

# Meal Planning - Needs Analysis

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## 1. Introduction

How often have we found ourselves stuck when producing a grocery list, or finding new meal ideas because we are constantly eating the same meals on a weekly basis? When it comes to meal planning, we often grab a frozen meal or fast-food, because we either don't have the time to cook or because we didn't plan our meals ahead of time. Our team is designing a new mobile app that provides recipes based on ingredient preferences. When using our app, meal planning will be a breeze for those who are constantly on the run, those who run out of ideas for meals, and will help keep others from falling off their diet.

The content in the following report is a guide to following and understanding our users' needs and goals. Our project team has interviewed a sufficient number of people to create multiple personas and developed synthesis methods to create our design base. User needs were identified and categorized to create a working prototype and fit the design.

## 2. User's Needs

For a successful development of the Meal Planning design, our project team interviewed a sample of random students, friends, and family members to understand what the problem is when the user decides to choose a meal plan. Our first phase began by conducting interviews by random in a secluded location outside of Starbucks near the library at the University of Pacific. We chose this location because varying students attending the University come here often and it is often busy; meaning more people to interview. Listening to random students and faculty needs helped to gather more defined information on how users prepare their meals on a daily or weekly basis. Other team members interviewed family members and friends who discovered that their ways of meal planning are on different levels than college students. The team discovered that the users have a need for the following items as their top interest in design:

- Budget Friendly
- Number of servings per meal
- Healthier meals
- Grocery lists (Ingredients bought in bulk)
- Recipe ideas/create your own
- Calorie tracker/burned/weight loss
- Nutrition information for the recipes provided
- 2 day plan vs Weekly plan
- Grocery store linked to grocery list
- Alternative ideas for certain ingredients (i.e. oat milk instead of whole milk for Lactose Intolerant)
- Can log food intake and/or the ability to add notes about recipe
- Save favorite meals
- Filter dishes based on Nationality/Diet type/kosher/allergies (Vegetarian, Lactose-free)
- App that keeps track of previous meals with calorie count/nutrition info
- Ability to share meal plans
- Meals according to time of day: breakfast, lunch, dinner
- Video of how to cook the recipe that they click on
- Barcode scanner to scan the nutrition info to log the food you've eaten.

## 3. Synthesis

### 3.1. Personas

#### Persona 1 - Scott, a Family Meal Planner

##### Biography

- 45 year old Male
- Lives in Williamsport, Ohio
- Works as an Automotive Mechanic

##### Struggles with Finding

- New simple healthy meals for family
- Alternative ingredients for low carb diet
- Ingredients that can be bought in bulk and used in most recipes like rice



##### Current Situation

- Currently meal plans for family of 4
- Wife and him works from 8am to 5pm
- Buys groceries every Sunday
- Cooks dinner daily and prepares breakfast and lunches for the next 2 days
- Switches cooking with wife
- Often looks online for new recipes on websites like Pinterest
- Usually spends around \$175 every week

Persona 1 - Scott, wishes for a quick and easy way to find recipes that are simple and healthy for him and his family. This would mean something like recipes similar to chicken and rice, where rice can be bought in bulk and used in various recipes, not just one. Besides this, he also wants alternatives to recipe ingredients to make the recipe low carb. For example, low carb bread is an alternative to regular bread.

#### Persona 2 - Tina, a Weekly Meal Planner



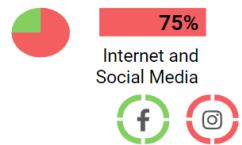
##### Biography

**Age:** 25-35  
**Status:** Fit and Active  
**Gender:** Woman



##### Meal Planning Resources

25%  
Inventing new meal prep ideas from experience



##### Meal Planning Experience

- Has 2-3 meals a day (1 meal protein shake)
- Does not stray away from meal plan.
- Encourages food tracker application to manage ideas for meal prepping.
- Meal preparations occasionally outsourced by another food service provider.
- Spends \$75-\$100 on food items in one week,

Persona 2- Tina, is a fit and active woman who likes to plan her meals ahead of time so that she can live her healthy lifestyle without worrying about cheating her diet. Her recipe ideas currently come from all over social media but expressed this takes time to save her favorite meal ideas and forgets where she got the ideas or ingredients from. Our designs 1-3 will help with this user's needs.

## Persona 3 - Estella, Team Meal Planner

### **Biography:**

- **Age:** 19-22
- **Status:** University Student majoring in Computer Science
- **Gender:** Woman
- **Residence:** Manteca, CA

### **Additional Information:**

- Often times feels pressure between work and her part-time job
- Lives with her close friend who she meal preps with
- Struggles to meal plan on her own given her academic and work responsibilities



Portrait: Estella, Manteca, CA

### **Meal Planning Experience:**

- Buys ingredients weekly
- Wants to maintain a healthy balance of foods
- Values teamwork
- Cooks for one other person whom she meal plans with
- Eats about three meals a day
- Cooks meals that she is familiar with but would like to explore new recipes

### **Needs:**

- A source of information that compares the best price ingredients for meals
- Well-balanced meals

Persona 3 - Estella, is a student who also works and is very busy and does not have much money to spend. She likes to cook and also make meals for the week. Budgetary needs are a necessity for her in choosing the right meal. Our designs will help her with this need for making meals that are budget friendly.

### 3.2. Design artifacts

#### Affinity synthesis:

The affinity method allowed our team to create personas based on our interviewees processes and needs for meal planning. The first cluster shows the different responses, and the second cluster shows how we thematically organized the user's needs based on if they cook for their family's or only themselves. From there our team was able to create the final themes based on the users who prefer to eat healthy versus those who had no preference. Please refer to Appendix A for implementation of the affinity synthesis.

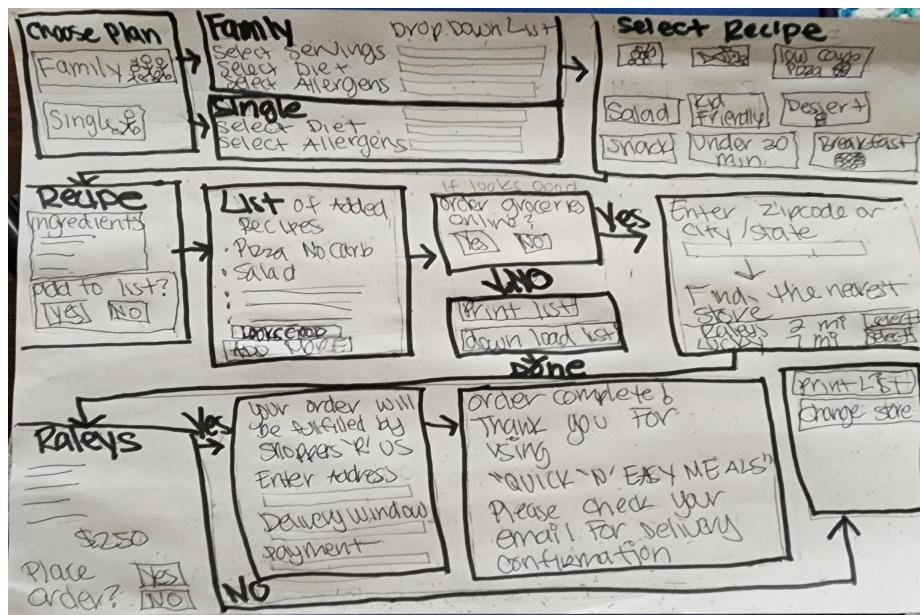
#### 2x2 matrix:

In our 2x2 matrix, each persona is mapped to their according quadrant. On the horizontal axis, the spectrum ranges from Individualistic (planning for themselves based on personal preference or schedule) to Collaborative (planning with input from others, such as family members or roommates). On the vertical axis, the spectrum ranges from Proactive (planning in advance and following a strict schedule) to Reactive (planning in response to circumstances). Please refer to Appendix A for 2x2 matrix synthesis images.

### 3.3 Design Ideas

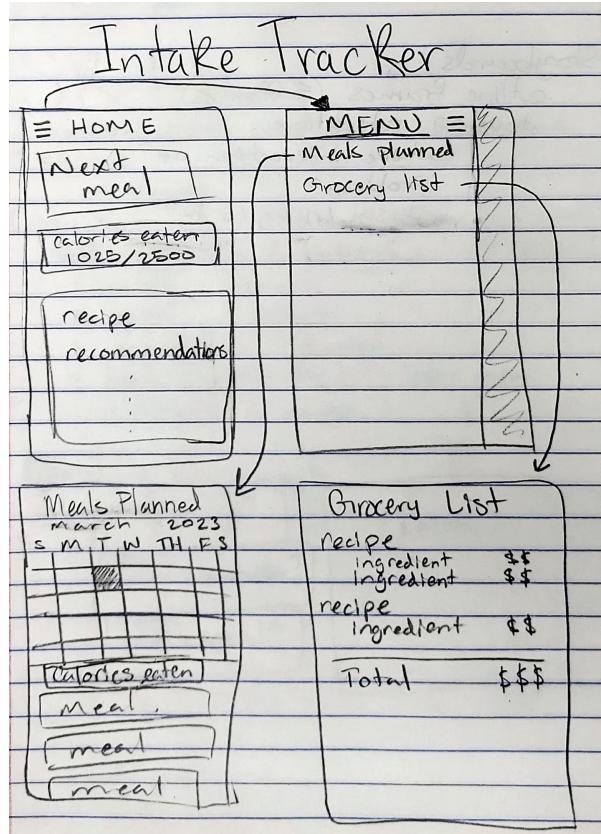
### 3.3.1 Idea 1

#### Quick 'N' Easy Meals



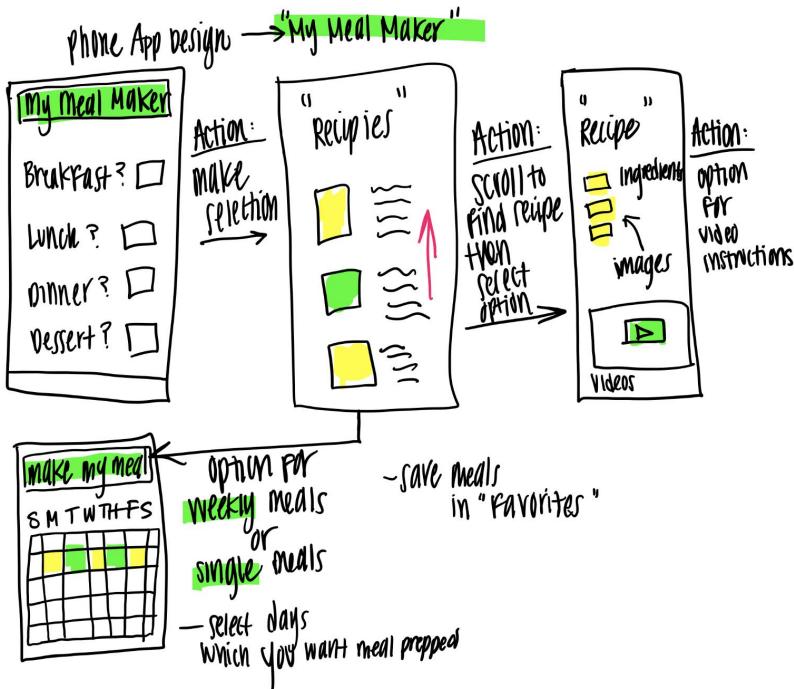
This sketch design reflects the needs of users who are constantly on the go and don't have time to create new recipes and would like to save time by having a grocery list auto-generated based on recipe selection. Quick 'N' Easy Meals will allow users to enter the number of servings desired, diet type (with a non-restrictive option), and food allergens. The app would then provide recipes based on the selected options, and provide the option to add the recipe ingredients to a grocery list. Once the user is done adding recipes, then the user has the option to print/download the shopping list and better yet, has the option to get the groceries delivered. This is a one stop shop for meal planning when it comes to saving time, having a grocery list prepared, choosing recipes based on the users needs, and even having the option to get the groceries delivered.

### 3.3.2 Idea 2:



This sketch design was created with users who are focused on what they eat to maintain, lose, or gain weight. The Intake Tracker saves what meals and the meal calories the user ate each day with the ability to add any ingredients they need to make their meals in a grocery list that has the average price of each item. The main benefit is having the meals the user makes and a calorie tracker in one spot. This design would work best for, persona 2, Tina's needs and goals.

### 3.3.3 Idea 3



This idea has big icons for easy visibility and selection process for choosing a type of meal to plan and cook. Starting with the main screen, to welcome the user it will ask "Which meal would you like to cook?". Then the user would select the meal type and quantity of meals. The icon selection would then filter out recipes with their personal dietary restrictions for the user and also have a video function for instructions on how to cook. The user would be able to save their favorite meals and add them to a calendar. This application would be suitable for all personas and their user needs and goals.

#### 4. Explanation

Before conducting interviews, our group brainstormed questions to ask that helped us better understand our interviewees' needs and motivations for meal planning. These questions consisted of information such as who cooked in their household, how much money was spent on ingredients in a week, and what they would find convenient in a meal planning app. For our app, we received suggestions such as a source for new recipes, local cost friendly ingredients, and a calorie tracker. We also found that several of our participants not only prepared meals for themselves, but also close friends, family members, or children.

While creating our personas, our group compared the lifestyles of each of our users using our synthesis methods, and determined common struggles and needs they experienced with meal planning. Using this information, we were able to design personas that helped us to better understand these characteristics, and meet our users' needs. For example, we developed the persona of Scott, the Family Meal Planner, to determine how the

responsibilities of being a parent and how providing meals for different dietary preferences might affect their meal planning. In this case, it would be more convenient to find ingredients that could be bought in bulk for his family of four.

## 5. Appendix

### Appendix A:

#### Interviewee Meal Planning Preferences



#### Categorized: Family or Single Serving Size



#### Re-Categorized Based on Restricted or Non-Restrictive Preferences



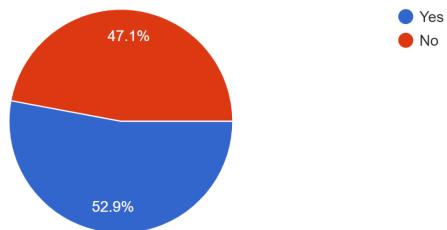
## 2x2 Analysis Meal Planning Approach



### Random Survey Responses

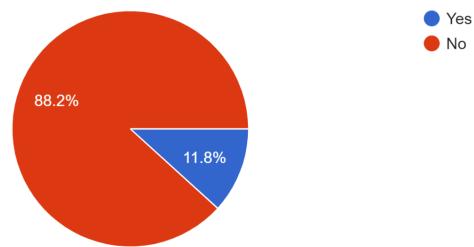
Do you like to Meal Plan?

17 responses



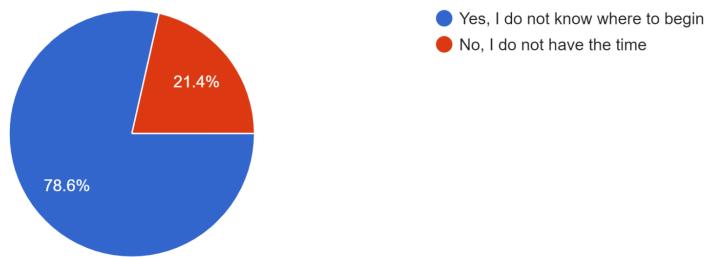
Currently do you have a Food or Meal Planner

17 responses



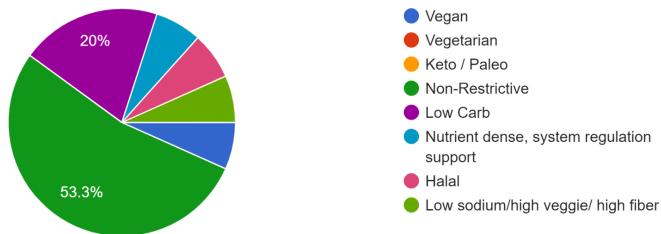
If No, would you like to learn how?

14 responses



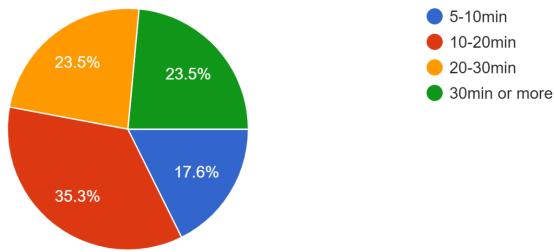
If Yes, which dietary options do you follow?

15 responses



How much time does it take you to find a meal?

17 responses



Questions:	Responses:
Question 1: How do you cook or acquire food at home?	<ul style="list-style-type: none"> <li>Buy weekly groceries, occasionally order food.</li> <li>Plan shop and cook.</li> <li>My daughter in law cooks or we eat out</li> <li>Microwave</li> <li>Fresh, frozen, dry produce</li> <li>Grocery store</li> <li>I cook it myself</li> <li>I buy it, then i cook it.</li> <li>On the stove from the store and cook enough food for the week</li> <li>Typically either make it myself, another family member cooks for the others that day, or we all just get something to-go.</li> <li>Usually I look at the current inventory I have, and either make a meal out of the ingredients currently at home or make a list of needed items and go to the store to buy everything I need.</li> <li>It's usually already made for me. if it's not, I will either order takeout or make something easy to make (sandwich, quesadilla, ect)</li> <li>I just make a little sandwich</li> <li>I look recipes up on Pinterest</li> <li>Usually DoorDash if i'm lazy or don't have time to cook. Otherwise i'll grocery shop and cook.</li> <li>I cook the meals</li> <li>I do my own grocery shopping &amp; then prepare it accordingly. I rarely use a recipe.</li> </ul>
Question 2: If you do have a food planner, which phone app or process do you use?	<ul style="list-style-type: none"> <li>No food planner</li> <li>MyFitnessPal</li> <li>None</li> <li>Android</li> </ul>

If you were to follow a mobile app for Meal Planning, what is more important for you? Choose your top 6 choices. First being the most important.

