the food they like and do not like.
- Adding social features including groups and challenges.



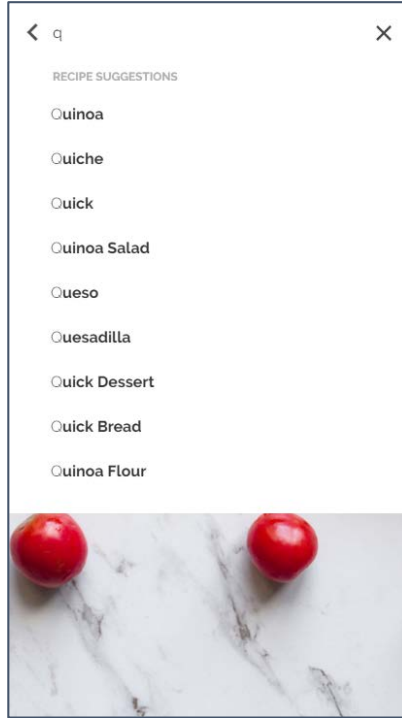
Information Architecture

Chewy						
Main Page			Bottom Navigation			
Fridge	Meal Plan	Recipes	Cart	Social	Profile	Settings
Groceries	Each day in a week	For You	Shopping List	Your Groups	User Info	My Account
Grocery	Recipes	Recipe	Grocery	Group	User Potrait	Preferences
Nutrition Facts		Image	Quantity	Group Intro	Username	Maximum Cooking Time
Recommended Recipes		Metadata		Challenges	Joined Groups	Maximum Ingredients Per Recipe
Freshness		Ingredients		Posts	Completed challenges	Unwanted Ingredients
Best used date		Directions		Popular Groups	Categories of Recipes	Preferred Ingredients
		Nutrition				About Chewy
		Trending			Favorite Recipes	Feedback & Support
		Recently Added			Default Categories	
					User-created Categories	

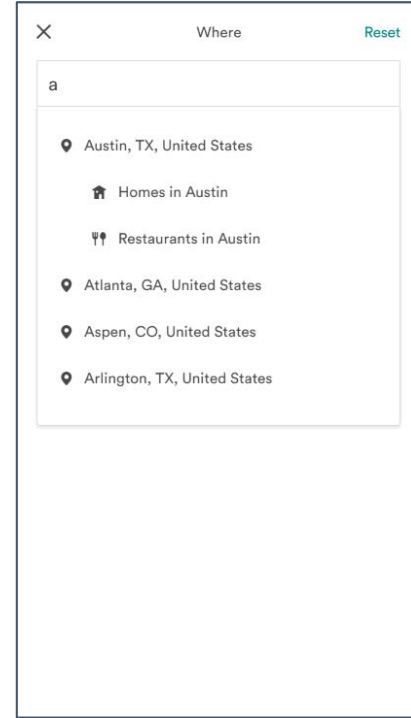
Search



Google Maps



Yummly



Airbnb

Navigation

Cart > Add to Fridge

Social > Groups > Challenges

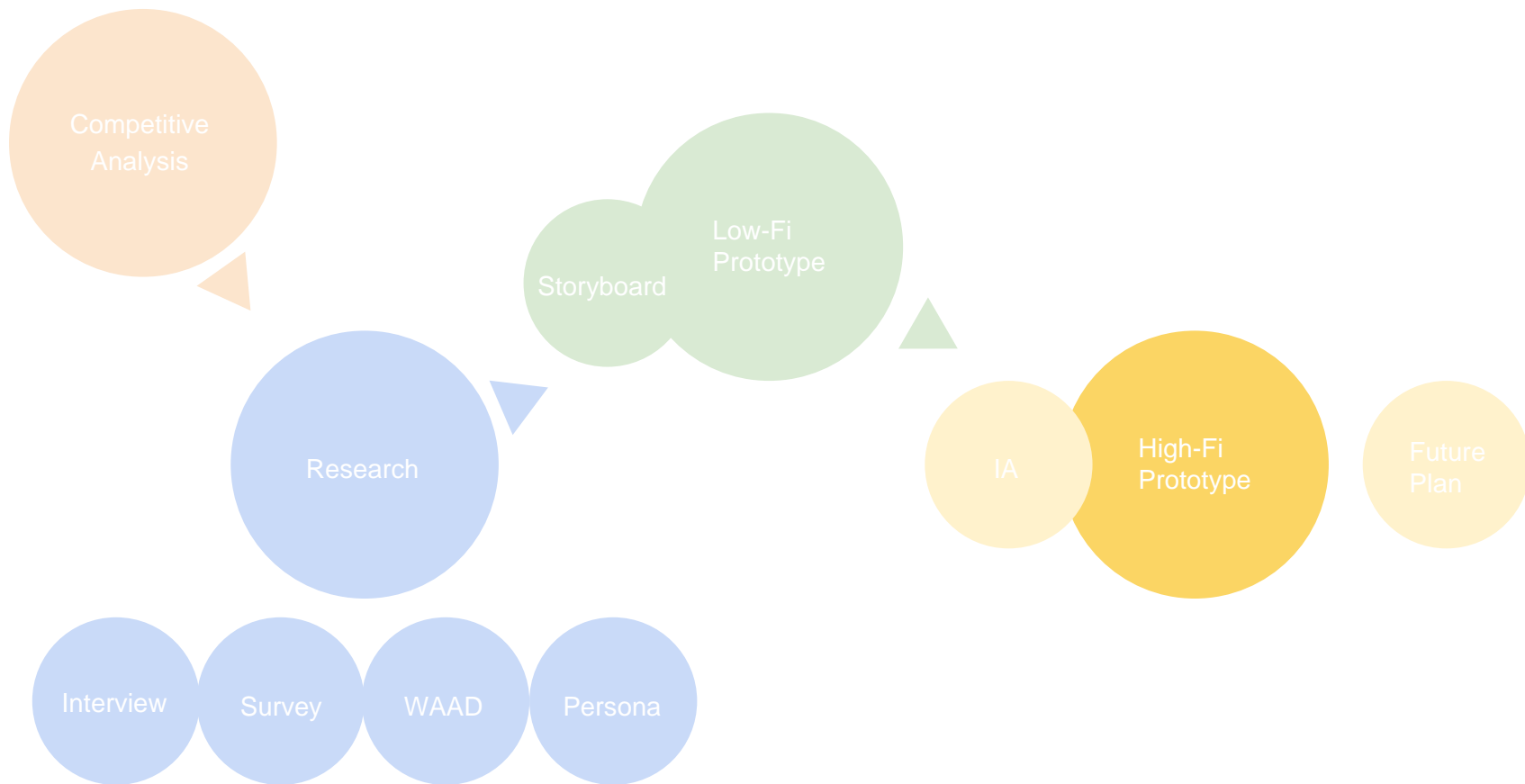
Profile > Favorites

Home > Meal Plan, Fridge, Recipes

Settings > Preferences

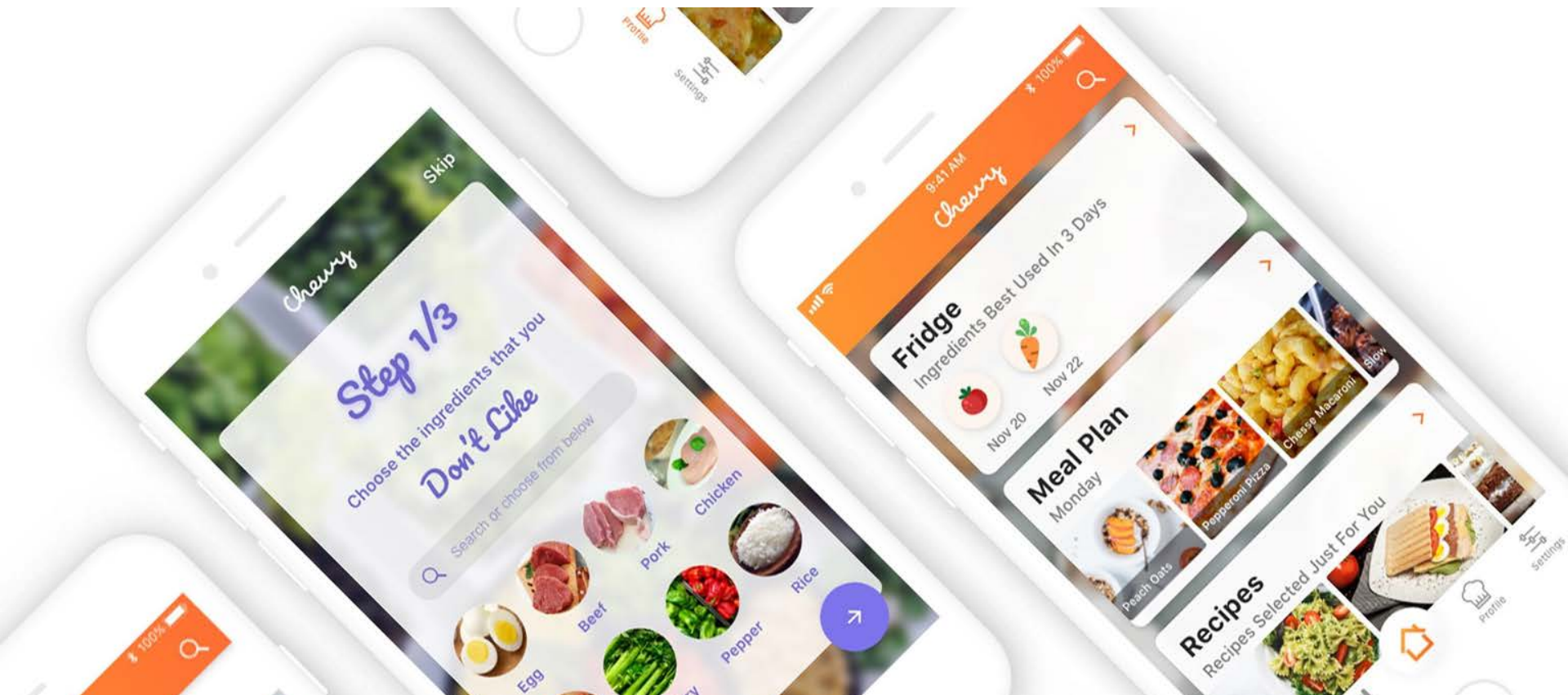
Controlled Vocabulary

Term	Definition
Item	Consumables that have been either: purchased or included in a shopping list
Ingredients	Similar to Item, Ingredients refer to consumables that are being used in a recipe
Fridge	Repository where consumables that have been already purchased are tracked
Meal Plan	List of past and present recipes that have been scheduled by the user
Cart	Akin to a 'shopping list', this includes items that await purchasing
Groups	Each group houses collection of recipes based on user-generated tags
Trending	List of popular recipes on user 'Recipe' page
Recommended Recipes	Generated potential recipes based on selected list of preferred ingredients
Unwanted	Items to which potential recipes will be excluded from Recommended Recipes
Preferred	Items to which potential recipes will be excluded from Recommended Recipes



High-Fidelity Prototype

<https://xd.adobe.com/view/145dd694-6a7f-4686-a414-0404c386d013>



Cherry

Skip

Step 1/3

Choose the ingredients that you

Don't Like



Search or choose from below



Egg



Beef



Pork



Chicken



Fish



Celery



Pepper



Rice



Cherry

Skip

Step 1/3

Choose the ingredients that you

Don't Like



Search or choose from below



Egg



Beef



Pork



Chicken



Fish



Celery



Pepper

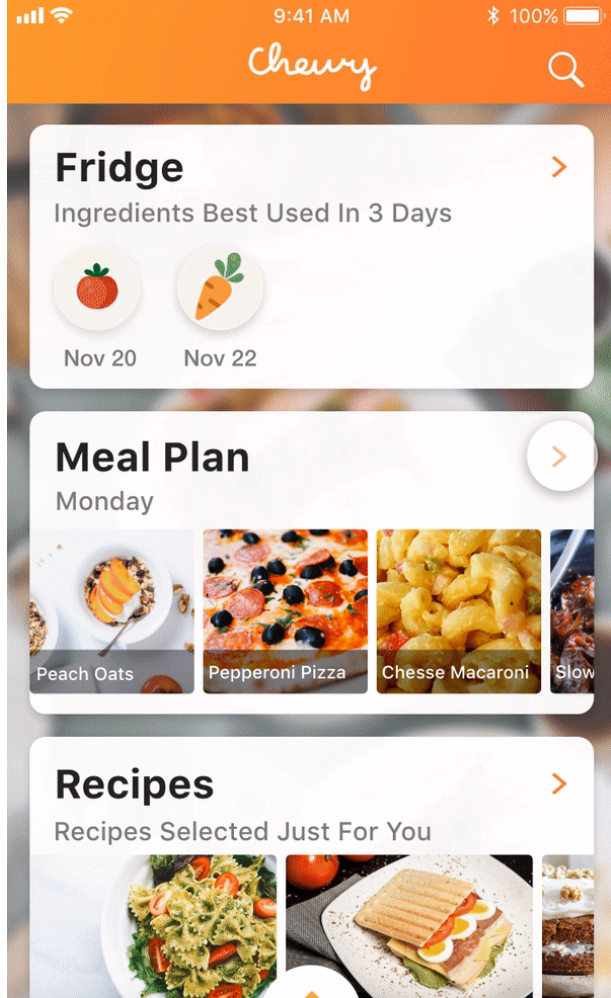


Rice

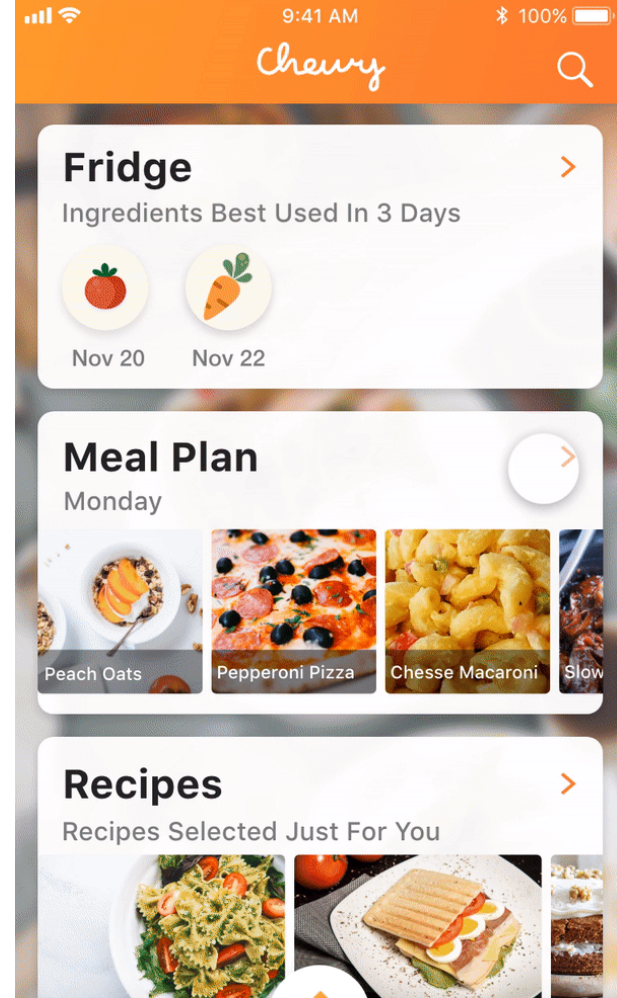


Before

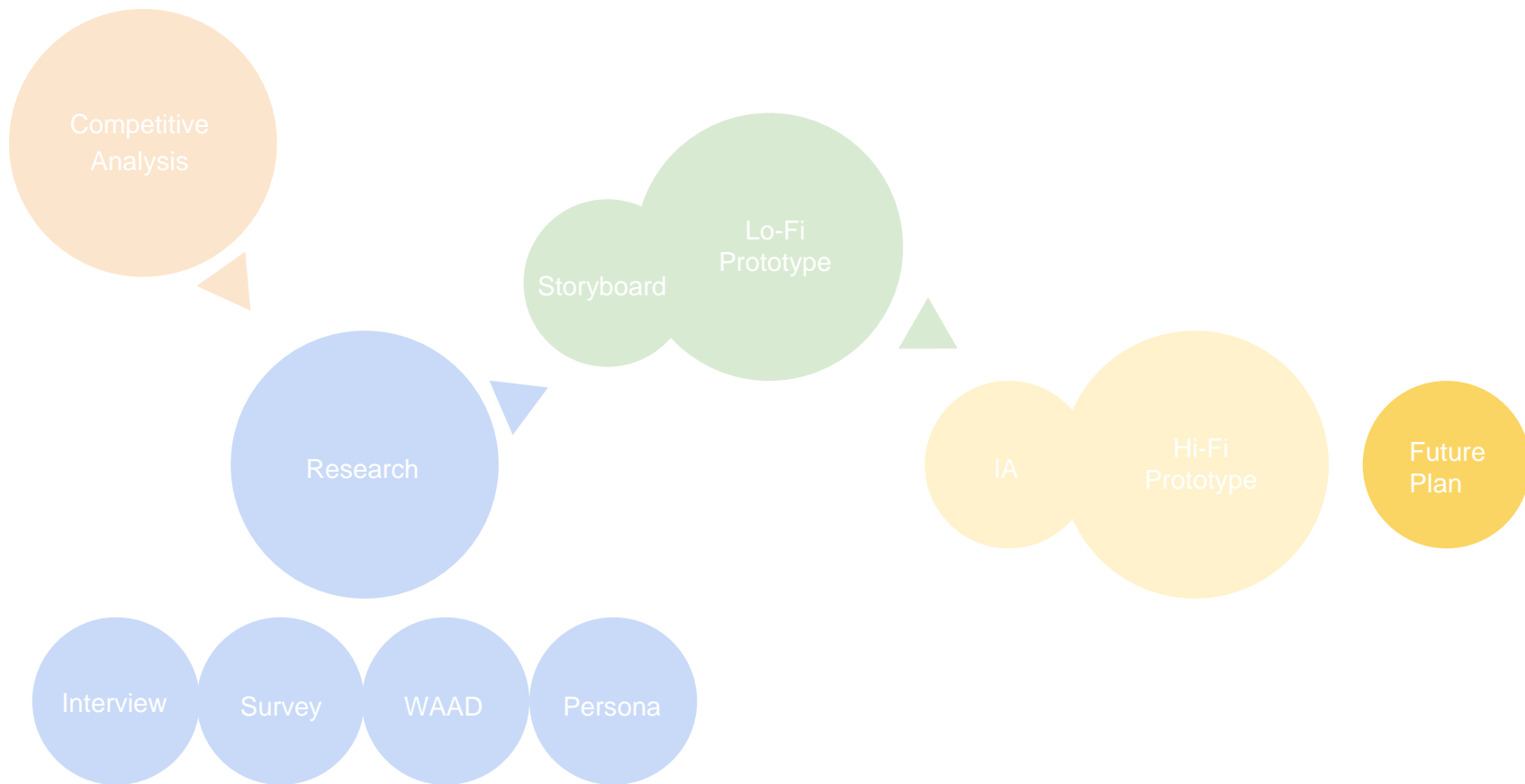
After



Before



After



Post High-Fidelity

- Complete new questionnaire
 - Are 'Social' functions still rated low
- User tasks
 - Begin recipe > Help guide > [Rate]
 - Purchase > Scan Receipt > Add to Fridge > [Rate]
- Complete next iteration round
- Final update
- Complete

References, Links, Resources



Repository: <https://github.com/risoms/INFO-ARCH>

High-Fidelity Prototype Mockup: <https://xd.adobe.com/view/145dd694-6a7f-4686-a414-0404c386d013/>

Pre-Questionnaire Report:

https://utexas.qualtrics.com/WRReport/?RPID=RP2_0wcEadSy4GO3IK9&P=CP

Presentation:

https://docs.google.com/presentation/d/18NhtFciYJvFY1RNIMWOa4zJFTmLJNMtK6uVZpl8ANzk/present#slide=id.g2b58dbc518_0_0